HIGHWAY WORK PROPOSAL

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

Proposal Number: 007

COUNTY	STATE PROJECT	FEDERAL	PROJECT DESCRIPTION	HIGHWAY
Dane	5145-00-71	N/A	Mazomanie - USH 12; STH 78 to USH 12	STH 019

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: $390,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: December 12, 2023 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time November 15, 2024	
Assigned Disadvantaged Business Enterprise Goal 0%	This contract is exempt from federal oversight.

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal bid.

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)	(Bidder Signature)
(Print or Type Name, Notary Public, State Wisconsin)	(Print or Type Bidder Name)
(Date Commission Expires)	(Bidder Title)

Notary Seal

Type of Work: **For Department Use Only**

Excavation Common, Excavation Rock, Base, Concrete Pavement, HMA Pavement, Culvert Pipes, Storm Sewer, Curb and Gutter, Concrete Barrier, Guardrail, Signs, Pavement Marking, Structure Replacements.

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://wisconsindot.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://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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

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

B. Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

4. Have a properly executed annual bid bond on file with the department.
5. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.

(2) In lieu of preparing, delivering, and submitting the proposal as specified in 102.6 and 102.9 of the standard specifications, submit the proposal on the internet as follows:

1. Download the latest schedule of items reflecting all addenda from the Bid Express™ web site.
2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid
4. Submit the bid before the hour and date the Notice to Contractors designates
5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.

(3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

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

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express web site reflecting the latest addenda posted on the department's web site at:

https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.

(2) Staple an 8 1/2 by 11 inch printout of the Expedite□□ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal, not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder Name
BN00
Proposals: 1, 12, 14, & 22

(3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.

(4) The bidder-submitted printout of the Expedite□□ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.

(5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:

1. The check code printed on the bottom of the printout of the 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

Wisconsin Department of Transportation

DT1303 1/2006

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

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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)

Effective with March 2010 Letting

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

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

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.

4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.

7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR- 1273 - "Required Contract Provisions Federal Aid Construction Contracts," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

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

1. The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:

   (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

   (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

   (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and

   (d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

Special Provisions

Table of Contents

Article	Description	Page #
1.	General.	3
2.	Scope of Work.	3
3.	Prosecution and Progress.	3
4.	Traffic.	5
5.	Holiday and Special Event Work Restrictions.	7
6.	Utilities.	8
7.	Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.	9
8.	Information to Bidders, WPDES Transportation Construction General Permit (TCGP) for Storm Water Discharges.	10
9.	Aquatic Exotic Species Control.	10
10.	Environmental.	11
11.	Erosion Control Structures.	12
12.	Archaeological Site.	12
13.	Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.	12
14.	Historical Site Protection.	13
15.	Coordination with Businesses and Residents.	13
16.	General Requirements for Blasting Rock.	14
17.	Clearing and Grubbing, Items 201.0105 and 201.0205.	16
18.	Base Aggregate Dense 3/4-Inch, Item 305.0110.	17
19.	Base Aggregate Dense 1 1/4-Inch, Item 305.0120.	17
20.	QMP Base Aggregate Dense 1 1/4-Inch Compaction, Item 371.2000.S.	18
21.	HMA Percent Within Limits (PWL) Test Strip Volumetrics, Item 460.0105.S; HMA Percent Within Limits (PWL) Test Strip Density Item 460.0110.S.	24
22.	HMA Pavement Percent Within Limits (PWL) QMP.	29
23.	Appendix A.	37
24.	HMA Pavement Longitudinal Joint Density.	43
25.	Concrete Staining Multi-Color C-13-3098, Item 517.1015.S.01.	46
26.	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 58x91-Inch, Item 522.2358	48
27.	Fence Safety, Item 616.0700.S.	48
28.	Removing Signs Type II, Item 638.2602.	49
29.	Installing and Maintaining Bird Deterrent System STA 195+20, Item 999.2000.S.01; Installing and Maintaining Bird Deterrent System STA 263+75, Item 999.2000.S.02.	49
30.	Locating No-Passing Zones, Item 648.0100.	52
31.	Verify and Replace Existing Land Parcel Monuments, Item SPV.0060.01.	52
32.	Verify Landmark Reference Monuments, Item SPV.0060.02.	53
33.	Research and Locate Existing Land Parcel Monuments, Item SPV.0060.03.	54
34.	Pipe Underdrain (6-Inch) with Geotextile Fabric and Aggregate, Item SPV.0090.01.	55
35.	Stamping Concrete, Item SPV.0165.01.	56

36. Impervious Isolation Membrane, Item SPV.0180.01 57
37. Removing Distressed Pavement Milling, Item SPV.0180.02. 58
38. Backfill Special, Item SPV.0195.01. 59

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 5145-00-71, Mazomanie – USH 12, STH 78 to USH 12, STH 19, Dane 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, 2024 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 (20230629)

2. Scope of Work.

The work under this contract shall consist of milling asphaltic surface, common excavation, grading, base aggregate, select crushed material, HMA, culvert pipe, pedestrian underpass, storm sewer, concrete curb and gutter, concrete barrier, guardrail, permanent signing, pavement marking, Structures B-13-796, B-13-797, C-13-3098 and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

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

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

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

Prior to beginning operations under this contract, submit in writing the proposed schedule of operations to the engineer for approval. Meet weekly with the engineer to review progress on the project. At these meetings, present a current, updated project schedule and discuss all proposed activities in detail for the upcoming two-week time period.

To minimize the corridor-wide effects of grading operations on adjacent property owners, the contractor shall coordinate their construction operations such that no more than 3 miles of the project site are undergoing roadway excavation or base course placement operations at any given time.

For local traffic connectivity, work on Structures B-13-796 and B-13-797 cannot be constructed concurrently. Only one structure at a time can be under construction to ensure local traffic access during the project.

The contractor shall schedule work operations to limit the amount of subgrade exposed to the elements to no more than 1 mile at any one time.

Fish Spawning

There shall be no instream disturbance of Halfway Prairie Creek as a result of construction activity under or for this contract prior to May 1 or after October 1 in order to avoid adverse impacts upon spawning.

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.

Migratory Birds

Swallow or other migratory bird nests have been observed on or under the existing structure(s). All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act. The nesting season for swallows and other birds is from April 15 to August 30.

Either prevent active nests from becoming established or prevent birds from nesting by installing and/or maintaining a suitable deterrent device on the remaining structure prior to nesting activity under the bid item Installing and Maintaining Bird Deterrent System.

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

Northern Long-eared Bat (Myotis septentrionalis) and Eastern Pipistrelle

Northern long-eared bats (NLEB) and Eastern Pipistrelle have the potential to inhabit the project limits because they roost in trees, bridges and culverts. Roosts may not have been observed on this project, but conditions to support the species exist, and this project is within 0.25 miles but greater than 150 feet from a documented NLEB maternity roost. The species and all active roosts are protected by the federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

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

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

To avoid adverse impacts upon the NLEBs and Eastern Pipistrelle, no tree clearing is allowed between April 1 and October 31, both dates inclusive. If the required tree clearing is not completed by March 31, the department will suspend all tree clearing and associated work directly impacted by clearing.

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

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.

Rusty Patched Bumblebee (RPBB)

This project intersects a High Potential Zone (HPZ) for the Rusty Patched Bumblebee (RPBB), a listed federally endangered species. The Rusty Patched Bumble Bee could be present on-site. Therefore, the FWS recommends one of the following options be implemented:

Any prairie areas within the Dane County Indian Lake Park impacted by the project will have the topsoil stripped, stockpiled, and placed back in the prairie area and seeded with the WisDOT 70A seed mixture (flowering forb prairie mix) which already includes Little Bluestem seeding (20%). These prairie areas coincide with the HPZ for the RPBB (Station 312+00 – Station 450+00). Sow the WisDOT 70A seed in combination with the standard WisDOT 30 mix sowing the WisDOT 70A mix 15 feet from the new gravel shoulder.

Oak Wilt

To prevent the spread of oak wilt disease, cutting or pruning of oaks shall not occur between April 1 and September 30.

Dane County Parks/Ice Age Trail Closure

An agreement with Dane County Parks was made to close Indian Lake Park for up to one month to allow grade changes to be made to STH 19. Contact Joleen Stinson, Dane County Parks Director at (608) 422-0657 30 days prior to construction in this area to coordinate closure time.

4. Traffic.

Accomplish the construction sequence as detailed in the Prosecution and Progress article, and as described below.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control as shown on the plans. Submit the plan 14 days prior to the preconstruction conference, or if after the preconstruction conference, 14 days prior to the intended use of the revised traffic control. A request does not constitute approval.

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

Unless detailed in the plans, do not begin or continue any work that closes traffic lanes outside the allowed time periods specified in this article.

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

Place roadway signing and roadway temporary pavement marking as detailed on the plans and in conformance to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition.

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

- All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic and bicyclists.
- Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.
- Do not deliver or store materials or equipment within open travel lanes or open side roads during any stage of construction. Temporary lane closures and/or halting of traffic within open roadways is not permitted.

The contractor is responsible for coordinating with the following school districts to ensure that bus routes are maintained and accessible throughout construction.

Wisconsin Heights School District

(608) 767-2595

Go Riteway Transportation

(608) 401-1070

The contractor is also responsible for coordinating with the following post offices to ensure that mail delivery is maintained for residents along the project:

Black Earth

1341 Mills St
Black Earth, WI 53515
(608) 767-2484

Cross Plains

2012 Park St
Cross Plains, WI 53528
(608) 798-0619

Mazomanie

37 Crescent St
Mazomanie, WI 53560
(608) 795-4361

Close STH 19 to through traffic (local traffic access only) during construction and post the detour route as specified in the plans. Note in weekly correspondence to property owners if sections of the road might be closed due to profile changes. The detour route for STH 19 eastbound will consist of STH 19, STH 78, USH 12, and STH 19. The detour route for STH 19 westbound will consist of STH 19, USH 12, STH 78, and STH 19. During the replacement of the bridges, local access will be restricted near the bridge crossings in both directions. Stagger removal and construction operations on Structures B-13-0796, B-13-0797, and C-13-3098 such that only one crossing is inaccessible to local traffic at a time.

Private and Commercial Access

Access to businesses, residences and farming operations shall be maintained throughout the project. If an access is to be temporarily closed, notify those affected at least two business days in advance of the closure.

Maintain a clearly delineated, suitable driving surface of at least a 10-foot driving lane for residents, businesses, school buses, and emergency vehicles throughout construction. A suitable driving surface is defined as a material capable of withstanding a fully loaded quad axle truck without yielding as approved by the engineer. The 10-foot lane shall be graded to drain and rolled with a smooth drum vibratory roller or other alternate compaction equipment that produces a smooth driving surface.

The contractor shall provide the engineer and local law enforcement with a 24-hour, 7 days/week contact person responsible for the maintenance of the 10-foot driving lane for residents.

At all intersections of STH 19 and side roads, maintain two-way cross traffic with a minimum 20-foot driving surface consisting of existing pavement, new roadway aggregate/pavement, or Traffic Control Base Course at the discretion of the engineer. The contractor may reduce the maintained width to 15-feet during daylight hours provided that flaggers are present.

Contact farmers and businesses operating along STH 19 to coordinate their specific needs for agricultural equipment usage and deliveries along the corridor with the contractor’s work operations.

Employ such flaggers, signs, barricades, and drums as may be necessary to safeguard local traffic at all locations affected by construction operations. Make arrangements and be responsible for the prompt replacement of damaged or dislocated traffic control or guidance devices, day or night.

Do not store vehicles, equipment, or materials on adjacent streets beyond the project limits without specific approval from the engineer.

Notify the engineer if there are any changes in the schedule, early completions, or cancelations of scheduled work.

Advance Notification

Notify Mazomanie, Black Earth, Cross Plains and Waunakee Police and Fire Departments and Dane County Sheriff at least 3 days (72 hours) in advance of all closures.

Place Traffic Control Signs (PCMS) at the locations shown in the plan at least 7 days prior to and during construction. See plans for department approved messages to be displayed on each PCMS.

Lane Closures

Request approval from the engineer for all lane closures in advance as specified under Wisconsin Lane Closure System Advance Notification. A request does not constitute approval. Failure to obtain approval or reopen closed lanes at the required time will be subject to lane rental charges specified under Lane Rental Fee Assessment.

Wisconsin Lane Closure System Advance Notification

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

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

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

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

5. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 19 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 24, 2024 to 6:00 AM Tuesday, May 28, 2024 for Memorial Day;
- From noon Wednesday, July 3, 2024 to 6:00 AM Monday, July 8, 2024 for Independence Day;
- From noon Friday, August 30, 2024 to 6:00 AM Tuesday, September 3, 2024 for Labor Day;
- From noon Wednesday, November 27, 2024 to 6:00 AM Monday, December 2, 2024 for Thanksgiving.

stp-107-005 (20210113)

6. Utilities.

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

stp-107-065 (20080501)

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.

Underground and overhead utility facilities are located within the project limits. All station locations, offsets, and depths referenced are approximate locations. Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearance from overhead facilities at all times.

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

Alliant Energy – Electric has overhead and underground facilities running along and crossing existing STH 19.

Alliant Energy – Electric will relocate existing overhead lines from Station 0+00 to Station 154+20 to underground along the north right-of-way line. At Station 154+20, they will cross STH 19 and then follow along the south right-of-way line. At Station 184+50, they will cross again and follow the north right-of-way line. At Station 202+50, they will cross again and follow the north right-of-way line until Station 244+20. Existing overhead facilities will remain from Station 244+20 to Station 276+00. Alliant Energy – Electric will relocate existing overhead lines from Station 276+00 to Station 289+00 to underground along the south right-of-way line. This work will be completed prior to construction.

AT&T WI – Communications has existing underground fiber optic lines running along the existing south right-of-way of STH 19.

AT&T WI will adjust their line at most culvert or sewer crossings, Stations 27+25 Rt, 46+30 Rt, 89+20 Rt, 103+41 Rt, 120+73 Rt, 129+92 Rt, 146+56 Rt, 149+85 Rt, 175+06 Rt, 218+42 Rt, 248+23 Rt, 276+40 Rt, 286+25 Rt, 288+04 Rt, and 306+22 Rt.

From Station 273+65 to Station 274+50, AT&T WI will relocate their line 4' south of their existing alignment to avoid storm sewer and inlets. From Station 309+50 to Station 311+25, AT&T WI will lower this facility by 12 inches to avoid proposed grading.

This work will be completed prior to construction.

Brightspeed – Communications has discontinued underground copper telephone lines inside the south right-of-way line from the west limits to approximately Station 27+00. No relocation is anticipated.

Madison Gas and Electric (MG&E) – Electric has underground and overhead facilities from approximately Station 300+00 to the east project limits.

Station 324+00 to Station 364+00: MG&E Electric to relocate underground facilities to the south side of Highway 19. All transformers are currently placed in MG&E easement. MG&E Electric will place new cable to have 3ft of cover to compensate for future grade cut.

Stations 309+75 LT, 310+80 LT, 316+00 LT, and 319+00 LT: These poles will be set deeper to compensate for the grade change.

Station 366+80 LT: MG&E will relocate pole to the east and set deeper to resolve conflict.

Station 381+00 to Station 420+00 and Station 452+00 to Station 504+00: MG&E Electric will relocate poles to the south side of STH 19 and be deeper or taller than existing for cuts/fills.

Station 393+00 to Station 394+00: MG&E Electric will lower underground facilities in place to resolve conflict.

Station 409+50 to Station 414+25: MG&E Electric will relocate facilities to the north out of the roadway.

This work will be completed prior to construction.

Madison Gas and Electric (MG&E) – Gas has underground facilities within the project limits.

MG&E will replace existing gas main from approximately Station 0+70 to Station 137+00, Station 154+30 to Station 181+30, Station 204+30 to Station 241+60, Station 251+70 to Station 265+70, Station 272+70 to 312+00 (by CTH K), generally following the right-of-way line. Once the new gas main has been placed, the existing gas main will be purged of gas and discontinued in place. This work will be completed prior to construction.

Black Earth Telephone Company, LLC d/b/a TDS Telecom and Mid-Plains Telephone Co d/b/a TDS Telecom has underground telephone and fiber lines throughout the project. TDS will relocate the underground fiber optic facility from Station 28+50 to Station 103+00 approximately 2 feet from the proposed south right-of-way line. They will cross STH 19 at Station 103+00 and follow the proposed north right-of-way line to Station 258+00. They will cross STH 19 at Station 258+00 and follow the proposed south right-of-way line to Station 267+70 and crossing there to an existing facility to the north.

The existing underground facility north of the roadway will remain in place from Station 267+70 to Station 271+20. The underground along the north side will be replaced at the proposed north right-of-way from Station 271+20 to Station 273+00 and north along CTH KP. The existing underground facility south of the roadway will remain in place from Station 273+00 to Station 276+00. The underground along the south side will be replaced at the proposed south right-of-way from Station 276+00 to Station 291+50. The existing underground facility south of the roadway will remain in place from Station 291+50 to Station 304+20. The underground along the south side will be replaced at the proposed south right-of-way from Station 304+20 to Station 340+00. The existing underground facility south of the roadway will remain in place from Station 340+00 to the crossing at Station 344+00.

The underground along the *north* side will be replaced at the proposed *south* right-of-way from Station 344+00 to Station 369+00. The existing underground facilities both north and south of the roadway will remain in place from Station 369+00 to Station 378+60. From Station 378+60 to Station 451+80, both facilities will be replaced along the proposed south right-of-way line. It will cross at Station 451+80 and follow the north right-of-way line to Station 466+10. From 466+10 to Station 482+20, the line will be installed along the south right-of-way line.

This work will be completed prior to construction.

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Brian Taylor at (608) 245-2630.

If the contractor requires work outside the proposed slope intercepts, based on their method of operation to construct the project, it is the contractor's responsibility to determine whether a U.S. Army Corps of Engineers Section 404 permit modification is required. If a Section 404 permit modification is necessary, obtain the permit modification prior to beginning construction operations requiring the permit. No time extensions as discussed in standard spec 108.10 will be granted for the time required to apply for and obtain the permit modification. The contractor must be aware that the U.S. Army Corps of Engineers may not grant the permit modification request.

stp-107-054 (20230629)

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

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

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

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

A certificate of permit coverage is available from the regional office by contacting Greg Brecka at (608) 516-6524. Post the permit certificate in a conspicuous place at the construction site.

stp-107-056 (20230629)

9. 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 (>104º 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)

10. Environmental.

Timber Rattlesnake/Slender Glass Lizard

Crotalus horridus, Timber Rattlesnake. Special Concern (SC/P). Timber rattlesnakes are a species of Special Concern and a Protected Wild Animal. Adult males and non-gravid females prefer deciduous forests and woodland edges in an agricultural setting. Gravid females and juveniles prefer to remain in open-canopy bluff prairies. Timbers emerge from hibernation as early as mid-April and remain active until as late as mid-October. The Timber Rattlesnake would be most likely located within any open woodland and rocky outcrop habitats located within this corridor.

Ophisaurus attenuates, Slender Glass Lizard. Endangered. Habitat for this legless lizard includes oak savannahs, sand prairies, old fields with sandy soils, and woodland edges around these habitats. This reptile is active from mid-April through September. Based on a project corridor review with DNR NHC in the summer of 2013 and in 2019, it does not appear that the preferred habitat for this species, sandy open soils, is present within the project corridor.

A qualified biological monitor hired by WisDOT shall be present at the Preconstruction Conference (Pre-Con) to ensure they are on-site during the initial clearing and grading of the rock outcropping between CTH F and approximately 0.2 miles east of CTH F on the north side of the highway. The monitor shall be present during all work actives at this location until the area is isolated with snake exclusion fencing. The monitor should survey the area for snakes and lizards prior to and during initial disturbance and remove any rattlesnakes and slender glass lizards encountered safely away from the project area. The monitor should record any rattle snakes or slender glass lizards identified and report to Stacy Rowe (stacy.rowe@wisconsin.gov).

Project construction staff should be aware that the slender glass lizard or the timber rattlesnake may be present in other areas of the corridor and that they are protected species. Avoid and/or relocate any that are identified within project areas during construction.

Air Quality Permit for HMA Plant

If a hot mix asphalt plant is to be utilized, it will require an air pollution control permit and must be able to meet the emission limits and air quality standards of the State of Wisconsin. Portland concrete batch plants that produce or will produce less than 20,000 cubic yards of concrete per month averaged over any 12-consecutive-month period are exempt under NR 406.04(1)(d) and 407.03(1)(d) of the Wisconsin Administrative Code.

For more information on whether a proposed batch plant will require an air quality construction permit, contact:

Andrew Stewart
(608) 264-8884
Andrew.stewart@wisconsin.gov

The site that is utilized for the asphalt plant must be properly treated to prevent erosion. Appropriately sized stilling basins should be provided that will intercept runoff and allow ample time for the suspended material to settle out before any water is discharged. If any gravel washing is to be completed on-site, the Wisconsin DNR requests to review the erosion control plan for the site before the project is started.

Erosion Control and Storm Water Management

All disturbed bank areas should be adequately protected and restored as soon as feasible.

If erosion mat is used along stream banks, biodegradable non-netted mat will be used as specified in the plans. Avoid the use of fine mesh matting that is tied or bonded at the mesh intersection such that the openings in the mesh are fixed in size.

If dewatering is required for any reason, the water must be pumped into a properly selected and sized dewatering basin before the clean/filtered water is allowed to enter any waterway or wetland. The basin must remove suspended solids and contaminants to the maximum extent practicable. A properly designed and constructed dewatering basin must take into consideration maximum pumping volume (gpm or cfs) and the sedimentation rate for soils to be encountered. Do not house any dewatering technique in a wetland.

The contractor should restrict the removal of vegetative cover and exposure of bare ground to the minimum amounts necessary to complete construction. Restoration of disturbed soils should take place as soon as conditions permit. If sufficient vegetative cover will not be achieved because of late season construction, the site must be properly winterized.

All temporary stockpiles must be in an upland location and protected with erosion control measures (e.g., silt fence, rock filter-bag berm, etc.). Do not stockpile materials in wetlands, waterways, or floodplains.

11. Erosion Control Structures.

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

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

stp-107-070 (20191121)

12. Archaeological Site.

The **Ice Age Trail (47DA1440) Site** is located between Station 375+50 LT/RT to Station 389+50 LT/RT. Place protective fencing along the edge of the area of potential effect in the southwestern portion of the site to prevent inadvertent disturbance to the remainder of the site area in this location. This portion of the site shall not be used for staging or storage of equipment, materials, and personnel, and it should not be used as a source of borrow, or as the location for placement of waste.

St. Paul's German Lutheran Church Cemetery (BDA-0007), Station 264 LT to Station 268 LT, is an active, historic Euromerican cemetery that is considered to be an un-catalogued burial site under Wis. Stat. 157.70. While the church/cemetery trustees know of no burials located outside of an existing fence along WIS 19, there are no deeds specifically delineating the portion of the parcel(s) used as a cemetery and no known cemetery plat exists. A 157.70 burial permit will be obtained by the department prior to construction. The contractor or engineer must notify WisDOT's Cultural Resources Team (CRT) 30 days prior to ground disturbance to have a qualified archaeologist monitor the activities within this area.

The **Bowman Grounds Cemetery (BDA-0193)**, Station 273 RT to Station 276 RT, is a historic Euromerican burial site. The burial site is considered to be an un-catalogued burial site under Wis. Stat. 157.70. A 157.70 burial permit will be obtained by the department prior to construction. The contractor or engineer must notify WisDOT's Cultural Resources Team (CRT) 30 days prior to ground disturbance to have a qualified archaeologist monitor the activities within this area.

While not an archaeological resource, the three remaining **Civil War Memorial Trees**, Station 176 LT to Station 177 LT, located along Old Settlers Road may be interpreted as a Traditional Cultural Property based upon their history and significance to the local community. The trees are not to be disturbed during construction activities.

13. Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.

John Roelke, License Number AII-119523, inspected Structure B-13-0077 and B-13-0593 for asbestos on July 18, 2013. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Gregory Brecka, (608) 516-6524.

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 03/20), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days before beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Gregory Brecka, (608) 516-6524, and via e-mail to dothazmatunit@dot.wi.gov or via U.S. mail to DOT BTS-ESS attn: Hazardous Materials Specialist, 5 South S.513.12, PO Box 7965, Madison, WI 53707-7965. In addition, comply with all local or municipal asbestos requirements.

Use the following information to complete WisDNR form 4500-113:

- Site Name: Structure B-13-0077, STH 19 over Halfway Prairie Creek
- Site Address: Town of Berry – Latitude 43°11’14.10”, Longitude 89°41’16.40”
- Ownership Information: State Highway Department, 2302 Fish Hatchery Road, Madison, WI 53713
- Contact: Greg Brecka
- Phone: (608) 245-2671
- Age: 65 years old. This structure was constructed in 1958.
- Area: 964 SF of deck.

Site Name: Structure B-13-0593, STH 19 over Halfway Prairie Creek

- Site Address: Town of Berry – Latitude 43°11’27.97”, Longitude 89°39’48.43”
- Ownership Information: State Highway Department, 2302 Fish Hatchery Road, Madison, WI 53713
- Contact: Greg Brecka
- Phone: (608) 245-2671
- Age: 84 years old. This structure was constructed in 1939.
- Area: 2166 SF of deck.

Insert the following paragraph in Section 6.g.:

If asbestos not previously identified is found or previously non-friable asbestos becomes crumbled, pulverized, or reduced to a powder, stop work immediately, notify the engineer, and the engineer will notify the department’s Bureau of Technical Services at (608) 266-1476 for an emergency response as specified in standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

stp-107-125 (20220628)

14. Historical Site Protection.

The department determined that the Stewart-Bohn Farmstead, located at 9755 STH 19, Town of Mazomanie, Dane County, the Old Halfway Prairie School, located at 9770 STH 19, Town of Mazomanie, Dane County, the John Guenther House, located at 8785 STH 19, Town of Berry, Dane County, the Franz and Nebrieke Watzke House, located at 8125 STH 19, Town of Berry, Dane County, the Martin and Anna Walser House, located at 6141 CTH KP, Town of Berry, Dane County and the Schumann Farm – Station 365+00, RT within the limits shown on the plan, meet eligibility criteria for listing on the Nation Register of Historic Places. Place temporary fencing along the edge of the site boundaries if close to construction operations to prevent disturbance to the site. The site should not be used for staging or storage of equipment, materials, and personnel, and it should not be used as a source of borrow, or as the location for the placement of waste.

15. Coordination with Businesses and Residents.

The department will arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week before the start of work under this contract and hold a meeting one week prior to each traffic staging change. The department will arrange for a suitable location for meetings that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for meetings. The contractor shall schedule meetings with at least two weeks’ prior notice to the engineer to allow for these notifications.

stp-108-060 (20141107)

16. General Requirements for Blasting Rock.

The sandstone within the project area is anticipated to be ripped mechanically as the material is weakly- to moderately-weakly cemented, and friable (easily crumbled). In sandstone units such as this, ripping will produce a more stable rock face long term than will blasting. Blasting of the material should be considered as a last resort.

If very hard rock is encountered and mechanical removal is determined to be ineffective, the contractor shall obtain permission from the WisDOT SW Region Soils/Materials Engineer before blasting is allowed.

Melissa Markquart, P.E.
SW Region Soils and Materials Engineer
(608) 799-0480

Add the following to standard spec 205.3.7.

Perform all blasting in compliance with the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43.

Blasting Plan Submittal

Not less than two weeks prior to commencing blasting operations, or at any time when changes to the drilling and blasting methods are proposed, submit a Blasting Plan to the engineer for review. The blasting plan shall contain full details of the drilling and blasting patterns and controls proposed for both the controlled and production blasting. Include the following minimum information in the blasting plan:

1. Station limits of proposed shot.
2. Plan and section views of proposed drill pattern including free face, burden, blasthole spacing, blasthole diameters, blasthole angles, lift height, and subdrill depth.
3. Loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming.
4. Initiation sequence of blastholes including delay times and delay system.
5. Manufacturer’s data sheets for all explosives, primers, and initiators to be employed.

The blasting plan submittal is for quality control and record keeping purposes. Review of the blasting plan by the engineer does not relieve the contractor of responsibility for the accuracy and adequacy of the plan when implemented in the field.

Safety

Immediately notify the engineer of any incidents of fly rock, damage to any personal property, or existing roadway that is open to traffic, and any violations of the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43. Failure to do so shall be considered a safety violation under standard spec 107 and all work on the project may be stopped under standard spec 105.1(1).

Notify the engineer of the station, location, and ‘size’ of all blasts at least one hour prior to the blast.

Observe the entire blast area for a minimum of five minutes following a blast to guard against rock or debris fall before commencing work in the area.

The engineer has the authority to prohibit or halt the contractor’s blasting operations if it is apparent that through the methods being employed, the required slopes are not being obtained in a stable condition, the safety and convenience of the traveling public is being jeopardized, or vibration levels above the allowable levels occur.

Condition Surveys

Conduct and document pre-blast and post-blast surveys of any nearby buildings or structures as required by the scaled-distance equation specified in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43. Make right of entry arrangements with the property owners for these condition surveys. Prior to any blasting, make the pre-blast survey records available to

the engineer for review. After completion of blasting operations, perform a post-blast survey and make these records available to the engineer for review. The contractor shall be responsible for any damage resulting from blasting.

These condition surveys shall consist of visually inspecting and recording all existing defects in the structures before and after blasting operations. Photographs and/or videotape may be used to assist in documentation. Submit a written report to the department detailing the visual and photographic investigation of potentially affected structures. This report will include copies of the pre-blast and post-blast surveys and discuss any discrepancies and findings of these surveys.

If at any time during the progress of the work, the methods of drilling and blasting do not produce the desired result of a uniform slope and shear face, within the tolerances specified, drill, blast, and excavate in short sections, not exceeding 100 feet in length, until a technique is arrived at that will produce the desired results. Extra cost resulting from this requirement shall be borne by the contractor.

Vibration Control and Monitoring

All vibration control and monitoring shall comply with Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43, Instrumentation and SPS 307.44, Control of Adverse Effects.

Whenever there is a potential for vibration damage to adjacent buildings, structures, or utilities, monitor each blast with an approved seismograph located, as approved, between the blast area and the closest structure subject to blast damage, and as close as practical to the subject structure. Peak particle velocity shall not be allowed to exceed the safe limits of the nearest structure subject to vibration damage.

A vibration specialist, approved by the engineer, shall perform vibration monitoring. The vibration specialist shall monitor vibration levels according to the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 and interpret the seismograph records to ensure that the seismograph data shall be effectively utilized in the control of the blasting operations with respect to the existing structures and utilities.

According to the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 consult with the owner of any structure or utility not listed in SPS 307.43 to establish maximum allowable limits on ground vibrations. In no case shall these vibration limits exceed the following criteria:

Structure Type	Maximum Peak Particle Velocity (inches/second)
Reinforced Concrete, Structures, Unoccupied	4.0
Steel Structures, Unoccupied	4.0
Buried Utilities	2.0
Wells and Aquifers	2.0
Green Concrete (Less than 7 days)	1.0

Furnish data recorded for each shot to the engineer prior to the next blast; the data shall include the following:

1. Identification of vibration monitoring instrument used.
2. Name of qualified observer and interpreter.
3. Distance and direction of recording station from blast area.
4. Type of ground at recording station and material on which the instrument is sitting.
5. Peak particle velocity and principal frequency in each component.
6. A dated and signed copy of records of seismograph readings.
7. A comparison of measured seismograph readings to maximum allowable readings identified in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 or as specified in this special provision.

If the recorded vibration data exceeds the allowable levels established in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 or as specified in this special provision, immediately halt blasting operations. Submit a revised blasting plan to the engineer and do not resume blasting operations until the engineer approves the revised plan.

All costs associated with the work described herein shall be considered included in the bid item Excavation Rock.

17. Clearing and Grubbing, Items 201.0105 and 201.0205.

Supplement standard spec 201.3 with the following:

The emerald ash borer (EAB) has resulted in a quarantine of ash trees (*Fraxinus, sp*) by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) and the Wisconsin Department of Natural Resources (DNR).

Ash trees species attacked by emerald ash borer include the following:

- Green ash *(F. pennsylvanica*) is found throughout the state, but is most common in southern Wisconsin. It may form pure stands or grow in association with black ash, red maple, swamp white oak, and elm. It grows as an associate in upland hardwood stands, but is most common in and around stream banks, floodplains, and swamps.
- Black ash *(F. nigra*) is distributed over the entire state but is most frequently found in northern Wisconsin. It is most common in swamps, but is also found in other wet forest types.
- Blue ash (*F. quadrangulata*) is a threatened species that is currently found only at a few sites in Waukesha County. The species is at the edge of its range in Wisconsin but is common in states farther south. The species is not of commercial importance. Blue ash twigs are 4-sided.
- White ash (*F. americana*) tends to occur primarily in upland forests, often with *Acer saccharum.*
- Includes all horticultural cultivars of these species.

(Note: blue ash twigs are 4-sided. All other Wisconsin ash trees have round stems.)

Mountain ash (*Sorbus Americana* and *S. decora*) is not a true ash and is not susceptible to EAB infestation.

The contractor shall be responsible for hiring a certified arborist to identify all ash trees that will be cleared and grubbed for the project. In addition, prior to scheduled clearing and grubbing activities, the arborist shall mark all ash trees with flagging tied around the trunk perimeter (florescent lime is suggested as it isn't identified with other project activities).

Follow and obey the following DATCP order:

ATCP 21.17 Emerald ash borer, import controls and quarantine.

1. Importing or moving regulated items from infested areas; prohibition.

Except as provided in sub. (3), no person may do any of the following:

a) Import a regulated item under sub. (2) into this state if that item originates from an emerald ash borer regulated area identified in 7CFR 301.53-3.

b) Move any regulated item under sub. (2) out of an emerald ash borer regulated area that is identified in 7CFR 301.53-3 and located in this state.

Note: The United States Department of Agriculture – Animal and Plant Health Inspection Service (USDA-APHIS) periodically updates the list of regulated areas in 7CFR 301.53-3. Subsection (1) applies to new regulated areas as those areas are identified in the CFR.

2. Regulated items.

The following are regulated items for purposes of sub. (2):

a) The emerald ash borer, *Agrilus planipennis* Fairmaire in any living stage.

b) Ash trees.

c) Ash limbs, branches, and roots.

d) Ash logs, slabs or untreated lumber with bark attached.

e) Cut firewood of all non-coniferous species.

f) Ash chips and ash bark fragments (both composted and uncomposted) larger than one inch in diameter.

g) Any other item or substance that may be designated as a regulated item if a DATCP pest control official determines that it presents a risk of spreading emerald ash borer and notifies the person in possession of the item or substance that it is subject to the restrictions of the regulations.

Regulatory Considerations

The quarantine means that ash wood products may not be transported out of the quarantined area.

Clearing and grubbing includes all ash trees that are to be removed from within the project footprint. If ash trees are identified within clearing and grubbing limits of the project, the following measures are required for disposal:

Chipped ash trees

1. May be left on site if used as landscape mulch within the project limits. If used as mulch on site, chips may not be applied at a depth greater than standard mulch applications as this will impede germination of seeded areas.
2. May be buried on site within the right-of-way according to standard spec 201.3 (14).
3. May be buried on adjacent properties to projects within the quarantined zone with prior approval of the engineer according to standard spec 201.3 (15).
4. May be trucked to a licensed landfill within the quarantined zone with the engineer's approval according to standard spec 201.3 (15).

18. Base Aggregate Dense 3/4-Inch, Item 305.0110.

Add the following to standard spec 301.2.4.3:

Furnish only aggregate classified as crushed stone for Dense 3/4-Inch when used in the top 3 inches of the unpaved portion of the shoulder or for unpaved driveways and field entrances.

swr-305-001 (20170711)

19. Base Aggregate Dense 1 1/4-Inch, Item 305.0120.

Add the following to standard spec 305.2.2.1:

When 1 1/4-Inch base aggregate is >/= 50 percent crushed gravel, conform to the following gradation requirements:

SIEVE	PERCENT PASSING BY WEIGHT
1 1/4 inch	95 - 100
1 inch	---
3/4 inch	70 - 90
3/8 inch	45 - 75
No. 4	30 - 60
No. 10	20 - 40
No. 40	7 - 25
No. 200	3 - 10[1]

[1] Limited to a maximum of 8.0 percent for base placed between old and new pavement.

swr-305-002 (20170711)

20. QMP Base Aggregate Dense 1 1/4-Inch Compaction, Item 371.2000.S.

A Description

(1) This special provision describes modifying the compaction and density testing and documentation requirements of work done under the Base Aggregate Dense 1 1/4-Inch bid items. Conform to standard spec 305 as modified in this special provision and to the contract QMP Base Aggregate article.

(2) Provide and maintain a quality management program. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process related to construction of dense graded base which meets all the requirements of this provision.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes sampling and testing procedures.

https://wisconsindot.gov/rdwy/cmm/cm-08-00toc.pdf

(4) This special provision applies to Base Aggregate Dense 1 1/4-Inch material placed: above at least 16 inches of subgrade improvement, 12 inches of subgrade improvement and geogrid or QMP subgrade provisions, between shoulder hinge points and lower than mainline pavement. Unless otherwise specified by the contract, all Base Aggregate Dense 1 1/4-Inch material placed on side roads, private and public entrances, individual ramps less than 1500 feet, passing lanes less than 1500 feet, tapers, turn lanes, and other undefined locations are exempt from the compaction and density requirement modifications and testing contained within this special provision.

B (Vacant)

C Construction

C.1 General

(1) The engineer shall approve the grade before placement of the base. Approval of the grade shall be according to applicable provisions of the standard specifications.

Add the following to standard spec 305.3.2.2:

(3) For 1 1/4-Inch dense graded base composed of < or = 20% reclaimed asphaltic pavement (RAP) or crushed concrete (RCA), as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve, the contractor must determine the material target density according to:

Method 1: Maximum dry density according to AASHTO T-180, Method D, with correction for coarse particles and modified to require determination of Bulk Specific Gravity (Gm) according to AASHTO T 85. Bulk Specific Gravities determined according to standard spec 106.3.4.2.2 for aggregate source approval may be utilized.

(4) For 1 1/4-Inch dense graded base composed of >20% RAP or RCA, as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve, the contractor may choose from the following options to determine the material target density:

Method 2: Maximum dry density as determined by AASHTO T-180, Method D, with correction for coarse particles, and modified to require determination of Bulk Specific Gravity (G_m) according to AASHTO T 85.

Method 3: Maximum wet density as determined by AASHTO T-180, Method D, modified to define *Maximum Density* as the wet density in pounds per cubic foot of soil at optimum moisture content using Method D specified compaction, with correction for coarse particles, and modified to require determination of Bulk Specific Gravity (G_m) according to AASHTO T 85.

Method 4: Average of 10 random control strip wet density measurements as described in section C.2.5.1.

(5) Compact the 1 1/4-Inch dense graded base to a minimum of 93.0% of the material target density for methods 1, 2 and 3. Compact 1 ¼-inch dense graded base to a minimum of 96% of the material target density for method 4. Ensure that adequate moisture is present during placement and compaction operations to prevent segregation and to help achieve compaction.

(6) Base Aggregate Dense 1 1/4-Inch will be accepted for compaction on a lot basis.

(7) Field density tests on materials using contractor elected target density methods 3 or 4 will not be considered for lot acceptance on the basis of compaction under the requirements of this provision until the moisture content of the in-place material is less than 2.0 percentage points above the maximum wet density optimum moisture or 2.0 percentage points of the average moisture content of the 10 density tests representing a control strip, respectively. Determine moisture content using AASHTO T255 as modified in CMM chapter 8 or a nuclear density gauge. If conducting AASHTO T255, sample materials after watering but before compaction.

C.2 Quality Management Program

C.2.1 Quality Control Plan

(1) Submit a comprehensive written quality control plan to the engineer no later than 10 business days before placement of material. Do not place any dense graded base before the engineer reviews and accepts the plan. Construct the project as the plan provides.

(2) Do not change the quality control plan without the engineer's review and acceptance. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory as changes are adopted. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
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. Lot layout and random test location plan.
8. A description of placement methods and operations. Including, but not limited to: staging, construction of an initial working platform, lift thicknesses, and equipment.

C.2.1 Pre-Placement Meeting

A minimum of two weeks before placement of Base Aggregate Dense 1 1/4-Inch material, hold a pre-placement meeting at a mutually agreed upon time and location. Present the Quality Control Plan at the meeting. Attendance at the pre-placement meeting is mandatory for the project superintendent, quality control manager, project inspection and testing staff, all appropriate contractor personnel involved in the sampling, testing, and quality control including subcontractors, and the engineer or designated representatives.

C.2.2 Personnel

(1) Perform the quality control sampling, testing, and documentation required under this provision using technicians certified by the department's Highway Technician Certification Program (HTCP). Have a HTCP Nuclear Density Technician I, or ACT certified technician, perform field density and field moisture content testing. Adhere to the minimum required certifications for aggregate testing per part 7 of the standard specification. AASHTO T180 proctor testing requires a minimum certification level of AGGTEC-1.

(2) If an ACT is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

C.2.3 Equipment

(1) Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.

(2) Furnish nuclear gauges from the department's approved product list at:

https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/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) For all target density methods, conform to AASHTO T310 and CMM 8-15 for wet density testing and gauge monitoring methods.

(5) For the specified target density determined using method 1 in section C.1, compute the dry densities for the compacted dense graded base, composed of < or = 20% RAP or RCA, according to AASHTO T310.

(6) For contractor elected target density method 2 in section C.1, compute dry densities of dense graded base composed of >20% RAP or RCA using a moisture correction factor and the nuclear wet density value. Determine the moisture correction value, for each Proctor produced under the requirements of C.2.5, using the moisture bias as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the 5 random tests is not required. Conduct a moisture bias test for every 7500 feet of Base Aggregate Dense 1 1/4-Inch placed. Determine natural moistures in the laboratory.

(7) Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Backscatter may be used only if the material being tested cannot reliably maintain an undistorted direct transmission test hole. Direct transmission tests must be performed at the greatest possible probe depth of 2 inches, 4 inches, or 6 inches, but not to exceed the depth of the compacted layer being tested. Perform each test for at least one minute of nuclear gauge count time.

C.2.5 Contractor Testing

(1) Perform compaction testing on the mainline dense graded base material, as defined by A.(4). Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians as required in C.2.3. Conform to CMM 8-15 for testing and gauge monitoring methods.

(2) Select test sites randomly using ASTM Method D3665. Random numbers may be determined using an electronic random number generator. Guidance for determining test locations can be found in section 8-30.9 of the Construction and Materials Manual (CMM). Test locations must be kept a minimum of 3 feet from the unsupported edge of dense graded base layers.

(3) When a density target is determined in accordance methods 3 or 4 in section C.1, conduct density testing on same date of final compaction.

C.2.5.1 Contractor Required Quality Control (QC) Testing

(1) Conduct testing at a minimum frequency of one test per lot. A lot is 1500 feet for each layer with a maximum width of 18 feet, minimum width of 6 feet, and minimum lift thickness of 2" of Base Aggregate Dense 1 1/4-Inch material placed. Each lot of compacted Base Aggregate Dense 1 1/4-Inch material, as defined by A.(4), will be accepted when the lot field density meets the required minimum density. Lots that don't achieve density requirements must be addressed and approved according to C.2.7.

(2) Add separate lots for passing lanes and individual ramps greater than 1500 feet.

(3) Combine partial lots less than 750 feet with the previous lot. Partial lots greater than or equal to 750 feet are standalone lots.

(4) Notify the engineer if a lot field density test falls below the required minimum value. Document and perform corrective actions according to C.2.7. Deliver documentation of all compaction testing results to the engineer at the time of testing.

C.2.5.1.1 Target Density Determination

C.2.4.1.1.1 Maximum Wet and/or Dry Density Methods

(1) For contractor elected target density methods 2 and 3 in section C.1, and contractually specified target density method 1 in section C.1; perform one gradation and 5-point Proctor test before placement of 1 ¼-Inch dense graded base. Perform additional gradations every 3000 tons according to standard spec 305 and 730. If sampling requirements are identical, samples/testing performed for the QMP Base Aggregate specification may be used to fulfill the gradation testing requirements of this specification.

(2) Perform additional 5-point Proctor tests, at a minimum, when:

1. The four point moving average gradation on any one sieve differs from the original gradation test result for that sieve, by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to create a 5-point Proctor. Each 5-point Proctor test will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.
2. The source of base aggregate changes.
3. Percent target density exceeds 103.0% on two consecutive density tests.

(3) Provide Proctor test results to the engineer within two business days of sampling. Provide gradation test results to the engineer within one business day of sampling.

(4) Split each contractor QC Proctor sample and identify it according to CMM 8-30. Deliver the split to the engineer within one business day for department QV Proctor testing.

(5) Split each non-Proctor contractor QC sample and identify it according to CMM 8-30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

C.2.5.1.1.2 Density Control Strip Method

(1) For contractor elected target density method 4 in section C.1, construct a control strip for each layer of placement to identify the target wet density for the base aggregate dense material. The control strip construction and density testing will occur under the direct observation and/or assistance of the department QV personnel. For blended material, reprocessed material and crushed concrete, perform additional gradations every 3000 tons according to standard spec 305 and 730. If sampling frequencies are identical, samples/testing performed for the QMP Base Aggregate specification may be used to fulfill the gradation testing requirements of this specification.

(2) Unless the engineer approves otherwise, construct control strips to a minimum dimension of 300 feet long and one full lane width.

(3) Completed control strips may remain in-place to be incorporated into the final roadway cross-section.

(4) Construct additional control strips, at a minimum, when:

1. The source of base aggregate changes.
2. The four point moving average percentage of blended recycled materials, from classification of material retained on the No. 4 sieve in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip.
3. The layer thickness changes more than 2.0 inches.
4. The percent target density exceeds 103.0% on two consecutive density measurements.

(5) Construct control strips using equipment and methods representative of the operations to be used to place and compact the remaining 1 1/4–Inch Base Aggregate Dense material. Wet the base, as mutually agreed upon by the contractor and engineer, to obtain and/or maintain adequate moisture content to ensure proper compaction. Discontinue water placement if the base begins to exhibit signs of saturation or instability.

(6) After compacting the control strip with a minimum of 2 passes, mark and take density measurements at 3 random locations. Subsequent density measurements will be taken at the same 3 locations. Test locations must be kept a minimum of 3 feet from the unsupported edge of dense graded base layers.

(7) After each subsequent pass of compaction equipment over the entirety of the control strip, take wet density measurements at the 3 marked locations. Continue compacting and testing until the increase in wet density measurements are less than 2.0 lb/ft^3, or the density measurements begin to decrease.

(8) Upon completion of control strip compaction, take 10 randomly located wet density measurements within the limits of the control strip. The final measurements recorded at the 3 locations under article C.2.4.1.1.2 may be included as 3 of the 10 measurements. Average the ten measurements to obtain the control strip target density and target moisture for use in contractor elected method 4 in section C.1. Test locations must be kept a minimum of 3 feet from the unsupported edge of dense graded base layers.

C.2.6 Department Testing

C.2.6.1 General

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

(2) When a density target is determined in accordance methods 3 and 4 in section C.1, conduct density testing on same date of final compaction.

C.2.6.2 Quality Verification (QV) Testing

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.2.3 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 20% of the required gradation, density and Proctor contractor tests.

(3) The department will utilize contractor's QC Proctor results for determination of the material target density. The department will verify QC Proctor values by testing QC Proctor split sample. The department will use QC Proctor value as a target density if the QC and QV Proctor test results meet the tolerance requirements specified in section C.2.6.2(7).

(4) The department will locate gradation and nuclear density test samples, at locations independent of the contractor's QC work, collecting one sample at each QV location. Sampling for gradation may be done independently of nuclear density tests, before watering and before compacting. The department will split each QV sample, test half for QV, and retain the remaining half for 10 calendar days.

(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 utilize control strip target density testing results in lieu of QV Proctor sampling and testing when the contractor elected target density method 4 in section C.1 is used.

(7) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If QV test results are nonconforming, take corrective actions according to C.2.7 until the requirements of this special provision are met. Differing QC and QV nuclear density values of more than 2.0 pcf will be investigated and resolved. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.2.6.3 Independent Assurance (IA)

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

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.2.6.4.

C.2.6.4 Dispute Resolution

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor shall review the data, examine data reduction and analysis methods, evaluate sampling and testing methods/procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.

(2) Production test results, and results from other process control testing, may be considered when resolving a dispute.

(3) If project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.2.7 Corrective Action

(1) Lots not achieving the minimum density requirements may be addressed and accepted for compaction according to the requirements of this section. Unless directed by the engineer, corrective actions taken to address an unacceptable lot must be applied to the entire lot corresponding to the non-conforming test.

(2) Investigate the moisture content of material in an unacceptable lot. Moisture content testing/samples collected under the QC and/or QV testing articles of this specification may be used to complete this investigation. Obtain moisture content readings according to ASTM D 6938. For material composed of >20% RAP or RCA, correct the moisture content with the moisture correction value using the moisture bias, as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the 5 random tests is not required.

(3) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods 1, 2 and 3 in section C.1, or within 2.0 percentage points of the target moisture content for target density method 4 in section C.1, and exhibiting no signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, shall be compacted a minimum of one more pass using equipment and methods representative of the operations used to place and compact the Base Aggregate Dense 1 1/4–Inch, and density tested at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(4) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods 1, 2, or 3 in section C.1, or within 2.0 percentage points of the target moisture content for target density method 4 in section C.1 and exhibiting signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, will be reviewed by the engineer. The engineer may request subgrade improvement methods, such as excavation below subgrade (EBS), installation of geotextile fabrics, installation of breaker run material, or others to be completed, or may request an additional pass of compactive effort using equipment and methods representative of the operations used to place and compact the base aggregate dense and density test.

1. If, after an additional pass, the change in density at the same location (station and offset) as the failing QC and/or QV density tests exceeds 2.0 lb/ft^3 in a lot continue subsequent compactive efforts and density testing on that lot. If the change in density at the same location (station and offset) as the failing QC and/or QV density tests is less than or equal to 2.0 lb/ft^3, and subgrade improvement methods are not requested by the engineer, the lot is accepted as satisfying the compaction requirements of this provision.
2. If subgrade improvement methods are requested by the engineer, upon completion, including compaction of the restored base material, conduct a density test within the improved subgrade limits. This density test result will replace the prior field density value. If the lot field density equals or exceeds the minimum density requirement defined in section C.1, the lot is accepted as satisfying the compaction requirements of this provision. If the lot field density fails to achieve the minimum density requirement defined in section C.1, compact the lot a minimum of one more pass using equipment and methods representative of the operations used to place and compact the base aggregate dense; and density test at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(5) Unacceptable lots, with moisture contents in excess of 2.0 percentage points above or below optimum moisture for target density methods 1, 2 or 3 in section C.1; or in excess of 2.0 percentage points above or below the target moisture content for target density method 4 in section C.1; shall receive contractor performed and documented corrective action; including additional density testing.

(6) Density tests completed subsequent to any corrective action will replace previous field density test results for that lot. Continue corrective actions until the minimum density requirement is achieved or an alternate compaction acceptance criteria is met according to this section.

(7) Field moisture contents of materials tested using contractor elected target density methods 3 or 4 in section C.1 cannot exceed 2.0 percentage points of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively. Density tests on materials using contractor elected target density methods 3 or 4 in section C.1 will not be considered for lot compaction acceptance until the moisture content of the corresponding density test of the in-place material is less than 2.0 percentage points above of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively.

D Measurement

(1) The department will measure the QMP Base Aggregate Dense 1 1/4-Inch Compaction bid item by each lot, acceptably completed per C.2.5.1.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
371.2000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	EACH

(2) Payment is full compensation for performing compaction testing; for sampling and laboratory testing; and for developing, completing, and documenting the compaction quality management program. The department will pay separately for providing aggregate under the Base Aggregate Dense 1 1/4-Inch bid item.

(3) The department will pay for additional tests directed by the engineer. One engineer directed test is equal to one acceptably completed lot of the QMP Base Aggregate Dense 1 1/4-Inch Compaction bid item. The department will not pay for additional corrective action tests required due to unacceptable material.

stp-370-010 (20210113)

21. 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:

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

C.1.1.2 Density

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

C.1.2 Field Tests

C.1.2.1 Density

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

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

The target maximum density to be used in determining core density is the average of the three volumetric/mix Gmm values from the test strip multiplied by 62.24 lb/ft^3. 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/ft^3. If no PWL production QV volumetric test is to be taken in a density-only test strip, a non-random QV test will be taken according to 460.2.8.3.1.4 as modified in HMA Pavement Percent Within Limits (PWL) QMP and if non-conforming to C.2.1 herein, follow corrective action outlined in 460.2.8.2.1.7(4) as modified in HMA Pavement Percent Within Limits (PWL) QMP.

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

C.1.3 Laboratory Tests

C.1.3.1 Volumetrics

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

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

C.2 Acceptance

C.2.1 Volumetrics

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

ITEM	ACCEPTANCE LIMITS
Percent passing given sieve:	
37.5-mm	+/- 8.0
25.0-mm	+/- 8.0
19.0-mm	+/- 7.5
12.5-mm	+/- 7.5
9.5-mm	+/- 7.5
2.36-mm	+/- 7.0
75-µm	+/- 3.0
Asphaltic content in percent[1]	- 0.5
Air Voids	-1.5 & +2.0
VMA in percent[2]	- 1.0
Maximum specific gravity	+/- 0.024

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

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

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

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

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

C.2.2 Density

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

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

C.2.3 Test Strip Approval and Material Conformance

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

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

The PWL values for air voids and density shall be calculated after determining core densities. An approved test strip is defined as the individual PWL values for air voids and density both being equal to or greater than 75, mixture volumetric properties conforming to the limits specified in C.2.1, and an acceptable gauge-to-core correlation. Further clarification on PWL test strip approval and appropriate post-test strip actions are shown in the following table:

PWL TEST STRIP APPROVAL AND MATERIAL CONFORMANCE CRITERIA

PWL VALUE FOR AIR VOIDS AND DENSITY	TEST STRIP APPROVAL	MATERIAL CONFORMANCE	POST-TEST STRIP ACTION
Both PWL $\geq$ 75	Approved[1]	Material paid for according to Section E	Proceed with Production
50 $\leq$ Either PWL < 75	Not Approved	Material paid for according to Section E	Consult BTS to determine need for additional test strip
Either PWL < 50	Not Approved	Unacceptable material removed and replaced or paid for at 50% of the contract unit price according to Section E	Construct additional Volumetrics or Density test strip as necessary

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

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

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

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

D Measurement

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

E Payment

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

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

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

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

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

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

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

PAY ADJUSTMENT FOR HMA PAVEMENT AIR VOIDS & DENSITY

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

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

[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:

Pay Adjustment = (PF-100)/100 x (WP) x (tonnage) x ($65/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:

Parameter	WP
Air Voids	0.5
Density	0.5

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

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

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

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

stp-460-040 (20230629)

22. HMA Pavement Percent Within Limits (PWL) QMP.

A Description

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

B Materials

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

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

460.2.8.2.1.3.1 Contracts under Percent within Limits

(1) Furnish and maintain a laboratory at the plant site fully equipped for performing contractor QC testing. Have the laboratory on-site and operational before beginning mixture production.

(2) Obtain random samples and perform tests according to this special provision and further defined in Appendix A: *Test Methods & Sampling for HMA PWL QMP Projects*. Obtain HMA mixture samples from trucks at the plant. For the sublot 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 WTM R47. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per sublot. 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 WTM R97. Additional handling instructions for retained samples are found in CMM 836.4 and CMM 836.5.

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

  Determine AC using one of the following methods:

  - AC by ignition oven according to WTM T308. If the department is using an ignition oven to determine AC, conform to WTP H-003. If the department is not using an ignition oven to determine AC, IOCFs must still be reverified for any of the reasons listed in WTP H-003 Table 2 and conform to WTP H-003 section 3.
  - AC by chemical extraction according to AASHTO T 164 Method A or B.
  - AC by automated extraction according to WTM D8159.
- Bulk specific gravity (Gmb) of the compacted mixture according to WTM T166.
- Maximum specific gravity (Gmm) according to WTM T209.
- Air voids (V_a) by calculation according to WTM T269.
- Voids in Mineral Aggregate (VMA) by calculation according to WTM R35.

(5) Lot size shall consist of 3750 tons with sublots of 750 tons. Test each design mixture at a frequency of one 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 sublot 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, without freeze-thaw conditioning cycles, on each qualifying mixture according to WTM T283 CMM 836.6.14. Test each full 50,000-ton production increment, or fraction of an increment, after the first 5,000 tons of production. Perform required increment testing in the first week of production of that increment. If field tensile strength ratio values are below the spec limit, notify the engineer. The engineer and contractor will jointly determine a corrective action.

Delete standard spec 460.2.8.2.1.5 and 460.2.8.2.1.6.

Replace standard spec 460.2.8.2.1.7 Corrective Action with the following:

460.2.8.2.1.7 Corrective Action

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

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

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

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

(3) Notify the engineer if any individual test result falls outside the action limits, investigate the cause and take corrective action to return to within action limits. If two consecutive test results fall outside the action limits, stop production. Production may not resume until approved by the engineer. Additional QV samples may be collected upon resuming production, at the discretion of the engineer.

(4) For any additional non-random tests outside the random number testing conducted for volumetrics, the data collected will not be entered into PWL calculations. Additional QV tests must meet acceptance limits or be subject to production stop. If the department's non-random test does not conform to the acceptance limits, the retained sample will be tested by the BTS lab. If the BTS results also do not meet the acceptance limits, the material will be considered unacceptable as described in (5) below.

(5) Remove and replace unacceptable material at no additional expense to the department. Unacceptable material is defined as any individual QC or QV tests results outside the acceptance limits or a PWL value < 50. For AC in percent, unacceptable material is defined as any individual QV test result outside of the acceptance limit. The engineer may allow such material to remain in place with a price reduction. The department will pay for such HMA Pavement allowed to remain in place at 50 percent of the contract unit price.

Replace standard spec 460.2.8.3.1.2 Personnel Requirements with the following:

460.2.8.3.1.2 Personnel Requirements

(1) The department will provide at least one HTCP-certified Transportation Materials Sampling (TMS) Technician, to observe QV sampling of HMA mixtures.

(2) Under departmental observation, a contractor TMS technician shall collect and split samples.

(3) A department HTCP-certified Hot Mix Asphalt, Technician I, Production Tester (HMA-IPT) technician will ensure that all sampling is performed correctly and conduct testing, analyze test results, and report resulting data.

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

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

460.2.8.3.1.4 Department Verification Testing Requirements

(1) HTCP-certified department personnel will obtain QV random samples by directly supervising HTCP-certified contractor personnel sampling from trucks at the plant. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per sublot. 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 standard spec 460.2.8.3.1.7(2) of this special provision. Additional sampling details are found in Appendix A.

(2) The department will verify product quality using the test methods specified here in standard spec 460.2.8.3.1.4(3). The department will identify test methods before construction starts and use only those methods during production of that material unless the engineer and contractor mutually agree otherwise.

(3) The department will perform all testing conforming to the following standards:

- Bulk specific gravity (Gmb) of the compacted mixture according to WTM T166.
- Maximum specific gravity (Gmm) according to WTM T209.
- Air voids (Va) by calculation according to WTM T269.
- Voids in Mineral Aggregate (VMA) by calculation according to WTM R35.
- Asphalt Content (AC) in percent determined by ignition oven method according to WTM T308 and conforming to WTP H-003, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to WTM D8159.

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

Delete standard spec 460.2.8.3.1.6.

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following:

460.2.8.3.1.7 Data Analysis for Volumetrics

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

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

[1] The Retained portion of the split from the lot in the analysis window with a QV test result furthest from the QV mean (not necessarily the sublot 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 sublot(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 sublot 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 sublot basis. If an entire PWL sublot is removed and replaced, the test results of the newly placed material will replace the original data for the sublot. Any remove and replace shall be performed at no additional cost to the department. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test will be conducted and under such circumstances will be entered into the HMA PWL Production spreadsheet for data analysis and pay determination.] The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

Delete standard spec 460.2.8.3.1.8 Corrective Action.

C Construction

Replace standard spec 460.3.3.2 Pavement Density Determination with the following:

460.3.3.2 Pavement Density Determination

(1) The engineer will determine the target maximum density using department procedures described in WTM T355 and CMM 815. The engineer will determine density as soon as practicable after compaction and before placement of subsequent layers or before opening to traffic.

(2) Do not re-roll compacted mixtures with deficient density test results. Do not operate continuously below the specified minimum density. Stop production, identify the source of the problem, and make corrections to produce work meeting the specification requirements.

(3) A lot is defined as 7500 lane feet with sublots of 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. The contractor is required to complete three tests randomly per sublot and the department will randomly conduct one QV test per sublot. A partial quantity less than 750 lane feet will be included with the previous sublot. Partial lots with less than three sublots will be included in the previous lot for data analysis/acceptance and pay, by the engineer. If density lots/sublots are determined prior to construction of the test strip, any random locations within the test strip shall be omitted. Exclusions such as shoulders and appurtenances shall be tested and recorded according to CMM 815. However, all acceptance testing of shoulders and appurtenances will be conducted by the department, and average lot (daily) densities must conform to standard spec Table 460-3 or else be subject to disincentives according to 460.5.2.2(5) herein. No density incentive will be applied to shoulders or appurtenances. Offsets will not be applied to nuclear density gauge readings for shoulders or appurtenances. Unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 815.11.

(4) The three QC locations per sublot represent the outside, middle, and inside of the paving lane. The QC density testing procedures are detailed in Appendix A.

(5) QV nuclear testing will consist of one randomly selected location per sublot. The QV density testing procedures will be the same as the QC procedure at each testing location and are also detailed in Appendix A.

(6) An HTCP-certified nuclear density technician (NUCDENSITYTEC-I) shall identify random locations and perform the testing for both the contractor and department. The responsible certified technician shall ensure that sample location and testing is performed correctly, analyze test results, and provide density results to the contractor weekly, or at the completion of each lot.

(7) For any additional tests outside the random number testing conducted for density, the data collected will not be entered into PWL calculations. However, additional QV testing must meet the tolerances for material conformance as specified in the standard specification and this special provision. If additional density data identifies unacceptable material, proceed as specified in CMM 815.11.

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

460.3.3.3 Analysis of Density Data

(1) Analysis of test data for pay determination will be contingent upon test results from both the contractor (QC) and the department (QV).

(2) As random density locations are paved, the data will be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. The engineer, upon completion of the first 3 lots, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. A rolling window of 3 lots will be used to conduct F & t comparison for the remainder of the contract (i.e., lots 2-4, then lots 3-5, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025.

i. If the F- and t-tests indicate variances and means compare, the QC and QV data sets are determined to be statistically similar and QC data will be used for PWL and pay adjustment calculations.

ii. If the F- and t-tests indicate variances or means do not compare, the QV data will be used for subsequent calculations.

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

(4) Density resulting in a PWL value less than 50 or not meeting the requirements of 460.3.3.1 (any individual density test result falling more than 3.0 percent below the minimum required target maximum density as specified in standard spec Table 460-3) is unacceptable and may be subject to remove and replace at no additional cost to the department, at the discretion of the engineer.

i. Replacement may be conducted on a sublot basis. If an entire PWL sublot is removed and replaced, the test results of the newly placed material will replace the original data for the sublot.

ii. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test must be conducted and under such circumstances will be entered into the data analysis and pay determination.]

iii. If the engineer allows such material to remain in place, it will be paid for at 50% of the HMA Pavement contract unit price. The extent of unacceptable material will be addressed as specified in CMM 815.11. The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

D Measurement

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

E Payment

Replace standard spec 460.5.2 HMA Pavement with the following:

460.5.2 HMA Pavement

460.5.2.1 General

(1) Payment for HMA Pavement Type LT, MT, and HT mixes is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting mixture; for HMA PWL QMP testing and aggregate source testing; for warm mix asphalt additives or processes; for stabilizer, hydrated lime and liquid antistripping agent, if required; and for all materials including asphaltic materials.

(2) If provided for in the plan quantities, the department will pay for a leveling layer, placed to correct irregularities in an existing paved surface before overlaying, under the pertinent paving bid item. Absent a plan quantity, the department will pay for a leveling layer as extra work.

460.5.2.2 Calculation of Pay Adjustment for HMA Pavement using PWL

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

PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY

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

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

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

(2) For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density shall be according to standard spec Table 460-3.

(3) Pay adjustment will be determined on a lot basis and will be computed as shown in the following equation:

Pay Adjustment = (PF-100)/100 x (WP) x (tonnage) x ($65/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:

Parameter	WP
Air Voids	0.5
Density	0.5

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

(5) Pay adjustment for shoulders and appurtenances accepted by department testing will be determined on a lot basis. If the lot density is less than the specified minimum in table 460-3, the department will reduce pay based on the contract unit price for the HMA pavement bid item for that lot as follows:

DISINCENTIVE PAY REDUCTION FOR HMA PAVEMENT DENSITY

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

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

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

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

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

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

AC Binder Relative to JMF	Pay Adjustment / Sublot
• -0.4% to -0.5%	• 75%[1]
• More than -0.5%	• 50%[1] [2]

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

[2] Any material resulting in an asphalt binder content more than 0.5% below the JMF AC content shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

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

stp-460-050 (20230629)

23. Appendix A.

Test Methods & Sampling for HMA PWL QMP Projects

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

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

WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip

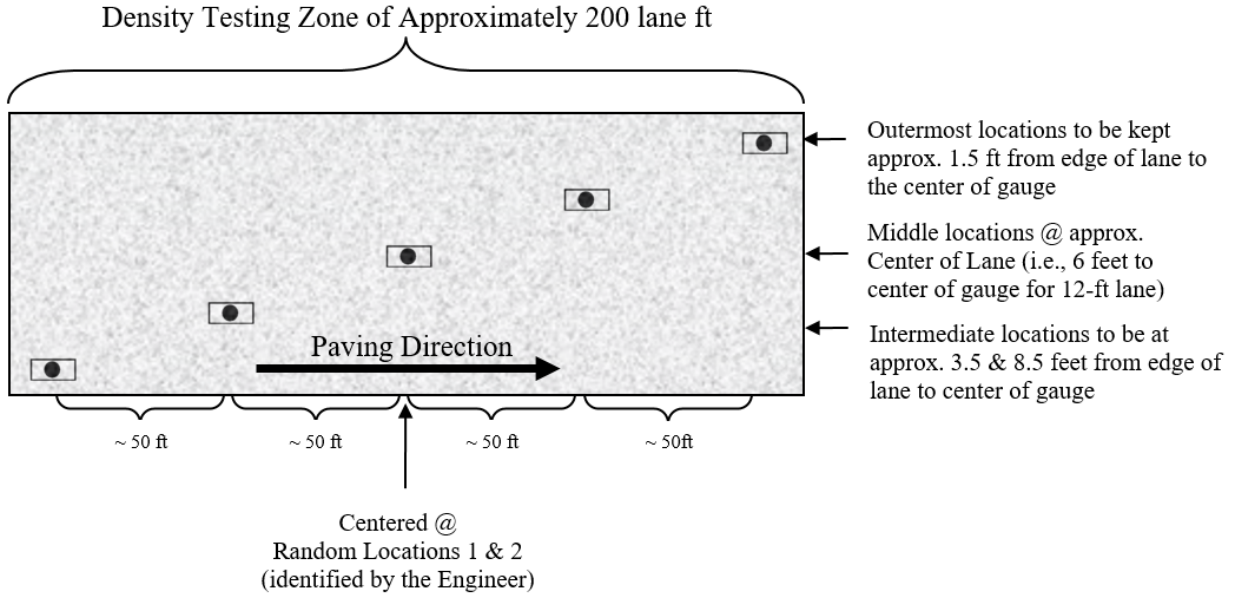


Figure 1: Nuclear/Core Correlation Location Layout

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

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

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

The zones are supposed to be undisclosed to the contractor/roller operators. The engineer will not lay out density/core test sites until rolling is completed and the cold/finish roller is beyond the entirety of the zone. Sites are staggered across the 12-foot travel lane, and do not include shoulders. The outermost locations 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:

(a) (b)

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 according to WTM R79 prior to using specimens for in-place density determination according to WTM T166.

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 Measurements for Main Production

For nuclear density testing of the pavement beyond the test strip, QC tests will be completed at three locations per sublot, with a sublot defined as 1500 lane feet. The three locations will represent the outside, middle, and inside of the paving lane (i.e., the lane width will be divided into thirds as shown by the dashed longitudinal lines in Figure 3 and random numbers will be used to identify the specific transverse location within each third according to CMM 815). Longitudinal locations within each sublot shall be determined with 3 independent random numbers. The PWL Density measurements do not include the shoulder and other appurtenances. Such areas are tested by the department and are not eligible for density incentive but are subject to disincentive according to 460.5.2.2(5) of the HMA PWL QMP article. Each location will be measured with two one-minute gauge readings oriented 180 degrees from one another, in the same footprint as detailed in Figure 2 above. Each location requires a minimum of two readings per gauge. The density gauge orientation for the first test will be with the source rod towards the direction of paving. QV nuclear testing will consist of one randomly selected location per sublot. The QV is also comprised of two one-minute readings oriented 180 degrees from one another. For both QC and QV test locations, if the two readings exceed 1.0 pcf of one another, a third reading 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 sublot density testing layout is depicted in Figure 4, with QC test locations shown as solid lines and QV as dashed.

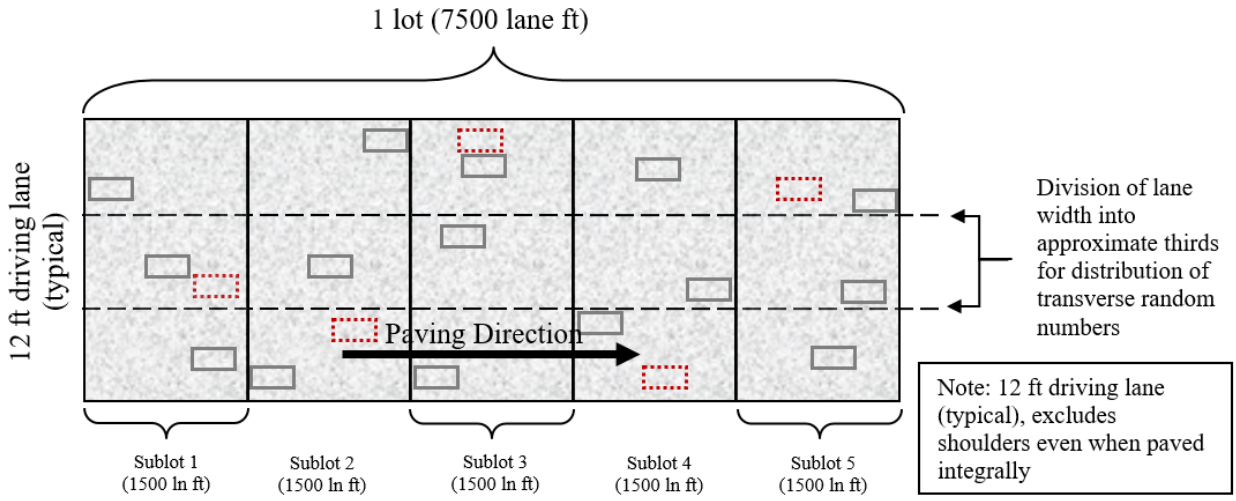


Figure 4: Locations of main lane HMA density testing (QC=solid lines, QV=dashed)

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

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

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

New Gauge Combination

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

Re-correlation of Gauges

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

Density Dispute Resolution Procedure

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

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

In lieu of using density gauges for acceptance of the lot, the lot will be cored in the QV locations. The results of the cores from the entire lot will be entered in the spreadsheet and used for payment. If the pay factor increases, the contractor will only receive the additional difference in payment for the disputed lot. If the pay factor does not increase, the department will assess the contractor $2,000 for the costs of additional testing.

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

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

Sampling for WisDOT HMA PWL QMP Production

Sampling of HMA mix for QC, QV and Retained samples shall conform to WTM R97 and WTM R47 except as modified here.

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 (sublot) 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 sublot. Each random sample shall be collected at the plant according to WTM R97. 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 WTM D3665 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 sublot tonnage. This number will then be added to the final tonnage of the previous sublot 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 sublot 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 sublot tests will be included into the previous lot, by the engineer.

It is intended that the plant operator not be 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 WTM R47.

Calculation of PWL Mainline Tonnage Example

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

Solution:

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

stp-460-055 (20230629)

24. HMA Pavement Longitudinal Joint Density.

A Description

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

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

B Materials

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

TABLE B-1 MINIMUM REQUIRED LONGITUDINAL JOINT DENSITY

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

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

C Construction

Add the following to standard spec 460.3.3.2:

(5) Establish companion density locations at each applicable joint. Each companion location shares longitudinal stationing with a QC or QV density location within each sublot and is located transversely with the center of the gauge 6-inches from the final joint edge of the paving area. Sublot and lot numbering remains the same as mainline densities, however, in addition to conventional naming, joint identification must clearly indicate “M” for inside/median side of lane or “O” for outside shoulder side of lane, as well as “U” for an unconfined joint or “C” for a confined joint (e.g., XXXXX-MC or XXXXX-OU).

(6) Each joint 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 nuclear density test results greater than 3.0% below specified minimums per Table B-1 herein, perform the following:

a) Testing at 50-foot increments both ahead and behind the unacceptable site.

b) Continued 50-foot incremental testing until test values indicate higher than or equal to -3.0 percent from target joint density.

c) Materials within the incremental testing indicating lower than -3.0 percent from target joint density are defined as unacceptable and will be handled with remedial action as defined in the payment section of this document.

d) The remaining sublot 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 sublot, 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 sublot density. When this occurs, the lane feet of any unacceptable material will be deducted from the sublot in which it is located, and the previously accepted sublot density will be used to calculate pay for the remainder of the sublot.

(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 nuclear 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. 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 sublot as follows:

PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY

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

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

(2) The department will not assess joint density disincentives for pavement placed in cold weather because of a department-caused delay as specified in standard spec 450.5.2(3).

(3) The department will not pay incentive on the longitudinal joint density if the traffic lane is in disincentive A disincentive may be applied for each mainline lane and all joint densities if both qualify for a pay reduction.

(4) Inlay paving operations will limit payment for additional material to 2 inches wider than the final paving lane width at the centerline.

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

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

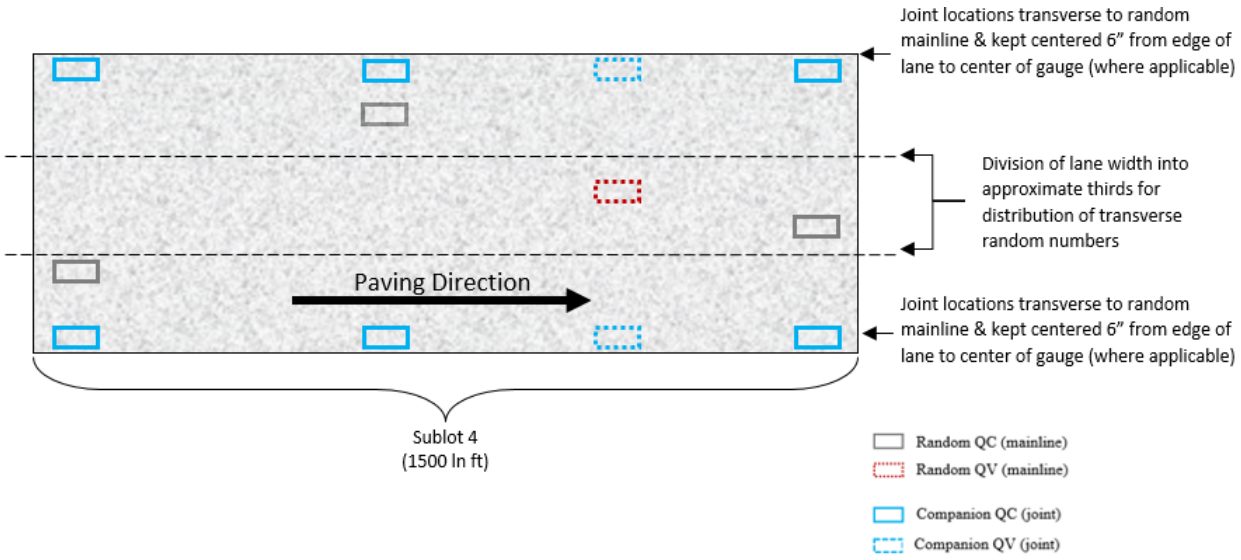
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

Appendix

WisDOT Longitudinal Joint – Nuclear Gauge Density Layout

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

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



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

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

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

stp-460-075 (20230629)

25. Concrete Staining Multi-Color C-13-3098, Item 517.1015.S.01.

A Description

This special provision describes providing a multi-color concrete stain on the exposed concrete surfaces of the structure as the plan details show.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement:	Tri-Mix by TK Products
	Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied according to manufacturer's recommendations:

Acrylic Bonding Admixture:	TK-225 by TK Products
	Achro 60 by Thoro Products
	Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

Tri-Sheen Concrete Surfacer, Smooth by TK Products

Tri-Sheen Acrylic by TK Products

TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products

Safe-Cure & Seal EPX by Chem Masters

H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials according to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish as specified in standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45º F or higher, or as given by the manufacturer.

The color of the staining shall produce a multi-color effect that consists of multiple colors replicating varying natural stone coloration. Stain the joints between stones produced by the form liner to create the appearance of grouted joints.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Before applying stain to the structure, apply the stain to sample panels measuring a minimum of 48 inches x 48 inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining. Submit color samples to the department before staining the sample panels. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between stones produced by the form liner. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated

Apply concrete stain to the surfaces according to the plan.

D Measurement

The department will measure Concrete Staining Multi-Color C-13-3098 in area by the square foot of surface, acceptably prepared and stained.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S.01	Concrete Staining Multi-Color C-13-3098	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.

stp-517-115 (20140630)

26. Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 58x91-Inch, Item 522.2358

Add the following to standard spec 520.2.5.2:

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

Revise standard spec 520.3.2.1(5) as follows:

Excavate the trench to at least 6 inches below the elevation established for the bottom of the pipe. Backfill to this depth with foundation backfill. Mechanically compact foundation backfill before laying the pipe. After laying the pipe, place low strength backfill to an elevation of 12 inches above the pipe to provide full and continuous support.

27. Fence Safety, Item 616.0700.S.

A Description

This special provision describes providing plastic fence at locations the plans show.

B Materials

Furnish notched conventional metal "T" or "U" shaped fence posts.

Furnish fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh Opening:	1 inch min to 3 inch max
Resin/Construction:	High density polyethylene mesh
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

C Construction

Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.

Overlap two rolls at a post and secure with wire ties.

D Measurement

The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts, 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
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.

stp-616-030 (20160607)

28. Removing Signs Type II, Item 638.2602.

Replace standard spec 638.3.4(2) with the following:

(2) Signs shall remain property of the department. Deliver signs to 3609 Pierstorff Street, Madison. Contact Timm Punzel at (608) 259-6709 to coordinate the delivery. Separate the signs by plywood and aluminum and palletize them so they can be unloaded using a forklift. This work will be considered incidental to the bid item "Removing Signs Type II".

swr-638-001 (20141114)

29. Installing and Maintaining Bird Deterrent System STA 195+20, Item 999.2000.S.01; Installing and Maintaining Bird Deterrent System STA 263+75, Item 999.2000.S.02.

A Description

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

B Materials

B.1 Hardware and Lumber

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

B.2 Netting Materials

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

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

a. 1/2” x 1/2” or 3/4" x 3/4” knotless, flame resistant, U.V. stabilized polyethylene or polypropylene netting with minimum 40-pound breaking strength per strand, or engineer approved equal.

b. Galvanized wire mesh (hardware cloth) with a wire diameter of .040 inches (19-gauge) and opening width of 1/2-inch.

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

B.3 Plastic Strip Curtain

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

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

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

Furnish concrete screws to attach strip curtain to structure.

B.4 Corner Slope Materials

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

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

C Construction

C.1 General

If active nests are observed after construction starts, or if a trapped bird or an active nest is found, stop work that may affect birds or their nests, and notify the engineer to consult with the Wisconsin Department of Natural Resources transportation liaison Eric Heggelund at (608) 228-7927, or the department regional environmental coordinator Brian Taylor at (608) 245-2630.

Efforts should be made to release trapped birds, unharmed.

C.2 Nest Removal

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

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

C.3 Exclusion Netting

C.3.1 Installation

Using concrete screws, anchor lumber to bridge or culvert along perimeter of intended netting. Fasten netting to lumber until netting is held taut. Eliminate any loose pockets or wrinkles that could trap and entangle birds. Ensure the net is pulled taut in order to prevent flapping in the wind, which results in tangles or breakage at mounting points.

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

C.4 Plastic Curtains

C.4.1 Installation

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

C.5 Corner Slopes

C.5.1 Installation

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

C.6 Inspection and Maintenance

Inspect bird deterrent devices every 2 weeks both during and prior to construction when deterrents have been installed to exclude birds prior to nesting windows, and after large storm events or high winds. Ensure that netting is taut, that no gaps or holes have formed, and that the nets are functioning properly. Ensure that corner slopes are not cracked or otherwise damaged and are functioning properly. Ensure that curtains are undamaged, with no tears, holes, or creases. Repair any damaged or loose deterrent devices. Inspect, maintain, and repair nesting deterrents whether installed by the contractor or others. Repair, replace, supplement deterrents as necessary with materials meeting the requirements of this specification.

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

Repair deterrents to prevent birds from attempting to nest again.

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

C.7 Removal and Structure Repair

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

D Measurement

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

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
999.2000.S.01	Installing and Maintaining Bird Deterrent System STA 195+20	EACH
999.2000.S.02	Installing and Maintaining Bird Deterrent System STA 263+75	EACH

Payment for Installing and Maintaining Bird Deterrent System is full compensation for providing and installing deterrents that prevent migratory bird nesting; removing and disposing of unoccupied or partially constructed nests without eggs or nestlings; maintaining, repairing, replacing, supplementing, existing deterrent materials; repairing damage to structures resulting from installation of deterrents; removal and disposal of materials.

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

stp-999-200 (20220107)

30. Locating No-Passing Zones, Item 648.0100.

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

stp-648-005 (20060512)

31. Verify and Replace Existing Land Parcel Monuments, Item SPV.0060.01.

A Description

This special provision describes verifying the final location of, and replacing existing land parcel or boundary monuments, previously located under the item "Research and Locate Existing Land Parcel Monuments", that are lost or disturbed by construction operations.

This provision does not relinquish the contractor’s responsibility of standard spec 107.11.

B Materials

Provide minimum sized replacement monuments as follows:

- Locations outside of pavement areas:
  - 1-inch inside diameter by 24-inch long iron pipe
  - 3/4-inch diameter by 24-inch long rod or rebar
- Locations in asphalt pavement areas:
  - Survey spike
  - Mag nail
- Locations in concrete pavement areas:
  - Drilled hole
  - Chiseled mark

C Construction

Perform work by, or under the direction of, a professional land surveyor licensed in the State of Wisconsin.

After construction is completed, verify the location of all monuments previously located with the item "Research and Locate Existing Land Parcel Monuments". Replace any monuments that were disturbed or destroyed to current minimum state survey standards.

Prepare a monument location map showing the type of monuments originally found, the type of replacement monuments used to replace the disturbed or destroyed monuments, and monument coordinates. The transportation project plat (TPP) is acceptable as a base map for the monument location map. Create the location map with a PDF editing tool such as Adobe or Bluebeam. The monument location map shall explicitly state that the replaced monuments are not being certified as actual land parcel or boundary monuments, only that evidence of monuments were found and replaced. Attach a cover letter to the location map that contains a brief synopsis of the work completed. The cover letter shall be signed, stamped, and dated by a professional land surveyor. Provide a copy of the monument location map and cover letter to the engineer, the county surveyor, and the region plat coordinator.

D Measurement

The department will measure Verify and Replace Existing Land Parcel Monuments as each individual monument, 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	Verify and Replace Existing Land Parcel Monuments	EACH

Payment is full compensation for all survey work necessary to verify the location of all monuments previously located under the item "Research and Locate Existing Land Parcel Monuments"; replacing monuments that were disturbed or destroyed from their original location; furnishing monuments or other necessary tools; furnishing a professional land surveyor; preparing, annotating and delivering the monument location map and cover letter.

F Contact Information

WisDOT SW Region-Madison Plat Coordinator

Jarod Alvarez
(608) 246-7918
jarod.alvarez@dot.wi.gov

Dane County Surveyor

Dan Frick
(608) 266-4252
Frick@countyofdane.com

swr-621-003

32. Verify Landmark Reference Monuments, Item SPV.0060.02.

A Description

This special provision describes preserving the location and constructing new monuments for existing Public Land Survey System (PLSS) section corner monuments and witness monuments located within permanent easements, temporary easements, or construction permit areas, which may be lost or disturbed by construction operations.

This provision does not relinquish the contractor’s responsibility of standard spec 107.11.

B Materials

The department can furnish aluminum monument caps, if necessary. Otherwise, all materials for the monumentation and witness ties will be the responsibility of the contractor to provide. Any monuments that satisfy Wisconsin Administrative Code Chapter AE-7 will be acceptable.

C Construction

Complete the work according to the direction of the Dane County Surveyor and as follows:

Contact and follow the direction of the Dane County Surveyor on perpetuation requirements for PLSS section corner monuments and witness monuments. Obtain existing tie sheets from the Dane County Surveyor. Locate and verify existing PLSS monuments and ties. Furnish, and install, if necessary, temporary and/or permanent ties. Provide a temporary tie sheet to the WisDOT SW Region – Madison Survey Coordinator and the Dane County Surveyor, for use by the public during the construction phase of the project and before the final monumentation is complete.

Perpetuate and/or reset all PLSS monuments and witness monuments under the direction of a State of Wisconsin Licensed Professional Land Surveyor. Prepare the temporary and final PLSS monument records according to the Wisconsin Administrative Code Chapter AE-7. Prepare and file new monument records with the Dane County Surveyor according to AE-7 and provide a copy of the same to the WisDOT SW Region – Madison Survey Coordinator. This work shall be overseen and completed by a State of Wisconsin Licensed Professional Land Surveyor.

The approximate location of the section corners that will likely be disturbed due to the proposed construction:

Landmark Reference Monument

Station	Offset	Township	Range	Section Corner
81+74.53	5.43, LT	T8N	R6E	12
108+13.73	0.37, LT	T8N	R6/7E	12 / 7
134+60.22	3.31, RT	T8N	R7E	7
272+96.44	0.95, LT	T8N	R7E	3/4/9/10
299+30.94	1.34, RT	T8N	R7E	3/10
478+06.28	22.40, RT	T8N	R8E	6/7

Notify the Dane County Surveyor and WisDOT SW Region – Madison Survey Coordinator at least 30 working days prior to construction operations that may disturb existing monuments, with pertinent questions or for department provided monument caps.

D Measurement

The department will measure Verify Landmark Reference Monuments by each U.S. public land survey corner acceptably verified, tied, and preserved.

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	Verify Landmark Reference Monuments	EACH

This price shall be payment in full for furnishing a Professional Land Surveyor; obtaining existing PLSS monument record tie sheet(s); preparing, providing, and filing temporary/final PLSS monument record tie sheet(s) from a Professional Land Surveyor; all survey work related to the perpetuation process; the furnishing and placing of all PLSS survey monuments; the furnishing and placement of any necessary witness ties; the removal of the existing monument(s) if necessary; and excavating for the placement of the new monument(s) if necessary.

F Contact Information

WisDOT SW Region – Madison Plat Coordinator

Jarod Alvarez
(608) 246-7918
jarod.alvarez@dot.wi.gov

Dane County Surveyor

Dan Frick
(608) 266-4252
Frick@countyofdane.com

swr-621-004

33. Research and Locate Existing Land Parcel Monuments, Item SPV.0060.03.

A Description

This special provision describes researching and locating existing land parcel or boundary monuments located in permanent easements, temporary easements, or construction permit areas, which may be lost or disturbed by construction operations.

This provision does not relinquish the contractor's responsibility of standard spec 107.11.

B (Vacant)

C Construction

Perform work by, or under the direction of, a professional land surveyor licensed in the State of Wisconsin.

Before construction, research, locate, and document monuments located in permanent easements, temporary easements, and construction permit areas. Establish coordinate ties to the monuments accurate to current minimum state survey standards.

Prepare a monument location map showing the type of monuments found and their coordinates. The transportation project plat (TPP) is acceptable as a base map for the monument location map. Provide a copy of the monument location map to the engineer and region right-of-way plat coordinator.

Verify and reset monument locations after construction is complete under the item titled "Verify and Replace Existing Land Parcel Monuments."

D Measurement

The department will measure Research and Locate Existing Land Parcel Monuments as each individual monument, 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	Research and Locate Existing Land Parcel Monuments	EACH

Payment is full compensation for all research, field survey, locating, and data recording necessary to locate and establish coordinates for existing monuments within the construction limits before construction; furnishing a professional land surveyor; preparing, annotating, and delivering the monument location map.

F Contact Information

WisDOT SW Region – Madison Plat Coordinator

Jarod Alvarez
(608) 246-7918
jarod.alvarez@dot.wi.gov

Dane County Surveyor

Dan Frick
(608) 266-4252
Frick@countyofdane.com

swr-621-005

34. Pipe Underdrain (6-Inch) with Geotextile Fabric and Aggregate, Item SPV.0090.01.

A Description

This special provision describes providing and placing pipe underdrain, geotextile fabric, and aggregate as shown on the plans and hereinafter provided. The work under this item shall be according to the standard specifications for each component.

B Materials

B.1 Pipe

Provide Pipe Underdrain 6-Inch conforming to the pertinent requirements of standard spec 612.2.

B.2 Geotextile Fabric

Provide Geotextile Fabric Type DF Schedule B conforming to the pertinent requirements of standard spec 645.2.1 and 645.2.4.

B.3 Aggregate

Provide coarse aggregate size No. 1 conforming to the pertinent requirements of standard spec 501.2.5.4.

C Construction

Construct the Pipe Underdrain (6-Inch) with Geotextile Fabric and Aggregate as the plans show and conforming to standard spec 612.3.1, 612.3.3, 612.3.5, and 645.3.4.

D Measurement

The department will measure Pipe Underdrain (6-Inch) with Geotextile Fabric and Aggregate 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	Pipe Underdrain (6-Inch) with Geotextile Fabric and Aggregate	LF

Payment is full compensation for providing and placing all materials, including pipe underdrain, geotextile fabric, aggregate, backfill, connections, fittings, and caps or plugs; and for all excavating, recompacting, disposing of surplus material, and restoring the work site.

swr-612-001 (20160205)

35. Stamping Concrete, Item SPV.0165.01.

A Description

This special provision describes the construction of stamping concrete as shown in the plans and hereinafter provided.

B Materials

B.1. Stamp

Use reusable elastomeric/urethane form liners of the architectural surface treatment(s) as detailed in the plans and hereinafter provided. Pattern shall be rustic ashlar. Provide a sample pattern to engineer for approval before use.

B.2. Antiquing Release Agent

Use an antiquing release agent compatible with the stamp and coloring materials. The antiquing release agent color shall be subject to approval by Dane County Parks and shall closely match the color of the adjacent stone ruins. Provide manufacturer’s color chart for antiquing release agent to engineer for approval before use.

B.3. Concrete Sealant

Use concrete sealant compatible with the stamp and installation methods.

Prime Sealant: Matte.

Secondary Sealant: Matte.

C Construction

Construct the concrete stamping pattern as shown in plans, or as directed by the engineer and as hereinafter provided.

C.1 Placement

Uniformly apply liquid release agent onto the concrete while it is still in a plastic state to provide clean release of imprinting tools from the concrete without lifting imprint or tearing concrete.

While initially finished concrete is in plastic state, accurately align and place imprinting stamps. Monitor the concrete while it sets up. Begin stamping once the concrete has set to the point it can be stamped. Uniformly pound or press imprint tools into concrete to produce required pattern and depth of imprint on the concrete surface. Remove platform tools immediately. Hand texture and stamp edges and surfaces that cannot be imprinted by stamp mats. Touch up imperfections such as broken corners, double imprints and surface cracks.

Stamp concrete consistently so that stamped concrete does not have a vertical elevation difference of 1/2-Inch or depressions in concrete capable of causing ponding water or ice. For concrete hand stamp edges and surfaces that cannot be imprinted by platform tools, use texture mats and single blade hand stamps to match platform tool stamping pattern. Finish imprinting to match pre-construction mockups.

C.2 Finishing

Allow concrete to cure for 24 hours after application of the antiquing release agents and stamp pattern.

Pressure wash concrete surface to remove approximately 80% of the antiquing release agent.

D Measurement

The department will measure Stamping Concrete by the square foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Stamping Concrete	SF

Payment is full compensation for stamping concrete including all patterns, release agents and sealants.

36. Impervious Isolation Membrane, Item SPV.0180.01

A Description

This special provision describes furnishing and installing an impervious isolation membrane within the backfill over structural plate pipe arches to mitigate chloride infiltration through soil fill.

B Materials

B.1 Liner Waterproofing Membrane

Furnish impervious isolation membrane according to ASTM D 7176-06. Furnish grade PVC30 or higher with a minimum thickness of 30 mils.

B.2 Submittals

Submit a manufacturer’s letter certifying the Impervious Isolation Membrane supplied will meet or exceed the minimum thickness including:

- Certified test data showing the product meets ASTM D 1776-06 – Non-Reinforced Polyvinyl Chorlide (PVC) Geomembranes.
- Minimum thickness and maximum thickness of PVC supplied to the project.

C Construction

Construct impervious isolation membrane above the structural backfill and below roadway backfills as the plans show. The impervious isolation membrane shall be a continuous sheet placed over structural plate pipe arches, extending the full width of the trench and along the entire length at the top of structural plate pipe arches.

Seams constructed in the field are not acceptable.

D Measurement

The department will measure Impervious Isolation Membrane by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Impervious Isolation Membrane	SY

Payment is full compensation for furnishing and placing impervious isolation membrane as shown in the plans. Work associated to structure and roadway backfill will be paid separately.

37. Removing Distressed Pavement Milling, Item SPV.0180.02.

A Description

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

B (Vacant)

C Construction

C.1 Milling

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

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

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

The removed material shall become the property of the contractor. Properly dispose of it according to standard spec 204 of the standard specifications.

C.2 Cleaning

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

C.3 Pavement Prep

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

D Measurement

The department will measure Removing Distressed Pavement Milling by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.02	Removing Distressed Pavement Milling	SY

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

swr-204-006 (20180824)

38. Backfill Special, Item SPV.0195.01.

A Description

This section describes furnishing backfill materials and backfilling excavations for the structural plate pipe.

B Materials

B.1 Backfill

Furnish and place backfill for the wall as shown on the plans and as hereinafter provided.

Place backfill in a zone extending horizontally from the back face of the wall facing to 1 foot minimum beyond the end of the reinforcement and extending vertically from the top of the leveling pad to a minimum of 3 inches above the final reinforcement layer.

Use natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. Do not use foundry sand, bottom ash, blast furnace slag, crushed/recycled concrete, crushed/milled asphaltic concrete or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	% by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. Provide the percent by weight, passing the #4 sieve.

In addition, backfill material shall meet the following requirements.

Test	Method	Value	
		(Galvanized)	(Aluminized Type 2)
pH	AASHTO T-289	5.0-10.0	5.0 – 9.0
Sulfate content	AASHTO T-290	200 ppm max.	
Chloride content	AASHTO T-291	100 ppm max.	
Electrical Resistivity	AASHTO T-288	3000 ohm-cm min.	1500 ohm-cm min.
Organic Content	AASHTO T-267	1.0% max.	
Angle of Internal Friction	AASHTO T-236[1]	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99, or as modified by C.2.)	

[1] If the amount of P-4 material is greater than 60%, use AASHTO 236 with a standard-size shear box. Test results of this method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM D5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications, and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1” material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified report of tests are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. For the additional required testing for every 2000 cubic yards of backfill placement, if the characteristic of the backfill and/or the source has not changed then Angle of Internal Friction tests are not included in the additional required testing. All certified reports of test results shall be less than 6 months old and performed by a certified independent laboratory.

C Construction

C.1 Excavation and Backfill

Excavation shall conform to standard spec 206.

Backfilling shall conform to standard spec 527.3.3.

D Measurement

The department will measure the Backfill Special bid items by the ton, acceptably completed. The department will only include material placed within the limits and in the places the plans show, the contract designates, or the engineer directs. The department may convert the measurement between weight and volume as specified in standard spec 109.1.

For measurement by the ton, the department will determine weight based on contractor-provided tickets submitted daily. Submit tickets as specified in standard spec 109.1.4.2. For material with more than 7 percent moisture, the department will reduce the ticket weight by the weight of water exceeding 7 percent. The department will determine moisture content as a percent of dry weight.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Backfill Special	TON

Payment for the Backfill Special bid items is full compensation for providing, placing, and compacting backfill. The department will pay for the Backfill Special bid items as specified in standard spec 209.5 for Backfill Granular.

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 PROVISIONS 5
FUEL COST ADJUSTMENT

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.1100	Backfill Granular Grade 1	CY	0.23
209.1500	Backfill Granular Grade 1	Ton	0.115
209.2100	Backfill Granular Grade 2	CY	0.23
209.2500	Backfill Granular Grade 2	Ton	0.115
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $3.30 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

(1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.

(2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.

(3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.

(4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1\right) x\ Q\ x\ BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

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

Make the following revisions to the standard specifications:

---

108 Prosecution and Progress

Add subsection 108.9.4.1 effective with the November 2023 letting:

108.9.4.1 Winter Suspension for Completion Date Contracts

(1) The contractor may request a winter suspension for a completion date contract. If the department determines weather conditions do not allow for the completion of the remaining work, the department may approve the contractor's request and determine the start date of the winter suspension. The end date of the winter suspension is March 31 or a date mutually agreed upon by both parties. For multi-year contracts, the department will only consider winter suspension for the final year of the contract.

(2) During winter suspension, store all materials in a manner that does not obstruct vehicular and pedestrian traffic and protect the materials from damage. Install traffic control and other safety devices necessary to protect the traveling public and pedestrians. Provide suitable drainage and install temporary erosion control where necessary. If the winter suspension begins when liquidated damages are being assessed, or when the work has not progressed as scheduled and would not have been completed prior to the completion date, the cost of necessary pre-suspension work is incidental. If the winter suspension begins prior to the contract completion date, and the work has progressed as scheduled and would have been completed prior to the completion date, the cost of pre-suspension work will be paid as specified under 109.4.

(3) For a winter suspension that begins prior to the contract completion date and the work has progressed as scheduled and would have been completed prior to the completion date, the engineer will extend contract time to correspond with the end of the winter suspension and liquidated damages will not be assessed during the winter suspension.

(4) For a winter suspension that begins when liquidated damages are being assessed or when the work has not progressed as scheduled and would not have been completed prior to the completion date, the engineer will not extend contract time. Time will be suspended until the end of the winter suspension. Liquidated damages will not be assessed during the winter suspension and liquidated damages will resume at the end of the winter suspension.

---

310 Open Graded Base

310.2 Materials

Replace paragraph two with the following effective with the November 2023 letting:

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

TABLE 310-01 COARSE AGGREGATE (% passing by weight)

AASHTO No. 67[1]

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

No. 50	-
No. 100	-
No. 200	<=1.5

[1] Size according to AASHTO M43.

---

390 Base Patching

390.4 Measurement

Replace entire section with the following effective with the November 2023 letting:

(1) The department will measure Removing Pavement for Base Patching by the cubic yard acceptably completed. Measure the depth from the bottom of the adjacent pavement to the top of the patch.

(2) The department will measure Base Patching Asphaltic by the ton acceptably completed as specified for asphaltic pavement in 450.4.

(3) The department will measure Base Patching Concrete HES and Base Patching Concrete SHES by the cubic yard acceptably completed. Measure the depth from the bottom of the adjacent pavement to the top of the patch.

390.5 Payment

Replace entire section with the following effective with the November 2023 letting:

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

ITEM NUMBER	DESCRIPTION	UNIT
390.0100	Removing Pavement for Base Patching	CY
390.0201	Base Patching Asphaltic	TON
390.0305	Base Patching Concrete HES	CY
390.0405	Base Patching Concrete SHES	CY

(2) Payment for Removing Pavement for Base Patching is full compensation for removing old pavement; for preparing the foundation and bringing up to grade. If the engineer orders the contractor to excavate yielding or unstable subgrade materials and backfill with suitable materials, the department will pay for that work with contract bid items or as agreed upon using 109.4.

(3) Payment for Base Patching Asphaltic is full compensation for providing and compacting asphaltic mixture including asphaltic binder.

(4) Payment for Base Patching Concrete HES and Base Patching Concrete SHES is full compensation for providing, curing, and protecting concrete. Payment also includes providing tie bars and dowel bars in unhardened concrete and steel within the patch. For tie bars and dowel bars provided in concrete not placed under the contract, the department will pay separately under the Drilled Tie Bars and Drilled Dowel Bars bid items as specified in 416.5.

(5) Payment for Base Patching SHES also includes providing test data to the engineer as specified in 416.2.4.

(6) The department will pay for sawing existing concrete pavement for removal under the Sawing Concrete bid item as specified in 690.5.

---

460 Hot Mix Asphalt Pavement

460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater

Replace paragraph four with the following effective with the November 2023 letting:

(4) Use the test methods identified below, or other methods the engineer approves, to perform the following tests at the frequency indicated:

Blended aggregate gradations:

Drum plants:

- Field extraction by ignition oven according to WTM T308, chemical extraction according to AASHTO T-164 method A or B; or automated extraction according to WTM D8159. Gradation of resulting aggregate sample determined according to WTM T30.
- Belt samples, optional for virgin mixtures, obtained from stopped belt or from the belt discharge using an engineer-approved sampling device and performed according to WTM T11 and T27.

Batch plants:

- Field extraction by ignition oven according to WTM T308, chemical extraction according to AASHTO T-164 method A or B; or automated extraction according to WTM D8159. Gradation of resulting aggregate sample determined according to WTM T30.

Asphalt content (AC) in percent:

Determine AC using one of the following methods:

- AC by ignition oven according to WTM T308.
- AC by chemical extraction according to AASHTO T-164 method A or B.
- AC by automated extraction according to WTM D8159.
- If the department is using an ignition oven to determine AC, conform to WTP H003.
- If the department is not using an ignition oven to determine AC, ignition oven correction factor (IOCF) must still be reverified for any of the reasons listed in WTP H003 Table 2 and conform to WTP H-003 sections 3 through 6.
- Gradation of resulting aggregate sample determined according to WTM T30.

Bulk specific gravity of the compacted mixture:

According to WTM T166.

Theoretical maximum specific gravity:

According to WTM T209.

Air voids (Va) by calculation according to WTM T269.

VMA by calculation according to WTM R35.

460.2.8.3.1.4 Department Verification Testing Requirements

Replace paragraph three with the following effective with the November 2023 letting:

(3) The department will perform testing conforming to the following standards:

Bulk specific gravity (G_{mb}) of the compacted mixture according to WTM T166.

Maximum specific gravity (Gmm) according to WTM T209.

Air voids (Va) by calculation according to WTM T269.

VMA by calculation according to WTM R35.

Asphalt content by ignition oven according to WTM T308, chemical extraction according to AASHTO T-164 method A or B, or automated extraction according to WTM D8159. If using an ignition oven to determine AC, conform to WTP H-003.

---

503 Prestressed Concrete Members

503.2.2 Concrete

Replace paragraph five with the following effective with the November 2023 letting:

(5) Furnish prestressed concrete members cast from air-entrained concrete, except I-type girders may use non-air-entrained concrete. Use type I, IL, IS, IP, IT, II, or III cement. The contractor may replace up to 30 percent of type I, IL, II, or III cement with an equal weight of fly ash, slag, or a combination of fly ash and slag. Ensure that fly ash conforms to 501.2.4.2.2 and slag conforms to 501.2.4.2.3. Use only one source and replacement rate for work under a single bid item. Use a department-approved air-entraining admixture conforming to 501.2.5.2 for air-entrained concrete. Use only coarse aggregate conforming to 310.2(2).

---

604 Slope Paving

604.2 Materials

Replace paragraph three with the following effective with the November 2023 letting:

(3) Under the Slope Paving Crushed Aggregate bid item, furnish crushed stone or crushed gravel conforming to the gradation in Table 604-01, but with the additional requirements that at least 75 percent of the particles, by count, have at least one fractured face. Determine fracture according to WTM D5821.

TABLE 604-01 COARSE AGGREGATE (% passing by weight)

AASHTO No. 4[1]

SEIVE	COARSE AGGREGATE (% PASSING by WEIGHT) AASHTO No. 4
2-inch	100
1 1/2-inch	90 - 100
1-inch	20 - 55
3/4-inch	0 - 15
1/2-inch	-
3/8-inch	0 - 5
No. 4	-
No. 8	-
No. 16	-
No. 30	-
No. 50	-
No. 100	-
No. 200	<=1.5

[1] Size according to AASHTO M43.

---

612 Underdrains

612.3.9 Trench Underdrains

Replace paragraph one with the following effective with the November 2023 letting:

(1) Under the Underdrain Trench bid item, excavate and backfill underdrain trenches. Backfill with coarse aggregate gradation conforming to 604.2(3). Before backfilling place geotextile as the plans show.

---

614 Semi-rigid Barrier Systems and End Treatments

614.2.6 Sand Barrel Arrays

Replace paragraph one with the following effective with the November 2023 letting:

(1) Furnish sand barrels from the APL. Use fine aggregate conforming to gradation shown in Table 614-2 mixed with sodium chloride conforming to AASHTO M143. Apply an object marker to front-most barrel in the array.

TABLE 614-2 FINE AGGREGATE GRADATION

SEIVE	FINE AGGREGATE (% PASSING by WEIGHT)
3/8-inch	100
No. 4	90 - 100
No. 8	-
No. 16	45 - 85
No. 30	-
No. 50	5 - 30
No. 100	0 - 10
No. 200	<=3.5

628 Erosion Control

628.2.13 Rock Bags

Replace paragraph two with the following effective with the November 2023 letting:

(2) Fill the bags with a clean, sound, hard, durable, engineer-approved coarse aggregate conforming by visual inspection to the gradation specified for coarse aggregate gradation in 604.2(3).

---

639 Drilling Wells

639.2.1 General

Replace paragraph two with the following effective with the November 2023 letting:

(2) For grout use fine aggregate conforming to 501.2.7.2; and gradation conforming to 614.2.6(1); and type I, IL, IS, IP, or IT cement.

---

652 Electrical Conduit

652.3.1.2 Installing Underground

Replace paragraph two with the following effective with the November 2023 letting:

(2) Excavate trenches true to line and grade to provide the conduit uniform bearing throughout its length. Do not backfill the trench before inspecting the conduit. Carefully tamp the backfill in place as specified for placing backfill in layers in 651.3. Place at least 0.7 cubic feet of coarse aggregate gradation conforming to 604.2(3) directly under each drainage hole.

ERRATA

390.3.4 Special High Early Strength Concrete Patching

Correct errata link in paragraph (1) by changing from 416.3.8 to 416.3.7.

(1) Construct as specified for special high early strength repairs under 416.3.7 except as follows:

- The contractor may delay removal for up to 14 calendar days after cutting the existing pavement.
- Open to traffic as specified for concrete base in 320.3.

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/rdwy/cmm/cm-02-28.pdf

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

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

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

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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	201.0105 Clearing	253.000 STA	_____.____	_____.____
0004	201.0205 Grubbing	253.000 STA	_____.____	_____.____
0006	203.0100 Removing Small Pipe Culverts	80.000 EACH	_____.____	_____.____
0008	203.0220 Removing Structure (structure) 01. STA 27+20	1.000 EACH	_____.____	_____.____
0010	203.0220 Removing Structure (structure) 02. STA 39+78	1.000 EACH	_____.____	_____.____
0012	203.0220 Removing Structure (structure) 03. STA 288+22	1.000 EACH	_____.____	_____.____
0014	203.0220 Removing Structure (structure) 04. STA 306+19	1.000 EACH	_____.____	_____.____
0016	203.0260 Removing Structure Over Waterway Minimal Debris (structure) 01. B-13-796	1.000 EACH	_____.____	_____.____
0018	203.0260 Removing Structure Over Waterway Minimal Debris (structure) 02. B-13-797	1.000 EACH	_____.____	_____.____
0020	204.0115 Removing Asphaltic Surface Butt Joints	96.000 SY	_____.____	_____.____
0022	204.0120 Removing Asphaltic Surface Milling	75,540.000 SY	_____.____	_____.____
0024	204.0150 Removing Curb & Gutter	790.000 LF	_____.____	_____.____
0026	204.0165 Removing Guardrail	1,923.000 LF	_____.____	_____.____
0028	204.0270 Abandoning Culvert Pipes	1.000 EACH	_____.____	_____.____
0030	205.0100 Excavation Common	280,598.000 CY	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	205.0200 Excavation Rock	1,544.000 CY	_____.____	_____.____
0034	206.1001 Excavation for Structures Bridges (structure) 01. B-13-796	1.000 EACH	_____.____	_____.____
0036	206.1001 Excavation for Structures Bridges (structure) 02. B-13-797	1.000 EACH	_____.____	_____.____
0038	206.4001 Excavation for Structures Structural Plate Pipe or Pipe Arches (structure) 01. C-13-3098	1.000 EACH	_____.____	_____.____
0040	210.1500 Backfill Structure Type A	772.000 TON	_____.____	_____.____
0042	210.2100 Backfill Structure Type B	1,663.000 CY	_____.____	_____.____
0044	211.0101 Prepare Foundation for Asphaltic Paving (project) 01. 5145-00-71	1.000 EACH	_____.____	_____.____
0046	211.0400 Prepare Foundation for Asphaltic Shoulders	300.000 STA	_____.____	_____.____
0048	213.0100 Finishing Roadway (project) 01. 5145-00-71	1.000 EACH	_____.____	_____.____
0050	214.0100 Obliterating Old Road	18.000 STA	_____.____	_____.____
0052	305.0110 Base Aggregate Dense 3/4-Inch	9,146.000 TON	_____.____	_____.____
0054	305.0120 Base Aggregate Dense 1 1/4-Inch	83,570.000 TON	_____.____	_____.____
0056	312.0110 Select Crushed Material	87,420.000 TON	_____.____	_____.____
0058	371.2000.S QMP Base Aggregate Dense 1 1/4-Inch Compaction	56.000 EACH	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0060	415.0080 Concrete Pavement 8-Inch	120.000 SY	_____._____	_____._____
0062	415.0410 Concrete Pavement Approach Slab	184.000 SY	_____._____	_____._____
0064	450.4000 HMA Cold Weather Paving	3,000.000 TON	_____._____	_____._____
0066	455.0605 Tack Coat	23,940.000 GAL	_____._____	_____._____
0068	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	2.000 EACH	_____._____	_____._____
0070	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	3.000 EACH	_____._____	_____._____
0072	460.2005 Incentive Density PWL HMA Pavement	31,370.000 DOL	1.00000	31,370.00
0074	460.2007 Incentive Density HMA Pavement Longitudinal Joints	25,420.000 DOL	1.00000	25,420.00
0076	460.2010 Incentive Air Voids HMA Pavement	45,070.000 DOL	1.00000	45,070.00
0078	460.5223 HMA Pavement 3 LT 58-28 S	23,860.000 TON	_____._____	_____._____
0080	460.5224 HMA Pavement 4 LT 58-28 S	20,610.000 TON	_____._____	_____._____
0082	465.0105 Asphaltic Surface	80.000 TON	_____._____	_____._____
0084	465.0120 Asphaltic Surface Driveways and Field Entrances	150.000 TON	_____._____	_____._____
0086	465.0315 Asphaltic Flumes	218.000 SY	_____._____	_____._____
0088	465.0520 Asphaltic Rumble Strips, Shoulder	101,642.000 LF	_____._____	_____._____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0090	465.0560 Asphaltic Rumble Strips, Centerline	50,821.000 LF	_____.____	_____.____
0092	502.0100 Concrete Masonry Bridges	452.000 CY	_____.____	_____.____
0094	502.3200 Protective Surface Treatment	499.000 SY	_____.____	_____.____
0096	502.3210 Pigmented Surface Sealer	173.000 SY	_____.____	_____.____
0098	503.0137 Prestressed Girder Type I 36W-Inch	355.000 LF	_____.____	_____.____
0100	504.0100 Concrete Masonry Culverts	17.000 CY	_____.____	_____.____
0102	505.0400 Bar Steel Reinforcement HS Structures	9,490.000 LB	_____.____	_____.____
0104	505.0600 Bar Steel Reinforcement HS Coated Structures	59,770.000 LB	_____.____	_____.____
0106	506.2610 Bearing Pads Elastomeric Laminated	10.000 EACH	_____.____	_____.____
0108	506.4000 Steel Diaphragms (structure) 01. B-13-797	4.000 EACH	_____.____	_____.____
0110	516.0500 Rubberized Membrane Waterproofing	44.000 SY	_____.____	_____.____
0112	517.1015.S Concrete Staining Multi-Color (structure) 01. C-13-3098	315.000 SF	_____.____	_____.____
0114	520.1018 Apron Endwalls for Culvert Pipe 18-Inch	60.000 EACH	_____.____	_____.____
0116	520.1024 Apron Endwalls for Culvert Pipe 24-Inch	32.000 EACH	_____.____	_____.____
0118	520.1030 Apron Endwalls for Culvert Pipe 30-Inch	6.000 EACH	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0120	520.1036 Apron Endwalls for Culvert Pipe 36-Inch	4.000 EACH	_____.____	_____.____
0122	520.3318 Culvert Pipe Class III-A 18-Inch	807.000 LF	_____.____	_____.____
0124	520.3324 Culvert Pipe Class III-A 24-Inch	796.000 LF	_____.____	_____.____
0126	520.3330 Culvert Pipe Class III-A 30-Inch	108.000 LF	_____.____	_____.____
0128	520.3336 Culvert Pipe Class III-A 36-Inch	120.000 LF	_____.____	_____.____
0130	521.1221 Apron Endwalls for Pipe Arch Steel 21x15-Inch	2.000 EACH	_____.____	_____.____
0132	521.1228 Apron Endwalls for Pipe Arch Steel 28x20-Inch	2.000 EACH	_____.____	_____.____
0134	521.1242 Apron Endwalls for Pipe Arch Steel 42x29-Inch	2.000 EACH	_____.____	_____.____
0136	521.1524 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 24-Inch 6 to 1	2.000 EACH	_____.____	_____.____
0138	521.1728 Apron Endwalls for Pipe Arch Sloped Side Drains Steel 28x20-Inch 6 to 1	2.000 EACH	_____.____	_____.____
0140	521.3721 Pipe Arch Corrugated Steel 21x15-Inch	30.000 LF	_____.____	_____.____
0142	521.3728 Pipe Arch Corrugated Steel 28x20-Inch	76.000 LF	_____.____	_____.____
0144	521.3742 Pipe Arch Corrugated Steel 42x29-Inch	32.000 LF	_____.____	_____.____
0146	522.0136 Culvert Pipe Reinforced Concrete Class III 36-Inch	36.000 LF	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0148	522.0148 Culvert Pipe Reinforced Concrete Class III 48-Inch	94.000 LF	_____.____	_____.____
0150	522.0160 Culvert Pipe Reinforced Concrete Class III 60-Inch	124.000 LF	_____.____	_____.____
0152	522.0430 Culvert Pipe Reinforced Concrete Class IV 30-Inch	122.000 LF	_____.____	_____.____
0154	522.0436 Culvert Pipe Reinforced Concrete Class IV 36-Inch	34.000 LF	_____.____	_____.____
0156	522.0460 Culvert Pipe Reinforced Concrete Class IV 60-Inch	128.000 LF	_____.____	_____.____
0158	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	1.000 EACH	_____.____	_____.____
0160	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	3.000 EACH	_____.____	_____.____
0162	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	2.000 EACH	_____.____	_____.____
0164	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	6.000 EACH	_____.____	_____.____
0166	522.1048 Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	2.000 EACH	_____.____	_____.____
0168	522.1060 Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	8.000 EACH	_____.____	_____.____
0170	522.2319 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	46.000 LF	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0172	522.2329 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	100.000 LF	_____.____	_____.____
0174	522.2338 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 38x60-Inch	336.000 LF	_____.____	_____.____
0176	522.2358 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 58x91-Inch	236.000 LF	_____.____	_____.____
0178	522.2414 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 14x23-Inch	152.000 LF	_____.____	_____.____
0180	522.2419 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	578.000 LF	_____.____	_____.____
0182	522.2424 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	420.000 LF	_____.____	_____.____
0184	522.2429 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch	40.000 LF	_____.____	_____.____
0186	522.2434 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 34x53-Inch	112.000 LF	_____.____	_____.____
0188	522.2614 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 14x23-Inch	6.000 EACH	_____.____	_____.____
0190	522.2619 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	31.000 EACH	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0192	522.2624 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	18.000 EACH	_____.____	_____.____
0194	522.2629 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	6.000 EACH	_____.____	_____.____
0196	522.2634 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 34x53-Inch	4.000 EACH	_____.____	_____.____
0198	522.2638 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	12.000 EACH	_____.____	_____.____
0200	522.2658 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 58x91-Inch	4.000 EACH	_____.____	_____.____
0202	527.0335 Pipe Arch Structural Plate 12-FT Span	114.000 LF	_____.____	_____.____
0204	550.2108 Piling CIP Concrete 10 3/4 X 0.50-Inch	2,210.000 LF	_____.____	_____.____
0206	601.0553 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	13,532.000 LF	_____.____	_____.____
0208	601.0584 Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBT	201.000 LF	_____.____	_____.____
0210	601.0586 Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBTT	12.000 LF	_____.____	_____.____
0212	602.3010 Concrete Surface Drains	10.900 CY	_____.____	_____.____
0214	603.1432 Concrete Barrier Type S32C	1,709.000 LF	_____.____	_____.____
0216	603.1436 Concrete Barrier Type S36C	250.000 LF	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0218	603.1456 Concrete Barrier Type S56C	500.000 LF	_____.____	_____.____
0220	606.0200 Riprap Medium	52.000 CY	_____.____	_____.____
0222	606.0300 Riprap Heavy	1,832.000 CY	_____.____	_____.____
0224	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	73.000 LF	_____.____	_____.____
0226	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	253.000 LF	_____.____	_____.____
0228	608.2319 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	101.000 LF	_____.____	_____.____
0230	608.3012 Storm Sewer Pipe Class III-A 12-Inch	1,122.000 LF	_____.____	_____.____
0232	608.3015 Storm Sewer Pipe Class III-A 15-Inch	1,156.000 LF	_____.____	_____.____
0234	608.3018 Storm Sewer Pipe Class III-A 18-Inch	944.000 LF	_____.____	_____.____
0236	608.3024 Storm Sewer Pipe Class III-A 24-Inch	3,501.000 LF	_____.____	_____.____
0238	608.3030 Storm Sewer Pipe Class III-A 30-Inch	438.000 LF	_____.____	_____.____
0240	608.3036 Storm Sewer Pipe Class III-A 36-Inch	130.000 LF	_____.____	_____.____
0242	611.0530 Manhole Covers Type J	3.000 EACH	_____.____	_____.____
0244	611.0540 Manhole Covers Type K	2.000 EACH	_____.____	_____.____
0246	611.0600 Inlet Covers Type A	1.000 EACH	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0248	611.0606 Inlet Covers Type B	10.000 EACH	_____.____	_____.____
0250	611.0610 Inlet Covers Type BW	15.000 EACH	_____.____	_____.____
0252	611.0612 Inlet Covers Type C	1.000 EACH	_____.____	_____.____
0254	611.0627 Inlet Covers Type HM	23.000 EACH	_____.____	_____.____
0256	611.0636 Inlet Covers Type HM-S	9.000 EACH	_____.____	_____.____
0258	611.0642 Inlet Covers Type MS	27.000 EACH	_____.____	_____.____
0260	611.0645 Inlet Covers Type MS-A	2.000 EACH	_____.____	_____.____
0262	611.1004 Catch Basins 4-FT Diameter	1.000 EACH	_____.____	_____.____
0264	611.1005 Catch Basins 5-FT Diameter	2.000 EACH	_____.____	_____.____
0266	611.2004 Manholes 4-FT Diameter	2.000 EACH	_____.____	_____.____
0268	611.2005 Manholes 5-FT Diameter	9.000 EACH	_____.____	_____.____
0270	611.2044 Manholes 4x4-FT	19.000 EACH	_____.____	_____.____
0272	611.2055 Manholes 5x5-FT	1.000 EACH	_____.____	_____.____
0274	611.3004 Inlets 4-FT Diameter	13.000 EACH	_____.____	_____.____
0276	611.3220 Inlets 2x2-FT	8.000 EACH	_____.____	_____.____
0278	611.3225 Inlets 2x2.5-FT	1.000 EACH	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0280	611.3230 Inlets 2x3-FT	9.000 EACH	_____.____	_____.____
0282	611.3901 Inlets Median 1 Grate	27.000 EACH	_____.____	_____.____
0284	611.3902 Inlets Median 2 Grate	2.000 EACH	_____.____	_____.____
0286	612.0406 Pipe Underdrain Wrapped 6-Inch	296.000 LF	_____.____	_____.____
0288	614.0150 Anchor Assemblies for Steel Plate Beam Guard	8.000 EACH	_____.____	_____.____
0290	614.2300 MGS Guardrail 3	2,048.000 LF	_____.____	_____.____
0292	614.2500 MGS Thrie Beam Transition	709.000 LF	_____.____	_____.____
0294	614.2610 MGS Guardrail Terminal EAT	22.000 EACH	_____.____	_____.____
0296	616.0700.S Fence Safety	1,000.000 LF	_____.____	_____.____
0298	618.0100 Maintenance and Repair of Haul Roads (project) 01. 5145-00-71	1.000 EACH	_____.____	_____.____
0300	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0302	624.0100 Water	390.000 MGAL	_____.____	_____.____
0304	625.0500 Salvaged Topsoil	279,157.000 SY	_____.____	_____.____
0306	627.0200 Mulching	124,679.000 SY	_____.____	_____.____
0308	628.1104 Erosion Bales	197.000 EACH	_____.____	_____.____
0310	628.1504 Silt Fence	76,812.000 LF	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0312	628.1520 Silt Fence Maintenance	76,812.000 LF	_____.____	_____.____
0314	628.1905 Mobilizations Erosion Control	6.000 EACH	_____.____	_____.____
0316	628.1910 Mobilizations Emergency Erosion Control	3.000 EACH	_____.____	_____.____
0318	628.2004 Erosion Mat Class I Type B	154,479.000 SY	_____.____	_____.____
0320	628.2008 Erosion Mat Urban Class I Type B	3,049.000 SY	_____.____	_____.____
0322	628.7005 Inlet Protection Type A	32.000 EACH	_____.____	_____.____
0324	628.7010 Inlet Protection Type B	29.000 EACH	_____.____	_____.____
0326	628.7015 Inlet Protection Type C	25.000 EACH	_____.____	_____.____
0328	628.7020 Inlet Protection Type D	8.000 EACH	_____.____	_____.____
0330	628.7504 Temporary Ditch Checks	10,646.000 LF	_____.____	_____.____
0332	628.7555 Culvert Pipe Checks	369.000 EACH	_____.____	_____.____
0334	628.7570 Rock Bags	18.000 EACH	_____.____	_____.____
0336	629.0210 Fertilizer Type B	168.000 CWT	_____.____	_____.____
0338	630.0130 Seeding Mixture No. 30	3,027.000 LB	_____.____	_____.____
0340	630.0171 Seeding Mixture No. 70A	350.000 LB	_____.____	_____.____
0342	630.0200 Seeding Temporary	7,206.000 LB	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0344	630.0500 Seed Water	8,533.000 MGAL	_____.____	_____.____
0346	633.1000 Delineators Barrier Wall	26.000 EACH	_____.____	_____.____
0348	633.5200 Markers Culvert End	219.000 EACH	_____.____	_____.____
0350	634.0614 Posts Wood 4x6-Inch X 14-FT	9.000 EACH	_____.____	_____.____
0352	634.0616 Posts Wood 4x6-Inch X 16-FT	15.000 EACH	_____.____	_____.____
0354	634.0618 Posts Wood 4x6-Inch X 18-FT	5.000 EACH	_____.____	_____.____
0356	634.0620 Posts Wood 4x6-Inch X 20-FT	1.000 EACH	_____.____	_____.____
0358	637.2210 Signs Type II Reflective H	44.920 SF	_____.____	_____.____
0360	637.2230 Signs Type II Reflective F	76.000 SF	_____.____	_____.____
0362	638.2102 Moving Signs Type II	185.000 EACH	_____.____	_____.____
0364	638.2602 Removing Signs Type II	28.000 EACH	_____.____	_____.____
0366	638.3000 Removing Small Sign Supports	18.000 EACH	_____.____	_____.____
0368	638.4000 Moving Small Sign Supports	203.000 EACH	_____.____	_____.____
0370	642.5401 Field Office Type D	1.000 EACH	_____.____	_____.____
0372	643.0300 Traffic Control Drums	13,800.000 DAY	_____.____	_____.____
0374	643.0420 Traffic Control Barricades Type III	14,020.000 DAY	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0376	643.0705 Traffic Control Warning Lights Type A	27,240.000 DAY	_____.____	_____.____
0378	643.0900 Traffic Control Signs	43,656.000 DAY	_____.____	_____.____
0380	643.0920 Traffic Control Covering Signs Type II	6.000 EACH	_____.____	_____.____
0382	643.1050 Traffic Control Signs PCMS	14.000 DAY	_____.____	_____.____
0384	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0386	645.0105 Geotextile Type C	260.000 SY	_____.____	_____.____
0388	645.0111 Geotextile Type DF Schedule A	150.000 SY	_____.____	_____.____
0390	645.0120 Geotextile Type HR	2,934.000 SY	_____.____	_____.____
0392	645.0220 Geogrid Type SR	75,570.000 SY	_____.____	_____.____
0394	646.2020 Marking Line Epoxy 6-Inch	513.000 LF	_____.____	_____.____
0396	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	189,335.000 LF	_____.____	_____.____
0398	646.4040 Marking Line Grooved Wet Ref Epoxy 10-Inch	846.000 LF	_____.____	_____.____
0400	646.5020 Marking Arrow Epoxy	6.000 EACH	_____.____	_____.____
0402	646.5120 Marking Word Epoxy	3.000 EACH	_____.____	_____.____
0404	646.6120 Marking Stop Line Epoxy 18-Inch	160.000 LF	_____.____	_____.____
0406	646.6466 Cold Weather Marking Epoxy 6-Inch	47,463.000 LF	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0408	646.6470 Cold Weather Marking Epoxy 10-Inch	212.000 LF	_____.____	_____.____
0410	648.0100 Locating No-Passing Zones	9.620 MI	_____.____	_____.____
0412	650.4000 Construction Staking Storm Sewer	185.000 EACH	_____.____	_____.____
0414	650.4500 Construction Staking Subgrade	50,849.000 LF	_____.____	_____.____
0416	650.5000 Construction Staking Base	50,849.000 LF	_____.____	_____.____
0418	650.5500 Construction Staking Curb Gutter and Curb & Gutter	13,573.000 LF	_____.____	_____.____
0420	650.6000 Construction Staking Pipe Culverts	110.000 EACH	_____.____	_____.____
0422	650.6501 Construction Staking Structure Layout (structure) 01. C-13-3098	1.000 EACH	_____.____	_____.____
0424	650.6501 Construction Staking Structure Layout (structure) 02. B-13-796	1.000 EACH	_____.____	_____.____
0426	650.6501 Construction Staking Structure Layout (structure) 03. B-13-797	1.000 EACH	_____.____	_____.____
0428	650.7500 Construction Staking Concrete Barrier	2,459.000 LF	_____.____	_____.____
0430	650.9911 Construction Staking Supplemental Control (project) 01. 5145-00-71	1.000 EACH	_____.____	_____.____
0432	650.9920 Construction Staking Slope Stakes	50,849.000 LF	_____.____	_____.____
0434	690.0150 Sawing Asphalt	1,017.000 LF	_____.____	_____.____
0436	715.0502 Incentive Strength Concrete Structures	2,814.000 DOL	1.00000	2,814.00

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0438	715.0720 Incentive Compressive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0440	740.0440 Incentive IRI Ride	38,497.000 DOL	1.00000	38,497.00
0442	999.2000.S Installing and Maintaining Bird Deterrent System (station) 01. STA 195+20	1.000 EACH	_____.____	_____.____
0444	999.2000.S Installing and Maintaining Bird Deterrent System (station) 02. STA 263+75	1.000 EACH	_____.____	_____.____
0446	ASP.1T0A On-the-Job Training Apprentice at $5.00/ HR	2,000.000 HRS	5.00000	10,000.00
0448	ASP.1T0G On-the-Job Training Graduate at $5.00/ HR	4,000.000 HRS	5.00000	20,000.00
0450	SPV.0060 Special 01. Verify and Replace Existing Land Parcel Monuments	38.000 EACH	_____.____	_____.____
0452	SPV.0060 Special 02. Verify Landmark Reference Monuments	6.000 EACH	_____.____	_____.____
0454	SPV.0060 Special 03. Research and Locate Existing Land Parcel Monuments	38.000 EACH	_____.____	_____.____
0456	SPV.0090 Special 01. Pipe Underdrain (6-inch) with Geotextile Fabric and Aggregate	8,479.000 LF	_____.____	_____.____
0458	SPV.0165 Special 01. Stamping Concrete	315.000 SF	_____.____	_____.____
0460	SPV.0180 Special 01. Impervious Isolation Membrane	460.000 SY	_____.____	_____.____
0462	SPV.0180 Special 02. Removing Distressed Pavement Milling	756.000 SY	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0464	SPV.0195 Special 01. Backfill Special	1,240.000 TON	_____.____	_____.____

Section: 0001 **Total:** _____.____

Total Bid: _____.____

PLEASE ATTACH ADDENDA HERE

Wisconsin Department of Transportation

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

November 28, 2023

NOTICE TO ALL CONTRACTORS:

Buy America Provision Addendum #01

Letting of December 12, 2023

Attached is a copy of the revised Buy America Provision that are included in all proposals in the December 12, 2023 letting.

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

Sincerely,

Mike Coleman
Proposal Development Specialist
Proposal Management Section

BUY AMERICA PROVISION

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

1. Iron and Steel

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

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

2. Manufactured Product

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

3. Construction Material

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

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

- The Total value of the non-compliant products is no more than the lesser of $1,000,000 or 5% of total applicable costs for the project[1]; or
- The total amount of Federal financial assistance applied to the project, through awards or subaward, is below $500,000[2]

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

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

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

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

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

1 The de minimis public interest waiver does not apply to iron and steel subject to the requirements of 23 U.S.C. 313 on financial assistant administered by FHWA. The de minimis threshold in 23 CFR 635.410(b)(4) continues to apply for iron and steel.
2 The small grant portion of the waiver does not apply to iron, steel, and manufactured goods subject to the requirements of 49 U.S.C. 22905(a).

Wisconsin Department of Transportation

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

November 30, 2023

NOTICE TO ALL CONTRACTORS:

Proposal #07: 5145-00-71
Mazomanie – USH 12
STH 78 to USH 12
STH 19
Dane County

Letting of December 12, 2023

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

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
205.0100	Excavation Common	CY	280,598	7,000	287,598

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Quantity Added	Proposal Total After Addendum
209.2500	Backfill Granular Grade 2	TON	0	14,570	14,570

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
16	Revised Construction Detail “Cross Drain Installation Detail” to define pay limits for Common Excavation and Backfill Granular Grade 2.
179	Revised Miscellaneous Quantity sheet, Base Course Summary Table, to include bid item 209.2500, Backfill Granular Grade 2.
180	Revised Miscellaneous Quantity sheet, Earthwork Summary Table, to reflect the changes in bid item 205.0100, Excavation Common, and to update Notes (3) & (11),
461	Revised Earthwork Detail sheet, Note 5 – Expanded EBS, to say “Will be backfilled with Engineer approved material from project excavation”.

Schedule of Items
Attached, dated November 30, 2023, are the revised Schedule of Items Pages 1 and 17.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 16, 179, 180, and 461.

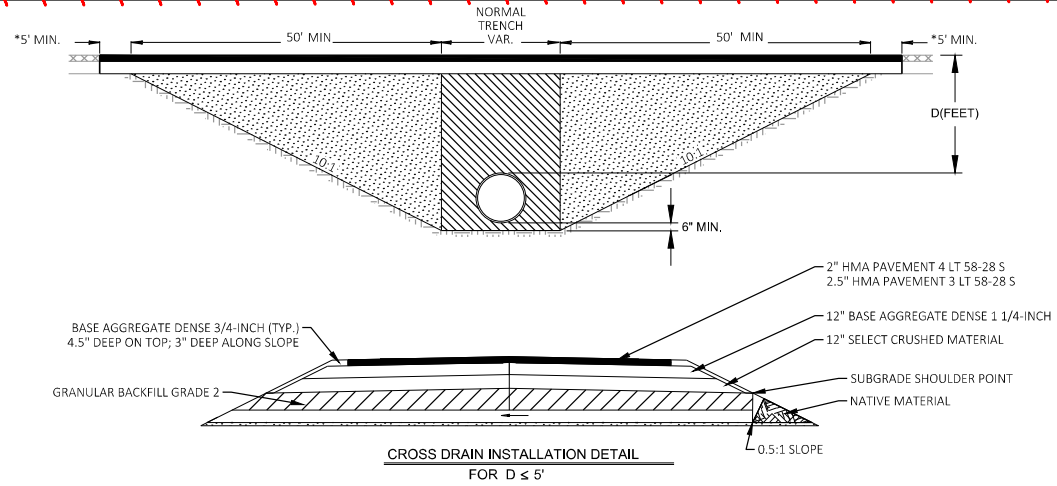
The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

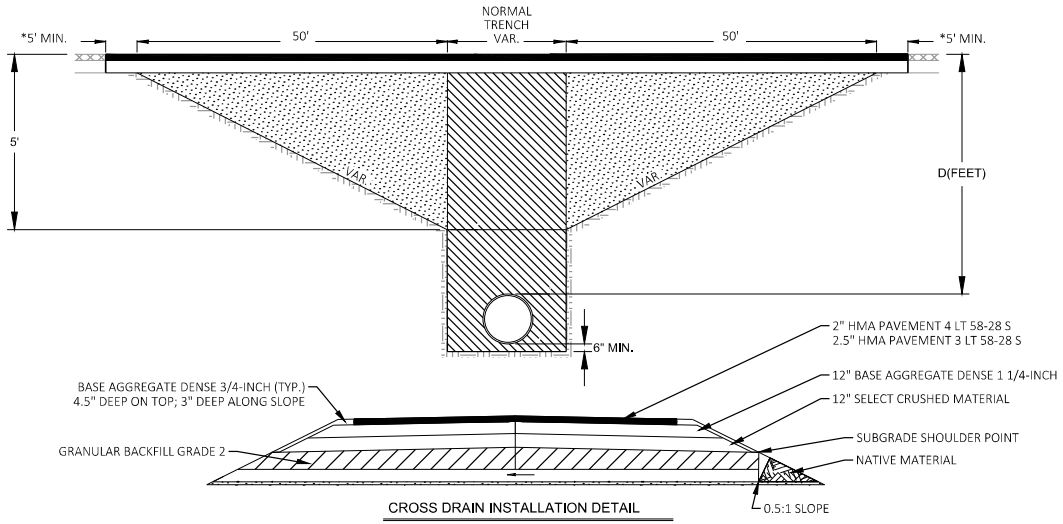
Proposal Development Specialist
Proposal Management Section

END OF ADDENDUM



CROSS DRAIN INSTALLATION DETAIL
FOR D ≤ 5'

* PAVEMENT REMOVAL LIMITS (TYP.)



CROSS DRAIN INSTALLATION DETAIL
FOR D≥ 5'

* PAVEMENT REMOVAL LIMITS (TYP.)

STATION	DIAMETER	D(FT)
0+70	24"x38"	2'
3+89	19"x30"	1.6'
7+69	19"x30"	1.1'
7+74	19"x30"	1.2'
21+12	14"x23"	1.8'
21+19	14"x23"	1.8'
27+19	29"x45"	1.3'
39+75	24"x38"	2.1'
39+83	24"x38"	2.1'
39+89	24"x38"	2'
46+43	24"x38"	1.4'
75+66	34"x53"	1.3'
75+78	34"x53"	1.3'
89+07	19"x30"	1.5'
89+13	19"x30"	1.5'
103+41	19"x30"	1.3'
120+73	24"x38"	1.1'
120+80	24"x38"	1.1'
120+87	24"x38"	1.1'
129+92	24"x38"	1.7'
143+81	19"x30"	1.9'
146+55	19"x30"	1.4'
149+85	19"x30"	2'
163+00	30"	2'
175+06	19"x30"	1.9'
211+05	19"x30"	1.6'
218+42	19"x30"	2.2'
248+23	19"x30"	1.8'
248+29	19"x30"	1.8'
286+25	30"	2.3'
288+03	38"x60"	2.6'
288+12	38"x60"	2.8'
463+50	19"x30"	2.4'
467+47	38"x60"	2.8'
467+56	38"x60"	2.8'
467+65	38"x60"	2.8'

LEGEND

COMMON EXCAVATION & BACKFILL GRANULAR GRADE 2 PAID SEPARATELY

EXCAVATION & BACKFILL GRANULAR GRADE 2 INCIDENTAL TO REMOVING SMALL PIPE CULVERTS

STATION	DIAMETER	D(FT)
182+99	24"	5.7'
491+21	24"	5.8'

Addendum No. 01
ID 5145-00-71
Revised Sheet 16
November 30, 2023

PROJECT NO: 5145-00-71	HWY: STH 19	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 16	E

FILE NAME : X:\PROJECTS\DANE\5145-00-01 STH 19\DESIGN\C3D\SHEETSPLAN\021001_CD.DWG
LAYOUT NAME - 021007
PLOT DATE : 11/29/2023 1:49 PM
PLOT BY : MARK MISUN
PLOT NAME :
PLOT SCALE : 1 IN:10 FT

REMOVAL SUMMARY

STATION	TO	STATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	204.0150 REMOVING CURB & GUTTER LF	204.0165 REMOVING GUARDRAIL LF	214.0100 OBLITERATING OLD ROAD STA	SPV.0180.02 SPECIAL (02. REMOVING DISTRESSED PAVEMENT MILLING) SY
0+35	-	56+00	13,650	162	-	-	137
56+00	-	71+00	-	155	-	-	-
71+00	-	225+50	37,700	-	282	-	377
237+50	-	269+00	7,700	101	308	-	77
283+00	-	305+00	5,380	167	691	-	54
305+00	-	463+50	-	205	-	18	-
463+50	-	508+54	11,110	-	642	-	111
		TOTAL	75,540	790	1,923	18	756

BASE COURSE SUMMARY

STATION	TO	STATION	209.2500 BACKFILL GRANULAR GRADE 2 TON	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	371.2000.S QMP BASE AGGREGATE DENSE 1 1/4-INCH COMPACTION EACH	624.0100 WATER MGAL	645.0220 GEOGRID TYPE SR SY	REMARKS
0+35	-	56+00	-	1,183	3,452	4,720	-	20	-	
56+00	-	71+00	-	297	4,364	3,910	4	20	5,670	
71+00	-	225+00	-	3,353	9,653	13,038	-	60	-	
225+00	-	237+50	-	280	4,611	4,315	4	20	4,730	
237+50	-	269+00	-	636	2,891	3,665	-	20	-	
269+00	-	283+00	-	317	4,630	4,875	4	20	5,290	
283+00	-	305+00	-	481	1,386	1,858	-	10	-	
305+00	-	463+50	-	2,101	47,760	42,901	44	200	59,880	
463+50	-	508+54	-	479	2,821	3,884	-	20	-	
PEDESTRIAN UNDERPASS			-	19	-	-	-	-	-	
PROJECT CULVERT BACKFILL			14,570	-	2,002	3,804	-	-	-	
PROJECT WIDE WEEPS			-	-	-	450	-	-	-	
		TOTAL	14,570	9,146	83,570	87,420	56	390	75,570	

PAVEMENT APPROACH SUMMARY

LOCATION	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	602.3010 CONCRETE SURFACE DRAINS CY	601.0584 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBT LF	601.0586 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE TBTT LF	REMARKS
B-13-796	60	104	5.4	95	12	
B-13-797	60	80	5.5	106	-	
TOTAL	120	184	10.9	201	12	

ASPHALTIC ITEMS SUMMARY

STATION	TO	STATION	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0105 ASPHALTIC SURFACE TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0560 ASPHALTIC RUMBLE STRIPS, CENTERLINE LF	465.0520 ASPHALTIC RUMBLE STRIPS, SHOULDER LF	REMARKS
0+33	-	56+00	-	2,484	2,470	1,980	14	-	5,567	11,134	
56+00		71+00	-	660	660	530	-	-	1,500	3,000	
71+00	-	225+00	-	6,810	6,770	5,420	40	-	15,400	30,800	
225+00	-	237+50	-	610	610	490	-	-	1,250	2,500	
237+50	-	269+00	-	1,408	1,400	1,120	8	-	3,150	6,300	
269+00	-	283+00	-	810	810	650	-	-	1,400	2,800	
283+00	-	304+75	-	966	960	770	6	-	2,175	4,350	
304+75	-	463+50	-	7,900	7,900	6,320	-	-	15,875	31,750	
463+50	-	508+54	-	2,292	2,280	1,830	12	-	4,504	9,008	
		SIDEROADS	-	-	-	1,500	-	-			
		DRIVEWAYS	-	-	-	-	-	150			
		UNDISTRIBUTED	3,000	-	-	-	-	-			
		PROJECT	-	-	-	-	-	-			
		TOTAL	3,000	23,940	23,860	20,610	80	150	50,821	101,642	

Addendum No. 01
ID 5145-00-71
Revised Sheet 179
November 30, 2023

* ADDITIONAL QUANTITIES LISTED ELSEWHERE
***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

EARTHWORK SUMMARY TABLE

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	205.0200 ROCK EXCAVATION (7)	REDUCED EBS IN FILL (9) FACTOR 0.80	EXPANDED EBS BACKFILL (11) FACTOR 1.30	EXPANDED ROCK (12) FACTOR 1.10	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
DIVISION 1																
QR-CTH F	09+12.659/09+85		41	0	49	-8	0	0	0	0	0	0	-8	0	0	
QR-JACOBY	10+15/10+47.334		21	0	18	3	0	0	0	0	5	6	-3	0	0	
QR-OLD SETTLERS	10+11.002/10+71.066		42	0	37	5	0	0	0	0	3	4	1	1	0	
QR-STH 19 STA 0+00-STA 195+00	00+30.355/195+00		51,685	3,756	1,097	50,588	1,544	3,005	4,883	1,698	4,507	-245	50,833	50,833	0	
DIVISION 1 SUBTOTAL			51,789	3,756	1,201	50,588	1,544	3,005	4,883	1,698	4,515	-235	50,823	50,834	0	
DIVISION 2																
QR-CTH K	08+63.309/09+85		578	0	73	505	0	0	0	0	11	14	491	491	0	
QR-STH 19 STA 195+44-STA 263+31	195+44.624/263+30.803		21,944	351	146	21,798	0	281	456	0	3,919	3,638	18,159	18,159	0	
QR-CTH KP SOUTH	08+00/09+85		878	0	113	765	0	0	0	0	5	6	759	759	0	
DIVISION 2 SUBTOTAL			23,400	351	332	23,068	0	281	456	0	3,935	3,658	19,409	19,409	0	
DIVISION 3																
QR-CTH KP NORTH	10+15/12+85		1,008	0	165	843	0	0	0	0	4	5	838	838	0	
QR-LILAC	08+59.689/09+80		299	0	73	226	0	0	0	0	41	51	175	175	0	
QR-MATZ	06+65/08+28.503		392	0	110	282	0	0	0	0	2	3	280	280	0	
QR-STH 19 STA 264+28-STA 508+49	264+28.637/508+49.758		182,406	16,929	10,757	171,649	0	13,543	22,008	0	88,856	94,141	77,508	77,508	0	
QR-SUTZFEY	09+34.258/09+88.992		197	0	30	167	0	0	0	0	0	0	167	167	0	
QR-WHIPPORWILL	08+10.01/09+80		71	0	103	-32	0	0	0	0	2,485	3,106	-3,138	0	0	
DIVISION 3 SUBTOTAL			184,073	16,929	11,238	173,135	0	13,543	22,008	0	91,388	97,306	75,829	78,967	0	
CROSS DRAIN INSTALLATION EXCAVATION	PROJECT		7,000													
GRAND TOTAL			266,562	21,036	12,772	246,790	1,544	16,829	27,347	1,698	99,838	100,729	146,060	149,210	0	
TOTAL COMMON EXC			287,598													

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) EBS EXCAVATION TO BE BACKFILLED WITH ENGINEER APPROVED MATERIAL FROM PROJECT EXCAVATION OR BORROW. USE OF SELECT CRUSHED MATERIAL TO BACKFILL EBS MUST BE APPROVED BY ENGINEER.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(7) ROCK EXCAVATION ITEM NUMBER 205.0200

(9) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USUABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.80

(11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH ENGINEER APPROVED MATERIAL FROM PROJECT EXCAVATION. EBS BACKFILL FACTOR = 1.30.

(12) EXPANDED ROCK FACTOR = 1.10

(13) EXPANDED FILL FACTOR = 1.25

DEPENDING ON SELECTIONS:

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

OR EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

Addendum No. 01
ID 5145-00-71
Revised Sheet 180
November 30, 2023

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

***ALL ITEMS CATEGORY 0010 UNLESS OTHERWISE NOTED

DIVISION 3 - STH 19 EARTHWORK SUMMARY

STATION	REAL STATION	DISTANCE	AREA (SF)					INCREMENTAL VOL (CY) (UNADJUSTED)					CUMULATIVE VOL (CY)						
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	EBS	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	ROCK EXC	EBS	CUT	EXPANDED FILL	EXPANDED ROCK	EXPANDED EBS BACKFILL	REDUCED EBS IN FILL	MASS ORDINATE
								NOTE 1	NOTE 2	NOTE 3			1.00 NOTE 1	1.25	1.10	1.30 NOTE 5	0.80 NOTE 7	NOTE 8
487+00	48700.00	50.00	117.32	0.00	31.76	0.00	0.00	238	0	55	0	0	169,985	105,895	0	0	0	64,090
487+50	48750.00	50.00	188.58	0.00	17.67	0.00	0.00	283	0	46	0	0	170,268	105,953	0	0	0	64,316
488+00	48800.00	50.00	156.28	0.00	21.64	0.00	0.00	319	0	36	0	0	170,587	105,998	0	0	0	64,590
488+50	48850.00	50.00	200.66	0.00	54.83	0.00	0.00	331	0	71	0	0	170,918	106,086	0	0	0	64,832
488+91.616	48891.62	41.62	258.47	0.00	87.04	0.00	0.00	354	0	109	0	0	171,272	106,223	0	0	0	65,050
489+00	48900.00	8.38	268.18	0.00	91.53	0.00	0.00	82	0	28	0	0	171,354	106,258	0	0	0	65,097
489+42.56	48942.56	42.56	270.87	0.00	107.07	0.00	0.00	425	0	157	0	0	171,779	106,454	0	0	0	65,325
489+50	48950.00	7.44	270.09	0.00	112.45	0.00	0.00	75	0	30	0	0	171,854	106,491	0	0	0	65,363
489+93.503	48993.50	43.50	276.37	0.00	155.77	0.00	0.00	440	0	216	0	0	172,294	106,761	0	0	0	65,533
490+00	49000.00	6.50	267.96	0.00	163.00	0.00	0.00	65	0	38	0	0	172,359	106,809	0	0	0	65,550
490+32.564	49032.56	32.56	243.52	0.00	191.18	0.00	0.00	308	0	214	0	0	172,667	107,076	0	0	0	65,591
490+50	49050.00	17.44	238.80	0.00	201.21	0.00	0.00	156	0	127	0	0	172,823	107,235	0	0	0	65,588
490+77.56	49077.56	27.56	185.81	0.00	207.17	0.00	0.00	217	0	208	0	0	173,040	107,495	0	0	0	65,545
491+00	49100.00	22.44	158.28	0.00	224.67	0.00	0.00	143	0	179	0	0	173,183	107,719	0	0	0	65,464
491+50	49150.00	50.00	243.04	0.00	168.74	0.00	0.00	372	0	364	0	0	173,555	108,174	0	0	0	65,381
492+00	49200.00	50.00	243.64	0.00	164.49	0.00	0.00	451	0	309	0	0	174,006	108,560	0	0	0	65,446
492+50	49250.00	50.00	268.50	0.00	151.65	0.00	0.00	474	0	293	0	0	174,480	108,926	0	0	0	65,554
493+00	49300.00	50.00	309.01	0.00	143.25	0.00	0.00	535	0	273	0	0	175,015	109,268	0	0	0	65,748
493+28.34	49328.34	28.34	260.47	0.00	136.94	0.00	0.00	299	0	147	0	0	175,314	109,451	0	0	0	65,863
493+50	49350.00	21.66	242.19	0.00	126.84	0.00	0.00	202	0	106	0	0	175,516	109,584	0	0	0	65,932
494+00	49400.00	50.00	247.13	0.00	101.69	0.00	0.00	453	0	212	0	0	175,969	109,849	0	0	0	66,120
494+50	49450.00	50.00	218.03	0.00	91.10	0.00	0.00	431	0	179	0	0	176,400	110,073	0	0	0	66,328
495+00	49500.00	50.00	205.22	0.00	68.55	0.00	0.00	392	0	148	0	0	176,792	110,258	0	0	0	66,535
495+50	49550.00	50.00	179.72	0.00	54.07	0.00	0.00	356	0	114	0	0	177,148	110,400	0	0	0	66,748
495+79.12	49579.12	29.12	161.23	0.00	53.59	0.00	0.00	184	0	58	0	0	177,332	110,473	0	0	0	66,860
496+00	49600.00	20.88	158.32	0.00	54.02	0.00	0.00	124	0	42	0	0	177,456	110,525	0	0	0	66,931
496+24.115	49624.12	24.12	159.18	0.00	44.89	0.00	0.00	142	0	44	0	0	177,598	110,580	0	0	0	67,018
496+50	49650.00	25.88	151.10	0.00	30.79	0.00	0.00	149	0	36	0	0	177,747	110,625	0	0	0	67,122
496+63.176	49663.18	13.18	138.76	0.00	25.82	0.00	0.00	71	0	14	0	0	177,818	110,643	0	0	0	67,176
497+00	49700.00	36.82	148.19	0.00	13.37	0.00	0.00	196	0	27	0	0	178,014	110,676	0	0	0	67,338
497+14.12	49714.12	14.12	148.06	0.00	9.69	0.00	0.00	77	0	6	0	0	178,091	110,684	0	0	0	67,407
497+50	49750.00	35.88	152.08	0.00	4.31	0.00	0.00	199	0	9	0	0	178,290	110,695	0	0	0	67,595
497+65.063	49765.06	15.06	161.29	0.00	0.71	0.00	0.00	87	0	1	0	0	178,377	110,696	0	0	0	67,681
498+00	49800.00	34.94	171.93	0.00	0.06	0.00	0.00	216	0	0	0	0	178,593	110,696	0	0	0	67,897
498+50	49850.00	50.00	193.31	0.00	0.02	0.00	0.00	338	0	0	0	0	178,931	110,696	0	0	0	68,235
499+00	49900.00	50.00	243.30	0.00	0.91	0.00	0.00	404	0	1	0	0	179,335	110,698	0	0	0	68,638
499+50	49950.00	50.00	239.92	0.00	19.43	0.00	0.00	447	0	19	0	0	179,782	110,721	0	0	0	69,061
500+00	50000.00	50.00	130.93	0.00	8.75	0.00	0.00	343	0	26	0	0	180,125	110,754	0	0	0	69,371
500+50	50050.00	50.00	52.19	0.00	9.35	0.00	0.00	170	0	17	0	0	180,295	110,775	0	0	0	69,520
501+00	50100.00	50.00	110.55	0.00	5.32	0.00	0.00	151	0	14	0	0	180,446	110,793	0	0	0	69,654
501+50	50150.00	50.00	123.59	0.00	1.54	0.00	0.00	217	0	6	0	0	180,663	110,800	0	0	0	69,863
502+00	50200.00	50.00	107.44	0.00	0.33	0.00	0.00	214	0	2	0	0	180,877	110,803	0	0	0	70,075
502+50	50250.00	50.00	96.23	0.00	0.01	0.00	0.00	189	0	0	0	0	181,066	110,803	0	0	0	70,264
503+00	50300.00	50.00	76.37	0.00	0.18	0.00	0.00	160	0	0	0	0	181,226	110,803	0	0	0	70,424
503+50	50350.00	50.00	24.32	0.00	10.21	0.00	0.00	93	0	10	0	0	181,319	110,815	0	0	0	70,504
504+00	50400.00	50.00	18.55	0.00	56.49	0.00	0.00	40	0	62	0	0	181,359	110,893	0	0	0	70,467
504+50	50450.00	50.00	20.30	0.00	2.02	0.00	0.00	36	0	54	0	0	181,395	110,960	0	0	0	70,435
505+00	50500.00	50.00	83.34	0.00	1.97	0.00	0.00	96	0	4	0	0	181,491	110,965	0	0	0	70,526
505+50	50550.00	50.00	121.56	0.00	8.32	0.00	0.00	190	0	10	0	0	181,681	110,978	0	0	0	70,704
506+00	50600.00	50.00	154.32	0.00	16.27	0.00	0.00	255	0	23	0	0	181,936	111,006	0	0	0	70,930
506+50	50650.00	50.00	23.72	0.00	3.15	0.00	0.00	165	0	18	0	0	182,101	111,029	0	0	0	71,072
506+78.815	50678.82	28.82	27.51	0.00	28.30	0.00	0.00	27	0	17	0	0	182,128	111,050	0	0	0	71,078
507+00	50700.00	21.18	31.38	0.00	0.22	0.00	0.00	23	0	11	0	0	182,151	111,064	0	0	0	71,087
507+50	50750.00	50.00	36.12	0.00	1.53	0.00	0.00	62	0	2	0	0	182,213	111,066	0	0	0	71,147
507+59.888	50759.89	9.89	39.23	0.00	2.04	0.00	0.00	14	0	1	0	0	182,227	111,068	0	0	0	71,160
508+00	50800.00	40.11	53.15	0.00	0.00	0.00	0.00	69	0	2	0	0	182,296	111,070	0	0	0	71,226
508+40.96	50840.96	40.96	68.44	0.00	0.00	0.00	0.00	92	0	0	0	0	182,388	111,070	0	0	0	71,318
508+49.758	50849.76	8.80	44.92	0.00	0.00	0.00	0.00	18	0	0	0	0	182,406	111,070	0	0	0	71,336

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH GRANULAR BACKFILL (OR CUT, OR BORROW)
5 - EXPANDED EBS	WILL BE BACKFILLED WITH ENGINEER APPROVED MATERIAL FROM PROJECT EXCAVATION
6 - REDUCED MARSH IN FILL	REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
7 - REDUCED EBS IN FILL	REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL
8 - MASS ORDINATE	IF MARSH OR EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH COMMON OR BORROW: [(CUT - SALVAGED PAVT - EXPANDED MARSH EXC - EXPANDED EBS) - ((FILL - EXPANDED ROCK) * FILL FACTOR)]
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

Addendum No. 01
ID 5145-00-71
Revised Sheet 461
November 30, 2023

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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	201.0105 Clearing	253.000 STA	_____.____	_____.____
0004	201.0205 Grubbing	253.000 STA	_____.____	_____.____
0006	203.0100 Removing Small Pipe Culverts	80.000 EACH	_____.____	_____.____
0008	203.0220 Removing Structure (structure) 01. STA 27+20	1.000 EACH	_____.____	_____.____
0010	203.0220 Removing Structure (structure) 02. STA 39+78	1.000 EACH	_____.____	_____.____
0012	203.0220 Removing Structure (structure) 03. STA 288+22	1.000 EACH	_____.____	_____.____
0014	203.0220 Removing Structure (structure) 04. STA 306+19	1.000 EACH	_____.____	_____.____
0016	203.0260 Removing Structure Over Waterway Minimal Debris (structure) 01. B-13-796	1.000 EACH	_____.____	_____.____
0018	203.0260 Removing Structure Over Waterway Minimal Debris (structure) 02. B-13-797	1.000 EACH	_____.____	_____.____
0020	204.0115 Removing Asphaltic Surface Butt Joints	96.000 SY	_____.____	_____.____
0022	204.0120 Removing Asphaltic Surface Milling	75,540.000 SY	_____.____	_____.____
0024	204.0150 Removing Curb & Gutter	790.000 LF	_____.____	_____.____
0026	204.0165 Removing Guardrail	1,923.000 LF	_____.____	_____.____
0028	204.0270 Abandoning Culvert Pipes	1.000 EACH	_____.____	_____.____
0030	205.0100 Excavation Common	287,598.000 CY	_____.____	_____.____

Proposal ID: 20231212007 **Project(s):** 5145-00-71

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
0464	SPV.0195 Special 01. Backfill Special	1,240.000 TON	_____._____	_____._____
0466	209.2500 Backfill Granular Grade 2	14,570.000 TON	_____._____	_____._____
	Section: 0001		**Total:**	_____._____
			Total Bid:	_____._____