

HIGHWAY WORK PROPOSAL

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

Proposal Number: **044**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Trempealeau	7140-00-70	N/A	La Crosse - Trempealeau; La Crosse/Tremp Co Ln To 10th St	STH 035

ADDENDUM REQUIRED ATTACHED AT BACK

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

Proposal Guaranty Required: \$75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: February 14, 2023 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code <h3 style="margin: 0;">SAMPLE</h3> <h3 style="margin: 0;">NOT FOR BIDDING PURPOSES</h3>
Contract Completion Time 60 Working Days	This contract is exempt from federal oversight.
Assigned Disadvantaged Business Enterprise Goal 0%	

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: Excavation, Base, Concrete Pavement, HMA Pavement, Asphaltic Surface, Curb and Gutter, Sidewalk, Culvert Pipe Replacements, Sanitary Work, Street Lighting.	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 Expedite™ generated schedule of items is not the same on each page.
 2. The check code printed on the printout of the Expedite™ 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.

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 7140-00-70, La Crosse – Trempealeau, La Crosse/Trempealeau County Line to 10th St, STH 35, Trempealeau County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2023 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 (20220628)

2. Scope of Work.

The work under this contract shall consist of milling asphaltic surface, cold-in-place recycling, HMA pavement, base aggregate dense, culvert replacements, culvert repairs, concrete curb and gutter, concrete sidewalk, erosion control, pavement marking, traffic control, 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 ten calendar days after the engineer issues a written notice to do so.

Provide the time frame for construction of the project within the 2023 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within 10 calendar days before the beginning of the approved time frame.

To revise the time frame, submit a written request to the engineer at least two weeks before the beginning of the intended time frame. 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.

The Notice to Proceed will be issued such that work shall start no later than June 19, 2023, unless otherwise approved by the engineer.

General

The following restrictions apply to STH 35 between station range Station 358+75 to Station 426+08 due to the minimal asphaltic pavement left after the milling operation:

Pave the lower layer of the traffic lane the same day as the milling operation. A milled surface within the parking lane is permitted for up to 48 consecutive hours, or the end of the work week or the beginning of the holiday work restrictions listed previously. A milled surface is prohibited during holidays or weekends.

During culvert replacements, place gravel at the same level of the surface layer if left overnight to prevent dips in the travel surface. At all culvert pipe replacement locations, an aggregate driving surface will not be allowed between 3:00 PM Friday and 6:00 AM Monday and during holiday work restrictions noted below. Patch and repave travel lanes with asphaltic surface at the end of each work week.

Limit lane closures or flagging operations to five city blocks within the urban section.

Perform culvert pipe repairs, lining, replacements, including asphaltic surface placement, curb ramp replacements, curb and gutter replacement, and all utility work prior to the start of roadway milling and paving operations.

Provide a minimum of 48-hour notice to all affected residents for planned water service outages.

Fish Spawning

Tank Creek and Shingle Creek are side channels to the Black River and tributaries to the Mississippi River. Unless otherwise agreed upon prior to the start of construction, there shall be no in-stream disturbance between March 15 to May 15, with both dates inclusive of the timeout period. This construction BMP minimizes impacts to fish and other aquatic organisms during sensitive time periods such as spawning and migration.

State Threatened Bat

A state threatened bat has 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 bat species and all active roosts are protected by the Wisconsin Endangered Species law. 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.

To avoid adverse impacts upon a state threatened bat species, no tree clearing is allowed between June 1 and August 15, both dates inclusive.

If the required tree clearing is not completed by May 31, the department will suspend all tree clearing and associated work directly impacted by clearing. Tree clearing may resume August 16.

Tree clearing is limited to that which is specified in the plans. If additional trees with a 3-inch or greater diameter at breast height (dbh) need to be removed, no tree clearing shall occur without prior approval from the engineer, following coordination with the WisDOT REC. Additional tree removal beyond the area originally specified will require consultation with the USFWS and WDNR and may require a bat presence/absence or visual emergency survey. Notify the engineer if additional clearing cannot be avoided to begin coordination with the WisDOT REC. The WisDOT REC will initiate consultation with the USFWS and WDNR and determine if a survey is necessary. Submit a schedule and description of clearing operations with the ECIP 14 days prior to any clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of clearing operations, and list those additional measures in the ECIP.

Amphibian and Reptile Exclusion Fencing

Install silt fence in areas where turtles and snakes may be present to serve as both a barrier to turtles and snakes as an erosion control measure. Install trenched-in silt fence prior to disturbing the site but no later than June 1 as shown in the plans to deter turtles and snakes from entering the construction zone. Install with "j-hooks" at the end of any silt fence installed. Maintain the silt fence through final stabilization of the graded areas and completion of all construction activities. Fencing must be inspected at least twice weekly on non-consecutive days and after any significant rain event. Repairs to the fencing must be made immediately and the DNR notified. Any amphibians or reptiles that are found in the active work zone shall be removed and relocated outside the active work zone. The active work zone includes any staging, storage, and marking areas adjacent to the project. If there is an amphibian or reptile mortality, contact the DNR Liaison immediately.

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

4. Traffic.

STH 35 shall remain open to through traffic. Utilize flagging operations and advance warning signing per applicable Standard Detail Drawings as needed to complete construction of this project. When work approaches an intersection, provide additional flagger(s) and signing to adequately and safely direct traffic around work operations.

Urban Section

Stage 1: Utilize a shoulder/parking lane closure for curb ramp construction and water improvements. Shift traffic to the south side of STH 35 during construction of the curb ramps and water improvements on the north side of STH 35.

Stage 2: Utilize a shoulder/parking lane closure for curb ramp construction on the south side of STH 35.

Stage 3: Mill and resurface on STH 35 using single lane, moving operation with flaggers. Motorists can expect to encounter flagging operations one city block at a time. During non-working hours, reopen all existing lanes (travel and parking).

Rural Section

Conduct cold-in-place recycling and resurface STH 35 using single lane, moving operation with flaggers. Motorists can expect to encounter flagging operations between side roads. Utilize temporary lane shift with flagging operations during culvert replacements. Utilize shoulder closure for culvert repairs, ditch cleaning, and clearing and grubbing. During non-working hours, reopen all travel lanes.

Pedestrians

Direct pedestrians around the construction work zone during curb ramp construction utilizing pedestrian accommodation standard detail drawings and as shown in the traffic control plans.

Divert pedestrians away from the Great River State Trail crossing during construction of the south trail curb ramp at STH 35 utilizing the existing multi-use path along the north side of STH 35, and a temporary pedestrian crossing to the trail parking lot and trailhead on the south side of the highway.

Detour pedestrians away from the Great River State Trail crossing during the construction of the north trail curb ramp at STH 35 by closing the Great River State Trail at Fremont Street. Utilize a signed pedestrian detour following Fremont Street and STH 35 to the trail parking lot and trailhead on the south side of the highway. Utilize a temporary pedestrian crossing around the trail curb ramp construction work zone within the shoulder of westbound STH 35.

Sidewalk work areas shall be reopened to pedestrian traffic within 5 calendar days of removal of the curb and gutter in that area.

Emergency Access During Construction

Maintain emergency access to the project area at all times. Keep all private entrances and commercial entrances accessible at all times unless approval of the engineer and written permission is obtained from the property owner 48 hours in advance of closing the access. If work is being completed on multiple driveways to the same property, conduct operations so at least one of the driveways remains open. Restore private entrances with a minimum gravel surface by the end of each working day. Restore private entrances, including a gravel surface, within 12 hours of removal.

Provide a 24-hour contact and phone number for issues to local officials, city police, fire department, and EMS in case of an incident. Repair, replace, or restore any damaged or disturbed traffic control devices within two hours from the time notified or made aware of the damaged or disturbed traffic control devices.

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
Lane and shoulder closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

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

5. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 35 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 26, 2023 to 6:00 AM Tuesday, May 30, 2023 for Memorial Day;
- From noon Friday, June 30, 2023 to 6:00 AM Wednesday July 5, 2023 for Independence Day;
- From noon Friday, September 1, 2023 to 6:00 AM Tuesday, September 5, 2023 for Labor Day;
- From noon Wednesday, November 22, 2023 to 6:00 AM Monday, November 27, 2023 for Thanksgiving.

stp-107-005 (20210113)

6. Utilities.

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

stp-107-065 (20080501)

Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities for the underground facilities in the area, as required per state statues. Use caution to maintain the integrity of utilities.

Any utility facilities not explicitly identified as being relocated or removed have been deemed to be not in conflict and will remain in place as is. It is expected that contractors will work safely around any facilities left within the work zone.

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 owner. Follow-up with a confirmation notice to the engineer and the utility owner not less than three working days before the site will be ready for the utility owner to begin its work.

The location of utility installations as described in this article are approximate.

Additional detailed information regarding the location of utility facilities is available at the region WisDOT office during normal working hours.

Trempealeau Municipal Utilities (Sewer)

Trempealeau Municipal Sewer has an existing underground sanitary sewer facility that runs along the north side of STH 35 beginning at Emmons Street until approximately Station 358+00 where it crosses under STH 35 and runs west along the curb and gutter line on the south side of STH 35 north to Main Street where it turns and continues north under Main Street / STH 35 until approximately Station 403+50. Another sanitary sewer facility begins at approximately Station 406+25 under the west lanes of STH 35 and continues north to the end of the project, gradually shifting to under the center of the roadway. Additional sanitary sewer lines connect into the sanitary sewer previously described at the following roadways: Jones Street, Fremont Street, South Street, 4th Street, and 6th Street.

Trempealeau Municipal Sewer has an existing underground stormwater facility begins at the intersection of Chase Street and heads north under STH 35 to King Street. There are existing storm sewer facilities within the intersections of STH 35 with Chase Street, Summer Street, King Street, Jay Street, Gray Street, South Street, and Main Street.

Trempealeau Municipal Sewer has existing underground sewer facilities in the project area that directly conflict with the project improvements. The following work will be performed by the contractor as part of the project: Adjust storm sewer manholes at Station 375+62, Station 375+92, Station 380+15, Station 383+95, Station 384+04, Station 383+85, Station 391+09, Station 391+22, Station 392+26, Station 398+74. Remove existing storm sewer manhole casting and install new at Station 369+30, Station 376+46, Station 394+72, Station 398+36, Station 422+25 and Station 426+01. Adjust sanitary manholes at Station 361+63, Station 376+48, Station 380+25, Station 383+95, Station 391+35, Station 394+78, Station 398+72, Station 402+26, Station 403+64, Station 406+25, Station 407+53, Station 409+80, Station 413+77, Station 413+83, Station 419+55, Station 422+69, and Station 422+72.

Trempealeau Municipal Utilities (Water)

Trempealeau Municipal Water has existing underground watermain that runs on the north side of STH 35 at the intersection of Bemis Street where it turns and heads north along the west side. There's another watermain that begins at Emmons Street and continues west along the north side of STH 35 to approximately Station 359+00 where it shifts south under STH 35 and continues west under STH 35 to Main Street thru the intersection of Main Street and 3rd Street. Another watermain runs under STH 35 beginning at the 3rd Street / Main Street intersection and continues north under STH 35 to the end of the project. Several watermains connect into the watermain previously described at the following roadways: Emmons Street, Jones Street, Jay Street, South Street, 4th Street, 6th Street and 10th Street. There are also several water valves along the watermain previously described that feed the local properties.

Trempealeau Municipal Water has existing underground watermain facilities in the project area that directly conflict with the project improvements. The following work will be performed by the contractor as part of the project: Remove existing water valve and box and install new at Station 361+80, Station 365+41, Station 368+92, Station 373+12, Station 380+53, Station 390+98, Station 391+15, Station 391+45 and Station 406+42. Remove existing hydrant, hydrant valve and lead and install new at Station 387+86 and Station 395+23. Adjust existing water valves at Station 369+37, Station 380+16, Station 398+51, Station 401+82, Station 402+16, Station 402+36, Station 402+70, Station 405+67, Station 413+58, Station 418+56 and Station 421+96.

Tri-County Com Coop (Communication Line)

Tri-County Com Coop has an underground communication line that runs east along the south side of STH 35 from Grove Street to Jones Street where it heads north crossing under STH 35 at approximately Station 362+30 where it turns and continues east along the north side of STH 35 to approximately Station 323+00.

Tri-County Com Coop has underground communication facilities in the project area that directly conflict with the project improvements. The following work will take place during construction. Tri-County Com Coop forces will relocate the underground communication facilities located between Station 326+00 and Station 327+50 which serve a single customer. Adjustments are anticipated to take 1 working day and will be coordinated with the contractor during construction.

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

- **CenturyLink/Brightspeed – Communication Line**
- **Dairyland Power Coop – Electricity**
- **Midwest Natural Gas – Gas/Petroleum**
- **Trempealeau Municipal Utilities - Electricity**
- **Windstream KDL, LLC – Communication Line**

7. Municipality Acceptance of Sanitary Sewer and Water Main Construction.

Both the department and Village of Trempealeau personnel will inspect construction of sanitary sewer and water main under this contract. However, construction staking, testing, and acceptance of the sanitary sewer and water main construction will be by the Village of Trempealeau.

stp-105-001 (20140630)

8. Information to Bidders, WPDES General Construction Storm Water Discharge Permit.

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Kyle McLean at (715) 225-9442. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

9. Environmental

Van Loon Wildlife Area

The Van Loon Wildlife Area is located along the south side of STH 35 from Station 107+00 to 122+00. Do not park or store any equipment outside of the roadway along this area.

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. Archaeological Site.

The Village Group (47Tr-91/BTR-0106) site is located approximately 258+50 to 266+00 LT within the limits shown on the plans.

The Squier Garden (47Tr-156/BTR-0143) site is located approximately 406+75 to 414+25 LT/RT within the limits shown on the plans.

The Schoolyard (47Tr-157/BTR-134) site is located approximately 366+00 to 394+00 LT/RT within the limits shown on the plans.

The Uhl (47Tr-159/BTR-0142) site is located approximately 380+00 to 392+25 LT/RT within the limits shown on the plans.

The Trempealeau Prairie Mounds (47Tr-408/BTR-0135) site is located approximately 311+00 to 373+00 LT/RT within the limits shown on the plans.

Notify the Bureau of Technical Services – Environmental Process and Document Section (BTS-EPDS) at (608) 266-0099 at least two weeks before commencement of any ground disturbing activities. BTS-EPDS will assign a qualified archaeologist to be on site during construction in these areas.

Do not use the site for borrow or waste disposal. Do not use the site area not currently capped by asphalt/concrete for the staging of personnel, equipment and/or supplies. Use of a hydrovac is not permitted within the boundaries of the human burial site.

stp-107-220 (20180628)

12. Notice to Contractor – Contamination Beyond Construction Limits.

The department completed testing for soil and ground water contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present at the following sites:

1. Station 401+40 to 402+60, beyond project limits left (former D&B Automotive Repair, 11388 Main Street, WDNR BRRTS No. 03-62-001147, Closed LUST Site).
2. Station 373+27 to 375+09, beyond project limits left (The River Stop, 24013 Third Street).
3. Station 371+41 to 372+62, beyond project limits left (former Trempealeau Budget Mart, 23991 Third Street, WDNR BRRTS No. 03-62-000856, Closed LUST Site).

The contaminated soils at the above sites are expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations at these locations to ensure that they do not extend beyond the excavation limits indicated in the plans. If contaminated soils are encountered at these sites or elsewhere on the project during excavation, terminate excavation in the area and notify the engineer.

The Hazardous Materials Report is available by contacting: Kyle McLean at (715) 225-9442.

stp-107-100 (20050901)

13. Notice to Contractor – Coordination with Property Owners

Notify the property owners at least 7 calendar days prior to commencing work on the curb ramps adjacent to:

24118 3rd Street

24457 4th Street

Do not disturb the tree at Station 406+40 RT. The tree is beyond proposed grading limits and outside of proposed easement area.

Do not disturb the existing landscaping timbers adjacent to the proposed sidewalk at Station 384+25 RT. Proposed concrete sidewalk and restoration work abuts the timbers.

14. Notice to Contractor – Great River State Trail

The Great River State Trail crosses STH 35 at approximately Station 360+75. No staging of equipment or materials should take place at the trail crossing without prior agreement. WDNR must be notified at least 30 days prior to any closures/detours of the Great Rivers State Trail. Coordinate any necessary trail work with WDNR by contacting Amy Lesik at (715) 495-1903.

The following conditions apply at the Great River State Trail during construction:

Restore the area immediately adjacent to the sidewalk (grass, asphalt, gravel) to pre-construction condition.

Maintain access to trail during the sidewalk replacement following a temporary pedestrian detour around the work site as shown on the plans.

15. Notice to Contractor – National Register-listed Coman House

The following conditions apply at the National Register-listed Coman House during construction:

- Install pedestrian curb at the back of sidewalk as shown in the plan to reduce impacts to the property.
- Restore the area immediately adjacent to the sidewalk (grass) to pre-construction condition.

16. Removing Apron Endwall for CPCS 24-Inch, Item 204.9060.S.

A Description

This special provision describes removing Apron Endwall for CPCS 24-Inch conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Apron Endwall for CPCS 24-Inch by each endwall, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Apron Endwall for CPCS 24-Inch	EACH
stp-204-025 (20150630)		

17. Removing Culvert Pipe Reinforced Concrete 24-Inch, Item 204.9090.S.01; Removing Culvert Pipe Reinforced Concrete 72-Inch, Item 204.9090.S.02.

A Description

This special provision describes removing culvert pipe reinforced concrete conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Culvert Pipe Reinforced Concrete by the linear foot, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.01	Removing Culvert Pipe Reinforced Concrete 24-Inch	LF
204.9090.S.02	Removing Culvert Pipe Reinforced Concrete 72-Inch	LF
stp-204-025 (20150630)		

18. Temporary Lane Shift During Culvert Work, Item 208.1500.S.

A Description

This special provision describes the construction of a temporary lane shift to maintain traffic with a one-lane roadway around culvert work.

B (Vacant)

C Construction

Place fill and base aggregate dense as needed to maintain traffic through the lane shift.

Furnish materials and construct conforming to the following standard specs:

Common excavation, material removal, and disposal	205
Borrow	208
Base Aggregate Dense	305

Do pertinent construction staking according to standard spec 650 for the temporary lane shift.

Construct to appropriate widths and material thicknesses. Remove materials once the lane shift is no longer needed to maintain traffic.

D Measurement

The department will measure Temporary Lane Shift During Culvert Work as a single unit for each temporary roadway, 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
208.1500.S	Temporary Lane Shift During Culvert Work	EACH

Payment is full compensation for placing, removing and disposal of fill material, including any base aggregate dense used for the driving surface, and associated construction staking.

The department will pay separately for traffic control and erosion control items.

stp-208-010 (20210708)

19. Prepare Foundation for CIR Base Layer 7140-00-70, Item 211.0700.S.

A Description

This special provision describes the preparation of foundation for work required prior to Cold-In-Place Recycling (CIR) according to standard spec 211 and as hereinafter provided.

B (Vacant)

C Construction

After any contract required surface milling, and immediately prior to commencing CIR operations, remove from the roadway, and up to one inch below the milled surface, any vegetation, standing water, loose crack filler, and any other deleterious materials.

D Measurement

The department will measure Prepare Foundation for CIR Base Layer as each individual project, 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
211.0700.S	Prepare Foundation for CIR Base Layer 7140-00-70	EACH

Replace standard spec 211.5.1 (4) with the following:

(4) Payment is full compensation for brooming and crack fill removal.

The department will pay separately for the following work associated with yielding areas under this item under the following contract items:

- Base Repair for CIR Layer.

stp-211-020 (20191121)

20. Base Repair for CIR Layer, Item 211.0800.S.

A Description

This special provision describes base repair for Cold In-Place Recycling (CIR) layer according to standard spec 211, and as hereinafter provided.

B (Vacant)

C Construction

After any contract required surface mill, the engineer and contractor shall visually inspect the milled surface for yielding areas.

Yielding areas will then be repaired prior to the CIR process. The identified yielding areas will be excavated to a maximum of 2 feet, repaired with base course, and a minimum of 5 inches of milled and re-laid pavement material or asphaltic surface in the upper layer,

Add the following to standard spec 211.3.5:

Prior to and during the placement of the CIR layer the contractor shall also be responsible for the work covered under this item.

Perform work under this bid item according to standard spec 205.

Remove soft and/or yielding areas of base to a maximum depth of 2-feet. All areas will be documented, and information will be provided to the engineer. If areas are found after paving operation begin, the engineer will be notified of locations. Excavated area will be filled and compacted with material that meets the material requirements of standard spec 305 and Base Aggregate Dense 1 ¼-inch, or standard spec 330 and Mill and Relay, or standard spec 465 and Asphaltic Surface.

Do not exceed plan quantity without written approval from the engineer.

D Measurement

The department will measure Base Repair for CIR Layer by the cubic yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
211.0800.S	Base Repair for CIR Layer	CY

Payment is full compensation for removing and excavating areas of base to a maximum of 2 feet; required saw cuts; providing, placing, and compacting dense graded base course; milling and relaying pavement; asphaltic surfacing; and traffic control.

stp-211-030 (20200629)

21. Cold In-Place Recycling (CIR) Asphalt Base Layer, Item 327.1000.S; Asphalt Stabilizing Agent, Item 455.0770.S.

A Description

- (1) This work consists of the milling, crushing, and screening (as necessary) of the existing hot mix asphalt (HMA) pavement to the width and depth specified on the plans. The processed material shall be blended with foamed asphalt stabilizing agent, water, and other additives as necessary, and required by the mix design, for placement and compaction of this mixture according to the plans and specifications.

B Materials

B.1 Reclaimed Asphalt Pavement (RAP) Material

- (1) The RAP material shall be milled from the existing roadway and processed in place.
- (2) The RAP shall be free of contamination including a base material, aggregate shoulder material, concrete, silt, clay, or other deleterious materials unless specified in the plan.
- (3) Rubberized crack filler, pavement markers, loop wires, fabric, or other materials shall be removed as observed from the roadway during the recycling process. Any residual materials shall be appropriately sized and homogenously blended with the RAP. No rubberized crack filler or fabric piece may have a dimension exceeding a length of 4 inches.

- (4) The milled and processed material shall conform to the following gradation:

<u>Sieve Size</u>	<u>Percent Passing</u>
2"	100
1 ½"	98 to 100
1"	95 to 100

B.2 Stabilizing Agent

- (1) The asphalt stabilizing agent used for Cold In-Place Recycling (CIR) Asphalt Base Layer shall be foamed asphalt.

B.2.1 Foamed Asphalt

- (1) Foamed asphalt shall be produced with a performance graded asphalt binder; without polymer modification; according to standard spec 455.
- (2) Asphalt binder performance grade for foamed asphalt shall be PG 46-34 or PG 52-34. Ensure that the material is furnished by a supplier from the [Combined State Binder Group Certified Supplier List](#).
- (3) Asphalt binder shall be sufficiently heated to meet the mix design expansion and half-life criteria; not to exceed 375° F.
- (4) Asphalt binder shall produce asphalt foam with a minimum expansion ratio of 8, and a half-life of no less than 6 seconds.

B.2.2 Water

- (1) Water may be added to the RAP at the milling head and/or in a mixing chamber.
- (2) Water added to the RAP, used for foaming asphalt, shall be free of sediment and deleterious materials.

B.3 Mixture Design

- (1) The contractor shall be responsible for obtaining milled samples and/or cores for the project mix design.
- (2) Core samples shall be obtained at a minimum frequency of 0.5 lane-mile. Cores shall be obtained from the area to be recycled including the shoulder. Samples obtained by coring should be enough to develop the mix design.
- (3) Samples for mix design obtained by milling shall be taken from at least 3 different locations directly from the area to be recycled.
- (4) All samples shall represent the entire depth of the layer to be recycled.
- (5) Develop and submit a material sampling plan for review and approval a minimum of 5 business days prior to obtaining milled and/or cored samples.
- (6) Material sampling prior to receipt of the engineer's notice to proceed shall require submittal and approval of an Application/Permit to Work on Highway Right-of-Way ([DT1812](#)).
- (7) During material sampling operations, contractor insurance shall be as specified in standard spec 107, traffic control requirements shall be as specified in standard spec 107 and 643, and in the contract special provisions.
- (8) Develop and submit a mix design with the optimal asphalt content 10 business days prior to the start of the CIR operation. This will be developed according to AASHTO MP 38-18 and PP 94-18; and additionally, will conform to the requirements listed in B.3.1. Submit mix design using WisDOT's provided CIR mix design template to the engineer and department's Bureau of Technical Services, Materials Management Section, Pavement Unit: DOTDLTSDBTSPavementUnit@dot.wi.gov

Table B.3.1 – Minimum Mix Design Requirements

Properties	Test Method	Specification	Criteria
RAP	Gradation of RAP (Sieve Analysis of Aggregates)	AASHTO MP 38-18 and PP 94-18	Fine or Medium Gradation per AASHTO PP 38-18 (Table 1)
	RAP Coating Test	AASHTO T 59	Minimum Good
Foaming	Foamed Asphalt Expansion Ratio	AASHTO MP 38-18 and PP 94-18	Minimum 8.0 Times
	Foamed Asphalt Half-life		Minimum 6.0 Seconds
Mixture Volumetrics	Bulk Specific Gravity of Compacted Samples		Report Only; Ndes=30
	Maximum Theoretical Specific Gravity		Report Only
	% Air Voids in Compacted Dense and Open Bituminous Paving Mixtures		Report Only
	Tensile Strength (Resistance of Compacted Mixture to Moisture) Dry, psi Ratio (TSR)		Minimum 45 Minimum 0.60*

*0.70 for mix designs requiring the addition of cement.

- (9) The mix design shall be used for informational purposes.
- (10) The mix design report shall contain the following minimum information:
 1. Gradation of RAP.
 2. Density, maximum specific gravity, air void content, indirect dry tensile strength, indirect wet (conditioned) tensile strength, and tensile strength ratio at each recycling agent content iteration (minimum of 4; inclusive of recommended moisture and stabilizing contents) and at the recommended moisture and stabilizing agent contents.
 3. Recommended water content from the moisture density curve as a percentage of dry RAP.
 4. Optimum stabilizing agent content as a percentage of dry RAP.
 5. PG grading of asphalt binder for foamed asphalt, supplier name and location, and certified test report.
 6. The optimal foaming characteristics of the asphalt stabilizing agent during the mix design process shall be determined at a minimum of using three different percentages of foamed asphalt content, three different temperatures, and water content.
 7. RAP coating test results.
 8. Any additives that may be used.
 - B.4 Quality Management Program

B.4.1 Quality Control Plan

- (1) Submit a comprehensive written quality control plan, including random numbers, to the engineer no later than 10 business days before beginning CIR activities. 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 it 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. A list of suppliers for all stabilizing agents.
 4. A list of source locations for all water.
 5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
 6. Location of the QC laboratory, retained sample storage, and other documentation.
 7. A summary of locations or quantities, selected randomly using ASTM Method D3665, to be tested under this provision.

B.4.2 Pre-CIR Construction Meeting

A minimum of 5 business days prior to the start of CIR construction, hold a pre-CIR construction meeting at a mutually agreed upon time and location. Attendance at the pre-CIR construction meeting is mandatory for the engineer, 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.

B.4.3 Personnel

- (1) Provide HTCP Nuclear Density Technician I or ACT certified technician for the performance of field density and field moisture content testing.
- (2) Provide HTCP Aggregate Technician I or ACT certified technician for material sampling and sieve analysis.
- (3) A Transportation Materials Sampling (TMS) certified technician is allowed for materials sampling.
- (4) 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 are performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.4.4 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 applicable AASHTO and/or ASTM specifications and maintain a calibration record at the laboratory.
- (2) Furnish nuclear gauges from the department's approved product list at:
<https://wisconsindot.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.

B.4.5 Quality Control (QC) Testing

- (1) Roadway production lots will be defined as 4000 lane feet. Each roadway production lot will consist of two 2000 lane feet sublots. The contractor will notify the department before sampling.

- (2) Gradation samples shall be taken at a random location at a minimum frequency of one per lot of production. Gradation samples shall be taken as representative of the full recycled depth. Samples may be obtained prior to or after the addition of stabilizing agent depending on the type of CIR equipment used in the project. For each sample report the gradation of the material, as determined according to AASHTO T27, for the Number 4 (4.75mm) sieve and larger.
- (3) Conduct and report density testing at a minimum frequency of three individual random tests per subplot.
- (4) Conduct and report mill depth checks at a random location at a minimum frequency of once per subplot.
- (5) Measure and report stabilizing agent foaming properties (i.e. half-life and expansion ratio) of each new tanker load from the equipment's test nozzle or recycling unit. If the foaming properties do not meet the requirement as specified in B.2.1, take the necessary corrective action by adjusting the temperature of the stabilizing agent and/or foaming water content.
- (6) Report stabilizing agent temperature at a minimum of one per each new tanker load.
- (7) Report stabilizing agent foamed asphalt expansion ratio and half-life at random locations at a minimum frequency of once per subplot.
- (8) Perform startup QC testing (milling depth, stabilizing agent, foaming properties, and stabilizing agent application rate) within the first 500 feet at the beginning of each day of production.
- (9) Conduct and report daily moisture content of the finished CIR layer representing each day's placement. Moisture content shall be based on the average of three random tests, from each day's placement. The moisture content shall be determined from a sample retrieved over the full depth of the CIR layer by weighting and drying to a constant weight using an oven at $230^{\circ}\pm 9^{\circ}\text{F}$. Engineer-directed tests are an addition to the above three tests representing the day's placement.
- (10) Once the section achieves 2.5% or less in moisture, the section is considered cured and additional moisture tests are not required unless directed by the engineer.
- (11) The contractor shall provide a Daily Inspection Report within 48 hours to the engineer summarizing the following:
 - daily beginning and ending stations,
 - applicable mix design,
 - stabilizing agent temperature,
 - stabilizing agent foaming properties,
 - subplot tests (mill depth check, density test, and gradation) locations and values, and
 - lot roadway sample locations.
 - moisture

Any adjustments to the application rate of the stabilizing agent, compaction or foaming water shall be reported as stated in section C.1. Test results (except gradation and moisture) shall be provided to the engineer by the end of the business day.

B.4.6 Department Testing

B.4.6.1 General

- (1) The department will conduct quality verification (QV) testing to validate the quality of the product and independent assurance (IA) 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 within 5 business days after the department obtains the sample.

B.4.6.2 Quality Verification (QV) Testing

- (1) The department will have a technician, or ACT working under a technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.4.3 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling.

- (2) The department will conduct random QV tests at the minimum frequency of 10% of the required QC tests. The department will observe the contractor's QC stabilizing agent foaming property test.
- (3) The department's mill depth check, roadway gradation sample, and density test sites, will be at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will split each QV gradation sample, test half for QV, and retain the remaining half for 7 calendar days.
- (4) The department will verify the contractor's moisture content values by testing a moisture content split sample at a frequency of at least one per day.
- (5) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (6) The department will assess QV results by comparing them 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, a re-evaluation of the entire process must be completed before production can resume.

B.4.6.3 Independent Assurance (IA)

- (1) Independence 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 B.4.6.4.

B.4.6.4 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 Construction

C.1 General

- (1) Unless the contract provides otherwise, keep the road open to traffic during construction.
- (2) Perform CIR operations; only between the dates of May 15 and September 15; when the air temperature approximately 3 feet above grade, in the shade, and away from artificial heat sources is above 50°F and when the nighttime ambient air temperature is above 35°F the night prior and the following night, unless approved otherwise by the engineer.

- (3) Do not perform CIR operations during inclement weather such as rain or fog; that will not allow proper mixing, placing, and/or compacting of the mixture.
- (4) CIR operations and recycled pavement base layer curing shall be completed to allow adequate time for placement of surfacing according to calendar requirements of standard spec 450.3.2.1.
- (5) The asphalt binder stabilizing agent application rate will be 2.00 percent with a field adjustment tolerance of +/- 0.30 percent. Any changes within the +/- 0.30 percent tolerance from the 2.00 percent application rate will need to be documented with date, time, pavement temperature, location, reason, and new values and communicated to the engineer at the time the change occurs.
- (6) The metered water added at the mill used for cooling and compaction shall be 2.00 percent. Any changes within the +/- 0.30 percent tolerance from the 2.00 percent application rate will need to be documented with date, time, pavement temperature, location, reason, and new values and communicated to the engineer at the time the change occurs.
- (7) If the stabilizing agent or water application rate from the mix design referenced in section B.3 is not within the range of 1.70 to 2.30 percent, at the department's direction, 500 feet test sections will be required as a comparison. The contractor's liability for the department's directed test sections will be waived. The department's Bureau of Technical Services Pavement Unit will be consulted on these test sections. No test section will be considered below 1.50 percent asphalt binder stabilizing agent.

C.2 Equipment

- (1) Equipment used for CIR shall be subject to approval by the engineer.
- (2) Tankers supplying hot stabilizing agent components shall be equipped to constantly monitor temperature within the tank.

C.2.1 Milling Machine

- (1) The primary milling machines; not inclusive of pre-mill/wedge-cut milling units; shall be capable of milling the existing pavement at a minimum width of not less than 12.5 feet and to the depth shown on the plans, specified in the contract or directed by the engineer. A smaller milling machine may be used to mill paved shoulders and miscellaneous areas to increase the recycle width.
- (2) The milling machines shall be equipped with automatic depth control, shall maintain constant cutting depth and width, uniform grade, and uniform slope.
- (3) For processes not incorporating additional screening, sizing, or crushing; the milling machine shall be capable of producing RAP sized as specified in B.1.
- (4) Use of a heating device to soften the pavement is not permitted.

C.2.2 Screening, Crushing, and Sizing Equipment

- (1) Processes requiring additional screening, sizing, or crushing, shall include a unit with a closed-circuit system capable of continuously returning oversized material to the crusher until all milled material entering the screening, crushing, or sizing equipment meets the gradation requirements of section B.1.

C.2.3 Mixing Unit

- (1) Processed RAP shall be mixed with the stabilizing agent and water in a mixing unit; defined as the milling machine cutter housing, a separate mixing chamber, or a pugmill.
- (2) The asphalt stabilizing agent shall be applied; using a computer-controlled additive system; uniformly at the predetermined application rate. The metering of the stabilizing agent must be monitored through a calibrated pump providing a continuous readout of quantities.
- (3) The additive system shall contain separate pumping systems for adding stabilizing agent and water. Each system shall have an inspection or test nozzle for stabilizing agent and/or water sampling.
- (4) The system shall be capable of producing a uniformly mixed homogeneous recycled pavement base layer mixture.

C.2.4 Paving Equipment

- (1) The placement and shaping of the recycled pavement base layer mixture shall be completed using a self-propelled paver or screed integral to the recycling equipment meeting the requirements of standard spec 450.3.1.4; revised to exclude the requirement of an activated screed or strike-off assembly.

- (2) The screed shall not be heated.
- (3) If utilizing a self-propelled paver, the material shall be transferred directly into the paver hopper from the recycling equipment or with a pick-up device. When a pick-up device is used, the entire windrow shall be removed from the milled surface and transferred to the paver hopper.

C.2.5 Compaction Equipment

- (1) Compaction equipment shall be self-propelled and meet the requirements of standard spec 450.3.1.5.
- (2) The number, weight, and types of rollers shall be used as necessary to achieve the specified compaction. At a minimum, the following rollers shall be used:
 1. At least one self-propelled double drum vibratory steel roller with a minimum weight of not less than 10 tons.
 2. At least one self-propelled pneumatic-tired roller with a minimum weight of not less than 22 tons.

C.3 Constructing CIR

C.3.1 Preparation

- (1) After any contract required surface milling, and immediately prior to commencing CIR operations, remove from the roadway, and up to 1 inch below the milled surface, any vegetation, standing water, loose crack filler, and any other deleterious materials.
- (2) Inspect the pavement surface, after any contract required surface milling, for areas of yielding subgrade. Yielding areas will be repaired prior to CIR operations.
- (3) Blade the existing base aggregate roadway shoulders away from the asphaltic surface edge to minimize contamination of the CIR base layer.

C.3.2 Processing and Placement of CIR Material

- (1) Mill the existing pavement to the required depth and width indicated on the plans.
- (2) Further process the milled RAP material as necessary by crushing, screening, and/or sizing to the gradation requirements of B.1.
- (3) Blend the RAP material with the mix design specified proportions of stabilizing agent and water; produce a uniform and homogeneous recycled mixture.
- (4) Spread the recycled mixture to the grade, elevations, and slopes specified on the plans; avoiding tearing or scarring of the recycled pavement base layer surface.
- (5) Ensure proper material transfer, handling, and spreading to prevent material segregation. If segregation does occur behind the paver, the contractor shall take immediate steps to correct the problem. Corrective action may include adjusting the forward speed of the paving operation and adjusting the flow of material to paver. The contractor shall make adjustments until a satisfactory end-product has been obtained, as determined by the engineer.
- (6) Longitudinal joints between successive CIR operations shall be overlapped a minimum of 3 inches. Consideration should be given to the amount of stabilizing agent used in the overlapping pass. Adjust the width of the stabilizing agent application so that the overlapped CIR mixtures maintains the target stabilizing agent content. Transverse joints between successive CIR operations during the same day of placement shall be overlapped a minimum of 2 feet. The beginning of each day's recycling operation shall overlap the end of the preceding recycling operation a minimum of 50 feet unless otherwise directed by the engineer.

C.4 Compaction

C.4.1 Control Strip Construction

- (1) On the first day of production, construct a control strip to identify the target wet density for the CIR layer using a nuclear moisture-density gauge in backscatter measurement. Nuclear gauge test duration in backscatter measurement shall be for a total of one-minute test per location in the direction of paving. The control strip construction and density testing will occur under the direct observation and/or assistance of the department QV personnel.
- (2) After the construction of the control strip, the CIR process shall be permitted to continue until the project's first asphalt binder tanker truck is empty. Any further CIR process shall be halted till the completion of the test rolling.

- (3) Unless the engineer approves otherwise, construct control strips to a minimum dimension of 500 feet long and one full lane width. Begin the control strip at a location of at least 200 feet beyond the start of the project.
- (4) Completed control strips may remain in-place to be incorporated into the final roadway cross-section.
- (5) Construct additional control strips, at a minimum, when:
 1. The CIR layer thickness changes in excess of 2.0 inches.
 2. The percent of target wet density is less than 96% or exceeds 105.0%; and is outside the range of the 10 random measurements defining the control strip; on two consecutive sublots.
 3. If there is a significant change in mix proportions, weather conditions, compaction equipment, or other controlling factors, the engineer may require the construction of new control strips to check target density.
- (6) Construct control strips using equipment and methods representative of the operations to be used for constructing the CIR layer.
- (7) After compacting the control strip with a minimum of three roller passes, mark and take three wet density measurements using a nuclear moisture-density gauge in backscatter mode at one random station. One density measurement representing the inside 1/3, one density measurement representing the middle 1/3, and one density measurement representing the outside 1/3 transversely across the traveled lane, a minimum of 1 ½ feet from the center of the probe to the unrestricted edge of the CIR layer. Subsequent density measurements will be taken at the same three locations.
- (8) After each subsequent pass of compaction equipment over the entirety of the control strip, take wet density measurements at the three marked locations. Continue compacting and testing until the increase in density measurements of individual locations is less than 2.0 lb/ft³, or the density measurements begin to decrease.
- (9) Upon completion of control strip compaction, take 10 randomly located wet density measurements within the limits of the control strip, a minimum of 1 ½ feet from the center of the probe to the unrestricted edge of the CIR layer. The final measurements recorded at the three 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.

C.4.2 Compaction Requirements

- (1) Compact the CIR layer to a required density of 96% of the target density. Density acceptance shall be based on the average subplot measurements results.

C.5 Surface Requirements

- (1) Prior to placement of the surface treatment, the engineer and contractor shall visually inspect the CIR layer for distresses including, but not limited to raveled areas, rutted areas, and areas of excess or deficient stabilizing agent, or deficient surface tolerance areas.
- (2) Test the recycled pavement base layer surface at regular intervals, and engineer selected locations, using a 10-foot straightedge or other engineer-specified devices.
- (3) The engineer may direct the repair of surface deviations greater than ½ inch between two surface contact points. High points shall be corrected by rerolling, trimming, milling, or grinding. Depressions may be corrected by having a tack coat applied and be filled with HMA immediately prior to placement of the surface treatment.
- (4) Raveled areas, rutted areas, and areas of excess or deficient stabilizing agent shall be re-processed or repaired. Reprocessing shall consist of milling, blending of additional stabilizing agent, placement with a paver, and compaction with determined rolling patterns as determined by the control strip.

C.6 Maintaining the Work

- (1) After compaction is complete, the contractor will determine when the CIR is stable to open to traffic.
- (2) After opening to traffic, and prior to placement of the upper layer, the surface of the recycled base shall be maintained in a condition suitable for the safe movement of traffic.
- (3) The recycled base and shoulders shall be protected and maintained from standing water, deleterious substances, and/or other damage.
- (4) Any damage to the recycled base, excluding department-directed test sections, shall be repaired by the contractor prior to placement of the upper layer at no additional cost to the department.

C.7 Curing and Surfacing

C.7.1 Curing

- (1) Application of a surface treatment or leveling/lower layer of HMA will not be allowed until the moisture content of the CIR layer reduces to 2.50 percent or less.
- (2) If the moisture content of the CIR layer does not reduce to 2.50 percent; the surface treatment may be applied after the change in moisture content is less than 0.30 percentage points for three consecutive calendar days
- (3) The moisture content shall be determined from a sample retrieved over the full depth of the CIR layer by weighting and drying to a constant weight using an oven at 230°±9°F. Moisture content testing by nuclear density shall only be used for informational purposes and not for acceptance. The department will obtain a sample(s) to verify the contractor's final moisture content values.

C.7.2 Tack Coat

- (1) The surface shall be prepared, and tack coat applied meeting the requirements of standard spec 455.3.2.
- (2) Tack coat application rate shall be 0.05 to 0.07 gal/SY. The engineer may adjust the tack coat application rate based on surface conditions.
- (3) Use only emulsified asphalt material as tack coat specified in standard spec 455.2.5. Paving grade asphaltic tack coat shall not be used.

C.7.3 Surfacing

- (1) Surfacing materials, equipment, and construction methods shall be according to the applicable sections of the standard specs or contract special provisions.
- (2) Paving of final surfacing (for single layer) or leveling/lower layer of HMA on the cured CIR sections shall not be conducted until the moisture content in the CIR layer reduces to 2.50% or less.
- (3) The final surfacing (for single layer) or leveling/lower layer shall be placed on the CIR layer within 10 calendar days once a section of the CIR layer is considered cured per section B.4.5.
- (4) After any rain event, the excess moisture in the CIR layer shall be allowed to dry before paving the final surfacing (for single layer) or leveling/lower HMA layer. After a measurable rain event and prior to paving or resuming paving the CIR layer with final surfacing (for single layer) or leveling/lower layer of HMA, the contractor shall dig a hole full depth of the CIR at a location directed and observed by the engineer. The contractor shall record depth of standing water after 5 minutes. A plan to deal with standing water/potential bleeding shall be submitted by the contractor to the engineer prior to paving. The department can request a split-sample moisture at any time as specified in section B.4.5.
- (5) The contractor is responsible for the prevention of water bleeding through the final surfacing (for single layer) or leveling/lower layer. Water bleeding through the final surfacing (for single layer) or leveling/lower layer is considered nonconforming work and will be handled according to standard spec 105.3.2.

D Measurement

- (1) The department will measure Cold In-Place Recycling (CIR) Asphalt Base Layer by the square yard, acceptably completed.
- (2) The department will measure the Asphalt Stabilizing Agent incorporated into the work by the ton; as metered through a calibrated pump, or through delivered ticket quantity.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
327.1000.S	Cold In-Place Recycling (CIR) Asphalt Base Layer	SY
455.0770.S	Asphalt Stabilizing Agent	TON

- (2) Payment is full compensation for measured quantities as specified above; all material including mixing and milling water; equipment necessary for milling and sizing, mixing, paving, compacting the completed CIR; incidentals necessary to the conduct mix design; including sampling and traffic control; mill the existing pavement for recycling, size the milled RAP, inject and mix the RAP with the stabilizing agent, place or pave, compact, and maintain the completed CIR.

- (3) The department will pay separately for the repair of yielding areas under the bid item Base Repair for CIR Layer.
- (4) The department will pay separately for removing or blading away of the adjacent shoulder material under the bid item Shaping Shoulders.
- (5) The department will pay separately for preparation under the bid item Prepare Foundation for CIR Base Layer.
- (6) The department will pay separately for surfacing treatments, including tack coat, under the appropriate bid items.

stp-327-010 (20220628)

22. Stamping Colored Concrete, Item 405.1000.

This special provision describes stamping and coloring concrete WisDOT Red for work constructed under other contract bid items. Conform to standard spec 405 as modified in this special provision.

Furnish one sample of the stamped colored concrete at least 15 working days prior to the start of stamped colored concrete installation. Color of the stamped concrete shall be WisDOT Red. The final color and finish is to be approved by the Village of Trempealeau, Mr. Paul Schindler, (608) 792-1972, prior to placement of any stamped colored concrete in the field.

Replace the entire contents of standard spec 405.2.2 with the following:

- (1) Furnish full-depth colored concrete conforming to standard spec 405.2.1.
- (2) Concrete shall be brushed in the same direction as the existing concrete sidewalk and stamped in an Old Chicago Brick running bond pattern.

Replace the entire contents of standard spec 405.3.2 with the following:

- (1) Color concrete full depth conforming to standard spec 405.3.1
- (2) The concrete shall be brushed in the same direction as the existing concrete sidewalk left in place and stamped in an Old Chicago Brick running bond pattern.

stp-405-100 (20190618)

23. HMA Pavement Balanced Mix Design.

A Description

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

This special provision incorporates balanced mix design (BMD) into the mix design procedures specified in standard specification 460. This specification applies to the primary upper layer mixture under the following bid item: 460.6645. Mix designs will be tested by the Hamburg Wheel-Track Test (HWT) according to AASHTO T 324 as modified by CMM 836.6.10.1 and the Indirect Tensile Cracking Test at Intermediate Temperature (CT-Index) according to ASTM D8225 as modified by CMM 836.6.10.2.

B Materials

Add the following to standard specification 460.2.1:

(4) Proposed additives or alternative materials must be submitted with the mix design submission along with samples of all other mix design materials.

Replace standard specification 460.2.3 with the following:

- (1) The department will designate the grade of asphaltic binder in the HMA Pavement bid item. The virgin binder grade designation may be different than what is specified by the department in the pay item, however, the resultant modified binder's grade must be at least that of which is specified by the bid item. The contractor may use virgin binder, modified binder, a blend of virgin and recycled binder, or a blend of modified and recycled binder to meet or exceed the upper and lower temperature grade requirements designated by the department in the bid item.

Replace standard specification 460.2.6 with the following:

- (2) The contractor may replace virgin binder with recovered binder up to the maximum percentage allowed under 460.2.5 without further testing. When the design percent asphalt binder replaced exceeds the allowable limits in 460.2.5, the contractor must document in the mix design submittal adjustments made and provide test results from extracted and recovered binder indicating that the mixture's asphaltic binder meets or exceeds the upper and lower temperature grade requirements designated by the department in the bid item.

Append table 460-2 with the following:

TABLE 460-2 Addendum

Binder Designation Level[1]	S	H	V	E
Hamburg Wheel Tracking (AASHTO T 324 as modified in CMM 836.6.10.1) Passes to 12.5mm rut depth Stripping Inflection Point	10,000 8,000	15,000 8,000	20,000 8,000	20,000 8,000
IDEAL-CT[2] (ASTM D8225 as modified in CMM 836.6.10.2) CT-Index	30	30	30	30

^[1] Asphalt binders will be tested against the contract specified traffic level performance requirements, which may not be the same traffic level as classified by AASHTO M332.

^[2] For SMA mixtures increase the CT-Index to 80 for all binder designation levels.

Add the following to standard specification 460.2.8.2.1.3.1:

- (7) During the first 10,000 tons of production, the department will collect additional material along with the standard QV sample to verify conformance with the prescribed performance specifications herein for informational purposes.

Append CMM table 866-2 with the following:

HMA TEST	TEST PROCEDURE
Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures	WisDOT-modified AASHTO T 324
Indirect Tensile Cracking Test at Intermediate Temperature	WisDOT-modified ASTM D8225

Modify the following in CMM 866.2.2:

5. Complete a mix design report identifying materials used and summarizing volumetric and performance properties in meeting required specifications in 866.2.4.

Modify the following in CMM 866.2.4.2:

Mixture Properties (3.0% "Air-Void Regression" asphalt binder content):

- Binder content, % (Pb).
- Maximum specific gravity (Gmm).
- Bulk specific gravity (Gmb).
- Air voids, % (Va)
- VMA (voids of the mineral aggregate), %.
- VFB (voids filled with binder) also called VFA (voids filled with asphalt), %.
- TSR (tensile strength ratio).
- TSR Compaction Effort (N = "x").

- Hamburg Wheel-Track Test
- Passes to 12.5mm rut depth
- Stripping Inflection Point
- IDEAL-CT
- CT-Index

Append Table 866-3 with the following:

Test	Allowable Difference
Hamburg Wheel-Track Testing of Compacted Asphalt Mixtures	N/A
Indirect Tensile Cracking Test at Intermediate Temperature	N/A

Add the following in CMM 866.2.5.1:

The department's performance test results for the Hamburg Wheel-Track Test and IDEAL-CT will be used for informational purposes only to determine reproducibility tolerances and will not be used to reject mix designs that are less than the values in standard specification 460.2, table 460-2 (including the addendum herein).

Modify the following to CMM 866.2.5.2:

This process requires submittal of the mix design summary report and blended aggregates representing the mix design job mix formula (JMF). The contractor needs to submit materials to the department a minimum of 10 working days before paving.

- The contractor must include four 6800g (15 lb) batches of the blended aggregate, representing the mix design JMF, (inclusive of any components containing recycled asphaltic materials or stabilizing agents) and either three full 1-quart containers or one full 1-gallon container of design PG binder. Virgin blended aggregate is submitted separately from RAM and both must be dried before sending to BTS. The contractor must also include three 16000 g (approx. 35 lb) batches of unaged, batched HMA material representing the JMF for the department performance testing described herein.
- BTS may request individual aggregate/RAM samples for each component and either three full 1-quart containers or one full 1-gallon container of the design PG binder in place of the composite aggregate samples.

C (Vacant)

D (Vacant)

E Payment

Costs for all sampling, testing, and documentation required under this special provision are incidental to the work.

**24. 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 CMM 836. 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) in accordance with 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 CMM 815.7 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 CMM 815.8. 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 in accordance with 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 in accordance with 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 ≥ 75
- iii. Density PWL value ≥ 75
- iv. Acceptable correlation

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

D Measurement

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

E Payment

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

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

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

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

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

Acceptable HMA mixture placed on the project as part of a volumetric or density test strip will be compensated by the appropriate HMA Pavement bid item with any applicable pay adjustments. If a test strip is delayed as defined in C.1 of this document, the department will assess the contractor \$2,000 for each instance, under the HMA Delayed Test Strip administrative item. If an additional test strip is required because the initial test strip is not approved by the department or the mix design is changed by the contractor, the department will assess the contractor \$2,000 for each additional test strip (i.e. \$2,000 for each individual volumetrics or density test strip) under the HMA Additional Test Strip administrative item.

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

PAY ADJUSTMENT FOR HMA PAVEMENT AIR VOIDS & DENSITY	
<i>PERCENT WITHIN LIMITS</i>	<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

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 in accordance with Appendix A.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.01	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.

stp-460-040 (20220107)

25. Material Transfer Vehicle, Item 460.9000.S.

A Description

This special provision describes providing Material Transfer Vehicles (MTV) and operators for use during HMA upper layer paving operations of the travel lanes as shown in the plan or as directed by the engineer.

B Materials

Furnish a self-propelled MTV with the ability to remix, maintain constant temperature, and continually feed the paver hopper. MTV storage capacity shall be adequate to provide continuous forward movement of the paver. Coordinate paver speed to match the delivery of material and capacity of the MTV to minimize stopping of the paver.

C Construction

Ensure that an operator stays with the MTV at all times during moving operations. Keep the paver's hopper full at all times to avoid segregation of coarse aggregates. Placement of HMA upper layer pavement in the travel lanes will not be allowed without the MTV. Tie ins of intersections, shoulders paved separately, and other non-travel lane areas will not require the use of the MTV.

D Measurement

The department will measure Material Transfer Vehicle once for the contract, acceptably completed, regardless the number of vehicles in use.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
460.9000.S	Material Transfer Vehicle	EACH

Payment is full compensation for furnishing all material transfer vehicles and operators.

stp-460-900 (20220628)

26. Asphaltic Surface.

Replace standard spec 465.2 (1) with the following:

Under the Asphaltic Surface bid item submit a mix design for the asphalt patch at culvert replacements. Furnish asphaltic mixture meeting the requirements specified for HMA Pavement Type HMA MT 58-34S under standard spec 460.2; except the engineer will not require the contractor to conform to the quality management program specified under standard spec 460.2.8. Use tack coat as required under 450.3.2.7.

**27. Culvert Pipe Liners, 36-Inch, Item 520.9700.S;
Cleaning Culvert Pipes for Liner Verification, Item 520.9750.S.**

A Description

This special provision describes providing, verifying, and pressure grouting culvert pipe liners for circular culverts.

B Materials

B.1 General

Provide flow calculations at the preconstruction conference. Use contractor-proposed liner properties, the Manning’s coefficients listed on the department’s approved products list, and base calculations on existing culvert sizes and liner sizes the plans show. Ensure that pipes when lined have a capacity within ±5% of the original full flow capacity of the pipe.

B.2 Flexible Pipe Liner

Use liners with a Manning's coefficient value published on the department's approved products list. Upon delivery provide manufacturer certificates of compliance certifying that the liners conform to the following:

Pipe Type	ASTM Designation	ASTM D3350 Resin
High Density Polyethylene (HDPE)		
Profile Wall Pipe	F894	345463C
Solid Wall Pipe	F714	345463C
Polyvinylchloride (PVC)	F949	---

B.3 Grout

B.3.1 Cement

Furnish cement meeting the requirements of standard spec 501.2.4.1 for Type I or II Portland Cement.

B.3.2 Fly Ash

Furnish Class C or F Fly Ash meeting the requirements of standard spec 501.2.4.2.2.

B.3.3 Sand

Furnish natural sand meeting the fine aggregate requirements of standard spec 501.2.7.2 and the size requirements of standard spec 501.2.7 except the percent passing the number 200 sieve shall be 0-5 percent by weight.

B.3.4 Water

Furnish water meeting the requirements of standard spec 501.2.6.

B.3.5 Mix Design

Use the basic proportions of dry materials per cubic yard of grout as follows:

- Cement 100 pounds
- Fly Ash 400 pounds
- Fine Aggregate 2600 pounds

Air entraining and chemical admixtures to control fluidity of the grout are allowable. Ten days before placement, furnish to the engineer a design mix detailing all components and their proportions in the mix.

B.3.6 Cellular Grout

Alternatively, the contractor may use, or if the manufacturer recommends, an engineer-approved commercial cellular concrete grout conforming to the following:

Cement	ASTM C150	Type I or II
Density	ASTM C495 (no oven drying)	50 pcf min
Compressive Strength	ASTM C495	300 psi @ 28 day min 100 psi in 24 hours
Shrinkage	ASTM	1% by volume
Flow	ASTM C939	35 sec max

C Construction

C.1 General

As soon as possible after contract execution, survey existing culvert pipes to determine which culverts need cleaning in order to verify the required liner diameter and length. Notify the engineer before cleaning to confirm payment under the Cleaning Culvert Pipes for Liner Verification bid item.

Coordinate with the engineer to field verify culvert diameter and length, shape, material, and condition before ordering the liners.

Obtain easements if necessary for installing long sections of pipe.

C.2 Excavating and Cleaning

Before inserting the liner, clean and dry the pipe. Excavate and pump as required to remove debris and other materials that would interfere with the placement or support of the inserted liner. Dispose of and replace unserviceable endwalls as the engineer directs.

C.3 Flow Diversion

Maintain drainage at and through worksite during construction according to standard spec 107.20, 205 and 520. Use existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Provide, operate, and maintain pumps to bypass flow or dewater during construction as necessary. Unless otherwise approved by the engineer, dewater by bypassing or diverting flow during bulkheading and grouting operations. Provide a plan for controlling flow and dewatering (including sediment treatment as required) as part of the project EQIP.

C.4 Placing Liners

Unload liners using slings and boom-type trucks or equivalents. Do not use chains or wire rope to handle liners and do not dump liners from the trucks when unloading.

Install liners such that the alignment and invert lie true to the lines, grades, and elevations in the plan. In absence of plan details, install liners horizontally to provide even annular space between the host pipe and sides of the liner. Install liners vertically with the invert as close to the host pipe invert as possible.

Obtain additional easements, if necessary, for installing long sections of liner.

Connect joints and install the liner per the manufacturer's recommendations and this part.

C.5 Pressure Grouting

Furnish a written plan for grouting the annular space between the host pipe and culvert pipe liner to the engineer for acceptance. Furnish the grouting plan prior to or at the project preconstruction conference so that it can be reviewed and discussed. At a minimum, the grouting plan shall consist of the following:

- Intended grout mix(es)
- Testing methods and frequency
- Pumping equipment and pressure regulation
- Intended grout staging
- Grout monitoring
- Bracing/floatation control

Include a description of staging in the grouting plan. Based on the length and slope of the host culvert, multiple stages may be required to minimize external loads on the culvert pipe liner. Develop the staging plan with the manufacturer based on the recommended maximum loading for the culvert pipe liner and the condition of the host culvert. Unless approved by the manufacturer, in no case shall a single lift of grout exceed 1/3rd the pipe external diameter at any point in the pour.

After the liner is in place, fill the area between the original culvert and the liner completely with grout per the accepted grouting plan. Block, grout in lifts, or otherwise secure liners to prevent floatation or deformation of the liner while grouting. Grout ports can be fabricated to allow placement of anti-floatation bracing or spacers.

Use a grout plant that is capable of accurately measuring, proportioning, mixing, and discharging by volume and at discharge pressures the liner manufacturer recommends. Do not exceed manufacturer-specified maximum pressures. Place grout in lifts to prevent exceeding maximum allowable pressures and to prevent floatation.

Use grout and witness ports to vent grouting and monitoring grouting progress. Plug ports as necessary as grout reaches them.

Do not remove any bracing inside of the liner until the grouting process is complete.

C.6 Assembly, Floatation, and Deflection Mitigation

Damage or misalignment due to assembly, floatation or deformation during grouting, or otherwise resulting from workmanship will be mitigated at the contractor's expense.

C.7 Site Restoration

Replace pipe sections damaged or collapsed during installation or grouting operations. Restore the grade to its original or improved cross section. Dispose of waste material.

D Measurement

The department will measure the Culvert Pipe Liners bid items by the linear foot measured in place for each culvert location, acceptably completed.

The department will measure Cleaning Culvert Pipes for Liner Verification as each culvert, acceptably cleaned. The department will only measure culverts the engineer approves for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
520.9700.S	Culvert Pipe Liners 36-Inch	LF
520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH

Payment for the Culvert Pipe Liners bid items is full compensation for providing pipe liners; obtaining easements; for excavation; for pumping to bypass flow, to clean pipes, for liner insertion or for grouting; for shoring and dewatering; for cleaning the existing pipe before liner installation; for pressure grouting; for replacing contractor-damaged pipe and endwalls; and for restoring the grade and disposing of waste materials.

The department will pay the contractor \$150 per cubic yard for grout required in excess of 110 percent of the theoretical quantity required to fill the space between the inside diameter of the existing pipe and the outside diameter of the liner.

Payment for Cleaning Culvert Pipes for Liner Verification is full compensation for cleaning required to verify liner length and diameter; for excavation; for pumping to bypass flow, to dewater, or to remove debris; and for disposing of waste material.

The department will pay separately for replacing unserviceable endwalls not rendered unserviceable by contractor operations under the appropriate contract endwall bid item, or absent the appropriate item as extra work.

stp-520-015 (20220107)

28. Adjusting Manhole Covers, Item 611.8110.

This special provision describes adjusting manhole covers conforming to standard spec 611 as modified in this special provision.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Supplement standard spec 611.3.7 with the following:

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.

stp-611-005 (20200629)

29. 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)

30. Pipe Grates, Item 611.9800.S.

A Description

This special provision describes providing pipe grates on the ends of pipes.

B Materials

Furnish steel conforming to the requirements of standard spec 506.2.2.1. Furnish steel pipe conforming to the requirements of standard spec 506.2.3.6.

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction

Repair pipes, rods, angles and brackets on which the galvanized coating has been damaged according to the requirements of AASHTO M36M.

D Measurement

The department will measure Pipe Grates in units of work, where one unit is one grate, 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
611.9800.S	Pipe Grates	EACH

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to pipes.

stp-611-010 (20030820)

31. HMA Pavement Percent Within Limits (PWL) QMP, Core Pilot Project; Incentive Density PWL HMA Pavement, Item SPV.0055.01; Incentive Air Voids HMA Pavement 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 specs 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 and HMA Pavement Percent Within Limits (PWL) QMP Test Strip Density articles at no additional cost to the department.

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

460.2.8.2.1.3.1 Contracts under Percent within Limits

- (1) Furnish and maintain a laboratory at the plant site fully equipped for performing contractor QC testing. Have the laboratory on-site and operational before beginning mixture production.
- (2) Obtain random samples and perform tests according to this special provision and further defined in Appendix A: *Test Methods & Sampling for HMA PWL QMP Projects*. Obtain HMA mixture samples from trucks at the plant. For the subplot in which a QV sample is collected, discard the QC sample and test a split of the QV sample.
- (3) Perform sampling from the truck box and three-part splitting of HMA samples according to CMM 836. 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 three splits for all random sampling per subplot. All QC samples shall provide the following: QC, QV, and Retained. The contractor shall take possession and test the QC portions. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. Additional sampling details are found in Appendix A. Label samples according to CMM 836. Additional handling instructions for retained samples are found in CMM 836.

(4) Use the test methods identified below to perform the following tests at a frequency greater than or equal to that indicated:

- Blended aggregate gradations in accordance with AASHTO T 30
- Asphalt content (AC) in percent

Determine AC using one of the following methods:

- AC by ignition oven according to AASHTO T 308 as modified in CMM 836.6.3.6. If the department is using an ignition oven to determine AC, conform to CMM 836.6.3.7. If the department is not using an ignition oven to determine AC, IOCFs must still be reverified for any of the reasons listed in CMM 836.6.3.7.2 Table 836-2 and conform to CMM 836.6.3.7.3.
- AC by chemical extraction according to AASHTO T 164 Method A or B.
- AC by automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.
- Bulk specific gravity (G_m) of the compacted mixture according to AASHTO T 166 as modified in CMM 836.6.5.
- Maximum specific gravity (G_{mm}) according to AASHTO T 209 as modified in CMM 836.6.6.
- Air voids (V_a) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R35.

(5) Lot size shall consist of 3750 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 AASHTO T283, without freeze-thaw conditioning cycles, 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	
19.0-mm	+/- 7.5	
12.5-mm	+/- 7.5	
9.5-mm	+/- 7.5	
2.36-mm	+/- 7.0	
75-µm	+/- 3.0	
AC in percent	-0.3	-0.5
V _a		- 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 three splits for all random sampling per subplot. All QV samples shall furnish the following: QC, QV, and Retained. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. 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 perform all testing conforming to the following standards:

- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166 as modified in CMM 836.6.5.
- Maximum specific gravity (Gmm) according to AASHTO T 209 as modified in CMM 836.6.6.
- Air voids (Va) by calculation according to AASHTO T 269.

- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R 35.
- Asphalt Content (AC) in percent determined by ignition oven method according to AASHTO T 308 as modified in CMM 836.6.3.6 and conforming to CMM 836.6.3.7, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.

⁽⁴⁾The department will randomly test each design mixture at the minimum frequency of one test for each lot.

Delete standard spec 460.2.8.3.1.6.

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following:

460.2.8.3.1.7 Data Analysis for Volumetrics

⁽¹⁾Analysis of test data for pay determination will be contingent upon QC and QV test results. Statistical analysis will be conducted on Gmm and Gmb test results for calculation of Va. If either Gmm or Gmb analysis results in non-comparable data as described in 460.2.8.3.1.7(2), subsequent testing will be performed for both parameters as detailed in the following paragraph.

⁽²⁾The engineer, upon completion of the first 3 lots, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. Additional comparisons incorporating the first 3 lots of data will be performed following completion of the 4th and 5th lots (i.e., lots 1-3, 1-4, and 1-5). A rolling window of 5 lots will be used to conduct F & t comparison for the remainder of the contract (i.e., lots 2-6, then lots 3-7, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025. If the F- and t-tests report comparable data, the QC and QV data sets are determined to be statistically similar and QC data will be used to calculate the Va used in PWL and pay adjustment calculations. If the F- and t-tests result in non-comparable data, proceed to the *dispute resolution* steps found below. Note: if both QC and QV Va PWL result in a pay adjustment of 102% or greater, dispute resolution testing will not be conducted. Dispute resolution via further investigation is as follows:

^[1]The Retained portion of the split from the lot in the analysis window with a QV test result furthest from the QV mean (not necessarily the subplot identifying that variances or means do not compare) will be referee tested for Gmm, Gmb, and Asphalt Content by the bureau's AASHTO accredited laboratory and certified personnel. All previous lots within the analysis window are subject to referee testing and regional lab testing as deemed necessary. Referee test results will replace the QV data of the subplot(s).

^[2]Statistical analysis will be conducted with referee test results replacing QV results.

- i. If the F- and t-tests indicate variances and means compare, no further testing is required for the lot and QC data will be used for PWL and pay factor/adjustment calculations.
- ii. If the F- and t-tests indicate non-comparable variances or means, the Retained portion of the random QC sample will be tested for Gmm, Gmb, and Asphalt Content by the department's regional lab for the remaining 4 sublots of the lot which the F- and t-tests indicate non-comparable datasets. The department's regional lab and the referee test results will be used for PWL and pay factor/adjustment calculations. Upon the second instance of non-comparable variance or means and for every instance thereafter, the department will assess a pay reduction for the additional testing of the remaining 4 sublots at \$2,000/lot under the HMA Regional Lab Testing administrative item.

^[3]The contractor may choose to dispute the regional test results on a lot basis within 7 days after receiving the results from the region. In this event, the retained portion of each subplot will be referee tested by the department's AASHTO accredited laboratory and certified personnel. The referee Gmm and Gmb test results will supersede the regional lab results for the disputed lot.

- i. If referee testing results in an increased calculated pay factor, the department will pay for the cost of the additional referee testing.
- ii. If referee testing of a disputed lot results in an equal or lower calculated pay factor, the department will assess a pay reduction for the additional referee testing at \$2,000/lot under the Referee Testing administrative item.

(3) The department will notify the contractor of the referee test results within 3 working days after receipt of the samples by the department's AASHTO accredited laboratory. The intent is to provide referee test results within 7 calendar days from completion of the lot.

(4) The department will determine mixture conformance and acceptability by analyzing referee test results, reviewing mixture data, and inspecting the completed pavement according to the standard spec, this special provision, and accompanying Appendix A.

(5) Unacceptable material (i.e., resulting in a PWL value less than 50 or individual QC or QV test results not meeting the Acceptance Requirements of 460.2.8.2.1.7 as modified herein) will be referee tested by the bureau's AASHTO accredited laboratory and certified personnel and those test results used for analysis. Such material may be subject to remove and replace, at the discretion of the engineer. If the engineer allows the material to remain in place, it will be paid at 50% of the HMA Pavement contract unit price. Replacement or pay adjustment will be conducted on a subplot basis. If an entire PWL subplot is removed and replaced, the test results of the newly placed material will replace the original data for the subplot. Any remove and replace shall be performed at no additional cost to the department. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test will be conducted and under such circumstances will be entered into the HMA PWL Production spreadsheet for data analysis and pay determination.] The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

Delete standard spec 460.2.8.3.1.8 Corrective Action.

C Construction

Replace standard spec 460.3.3.2 Pavement Density Determination with the following:

460.3.3.2 Pavement Density Determination by Cores

(1) For mainline pavement, PWL density determination will be by cores. Full-width passing lanes, turn lanes, or auxiliary lanes must be 1500 lane feet or greater to be eligible for PWL density determination. Shoulder and appurtenance density will be conducted by the department using a nuclear density gauge according to CMM 815, and average lot (daily) densities must conform to standard spec Table 460-3 or else be subject to disincentives according to 460.5.2.2(5) herein. No density incentive will be applied to shoulders or appurtenances. Offsets will not be applied to nuclear density gauge readings for shoulders or appurtenances. Unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 815.11.

(2) Sublots are typically 1500 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.

(3) A typical lot consists of 5 sublots. Partial lots with less than three sublots will be included in the previous lot for data analysis/acceptance and pay, by the engineer. If density lots/sublots are determined prior to construction of the test strip, any random locations within the test strip shall be omitted.

(4) 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.

460.3.3.2.2 Density Determination by Cores

(1) Core the pavement at one random location, determined by the engineer, per subplot. Each core location will represent the entire length and width of the subplot.

(2) Under the direct observation of the engineer, cut 100 or 150 mm (4 or 6 inch) diameter cores. 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. Prepare cores and determine density according to AASHTO T166 as modified in CMM 836.6.5. Dry cores after testing. Fill core holes according to Appendix A and obtain engineer approval before opening to traffic. The department will maintain custody of cores throughout the entire sampling and testing process. The department will label cores, transport cores to testing facilities, witness testing, store dried cores, and provide subsequent verification testing.

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

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

460.3.3.3 Data Analysis for Density

- (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. Upon the completion of each lot the core data will be used for PWL and pay adjustment calculations.
- (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) Core data for each lot 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 may be conducted on a subplot basis. If an entire PWL subplot is removed and replaced, the test results of the newly placed material will replace the original data for the subplot.
 - ii. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test must be conducted and under such circumstances will be entered into the data analysis and pay determination.]
 - iii. If the engineer allows such material to remain in place, it will be paid for at 50% of the HMA Pavement contract unit price. The extent of unacceptable material will be addressed as specified in CMM 815.11. The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.
 - iv. Unacceptable material identified by core density will be removed and replaced or paid at 50% of the contract unit price on a subplot basis.

D Measurement

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

E Payment

Replace standard spec 460.5.2 HMA Pavement with the following:

460.5.2 HMA Pavement

460.5.2.1 General

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

460.5.2.2 Calculation of Pay Adjustment for HMA Pavement using PWL

- (1) Pay adjustments will be calculated using 65 dollars per ton of HMA pavement. The HMA PWL Production Spreadsheet, including data, will be made available to the contractor by the department as soon as practicable upon completion of each lot. The department will pay for measured quantities of mix based on this price multiplied by the following pay adjustment calculated 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	PF = ((PWL – 90) * 0.4) + 100
≥ 50 to < 90	(PWL * 0.5) + 55
<50	50% ^[1]

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

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

⁽²⁾ For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density shall be 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.

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

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

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

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

⁽⁴⁾ Individual Pay Factors for each air voids (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

<i>PERCENT LOT DENSITY</i>	<i>PAYMENT FACTOR</i>
<i>BELOW SPECIFIED MINIMUM</i>	<i>(percent of contract price)</i>
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

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

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

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

^[1] Any material resulting in an asphalt binder content more than 0.3% below the JMF AC content will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.

^[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.

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

WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip

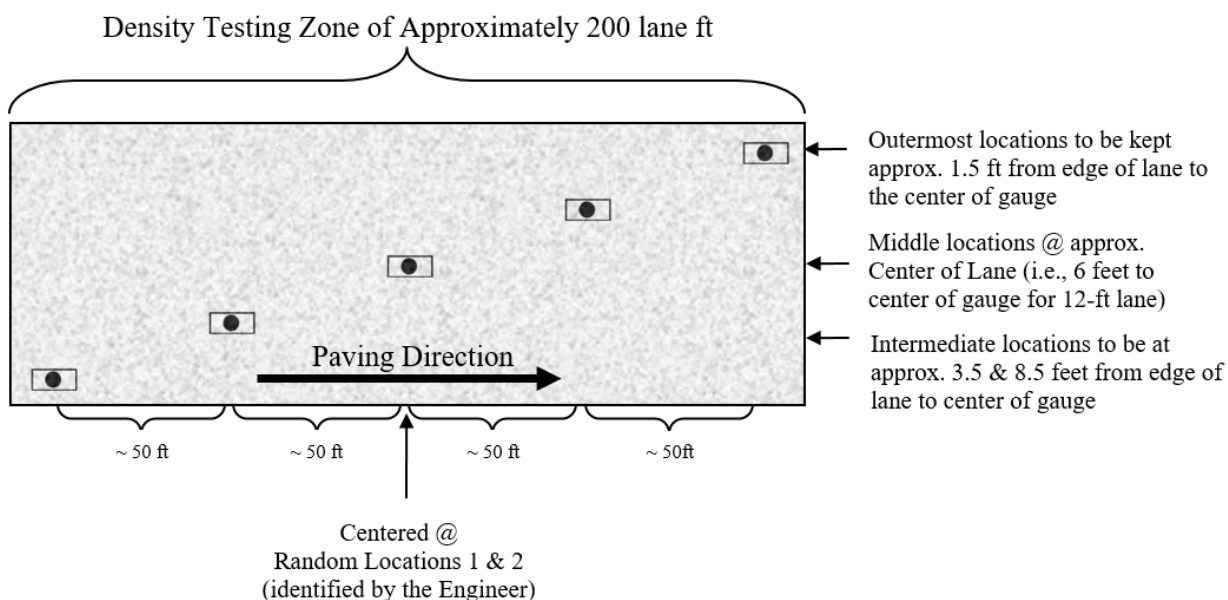



Figure 1: Nuclear/Core Correlation Location Layout

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

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

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

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

Individual locations are represented by the  symbol as seen in Figure 1 above. The symbol is two-part, comprised of the nuclear test locations and the location for coring the pavement, as distinguished here:



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



Figure 2: Nuclear gauge orientation for (a) 1st one-minute reading and (b) 2nd one-minute reading

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



Figure 3: Layout of raw gauge readings as recorded on pavement

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

Each core 100 or 150 mm (4 or 6 inches) in diameter will be taken at locations as identified in Figure 1. Each random core will be full thickness of the layer being placed. The contractor is responsible for thoroughly drying cores obtained from the mat in accordance with AASHTO R79 as modified by CMM 836.6.10 prior to using specimens for in-place density determination in accordance with AASHTO T 166 as modified by CMM 836.6.5.

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

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

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

For mainline density determination beyond the test strip, typical subplot lengths are 1500 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 is tested for density according to AASHTO T166 as modified in CMM 836.6.5. 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, testing of the cores, and filling of the core holes according to the guidance provided in the *WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip* portion of this document. The engineer 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.

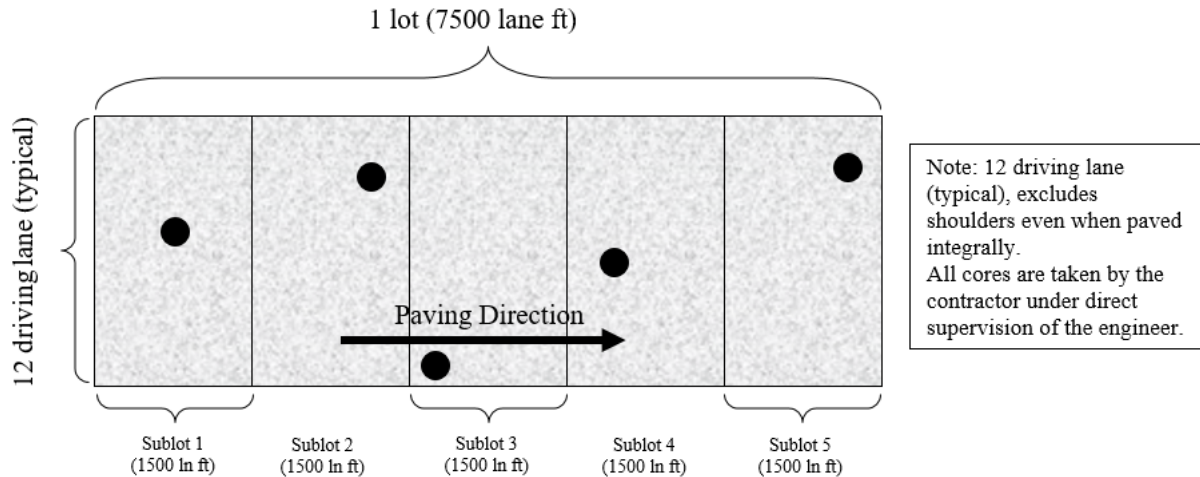


Figure 5: Example core density locations for traffic lanes

Sampling for WisDOT HMA PWL QMP Production

Sampling of HMA mix for QC, QV and Retained samples shall conform to CMM 836 except as modified here.

Delete CMM 836.4 Sampling Hot Mix Asphalt and replace with the following to update subplot tonnages:

Sampling Hot Mix Asphalt

At the beginning of the contract, the contractor determines the anticipated tonnage to be produced. The frequency of sampling is 1 per 750 tons (subplot) for QC and Retained Samples and 1 per 3750 tons (lot or 5 sublots) for QV as defined by the HMA PWL QMP article. A test sample is obtained randomly from each subplot. Each random sample shall be collected at the plant according to CMM 836.4.1 and 836.4.2. The contractor must 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 ASTM Method D-3665 or by using a calculator or computerized spreadsheet that has a random number generator. 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 should 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 should be taken in the next truck. Add a random sample for any fraction of 750 tons at the end of the contract. Lot size will consist of 3750 tons with sublots of 750 tons. Partial lots with less than three subplot tests will be included into the previous lot, by the engineer.

It'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.

QC, QV and retained samples shall be collected for all test strip and production mixture testing using a three-part splitting procedure according to CMM 836.5.2.

Calculation of PWL Mainline Tonnage Example

A mill and overlay project is 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:

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

33. HMA Pavement Longitudinal Joint Density, Core Pilot 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 at each applicable joint. Each companion location shares longitudinal stationing with a QV 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 will 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:
 - a) Testing at 50-foot increments both ahead and behind the unacceptable site
 - b) Continued 50-foot incremental testing until test values indicate higher than or equal to -3.0 percent from target joint density.
 - c) Materials within the incremental testing indicating lower than -3.0 percent from target joint density are defined as unacceptable and will be handled with remedial action as defined in the payment section of this document.
 - d) The remaining subplot average (exclusive of unacceptable material) will be determined by the first forward and backward 50-foot incremental tests that reach the criteria of higher than or equal to -3.0 percent from target joint density.

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

- (8) Joint density measurements will be kept separate from all other density measurements and entered as an individual data set into Atwood Systems.
- (9) Placement and removal of excess material outside of the final joint edge, to increase joint density at the longitudinal joint testing location, will be done at the contractor’s discretion and cost. This excess material and related labor will be considered waste and will not be paid for by the department. Joints with excess material placed outside of the final joint edge to increase joint density or where a notched wedge is used will be considered unconfined joints.

- (10) When not required by the contract, echelon paving may be performed at the contractor's discretion to increase longitudinal joint density and still remain eligible to earn incentive. The additional costs incurred related to echelon paving will not be paid for by the department. If lanes are paved in echelon, the contractor may choose to use a longitudinal vertical joint or notched wedge longitudinal joint as described in SDD 13c19 HMA Longitudinal Joints. Lanes paved in echelon shall be considered confined on both sides of the joint regardless of the selected joint design. The joint between echelon paved lanes shall be placed at the centerline or along lane lines.
- (11) When performing inlay paving below the elevation of the adjacent lane, the longitudinal joint along the adjacent lane to be paved shall be considered unconfined.

D Measurement

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

E Payment

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

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

PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY

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

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

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

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

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

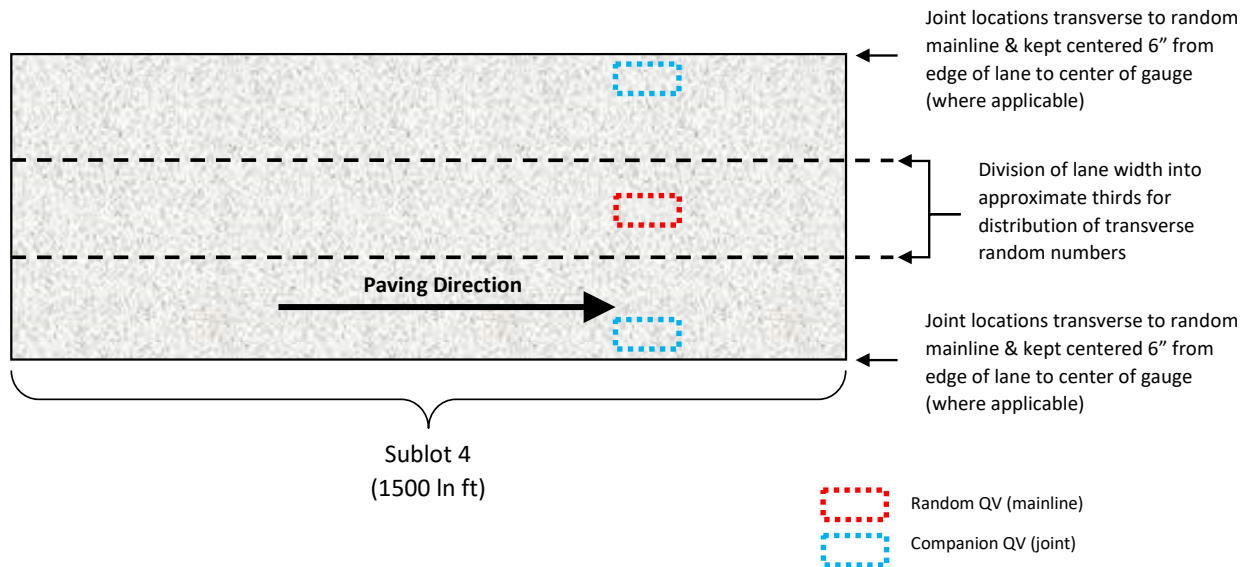
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

Appendix

WisDOT Longitudinal Joint – Core Density Layout

Each QV density location must have a companion density location at any applicable joint. This companion location must share longitudinal stationing with each QV density location and be located transversely with the center of the core 6-inches from the 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	\$0.40
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	\$0.40
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

34. 6-Inch Gate Valve and Box, Item SPV.0060.01.

A Description

This work consists of furnishing and installing water main valves, boxes, and valve box adapters, including any fittings, removal of existing valve and valve box, excavating, backfill and compaction, all according to the requirements of the plans, standard specifications and the Village of Trempealeau standard specifications for Watermain Materials and Install.

B Materials

VALVES. Valves shall meet AWWA C-509 and match the owner's standard. If the owner does not have a written standard the valves shall be full-opening, iron-body, non-rising stem, open to left, resilient seated wedge-type valves. All internal ferrous metal surfaces shall have an approved 6-mil, non-toxic, epoxy coating. Valves shall be American Flow Control 2500, Mueller #A-2360-20, Clow F-6100 epoxy-lined, or equal. End connections shall be mechanical joints.

All valves shall be of uniform make.

BOXES. The adjustable cast iron valve box with removable cover shall be Tyler Pipe 6860 or equal, screw-type, three pieces consisting of a cover, a tube extension section, a bottom section, and a base. The base shall completely overlap the valve box. The length shall be such that when extended to the specified depth of cover (7 feet minimum), there shall be not less than 6" overlap remaining between the top section and the next section.

VALVE BOX ADAPTERS. Each valve box shall be provided with a valve box adapter to help support the box on top of the valve to eliminate shifting and settling. The adapter shall be as manufactured by Adapter, Inc. or equal and include the epoxy coated support and a rubber gasket between the valve body and adapter. The adapter shall fit the valve furnished.

TYPE. Detailed information with regard to construction and operation shall be furnished to the engineer for approval before purchase by the contractor. If the proposed valves do not meet the engineer's approval, the contractor shall provide acceptable valves without additional cost to the owner.

JOINTS. Valves and fittings shall be furnished with mechanical joints consisting of high quality cast iron glands, rubber gaskets, and corten alloy bolts.

WRENCHES. The contractor shall furnish one extension wrench for each 100 valves installed, with a minimum of one. Each wrench shall be 18" longer than the depth of the trench. The wrenches shall fit the valves furnished.

C Construction

Water Valves to include a new valve box furnished and installed according to the Village of Trempealeau standard specifications for Watermain Materials and Install. Road boxes must be inspected before backfill.

The contractor shall install valves where indicated on plans. Valves shall be set on a solid concrete block (2"x 6"x18") and leveled.

Valve boxes shall be set over all valves unless valve manholes are specified.

The valves and boxes shall be installed in a vertical position as far as feasible. The box shall be suitably braced to prevent displacement during the backfilling. The top of the box shall be level with the finished grade of the street unless otherwise directed by the engineer. A sheet of 8 mil polyethylene shall be used to prevent bedding material from entering around the operating nut.

The Village shall be contacted a minimum of three businesses days prior to installation operations for their onsite evaluation.

City contact: Water/Sewer Superintendent
Todd Lakey
(608) 792-1735

D Measurement

The department will measure Water Valves per each valve and road box furnished and installed, 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	6-Inch Gate and Valve Box	EACH

Payment is full compensation for removal of any existing valve and box, furnishing and installing of valve and valve box per plans and specifications subject to the Village of Trempealeau and the engineer's approval.

35. Hydrant, Item SPV.0060.02.

A Description

This work consists of installing new fire hydrant and hydrant lead including removal of existing hydrant and hydrant lead, excavating, setting new hydrants, stone drain material, joint restraint, connection of hydrant lead to existing distribution system including fittings, backfill and compaction, all according to the requirements of the plans, the standard specifications and the Village of Trempealeau standard specifications for Watermain Materials and Install.

B Materials

HYDRANTS. All hydrants shall comply with AWWA C502 and match the owner's standard. If the owner does not have a written standard fire hydrants shall be 5" self-draining, dry-barrel type. Each hydrant shall have one pumper connection to match local standards and two 2-1/2" nozzles with National Standard threads and National Standard operating nut (1" pentagon). Hydrants shall open to the left (counter-clockwise). All hydrants shall be designed for the specified depth of cover (7'0" minimum) and include a 16" traffic section so the pumper connection shall be 24" above grade. Hydrants shall be of uniform make. Hydrants and fittings shall be furnished with mechanical joints, consisting of high quality cast iron glands, rubber gaskets, and corrosion-resistant bolts.

All hydrants shall be painted solid red or match the local standard. Hydrants shall be the local standard, Waterous Pacer or equal.

Hydrants shall be equipped with a 16" traffic flange located approximately 2" above grade to permit a "break away" of the hydrant barrel and stem.

CONNECTIONS. All hydrant connections shall consist of 6" Pressure Class 350 ductile iron pipe connecting the hydrant directly to the main line fitting. Whenever the main is 6" in diameter or over or a valve is provided on the lead, retainer glands or metal strapping shall be provided from the main line tee to the hydrant. Concrete blocking for the hydrant is required.

TYPE. The hydrants shall match the local standard and meet these specifications unless approved in writing. Detailed information with regard to construction and operation shall be furnished to the engineer before purchase by the contractor. If the hydrants do not meet the engineer's approval, the contractor shall provide acceptable hydrants without additional cost to the owner.

HYDRANT LEAD All hydrant leads shall be Class 350 Ductile Iron pipe with compact ductile iron fittings as specified in the Village of Trempealeau standard specifications for Watermain Materials and Install. Ductile iron pipe shall be polywrapped. Restraining glands shall be Mega-Lugs as manufactured by EBBA.

C Construction

Hydrant and hydrant lead shall be installed and tested according to the Village of Trempealeau standard specifications for Watermain Materials and Install. Road boxes must be inspected before backfill.

Hydrant units shall be installed or relocated by the contractor where indicated on the plans, unless otherwise directed by the engineer. The hydrant shall be installed according to the Standard Detail. Hydrants shall be set on solid concrete blocking and solidly blocked against the trench wall. The centerline of hydrants, when set, shall be vertical and the pumper nozzle shall face the curb. A minimum of 6 cubic feet of approved gravel shall be supplied for the hydrant drain. Whenever the main is over 6” in diameter or a valve is provided on the lead, metal strapping or retainer glands shall be provided from the main line tee to the hydrant. If hydrants are located in an area with known high groundwater, the drain ports shall be plugged and the barrel pumped dry. The engineer shall be notified prior to plugging drain ports.

The Village shall be contacted a minimum of three businesses days prior to installation operations for their onsite evaluation.

City contact: Water/Sewer Superintendent
Todd Lakey
(608) 792-1735

D Measurement

The department will measure Hydrant per each hydrant and hydrant lead furnished and installed, 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	Hydrant	EACH

Payment is full compensation for removal of existing hydrant and hydrant lead, furnishing and installing of new hydrant and hydrant lead per plans and specifications subject to the Village of Trempealeau and the engineer’s approval.

36. Relocate Existing Light Pole, Item SPV.0060.03.

A Description

This special provision describes salvaging, transporting, storing, and reinstalling decorative light pole assemblies according to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B Materials

Furnish all hardware and materials necessary to install salvaged decorative light pole assemblies.

C Construction

Notify Kim Ganz at the Village of Trempealeau at (608) 386-3731 at least ten working days prior to the removing the light pole assemblies. Coordinate acceptable dates for removal of the existing lighting system. Complete the removal work, relocation of the light pole and have light poles operational within 14 calendar days following the shutdown of an existing light pole. Limit the amount of nonoperational light poles to one light pole at a time.

Remove and salvage decorative light poles, bases, and luminaires per plan from their concrete footing and disassemble out of traffic. Ensure that access handhold doors and hardware remain intact. Inspect salvaged equipment for damage or defects. The department assumes that all equipment is in good condition and in working order prior to the contractor’s removal operation. Prior to removal, inspect and provide a list of any damaged or non-working lighting equipment to the engineer and the village. Any

equipment not identified as damaged or not working, prior to removal, shall be replaced by the contractor at no cost to the department.

If construction staging requires, store salvaged equipment that is to be reinstalled at other locations.

Reinstall decorative light pole, luminaire, and luminaire arm, including hardware, per plan and per manufacturer's recommendation.

Reinstall the decorative light pole and existing luminaire at the new locations shown on the plan and according to standard spec 652.3, 657.3, 659.3.

D Measurement

The department will measure Relocate Existing Light Pole by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Relocate Existing Light Pole	EACH

Payment is full compensation for removing and disassembling lighting equipment, scrapping of some materials, disposing of scrap material, protecting from damage, providing and installing all materials including hardware, fittings, mounting devices, and attachments necessary to completely install luminaire fixture and light pole.

37. Adjusting Water Valve Box, Item SPV.0060.04.

A Description

This work consists of adjusting water main valve boxes to match proposed grades. Should valve boxes be broken during adjustment a new valve box shall be provided. The valve box adjustment shall meet the standard specifications and the Village of Trempealeau standard specifications for Watermain Materials and Install.

B Materials

BOXES. The adjustable cast iron valve box with removable cover shall be Tyler Pipe 6860 or equal, screw-type, three pieces consisting of a cover, a tube extension section, a bottom section, and a base. The base shall completely overlap the valve box. The length shall be such that when extended to the specified depth of cover (7 feet minimum), there shall be not less than 6" overlap remaining between the top section and the next section.

C Construction

Adjusting Water Valve Box to include adjustment according to the Village of Trempealeau standard specifications for Watermain Materials and Install.

The Village shall be contacted a minimum of three businesses days prior to installation operations for their onsite evaluation.

City contact: Water/Sewer Superintendent
Todd Lakey
(608) 792-1735

D Measurement

The department will measure Adjusting Water Valve Box per each valve box adjusted, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Adjusting Water Valve Box	EACH

Payment is full compensation for adjustment of valve box elevations to match flush with sidewalk, pavement, or finished grades within the work area.

38. Adjusting Sanitary Manhole Cover, Item SPV.0060.05.

A Description

This work consists of adjusting sanitary manhole castings to match proposed grades by adding or removing adjustment rings. Should manhole castings be broken during adjustment a new casting shall be provided. The sanitary manhole casting adjustment shall meet the standard specifications standard specifications and the Village of Trempealeau standard specifications for Watermain Materials and Install.

B Materials

All manhole castings shall conform to the requirements of ASTM A-48, Class 35B (Gray Iron) with tensile strengths of 35,000 psi. Castings shall be of uniform quality and free from blowholes, shrinkage, distortion, cracks or other defects. They shall be smooth and well cleaned by shot blasting.

All manhole castings shall have machined bearing surfaces, concealed pick holes and be self-sealing.

The manhole castings shall be Neenah R1550 Type B, Campbell 1269 Heavy Duty or equal. Where water-tight covers are specified, the castings shall be equal to Neenah R1916-C with anchor bolts and bolt holes, Campbell Type A No. 1502 with gasket or equal.

C Construction

Manhole casting shall be adjusted according to the Village of Trempealeau standard specifications for Watermain Materials and Install.

The Village shall be contacted a minimum of three businesses days prior to installation operations for their onsite evaluation.

City contact: Water/Sewer Superintendent
Todd Lakey
(608) 792-1735

D Measurement

The department will measure Adjusting Sanitary Manhole Cover per each manhole casting adjusted, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Adjusting Sanitary Manhole Cover	EACH

Payment is full compensation for adjustment of sanitary manhole casting elevations to match flush with sidewalk, pavement, or finished grades within the work area.

39. Grading and Shaping Apron Endwall Installation, Item SPV.0060.06.

A Description

This special provision describes the excavating, filling, grading, shaping, compacting, and ditching to provide drainage necessary to accommodate installation of apron endwalls.

B Materials

All materials incorporated in the work shall be according to the pertinent provisions of the standard specifications and special provisions.

C Construction

All work shall be according to the pertinent provisions of the standard specifications.

Dispose of all unsuitable material according to standard spec 205.3.12.

D Measurement

The department will measure Grading and Shaping Apron Endwall Installation as a unit of work at each proposed endwall location, 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.0060.06	Grading and Shaping Apron Endwall Installation	EACH

Payment is full compensation for all excavation, grading, shaping, and compacting; any ditching necessary to provide drainage; and furnishing and placing fill.

Erosion control items will be measured and paid for separately under the pertinent items provided in the contract.

Finishing items including topsoil or salvaged topsoil, seed, fertilizer, and mulch will be measured and paid for separately under the pertinent items provided in the contract.

40. Grading and Shaping Curb Ramps, Item SPV.0060.07

A Description

This special provision describes the excavating, filling, grading, shaping, compacting, and ditching to provide drainage for all disturbed areas necessary for grading shaping and finishing curb ramps.

B Materials

All materials incorporated in the work shall be according to the pertinent provisions of the standard specifications and special provisions.

C Construction

All work shall be according to the pertinent provisions of the standard specifications.

Dispose of all unsuitable material according to standard spec 205.3.12.

D Measurement

The department will measure Grading and Shaping Curb Ramps as a unit of work at each curb ramp location, 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	Grading and Shaping Curb Ramps	EACH

Payment is full compensation for all excavation, grading, shaping, and compacting; any ditching necessary to provide drainage; and furnishing and placing fill.

41. Inlet Covers, Type H-D, Item SPV.0060.08.

A Description

This special provision describes furnishing and installing inlet covers according to the plan details, the pertinent requirements of standard spec 611 and as provided in this special provision.

B Materials

Provide an Inlet Cover Type H frame and grate with the curb box removed and replaced with a solid flat curb plate designed for heavy traffic loading as shown in the plan details. Neenah R-3290-A casting or approved equal.

C Construction

Construct according to standard spec 611.3.

D Measurement

The department will measure Inlet Covers Type H-D 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.0060.08	Inlet Covers, Type H-D	EACH

Payment is full compensation for providing covers, including frames, grates, curb plates and all other required materials and for installing and adjusting each cover.

42. Ditch Cleaning, Item SPV.0090.01.

A Description

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

B (Vacant)

C Construction

Grade and shape the ditch flow line as necessary to restore and allow unimpeded flow at inlet and outlet of each culvert pipe location. Do not excavate deeper than one foot. Grade and trim the lateral areas of disturbance to produce uniform side slope surfaces. Dispose of surplus material according to standard spec 205.3.12.

D Measurement

The department will measure Ditch Cleaning by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Ditch Cleaning	LF

Payment is full compensation for excavating material from existing ditch; for removal of brush and trees up to 3-inch diameter; for cleaning apron endwalls; for placing and finishing salvaged topsoil and/or top soil as needed; finishing of all disturbed areas necessary to blend the slopes resulting from ditch cleaning back into existing in-slopes and back slopes; and for disposing of all material.

43. Concrete Gutter 48-Inch, Item SPV.0090.02.

A Description

This special provision describes constructing concrete gutter to the pertinent requirements of standard spec 601 and conforming to the construction detail

B Materials

Furnish as described in the construction detail shown in the plans and as described in standard spec 601.2.

C Construction

Perform work according to standard spec 601.3.

D Measurement

The department will measure Concrete Gutter 48-Inch by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.08	Concrete Gutter 48-Inch	LF

Payment is full compensation for foundation excavation and preparation; special construction required at driveway and alley entrances, or curb ramps; for providing materials, including concrete, expansion joints; for placing, finishing, protecting, and curing and for forming joints.

44. Temporary Marking Line Removable Tape 6-Inch, Item SPV.0090.03.

A Description

This special provision describes providing and removing Temporary Marking Line Removable Tape 6-Inch.

B Materials

Furnish pavement marking materials conforming to standard spec 646.2.

C Construction

Construct conforming to standard spec 649.3.

D Measurement

The department will measure Temporary Marking Line Removable Tape 6-Inch by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	Temporary Marking Line Removable Tape 6-Inch	LF

Payment is full compensation for providing the marking or marker; for maintaining, and for removing the marking or marker. Placing and removing temporary markings applied under the standard spec 646 contractor option for same-day marking are incidental to the associated permanent pavement marking bid item.

The department will not pay for replacing marking or damaged marking.

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:

416.2.4 Concrete Pavement Repair and Replacement

Replace the entire text with the following effective with the November 2022 letting:

- (1) Except as specified in 416.3.6 for inlaid rumble strips, use grade C concrete as specified in 501.
- (2) The engineer will allow the contractor to open to construction and public traffic when the concrete reaches 2000 psi.

416.2.5 Special High Early Strength Concrete Pavement Repair and Replacement

416.2.5.1 Composition and Proportioning of Concrete

Replace paragraph one with the following effective with the November 2022 letting:

- (1) For the concrete mixture, use a minimum of 846 pounds of cementitious material per cubic yard of concrete. The engineer will allow the contractor to open to construction and public traffic when the concrete reaches 2000 psi. The contractor may add one or a combination of admixtures to the ingredients or to the mixture in order to obtain the required minimum strength and required air content. Do not retemper the concrete mixture.

455.2.4.3 Emulsified Asphalts

Replace paragraph one with the following effective with the November 2022 letting:

- (1) Furnish material conforming, before dilution, to the following:
 - Anionic emulsified asphalts^[1]..... AASHTO M140
 - Cationic emulsified asphalts^[1] AASHTO M208
 - Polymer-modified cationic emulsified asphalts AASHTO M316
- ^[1] Non-tracking emulsified asphalts shall conform to TABLE 455-1 for the type and grade specified.

TABLE 455-1 Requirements for Non-Tracking Emulsified Asphalt

PRODUCT	ANTT	CNTT
Saybolt Viscosity at 77°F (25°C), (AASHTO T 59), SFS	15-100	15-100
Paddle Viscosity at 77°F (25°C), (AASHTO T 382), cPs ^[1]	30-200	30-200
Storage Stability Test, 24 hr, (AASHTO T 59), %	1 max	1 max
Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	50 min	50 min
Sieve Test, No. 20 (850 µm), (AASHTO T 59), %	0.3	0.3
Penetration at 77°F (25°C), 100 g, 5 sec, (AASHTO T 49), dmm	10-40	10-40
Ash Content, (AASHTO T 111), %	1 max	1 max
Solubility in Trichlorethylene Test, (AASHTO T 44) ^[2]	97.5% min	97.5% min

^[1] Paddle Viscosity (AASHTO T 382) may be run in lieu of Saybolt Viscosity (AASHTO T 59).
^[2] The solubility in Trichlorethylene test (AASHTO T 44) may be run in lieu of Ash Content (AASHTO T 111).

455.2.5 Tack Coat

Replace paragraph one with the following effective with the November 2022 letting:

- (1) Under the Tack Coat bid item, furnish type SS-1h, CSS-1h, QS-1h, CQS-1h, ANTT, CNTT, or modified emulsified asphalt with an “h” suffix, unless the contract specifies otherwise.

710.5.7 Corrective Action

710.5.7.1 Optimized Aggregate Gradations

Replace paragraph one with the following effective with the November 2022 letting:

- (1) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by less than or equal to 1.0 percent on a single sieve size, notify the other party immediately and do one of the following:
 - Perform corrective action documented in the QC plan or as the engineer approves. Continue with the following:
 1. Document and provide corrective action results to the engineer as soon as they are available.
 2. Department will conduct two tests within the next business day after corrective action is complete.
 - If blended aggregate gradations are within the tarantula curve limits by the second department test:
 - Continue with concrete production.
 - Include a break in the 4-point running average.
 - For Class I Pavements: The department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
 - If blended aggregate gradations are not within the tarantula curve limits by the second department test and the contract requires an optimized aggregate gradation mix under 501.2.7.4.2.1(2), stop concrete production and submit a new optimized aggregate gradation mix design.
 - If blended aggregate gradations are not within the tarantula curve limits by the second department test and the contract does not require an optimized aggregate gradation mix under 501.2.7.4.2.1(2), stop concrete production and submit either a new optimized aggregate gradation mix design or a combined aggregate gradation mix design.
 - Submit a new optimized aggregate gradation mix design and perform the following:
 1. Restart control charts for the new mix design.
 2. Amend contractor Quality Control Plan

715.5 Payment

Replace the entire text with the following effective with the November 2022 letting:

715.5.1 General

- (1) The department will pay incentive for concrete strength under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
715.0502	Incentive Strength Concrete Structures	DOL
715.0603	Incentive Strength Concrete Barrier	DOL
715.0715	Incentive Flexural Strength Concrete Pavement	DOL
715.0720	Incentive Compressive Strength Concrete Pavement	DOL

- (2) Incentive payment may be more or less than the amount the schedule of items shows.
- (3) The department will administer disincentives for strength under the Disincentive Strength Concrete Structures, Disincentive Strength Concrete Barrier, Disincentive Flexural Strength Concrete Pavement, and Disincentive Compressive Strength Concrete Pavement, administrative items.
- (4) The department will adjust pay for each lot using PWL of the 28-day subplot average strengths for that lot. The department will measure PWL relative to strength lower specification limits as follows:
 - Compressive strength of 3700 psi for pavements.
 - Flexural strength of 650 psi for pavements.
 - Compressive strength of 4000 psi for structures and barrier.
- (5) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.
- (6) Submit test results to the department electronically using MRS software. The department will verify contractor data before determining pay adjustments.
- (7) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

715.5.2 Pavements

715.5.2.1 Compressive

- (1) The department will adjust pay for each lot using equation “QMP 3.01” as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 95 to 100	$(0.1 \times \text{PWL}) - 9.5$
>= 85 to < 95	0
>= 30 to < 85	$(1.5/55 \times \text{PWL}) - 127.5/55$
< 30	-1.50

- (2) The department will not pay incentive if the lot standard deviation is greater than 400 psi compressive.
- (3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive, but the department will assess a disincentive based on the individual subplot average strengths. The department will reduce pay for sublots with an average strength below 3700 psi compressive by \$1.50 per square yard.
- (4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, the department will adjust pay using strength results of the travel lane for integrally placed concrete shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

715.5.2.2 Flexural

- (1) The department will adjust pay for each lot using equation “QMP 6.02” as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 95 to 100	$(0.2 \times \text{PWL}) - 19$
>= 85 to < 95	0
>= 50 to < 85	$(2.0/35 \times \text{PWL}) - 170/35$
< 50	-2.00

- (2) The department will not pay incentive if the lot standard deviation is greater than 60 psi flexural.
- (3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive, but the department will assess a disincentive based on the individual subplot average strengths. The department will reduce pay for sublots with an average strength below 650 psi flexural by \$2.00 per square yard.
- (4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, the department will adjust pay using strength results of the travel lane for integrally placed concrete shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

715.5.3 Structures and Cast-in-Place Barrier

- (1) The department will adjust pay for each lot using equation “QMP 2.01” as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 99 to 100	10
>= 90 to < 99	0
>= 50 to < 90	$(7/8 \times \text{PWL}) - 78.75$
< 50	-35

- (2) The department will not pay incentive if the lot standard deviation is greater than 350 psi.
- (3) For lots with less than 4 sublots, there is no incentive, but the department will assess a disincentive based on the individual subplot average strengths. The department will reduce pay for sublots with an average strength below 4000 psi by \$35 per cubic yard.

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) to electronically submit certified payroll reports for contracts with federal funds and labor data for contracts with state funds only. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:
<https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx>
- (2) Ensure that all tiers of subcontractors, including all trucking firms, either submit their weekly certified payroll reports (contracts with federal funds) or labor data (contracts with state funds only) electronically through CRCS. 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 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 or by telephone. Contact Paul Ndon at (414) 438-4584 to schedule the training.
- (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) Firms wishing to export payroll/labor data from their computer system into CRCS should have their payroll coordinator contact Paul Ndon at paul.ndon@dot.wi.gov. Not every contractor's payroll system is capable of producing export files. For details, see Section 4.8 CPR Auto Submit (Data Mapping) on pages 49-50; 66-71 of the CRCS Payroll Manual at:
<https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf>

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 M-22-11 from the Office of Management and Budget: <https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf>) 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 smelting forward in the manufacturing process) 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 OMB M-22-11 and as referenced in CMM 228.5) must comply with Buy America. No exemptions (0.0%) are allowed.

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

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

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

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

Attach a list of iron or steel exemptions and their associated costs to the certification form.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	201.0120 Clearing	42.000 ID	_____.	_____.
0004	201.0205 Grubbing	2.000 STA	_____.	_____.
0006	201.0220 Grubbing	42.000 ID	_____.	_____.
0008	203.0100 Removing Small Pipe Culverts	2.000 EACH	_____.	_____.
0010	204.0100 Removing Concrete Pavement	14.000 SY	_____.	_____.
0012	204.0110 Removing Asphaltic Surface	1,287.000 SY	_____.	_____.
0014	204.0115 Removing Asphaltic Surface Butt Joints	1,319.000 SY	_____.	_____.
0016	204.0120 Removing Asphaltic Surface Milling	61,900.000 SY	_____.	_____.
0018	204.0150 Removing Curb & Gutter	1,198.000 LF	_____.	_____.
0020	204.0155 Removing Concrete Sidewalk	455.000 SY	_____.	_____.
0022	204.0195 Removing Concrete Bases	2.000 EACH	_____.	_____.
0024	204.9060.S Removing (item description) 01. Apron Endwall for CPCS 24-Inch	1.000 EACH	_____.	_____.
0026	204.9090.S Removing (item description) 01. CPRC 24-Inch	8.000 LF	_____.	_____.
0028	204.9090.S Removing (item description) 02. CPRC 72-Inch	8.000 LF	_____.	_____.
0030	205.0100 Excavation Common	1,348.000 CY	_____.	_____.
0032	208.1500.S Temporary Lane Shift During Culvert Work	4.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0034	211.0101 Prepare Foundation for Asphaltic Paving (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0036	211.0700.S Prepare Foundation for CIR Base Layer (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0038	211.0800.S Base Repair for CIR Layer	800.000 CY	_____.	_____.
0040	213.0100 Finishing Roadway (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0042	305.0110 Base Aggregate Dense 3/4-Inch	4,970.000 TON	_____.	_____.
0044	305.0120 Base Aggregate Dense 1 1/4-Inch	1,070.000 TON	_____.	_____.
0046	305.0500 Shaping Shoulders	494.000 STA	_____.	_____.
0048	327.1000.S CIR Asphaltic Base Layer	94,430.000 SY	_____.	_____.
0050	405.1000 Stamping Colored Concrete	4.400 CY	_____.	_____.
0052	415.0060 Concrete Pavement 6-Inch	14.000 SY	_____.	_____.
0054	416.0610 Drilled Tie Bars	135.000 EACH	_____.	_____.
0056	455.0605 Tack Coat	20,824.000 GAL	_____.	_____.
0058	455.0770.S Asphalt Stabilizing Agent	495.000 TON	_____.	_____.
0060	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.	_____.
0062	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	4.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0064	460.6645 HMA Pavement 5 MT 58-34 V	21,725.000 TON	_____.	_____.
0066	460.9000.S Material Transfer Vehicle 01. 7140-00-70	1.000 EACH	_____.	_____.
0068	465.0105 Asphaltic Surface	994.000 TON	_____.	_____.
0070	465.0110 Asphaltic Surface Patching	179.000 TON	_____.	_____.
0072	465.0120 Asphaltic Surface Driveways and Field Entrances	131.000 TON	_____.	_____.
0074	465.0425 Asphaltic Shoulder Rumble Strips 2-Lane Rural	44,758.000 LF	_____.	_____.
0076	465.0475 Asphalt Centerline Rumble Strips 2-Lane Rural	21,506.000 LF	_____.	_____.
0078	520.1024 Apron Endwalls for Culvert Pipe 24-Inch	2.000 EACH	_____.	_____.
0080	520.1036 Apron Endwalls for Culvert Pipe 36-Inch	2.000 EACH	_____.	_____.
0082	520.2024 Culvert Pipe Temporary 24-Inch	8.000 LF	_____.	_____.
0084	520.2030 Culvert Pipe Temporary 30-Inch	8.000 LF	_____.	_____.
0086	520.3324 Culvert Pipe Class III-A 24-Inch	88.000 LF	_____.	_____.
0088	520.4136 Culvert Pipe Class IV 36-Inch	56.000 LF	_____.	_____.
0090	520.8700 Cleaning Culvert Pipes	5.000 EACH	_____.	_____.
0092	520.9700.S Culvert Pipe Liners (size) 01. 36-Inch	86.000 LF	_____.	_____.
0094	520.9750.S Cleaning Culvert Pipes for Liner Verification	1.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0096	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	1.000 EACH	_____.	_____.
0098	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	8.000 LF	_____.	_____.
0100	522.0172 Culvert Pipe Reinforced Concrete Class III 72-Inch	8.000 LF	_____.	_____.
0102	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	6.000 EACH	_____.	_____.
0104	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	2.000 EACH	_____.	_____.
0106	522.1054 Apron Endwalls for Culvert Pipe Reinforced Concrete 54-Inch	2.000 EACH	_____.	_____.
0108	522.1072 Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	6.000 EACH	_____.	_____.
0110	601.0407 Concrete Curb & Gutter 18-Inch Type D	32.000 LF	_____.	_____.
0112	601.0409 Concrete Curb & Gutter 30-Inch Type A	31.000 LF	_____.	_____.
0114	601.0411 Concrete Curb & Gutter 30-Inch Type D	1,159.000 LF	_____.	_____.
0116	601.0600 Concrete Curb Pedestrian	121.000 LF	_____.	_____.
0118	602.0405 Concrete Sidewalk 4-Inch	4,800.000 SF	_____.	_____.
0120	602.0505 Curb Ramp Detectable Warning Field Yellow	408.000 SF	_____.	_____.
0122	602.0605 Curb Ramp Detectable Warning Field Radial Yellow	17.000 SF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0124	606.0200 Riprap Medium	25.000 CY	_____.	_____.
0126	606.0400 Riprap Extra-Heavy	11.000 CY	_____.	_____.
0128	611.0530 Manhole Covers Type J	6.000 EACH	_____.	_____.
0130	611.8110 Adjusting Manhole Covers	10.000 EACH	_____.	_____.
0132	611.8115 Adjusting Inlet Covers	20.000 EACH	_____.	_____.
0134	611.8120.S Cover Plates Temporary	33.000 EACH	_____.	_____.
0136	611.9800.S Pipe Grates	1.000 EACH	_____.	_____.
0138	618.0100 Maintenance And Repair of Haul Roads (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0140	619.1000 Mobilization	1.000 EACH	_____.	_____.
0142	624.0100 Water	89.000 MGAL	_____.	_____.
0144	625.0100 Topsoil	6,450.000 SY	_____.	_____.
0146	628.1504 Silt Fence	8,275.000 LF	_____.	_____.
0148	628.1520 Silt Fence Maintenance	8,275.000 LF	_____.	_____.
0150	628.1905 Mobilizations Erosion Control	4.000 EACH	_____.	_____.
0152	628.1910 Mobilizations Emergency Erosion Control	2.000 EACH	_____.	_____.
0154	628.2004 Erosion Mat Class I Type B	5,850.000 SY	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0156	628.2006 Erosion Mat Urban Class I Type A	600.000 SY	_____.	_____.
0158	628.7005 Inlet Protection Type A	5.000 EACH	_____.	_____.
0160	628.7015 Inlet Protection Type C	45.000 EACH	_____.	_____.
0162	628.7504 Temporary Ditch Checks	200.000 LF	_____.	_____.
0164	628.7555 Culvert Pipe Checks	17.000 EACH	_____.	_____.
0166	628.7570 Rock Bags	175.000 EACH	_____.	_____.
0168	629.0210 Fertilizer Type B	4.500 CWT	_____.	_____.
0170	630.0110 Seeding Mixture No. 10	90.000 LB	_____.	_____.
0172	630.0140 Seeding Mixture No. 40	10.000 LB	_____.	_____.
0174	630.0200 Seeding Temporary	25.000 LB	_____.	_____.
0176	630.0500 Seed Water	115.000 MGAL	_____.	_____.
0178	633.5200 Markers Culvert End	24.000 EACH	_____.	_____.
0180	634.0618 Posts Wood 4x6-Inch X 18-FT	2.000 EACH	_____.	_____.
0182	638.2102 Moving Signs Type II	11.000 EACH	_____.	_____.
0184	638.3000 Removing Small Sign Supports	1.000 EACH	_____.	_____.
0186	638.4000 Moving Small Sign Supports	8.000 EACH	_____.	_____.
0188	642.5001 Field Office Type B	1.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0190	643.0300 Traffic Control Drums	15,100.000 DAY	_____.	_____.
0192	643.0420 Traffic Control Barricades Type III	200.000 DAY	_____.	_____.
0194	643.0705 Traffic Control Warning Lights Type A	400.000 DAY	_____.	_____.
0196	643.0715 Traffic Control Warning Lights Type C	300.000 DAY	_____.	_____.
0198	643.0900 Traffic Control Signs	8,800.000 DAY	_____.	_____.
0200	643.0920 Traffic Control Covering Signs Type II	12.000 EACH	_____.	_____.
0202	643.1000 Traffic Control Signs Fixed Message	64.000 SF	_____.	_____.
0204	643.3105 Temporary Marking Line Paint 4-Inch	25,038.000 LF	_____.	_____.
0206	643.3120 Temporary Marking Line Epoxy 4-Inch	22,551.000 LF	_____.	_____.
0208	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0210	644.1440 Temporary Pedestrian Surface Matting	1,025.000 SF	_____.	_____.
0212	644.1601 Temporary Pedestrian Curb Ramp	900.000 DAY	_____.	_____.
0214	644.1605 Temporary Pedestrian Detectable Warning Field	410.000 SF	_____.	_____.
0216	644.1810 Temporary Pedestrian Barricade	5,500.000 LF	_____.	_____.
0218	645.0120 Geotextile Type HR	100.000 SY	_____.	_____.
0220	646.1020 Marking Line Epoxy 4-Inch	24,796.000 LF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0222	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	48,617.000 LF	_____.	_____.
0224	646.3040 Marking Line Grooved Wet Ref Epoxy 8-Inch	1,152.000 LF	_____.	_____.
0226	646.4520 Marking Line Same Day Epoxy 4-Inch	7,035.000 LF	_____.	_____.
0228	646.5020 Marking Arrow Epoxy	2.000 EACH	_____.	_____.
0230	646.5120 Marking Word Epoxy	1.000 EACH	_____.	_____.
0232	646.5220 Marking Symbol Epoxy	1.000 EACH	_____.	_____.
0234	646.6120 Marking Stop Line Epoxy 18-Inch	20.000 LF	_____.	_____.
0236	646.7120 Marking Diagonal Epoxy 12-Inch	325.000 LF	_____.	_____.
0238	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	417.000 LF	_____.	_____.
0240	646.8120 Marking Curb Epoxy	2,000.000 LF	_____.	_____.
0242	646.8320 Marking Parking Stall Epoxy	306.000 LF	_____.	_____.
0244	646.9000 Marking Removal Line 4-Inch	12,100.000 LF	_____.	_____.
0246	650.6000 Construction Staking Pipe Culverts	2.000 EACH	_____.	_____.
0248	650.8000 Construction Staking Resurfacing Reference	31,908.000 LF	_____.	_____.
0250	650.8501 Construction Staking Electrical Installations (project) 01. 7140-00-70	1.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0252	650.9000 Construction Staking Curb Ramps	37.000 EACH	_____.	_____.
0254	650.9500 Construction Staking Sidewalk (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0256	650.9911 Construction Staking Supplemental Control (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0258	652.0215 Conduit Rigid Nonmetallic Schedule 40 1 1/4-Inch	30.000 LF	_____.	_____.
0260	654.0105 Concrete Bases Type 5	2.000 EACH	_____.	_____.
0262	655.0610 Electrical Wire Lighting 12 AWG	250.000 LF	_____.	_____.
0264	655.0625 Electrical Wire Lighting 6 AWG	500.000 LF	_____.	_____.
0266	690.0150 Sawing Asphalt	2,553.000 LF	_____.	_____.
0268	690.0250 Sawing Concrete	344.000 LF	_____.	_____.
0270	715.0720 Incentive Compressive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0272	740.0440 Incentive IRI Ride	23,740.000 DOL	1.00000	23,740.00
0274	SPV.0055 Special 01. Incentive Density PWL HMA Pavement	13,400.000 DOL	_____.	_____.
0276	SPV.0055 Special 02. Incentive Air Voids HMA Pavement	16,800.000 DOL	_____.	_____.
0278	SPV.0055 Special 03. Incentive Density HMA Pavement Longitudinal Joints	33,170.000 DOL	_____.	_____.
0280	SPV.0060 Special 01. 6-Inch Gate Valve and Box	9.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0282	SPV.0060 Special 02. Hydrant	2.000 EACH	_____.	_____.
0284	SPV.0060 Special 03. Relocate Existing Light Pole	2.000 EACH	_____.	_____.
0286	SPV.0060 Special 04. Adjusting Water Valve Box	11.000 EACH	_____.	_____.
0288	SPV.0060 Special 05. Adjusting Sanitary Manhole Cover	17.000 EACH	_____.	_____.
0290	SPV.0060 Special 06. Grading and Shaping Apron Endwall Installation	17.000 EACH	_____.	_____.
0292	SPV.0060 Special 07. Grading and Shaping Curb Ramps	37.000 EACH	_____.	_____.
0294	SPV.0060 Special 08. Inlet Covers, Type H-D	4.000 EACH	_____.	_____.
0296	SPV.0090 Special 01. Ditch Cleaning	1,075.000 LF	_____.	_____.
0298	SPV.0090 Special 02. Concrete Gutter 48-inch	27.000 LF	_____.	_____.
0300	SPV.0090 Special 03. Temporary Marking Line Removable Tape 6-Inch	1,000.000 LF	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.

PLEASE ATTACH ADDENDA HERE



Wisconsin Department of Transportation

January 24, 2023

**Division of Transportation Systems
Development**

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

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

NOTICE TO ALL CONTRACTORS:

Proposal #44: 7140-00-70
La Crosse - Trempealeau
La Crosse/Tremp Co Ln - 10th St
STH 35
Trempealeau County

Letting of February 14, 2023

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

Special Provisions:

Revised Special Provisions	
Article No.	Description
21	Cold In-Place Recycling (CIR) Asphalt Base Layer, Item 327.1000.S; Asphalt Stabilizing Agent, Item 455.0770.S

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

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01

7140-00-70

January 24, 2023

Special Provisions

**21. Cold In-Place Recycling (CIR) Asphalt Base Layer, Item 327.1000.S;
Asphalt Stabilizing Agent, Item 455.0770.S.**

Replace entire section titled C.7.3 Surfacing with the following.

C.7.3 Surfacing

- (1) Surfacing materials, equipment, and construction methods shall be according to the applicable sections of the standard specs or contract special provisions.
- (2) Paving of final surfacing (for single layer) or leveling/lower layer of HMA on the cured CIR sections shall not be conducted until the moisture content in the CIR layer reduces to 2.50% or less.
- (3) The final surfacing (for single layer) or leveling/lower layer shall be placed on the CIR layer within 10 calendar days once a section of the CIR layer is considered cured per section B.4.5.
- (4) After any rain event, the excess moisture in the CIR layer shall be allowed to dry before paving the final surfacing (for single layer) or leveling/lower HMA layer. The contractor and the engineer should inspect the CIR layer to determine suitability for surfacing.

END OF ADDENDUM



Wisconsin Department of Transportation

Division of Transportation Systems Development

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

January 26, 2023

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

NOTICE TO ALL CONTRACTORS:

Proposal #44: 7140-00-70
La Crosse – Trempealeau
La Crosse/Tremp Co Ln to 10th St
STH 35
Trempealeau County

Letting of February 14, 2023

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

Special Provisions:

Added Special Provisions	
Article No.	Description
33	Pipe Grates, 24-Inch, Item 611.9800.S.01

Deleted Special Provisions	
Article No.	Description
15	Pipe Grates

Schedule of Items:

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
611.9800.S.01	Pipe Grates, 24-Inch	Each	0	1	1

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
611.9800.S	Pipe Grates	Each	1	-1	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
84	Miscellaneous Quantities (updated Pipe Grates bid item)

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

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 02

7140-00-70

January 26, 2023

Special Provisions

15. DELETED

33. Pipe Grates, 24-Inch, Item 611.9800.S.01.

A Description

This special provision describes providing pipe grates for pipe apron endwalls as detailed in the plans.

B Materials

Furnish steel conforming to the requirements of standard spec 506.2.2.1. Furnish steel pipe conforming to the requirements of standard spec 506.2.3.6.

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction

Repair pipes, rods, angles and brackets on which the galvanized coating has been damaged according to the requirements of AASHTO M36.

D Measurement

The department will measure Pipe Grates in units of work, where one unit is one grate, 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
611.9800.S.01	Pipe Grates, 24-Inch	EACH

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to apron endwalls.

stp-611-010 (20230113)

Schedule of Items

Attached, dated January 26, 2023, are the revised Schedule of Items Pages 1 – 12.

Plan Sheets

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

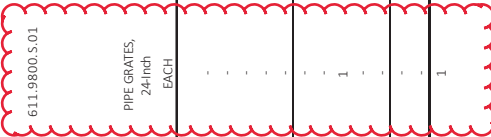
Revised: 84

END OF ADDENDUM

CULVERTS

CATEGORY	LOCATION	REMOVING (01. APRON ENDWALL FOR CPCS 24-INCH) EACH	REMOVING (ITEM DESCRIPTION) (01. APRON ENDWALL FOR CPCS 24-INCH) LF	REMOVING (ITEM DESCRIPTION) (02. CPVC 72-INCH) LF	APRON ENDWALLS FOR CULVERT PIPE 24-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE 36-INCH EACH	CULVERT PIPE CLASS III-A 24-INCH LF	CULVERT PIPE CLASS III-A 36-INCH LF	CLEANING CULVERT PIPES (01. 36-INCH) LF	CULVERT PIPE LINERS (SIZE) (01. 36-INCH) LF	CLEANING CULVERT PIPES EACH	CLEANING CULVERT PIPES FOR LINER VERIFICATION EACH	APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	520.9750.5	520.9700.5.01	520.9700.5.01	521.1024
0010	CULVERT 70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 100	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 160	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 180	1	-	-	-	-	-	-	-	86	-	1	-	-	-	-	-
0010	CULVERT 210	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 220	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	TOTAL 0010	2	1	8	2	2	8	56	5	86	5	1	-	-	-	-	1

CATEGORY	LOCATION	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 72-INCH LF	CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 54-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH EACH	
522.0124	522.0172	522.1024	522.1030	522.1054	522.1072	606.0200	606.0400	633.5200	645.0120	645.0120	645.0120	645.0120	645.0120	645.0120	645.0120	645.0120	645.0120	645.0120	645.0120
0010	CULVERT 70	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 90	8	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 100	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 110	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 120	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 130	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 150	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	CULVERT 220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	TOTAL 0010	8	8	6	2	2	25	11	100	17	1,075	-	-	-	-	-	-	-	-



Addendum No. 02
ID 7140-00-70
Revised Sheet 80
January 26, 2023

NOTE: ALL CPVC SHALL BE TIED TO EXISTING SECTIONS AND TO NEW ENDWALLS.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	201.0120 Clearing	42.000 ID	_____.	_____.
0004	201.0205 Grubbing	2.000 STA	_____.	_____.
0006	201.0220 Grubbing	42.000 ID	_____.	_____.
0008	203.0100 Removing Small Pipe Culverts	2.000 EACH	_____.	_____.
0010	204.0100 Removing Concrete Pavement	14.000 SY	_____.	_____.
0012	204.0110 Removing Asphaltic Surface	1,287.000 SY	_____.	_____.
0014	204.0115 Removing Asphaltic Surface Butt Joints	1,319.000 SY	_____.	_____.
0016	204.0120 Removing Asphaltic Surface Milling	61,900.000 SY	_____.	_____.
0018	204.0150 Removing Curb & Gutter	1,198.000 LF	_____.	_____.
0020	204.0155 Removing Concrete Sidewalk	455.000 SY	_____.	_____.
0022	204.0195 Removing Concrete Bases	2.000 EACH	_____.	_____.
0024	204.9060.S Removing (item description) 01. Apron Endwall for CPCS 24-Inch	1.000 EACH	_____.	_____.
0026	204.9090.S Removing (item description) 01. CPRC 24-Inch	8.000 LF	_____.	_____.
0028	204.9090.S Removing (item description) 02. CPRC 72-Inch	8.000 LF	_____.	_____.
0030	205.0100 Excavation Common	1,348.000 CY	_____.	_____.
0032	208.1500.S Temporary Lane Shift During Culvert Work	4.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0034	211.0101 Prepare Foundation for Asphaltic Paving (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0036	211.0700.S Prepare Foundation for CIR Base Layer (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0038	211.0800.S Base Repair for CIR Layer	800.000 CY	_____.	_____.
0040	213.0100 Finishing Roadway (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0042	305.0110 Base Aggregate Dense 3/4-Inch	4,970.000 TON	_____.	_____.
0044	305.0120 Base Aggregate Dense 1 1/4-Inch	1,070.000 TON	_____.	_____.
0046	305.0500 Shaping Shoulders	494.000 STA	_____.	_____.
0048	327.1000.S CIR Asphaltic Base Layer	94,430.000 SY	_____.	_____.
0050	405.1000 Stamping Colored Concrete	4.400 CY	_____.	_____.
0052	415.0060 Concrete Pavement 6-Inch	14.000 SY	_____.	_____.
0054	416.0610 Drilled Tie Bars	135.000 EACH	_____.	_____.
0056	455.0605 Tack Coat	20,824.000 GAL	_____.	_____.
0058	455.0770.S Asphalt Stabilizing Agent	495.000 TON	_____.	_____.
0060	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.	_____.
0062	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	4.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20230214044 Project(s): 7140-00-70

Federal ID(s): N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0064	460.6645 HMA Pavement 5 MT 58-34 V	21,725.000 TON	_____.	_____.
0066	460.9000.S Material Transfer Vehicle 01. 7140-00-70	1.000 EACH	_____.	_____.
0068	465.0105 Asphaltic Surface	994.000 TON	_____.	_____.
0070	465.0110 Asphaltic Surface Patching	179.000 TON	_____.	_____.
0072	465.0120 Asphaltic Surface Driveways and Field Entrances	131.000 TON	_____.	_____.
0074	465.0425 Asphaltic Shoulder Rumble Strips 2-Lane Rural	44,758.000 LF	_____.	_____.
0076	465.0475 Asphalt Centerline Rumble Strips 2-Lane Rural	21,506.000 LF	_____.	_____.
0078	520.1024 Apron Endwalls for Culvert Pipe 24-Inch	2.000 EACH	_____.	_____.
0080	520.1036 Apron Endwalls for Culvert Pipe 36-Inch	2.000 EACH	_____.	_____.
0082	520.2024 Culvert Pipe Temporary 24-Inch	8.000 LF	_____.	_____.
0084	520.2030 Culvert Pipe Temporary 30-Inch	8.000 LF	_____.	_____.
0086	520.3324 Culvert Pipe Class III-A 24-Inch	88.000 LF	_____.	_____.
0088	520.4136 Culvert Pipe Class IV 36-Inch	56.000 LF	_____.	_____.
0090	520.8700 Cleaning Culvert Pipes	5.000 EACH	_____.	_____.
0092	520.9700.S Culvert Pipe Liners (size) 01. 36-Inch	86.000 LF	_____.	_____.
0094	520.9750.S Cleaning Culvert Pipes for Liner Verification	1.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0096	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	1.000 EACH	_____.	_____.
0098	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	8.000 LF	_____.	_____.
0100	522.0172 Culvert Pipe Reinforced Concrete Class III 72-Inch	8.000 LF	_____.	_____.
0102	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	6.000 EACH	_____.	_____.
0104	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	2.000 EACH	_____.	_____.
0106	522.1054 Apron Endwalls for Culvert Pipe Reinforced Concrete 54-Inch	2.000 EACH	_____.	_____.
0108	522.1072 Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	6.000 EACH	_____.	_____.
0110	601.0407 Concrete Curb & Gutter 18-Inch Type D	32.000 LF	_____.	_____.
0112	601.0409 Concrete Curb & Gutter 30-Inch Type A	31.000 LF	_____.	_____.
0114	601.0411 Concrete Curb & Gutter 30-Inch Type D	1,159.000 LF	_____.	_____.
0116	601.0600 Concrete Curb Pedestrian	121.000 LF	_____.	_____.
0118	602.0405 Concrete Sidewalk 4-Inch	4,800.000 SF	_____.	_____.
0120	602.0505 Curb Ramp Detectable Warning Field Yellow	408.000 SF	_____.	_____.
0122	602.0605 Curb Ramp Detectable Warning Field Radial Yellow	17.000 SF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0124	606.0200 Riprap Medium	25.000 CY	_____.	_____.
0126	606.0400 Riprap Extra-Heavy	11.000 CY	_____.	_____.
0128	611.0530 Manhole Covers Type J	6.000 EACH	_____.	_____.
0130	611.8110 Adjusting Manhole Covers	10.000 EACH	_____.	_____.
0132	611.8115 Adjusting Inlet Covers	20.000 EACH	_____.	_____.
0134	611.8120.S Cover Plates Temporary	33.000 EACH	_____.	_____.
0138	618.0100 Maintenance And Repair of Haul Roads (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0140	619.1000 Mobilization	1.000 EACH	_____.	_____.
0142	624.0100 Water	89.000 MGAL	_____.	_____.
0144	625.0100 Topsoil	6,450.000 SY	_____.	_____.
0146	628.1504 Silt Fence	8,275.000 LF	_____.	_____.
0148	628.1520 Silt Fence Maintenance	8,275.000 LF	_____.	_____.
0150	628.1905 Mobilizations Erosion Control	4.000 EACH	_____.	_____.
0152	628.1910 Mobilizations Emergency Erosion Control	2.000 EACH	_____.	_____.
0154	628.2004 Erosion Mat Class I Type B	5,850.000 SY	_____.	_____.
0156	628.2006 Erosion Mat Urban Class I Type A	600.000 SY	_____.	_____.



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0158	628.7005 Inlet Protection Type A	5.000 EACH	_____.	_____.
0160	628.7015 Inlet Protection Type C	45.000 EACH	_____.	_____.
0162	628.7504 Temporary Ditch Checks	200.000 LF	_____.	_____.
0164	628.7555 Culvert Pipe Checks	17.000 EACH	_____.	_____.
0166	628.7570 Rock Bags	175.000 EACH	_____.	_____.
0168	629.0210 Fertilizer Type B	4.500 CWT	_____.	_____.
0170	630.0110 Seeding Mixture No. 10	90.000 LB	_____.	_____.
0172	630.0140 Seeding Mixture No. 40	10.000 LB	_____.	_____.
0174	630.0200 Seeding Temporary	25.000 LB	_____.	_____.
0176	630.0500 Seed Water	115.000 MGAL	_____.	_____.
0178	633.5200 Markers Culvert End	24.000 EACH	_____.	_____.
0180	634.0618 Posts Wood 4x6-Inch X 18-FT	2.000 EACH	_____.	_____.
0182	638.2102 Moving Signs Type II	11.000 EACH	_____.	_____.
0184	638.3000 Removing Small Sign Supports	1.000 EACH	_____.	_____.
0186	638.4000 Moving Small Sign Supports	8.000 EACH	_____.	_____.
0188	642.5001 Field Office Type B	1.000 EACH	_____.	_____.
0190	643.0300 Traffic Control Drums	15,100.000 DAY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0192	643.0420 Traffic Control Barricades Type III	200.000 DAY	_____.	_____.
0194	643.0705 Traffic Control Warning Lights Type A	400.000 DAY	_____.	_____.
0196	643.0715 Traffic Control Warning Lights Type C	300.000 DAY	_____.	_____.
0198	643.0900 Traffic Control Signs	8,800.000 DAY	_____.	_____.
0200	643.0920 Traffic Control Covering Signs Type II	12.000 EACH	_____.	_____.
0202	643.1000 Traffic Control Signs Fixed Message	64.000 SF	_____.	_____.
0204	643.3105 Temporary Marking Line Paint 4-Inch	25,038.000 LF	_____.	_____.
0206	643.3120 Temporary Marking Line Epoxy 4-Inch	22,551.000 LF	_____.	_____.
0208	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0210	644.1440 Temporary Pedestrian Surface Matting	1,025.000 SF	_____.	_____.
0212	644.1601 Temporary Pedestrian Curb Ramp	900.000 DAY	_____.	_____.
0214	644.1605 Temporary Pedestrian Detectable Warning Field	410.000 SF	_____.	_____.
0216	644.1810 Temporary Pedestrian Barricade	5,500.000 LF	_____.	_____.
0218	645.0120 Geotextile Type HR	100.000 SY	_____.	_____.
0220	646.1020 Marking Line Epoxy 4-Inch	24,796.000 LF	_____.	_____.
0222	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	48,617.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0224	646.3040 Marking Line Grooved Wet Ref Epoxy 8-Inch	1,152.000 LF	_____.	_____.
0226	646.4520 Marking Line Same Day Epoxy 4-Inch	7,035.000 LF	_____.	_____.
0228	646.5020 Marking Arrow Epoxy	2.000 EACH	_____.	_____.
0230	646.5120 Marking Word Epoxy	1.000 EACH	_____.	_____.
0232	646.5220 Marking Symbol Epoxy	1.000 EACH	_____.	_____.
0234	646.6120 Marking Stop Line Epoxy 18-Inch	20.000 LF	_____.	_____.
0236	646.7120 Marking Diagonal Epoxy 12-Inch	325.000 LF	_____.	_____.
0238	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	417.000 LF	_____.	_____.
0240	646.8120 Marking Curb Epoxy	2,000.000 LF	_____.	_____.
0242	646.8320 Marking Parking Stall Epoxy	306.000 LF	_____.	_____.
0244	646.9000 Marking Removal Line 4-Inch	12,100.000 LF	_____.	_____.
0246	650.6000 Construction Staking Pipe Culverts	2.000 EACH	_____.	_____.
0248	650.8000 Construction Staking Resurfacing Reference	31,908.000 LF	_____.	_____.
0250	650.8501 Construction Staking Electrical Installations (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0252	650.9000 Construction Staking Curb Ramps	37.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0254	650.9500 Construction Staking Sidewalk (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0256	650.9911 Construction Staking Supplemental Control (project) 01. 7140-00-70	1.000 EACH	_____.	_____.
0258	652.0215 Conduit Rigid Nonmetallic Schedule 40 1 1/4-Inch	30.000 LF	_____.	_____.
0260	654.0105 Concrete Bases Type 5	2.000 EACH	_____.	_____.
0262	655.0610 Electrical Wire Lighting 12 AWG	250.000 LF	_____.	_____.
0264	655.0625 Electrical Wire Lighting 6 AWG	500.000 LF	_____.	_____.
0266	690.0150 Sawing Asphalt	2,553.000 LF	_____.	_____.
0268	690.0250 Sawing Concrete	344.000 LF	_____.	_____.
0270	715.0720 Incentive Compressive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0272	740.0440 Incentive IRI Ride	23,740.000 DOL	1.00000	23,740.00
0274	SPV.0055 Special 01. Incentive Density PWL HMA Pavement	13,400.000 DOL	_____.	_____.
0276	SPV.0055 Special 02. Incentive Air Voids HMA Pavement	16,800.000 DOL	_____.	_____.
0278	SPV.0055 Special 03. Incentive Density HMA Pavement Longitudinal Joints	33,170.000 DOL	_____.	_____.
0280	SPV.0060 Special 01. 6-Inch Gate Valve and Box	9.000 EACH	_____.	_____.
0282	SPV.0060 Special 02. Hydrant	2.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0284	SPV.0060 Special 03. Relocate Existing Light Pole	2.000 EACH	_____.	_____.
0286	SPV.0060 Special 04. Adjusting Water Valve Box	11.000 EACH	_____.	_____.
0288	SPV.0060 Special 05. Adjusting Sanitary Manhole Cover	17.000 EACH	_____.	_____.
0290	SPV.0060 Special 06. Grading and Shaping Apron Endwall Installation	17.000 EACH	_____.	_____.
0292	SPV.0060 Special 07. Grading and Shaping Curb Ramps	37.000 EACH	_____.	_____.
0294	SPV.0060 Special 08. Inlet Covers, Type H-D	4.000 EACH	_____.	_____.
0296	SPV.0090 Special 01. Ditch Cleaning	1,075.000 LF	_____.	_____.
0298	SPV.0090 Special 02. Concrete Gutter 48-inch	27.000 LF	_____.	_____.
0300	SPV.0090 Special 03. Temporary Marking Line Removable Tape 6-Inch	1,000.000 LF	_____.	_____.
0320	611.9800.S Pipe Grates (size) 01. 24-Inch	1.000 EACH	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.