HIGHWAY WORK PROPOSAL

Proposal Number: Ø 2

Wisconsin Department of Transportation
DT1502 10/2010 s.66.29(7) Wis. Stats.

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Columbia	1010-02-84	WISC 2016 338	Madison - Portage CTH CS - Portage Interchange	IH 39

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, $ 310,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: November 8, 2016 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time November 1, 2017	
Assigned Disadvantaged Business Enterprise Goal 8%	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)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Removals, grading, concrete pavement repair and rehabilitation, HMA pavement, bridge repairs at B-11-30, 33, 35, 37, 39, base aggregate dense, steel plate beam guard, cable barrier, pipe lining, lighting, ITS, pavement marking, signing.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

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.

Effective with August 2015 Letting

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:
http://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 P.M. local time on the Thursday before the letting. Check the department's web site after 5:00 P.M. 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 P.M. 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:
http://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 departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, 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:

1. Have a properly executed annual bid bond on file with the department.
2. 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:

http://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.

C 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)

March 2010

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

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

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

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

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

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

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

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

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

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

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

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

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1010-02-84 Madison – Portage, CTH CS – Portage Interchange, IH 39 Columbia 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, 2016 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 (20151210)

2. Scope of Work.

The work under this contract shall consist of removals, grading, concrete pavement repair and rehabilitation, HMA pavement, bridge repairs at B-11-30, 33, 35, 37, 39, base aggregate dense, steel plate beam guard, cable barrier, pipe lining, lighting, ITS, pavement marking, signing, finishing and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

Perform all work during the 2017 construction season.

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

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

Provide the Erosion Control Implementation Plan (ECIP) 14 days prior to the Preconstruction Conference.

Included in this “Prosecution and Progress” article and “Traffic” article are restrictions to working hours and lane closures. Work efforts will possibly require multiple or concurrent controlling operations to occur at the same time. This information is included to assist the contractor and its subcontractors and shall not be interpreted as a demonstration of specified means and methods.

Within the course of Stage 1a operations, close the STH 33 exit ramps to through traffic for a maximum of 20 calendar days. Close both exit ramps at the same time. Do not reopen until completing the following work: B-11-30 joint and deck repair, exit ramp curb and gutter, ramp paving, and crash wall construction. The STH 33 work within Stage 1a must run contiguous with Stage 4a.

If the contractor fails to complete the work necessary to reopen STH 33 exit ramps to traffic within 20 calendar days, the department will assess the contractor $10,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 20 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of stage 4b operations, close Cascade Mountain Road to through traffic for a maximum of 40 calendar days. Do not reopen until completing the following work: approach grading and beam guard, all structure work.

If the contractor fails to complete the work necessary to reopen Cascade Mountain Road to traffic within 40 calendar days, the department will assess the contractor $300 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 40 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of stage 4c operations, close CTH U to through traffic for a maximum of 40 calendar days. Do not reopen until completing the following work: approach grading and beam guard, all structure work.

If the contractor fails to complete the work necessary to reopen CTH U to traffic within 40 calendar days, the department will assess the contractor $1,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 40 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of stage 4d operations, close CTH V to through traffic for a maximum of 40 calendar days. Do not reopen until completing the following work: approach grading and beam guard, all structure work.

If the contractor fails to complete the work necessary to reopen CTH V to traffic within 40 calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 40 calendar

days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

At the beginning of stage 4e operations, close Kent Road to through traffic for a maximum of 40 calendar days. Do not reopen until completing the following work: approach grading and beam guard, all structure work.

If the contractor fails to complete the work necessary to reopen Kent Road to traffic within 40 calendar days, the department will assess the contractor $3,500 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 40 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Complete all mainline HMA paving and pavement supporting construction operations on IH 39/90/94 and IH 90/94 prior to 12:01 AM October 1, 2017.

If the contractor fails to complete the necessary work on IH 39/90/94 and IH 90/94 prior to 12:01 AM October 1, 2017, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the mainline HMA paving remains incomplete after 12:01 AM, October 1, 2017. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

The department will not grant time extensions to the interim completion dates specified above for the following:

1. Severe weather as specified in standard spec 108.10.2.2.
2. Labor disputes that are not industry wide.
3. Delays in material deliveries.

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

B Work Restrictions

Do not haul materials or equipment to or from the work zone without a lane closure unless approved by the engineer.

The engineer reserves the right to order the opening of a closed lane or ramp at any time if the traffic congestion is determined by the department to be unacceptable.

Shoulder closures are not allowed on weekends with the exception of late Sunday nights and during crash wall construction. Median and outside shoulders may not be closed at the same time. Lane and opposite shoulder closures are not allowed for example: outside lane and median shoulder may not be closed at the same time and vise versa.

Do not perform work on, nor close lanes, nor haul materials of any kind along or across any portion of the highway carrying IH 39/90/94 or IH 90/94 traffic starting four hours before a home game for the Wisconsin Badgers football team, and concluding four hours after the completion of the game. The engineer has authority to also apply work restrictions for other special events not listed here.

Uneven pavement lanes will not be allowed over the weekend. Construct HMA pavement layers to eliminate all uneven lanes before 5:00 AM each Friday.

Do not store equipment or materials within the wetland areas shown on the plans.

Construction Staging plans are developed based on similar construction activities. Changes to the staging may be permitted by the approval of the engineer.

Stage 1, Base patching, pavement repair, grading, ITS and crash walls:
Stage 1a: Base patch concrete pavement outside shoulder, install ITS and construct crash walls. Replace STH 33 exit ramp curb and gutter, HMA pavement, and pavement markings.
Stage 1b: Base patch concrete pavement median lane, center lane, median shoulder, and concrete barrier wall rehabilitation.
Stage 1c: Base patch outside lane, slope grading and crash wall construction.

Stage 2, Mainline overlay paving of lower HMA layer:
Stage 2a: Place lower layer of HMA pavement on median lane.
Stage 2b: Place lower layer of HMA pavement on median shoulder.
Stage 2c: Place lower layer of HMA pavement on the center lane.
Stage 2d: Place lower layer of HMA pavement on outside lane and ramps.
Stage 2e: Place lower layer of HMA pavement on outside shoulder.

Stage 3, Mainline overlay paving of upper HMA layer:
Stage 3a: Place upper layer of HMA pavement on median lane.
Stage 3b: Place upper layer of HMA pavement on median shoulder.
Stage 3c: Place upper layer of HMA pavement on the center lane.
Stage 3d: Place upper layer of HMA pavement on outside lane and ramps.
Stage 3e: Place upper layer of HMA pavement on outside shoulder.

Stage 4, B-11-0030 Joint Replacement, Overpass Overlays and Rail Painting:
This stage may interact with interstate traffic within Stage 1, Stage 2 or Stage 3 above. Stage 4 involves replacing the expansion joints on B-11-0030, constructing concrete deck overlays and painting the railings of four other overpass structures.

Stages 4d and 4e may not occur simultaneously. All other substages may occur at the same time.

Stage 4a: STH 33
Construct concrete repair and replacement of deck expansion joints on B-11-0030. The joint replacement shall be staged ½ at a time while maintaining one lane of traffic with a temporary traffic signal. Stage to be contiguous with Stage 1a. Schedule construction such that Stage 1a ramp closure occurs simultaneously with Stage 4a structure repairs.

Stage 4b: Cascade Mountain Road
Construct concrete overlay, paint the structure rail, grade and pave approaches, and beam guard.

Stage 4c: CTH U
Construct concrete overlay, paint the structure rail, grade and pave approaches and beam guard.

Stage 4d: CTH V
Construct concrete overlay, paint the structure rail, grade and pave approaches and beam guard.

Stage 4e: Kent Road
Construct concrete overlay, paint the structure rail, grade and pave approaches and beam guard.

Stage 5, Base aggregate dense on shoulders and MGS guard rail:
Stage 5a: Place base aggregate dense on shoulders and install MGS guard rail.
Stage 5b: Install pavement marking grooved wet reflective.
Stage 5c: Construct rumble strips.

Stage 6, STH 78 Intersection Lighting:
Construct STH 78 intersection lighting in the median of the roadway.

Northern Long-eared Bat (*Myotis septentrionalis*)
Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts have been identified within 150 feet of the project limits. 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).

To avoid adverse impacts upon the NLEBs, no Clearing is allowed between June 1 and July 31, both dates inclusive.

If the required Clearing is not completed by May 31, the department will suspend all clearing and associated work directly impacted by Clearing. The department will issue a notice to proceed with Clearing and associated work directly impacted by clearing after consulting with the United States Fish and Wildlife Service (USFWS).

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.

4. Traffic.

A General

Keep IH 39/90/94 and IH 90/94, on which this project is located, open to through traffic at all times throughout the project. Maintain all existing 12-foot wide lanes of traffic in each direction at all times, except as allowed below during limited night-time single and double lane closures. Keep all ramps and other roadways intersecting IH 39 open to traffic at all times except as allowed below.

All lane closures are subject to the approval of the Region traffic engineer. Times listed for lane closure restrictions include setup and breakdown of any equipment and traffic control devices. Notify all local emergency services at least 24 hours prior to closing and re-opening lanes or ramps on IH 39/90/94. Provide the State Highway Patrol, the Columbia County Sheriff's Department, and the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a safety hazard develops.

Lane closures are required for material delivery. Material delivery shall not occur with only shoulder closures in place.

The length of lane closure will be limited to the work to be done that night, not to exceed a maximum of three miles.

CHARTS OF LANE CLOSURES

For: IH 39/90/94 6 lane segment (Start – May 25, 2017 and September 5, 2017 - Completion)							
	Sun PM – Mon AM	Mon PM – Tues AM	Tues PM – Wed AM	Wed PM – Thur AM	Thurs PM – Fri AM	Fri PM – Sat AM	Sat PM – Sun AM
Northbound							
1 Lane Closed	7:00 PM – 10:00 AM	6:00 PM – 10:00 AM	6:00 PM – 10:00 AM	6:00 PM – 8:00 AM	8:00 PM – 8:00 AM	NOT ALLOWED	NOT ALLOWED
2 Lanes Closed	8:00 PM - 7:00 AM	7:00 PM - 7:00 AM	7:00 PM - 7:00 AM	7:00 PM - 7:00 AM	9:00 PM - 7:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 7:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 8:00 PM 8:00 AM – 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM
Shoulder Closure	7:00 PM – 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED

For: IH 39/90/94 6 lane segment (Start – May 25, 2017 and September 5, 2017 - Completion)							
	Sun PM – Mon AM	Mon PM – Tues AM	Tues PM – Wed AM	Wed PM – Thur AM	Thurs PM – Fri AM	Fri PM – Sat AM	Sat PM – Sun AM
Southbound							
1 Lane Closed	8:00 PM - 10:00 AM	6:00 PM - 10:00 AM	6:00 PM - 10:00 AM	6:00 PM - 10:00 AM	7:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED
2 Lanes Closed	10:00 PM - 6:00 AM	8:00 PM - 6:00 AM	8:00 PM - 6:00 AM	8:00 PM - 6:00 AM	8:00 PM - 6:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 8:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 10:00 AM – 11:59 AM	12:00 PM - 7:00 PM 8:00 AM – 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM
Shoulder Closure	8:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	NOT ALLOWED	NOT ALLOWED

For: IH 39/90/94 6 lane segment (May 30- August 31, 2017)							
	Sun PM – Mon AM	Mon PM – Tues AM	Tues PM – Wed AM	Wed PM – Thur AM	Thurs PM – Fri AM	Fri PM – Sat AM	Sat PM – Sun AM
Northbound							
1 Lane Closed	8:00 PM - 8:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	8:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED
2 Lanes Closed	9:00 PM - 7:00 AM	8:00 PM - 7:00 AM	8:00 PM - 7:00 AM	8:00 PM - 7:00 AM	10:00 PM - 7:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 8:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 8:00 PM 8:00 AM – 11:59 AM	12:00 PM- 11:59 AM	12:00 PM- 11:59 AM
Shoulder Closure	8:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED
Southbound							
1 Lane Closed	10:00 PM - 9:00 AM	8:00 PM - 9:00 AM	8:00 PM - 9:00 AM	8:00 PM - 9:00 AM	8:00 PM - 9:00 AM	NOT ALLOWED	NOT ALLOWED
2 Lanes Closed	11:00 PM - 6:00 AM	9:00 PM - 6:00 AM	9:00 PM - 6:00 AM	9:00 PM - 6:00 AM	10:00 PM - 6:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 10:00 PM 9:00 AM – 11:59 AM	12:00 PM - 8:00 PM 9:00 AM – 11:59 AM	12:00 PM - 8:00 PM 9:00 AM – 11:59 AM	12:00 PM - 8:00 PM 9:00 AM – 11:59 AM	12:00 PM - 8:00 PM 9:00 AM – 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM
Shoulder Closure	10:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED

For: IH 90/94 4 lane segment and IH 39 Northbound (Start – May 25, 2017 and September 5, 2017 - Completion)							
	Sun PM – Mon AM	Mon PM – Tues AM	Tues PM – Wed AM	Wed PM – Thur AM	Thurs PM – Fri AM	Fri PM – Sat AM	Sat PM – Sun AM
Westbound (Northbound)							
1 Lane Closed	8:00 PM - 9:00 AM	6:00 PM - 10:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	7:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 8:00 PM 9:00 AM – 11:59 AM	12:00 PM - 6:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 7:00 PM 8:00 AM – 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM
Shoulder Closure	8:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED
Eastbound (Southbound)							
1 Lane Closed	9:00 PM - 10:00 AM	6:00 PM - 10:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 9:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 10:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM – 11:59 AM	12:00 PM – 11:59 AM
Shoulder Closure	9:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 8:00 AM	NOT ALLOWED	NOT ALLOWED

For: IH 90/94 4 lane segment and IH 39 Northbound (May 30 – August 31, 2017)							
	Sun PM – Mon AM	Mon PM – Tues AM	Tues PM – Wed AM	Wed PM – Thur AM	Thurs PM – Fri AM	Fri PM – Sat AM	Sat PM – Sun AM
Westbound (Northbound)							
1 Lane Closed	8:00 PM - 8:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	8:00 PM - 7:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 8:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 8:00 PM 7:00 AM – 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM
Shoulder Closure	8:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 7:00 AM	NOT ALLOWED	NOT ALLOWED
Eastbound (Southbound)							
1 Lane Closed	9:00 PM - 8:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	6:00 PM - 8:00 AM	8:00 PM - 7:00 AM	NOT ALLOWED	NOT ALLOWED
All Lanes Open	12:00 PM - 9:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 6:00 PM 8:00 AM – 11:59 AM	12:00 PM - 8:00 PM 7:00 AM – 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM
Shoulder Closure	9:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 11:59 AM	12:00 PM - 7:00 AM	NOT ALLOWED	NOT ALLOWED

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

All lane and shoulder closures shall be removed when work is not in progress. Failure to reopen closed lanes and shoulders shall be subject to penalties specified under the article "Prosecution and Progress".

Do not park or store equipment, vehicles, or construction materials within the clear zone of any roadway carrying traffic during non-working hours except at locations and periods of time approved by the engineer. At such locations, the material and equipment involved shall not constitute a hazard to the traveling public.

During working hours, keep construction vehicles within the work zone to an absolute minimum.

Supplement standard spec 107.8 as follows:

Equip all contractors' vehicles and equipment operating in or near live traffic lanes with at least one hazard identification beacon (flashing amber light). The flashing amber light shall be activated when vehicles or equipment are operated on the roadway, parked in close proximity to the roadway, and when entering or exiting live lanes of traffic. The flashing amber light shall be mounted approximately midway between the transverse extremities of the vehicles or machinery and at the highest practicable point that provides visibility from all directions. The light shall be of the flashing strobe or revolving type meeting the following minimum requirements:

Flashing Strobe Type Light	Revolving Type Light
360-degree lens	360-degree lens
60 to 90 flashes per minute	45 to 90 flashes
5-inch minimum height	4-5/8 inch minimum height
3-3/4 inch minimum diameter	3-3/4 inch minimum diameter

The light shall be equipped with bulbs of 50 candlepower minimum. Mounting shall be either magnetic or permanent. No compensation for furnishing and installing the flashing amber light to contractor owned construction equipment or vehicles will be provided for in the contract.

No contractor equipment, including trucks, shall be allowed to use maintenance/emergency crossovers for changing their direction of travel.

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

B Traffic Control Devices

Prior to any work being performed, place appropriate traffic control signing, devices and temporary and permanent pavement marking as detailed on the plans, in the Standard Detail Drawings and in conformance with the Manual of Uniform Traffic Control Devices

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

Place Traffic Control Signs Portable Changeable Message at the beginning of the project for each direction of IH 39/90/94 and IH 90/94 at least 14 calendar days prior to the beginning of construction. Obtain approval from the department for all messages for the Traffic Control Signs Portable Changeable Message. The engineer shall contact the WisDOT Regional Traffic Engineer, Southwest Region, Madison office, (609) 246-5635.

Place drums for lane or shoulder closures one-foot minimum from edge of live traffic lane except as shown on the plans. Drums placed adjacent to the work areas shall be pulled back from the traveled lane when work is not in progress.

Have available at all times sufficient experienced personnel to promptly install, remove and reinstall the required traffic control devices to properly route traffic for work operations.

Do not disturb, remove or obliterate any permanent traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways not shown on the plans without the approval of the engineer.

C Closures

Place Traffic Control Signs Portable Changeable Message for all lane closures as shown on the plans at least seven days prior to the lane closure. Obtain approval from the department for all messages for the Traffic Control Signs Portable Changeable Message. The engineer shall contact the WisDOT Regional Traffic Engineer, Southwest Region, Madison office, (609) 246-5635.

Concurrent with all mainline single or double lane closures, install and maintain temporary speed limit reduction signage according to the plans and MUTCD. Install and remove reduced speed limit signage simultaneously with the closing and opening of lanes.

During the times when lane closures are allowed on IH 39/90/94 and IH 90/94, maintain a minimum clear width of 16 feet, including the adjacent shoulder at all times.

Failure to reopen closed lanes shall be subject to penalties specified under the article “Prosecution and Progress”.

All lane and shoulder closures shall be removed when work is not in progress. The exception to this is the shoulder closures required for the crash wall construction.

Do not close more than one ramp at a time without the approval of the engineer. All hours of ramp closures shall fall within the hours allowed for single lane closures as specified above in paragraph A with the exception of the westbound IH 90/94 exit ramps to STH 33 Stage 1a.

Single lane ramps may be closed for one night when constructing continuously reinforced concrete pavement repair on the adjacent travel lane which would require closing the ramp. A ramp may be closed overnight when placing the leveling layer of HMA pavement, again overnight when placing the surface layer of HMA pavement and constructing butt joint, and again overnight when placing base aggregate dense on the shoulders. A ramp may be closed for up to one hour when placing pavement markings and again for up to one hour when constructing rumble strips.

Multi-lane ramps will be constructed under traffic and will utilizing lane closures for staging work. Submit to the engineer a plan for constructing work under traffic.

D Detours

Detour traffic for ramp closures as shown on the plans. Install required traffic control and detour signs as shown on the plans prior to ramp closures and remove after completion of that stage. Cover advance warning signs and detour signs until work begins.

Provide the name and phone number of a 24 hour contact person if problems occur with the detour signing and barricades.

E Traffic Staging

Stage 1

Stage 1a: Base patch concrete pavement outside shoulder, install ITS and construct crash walls. Replace STH 33 exit ramp curb and gutter and pave STH 33 exit ramps.
Stage 1b: Base patch concrete pavement median lane, center lane, median shoulder, and concrete barrier wall rehabilitation.
Stage 1c: Base patch outside lane, slope grading and crash wall construction.

Utilize single and double lane nighttime closures to perform the work during off peak hours as defined in the charts above. Along IH 90/94 and IH 39 northbound, only single lane closures will be allowed on two-lane roadways. The lane(s) will remain closed for the entire length of the segment that can completed in one night – a maximum length of 3 miles. Double lane closures of the median and center lanes shall be used for patching the center lane. Traffic shall be shifted to the outside lane.

Shoulder closures may be in place during weekday daytime hours (as defined in the charts above) for the purpose of ITS construction, crash wall construction and STH 33 bridge repairs. Shoulder closures may remain in place during weekend hours for the purpose of crash wall construction only.

The exit ramps at STH 33 shall be closed during construction of the STH 33 structure (B-11-30) repairs, STH 33 crash walls, replacement of curb and gutter, and ramp paving. IH 90/94 westbound traffic to STH 33 shall be detoured to IH 39 northbound (Petro) to STH 33 and IH 90/94 eastbound traffic shall be detoured to IH 39 northbound (Petro) to STH 33.

The traffic control of this stage may also be used to construct structure railing painting containment over lane closures. The painting of structure railings occurs in Stage 4 on Cascade Mountain Road, CTH U, CTH V, and Kent Road and may occur over open lanes within the containment. Install and remove painting containment over lane closures. The lane closures needed for installation and removal of the painting containment system may not necessarily overlap with lane closures needed for interstate pavement and shoulder rehabilitation.

Stage the construction operations to ensure that the camera located near the Wisconsin River (CCTV-13-0024) is not down for more than five consecutive days.

Stage 2

Stage 2a: Place lower layer of HMA pavement on median lane.
Utilize double (in 3 lane segment), and single (in 2 lane segment) lane closures. Traffic shall be shifted to the outside lane and shoulder.

Stage 2b: Place lower layer of HMA pavement on median shoulder.
Utilize shoulder and single lane closure. Close adjacent lane with shoulder.

Stage 2c: Place lower layer of HMA pavement on the center lane.
Utilize double (in 3 lane segment) lane closures. Double lane closures of the median and center lanes shall be used for overlaying the center lane. Traffic shall be shifted to the outside lane and shoulder.

Stage 2d: Place lower layer of HMA pavement on outside lane and ramps.
Utilize double (in 3 lane segment), and single (in 2 lane segment) lane closures. Traffic shall be shifted onto the median lane and shoulder.

Stage 2e: Place lower layer of HMA pavement on outside shoulder.
Utilize shoulder and single lane closure. Close adjacent lane with shoulder.

Utilize single and double lane nighttime closures to perform the work during off peak hours as defined in the charts above. Along IH 90/94 and IH 39 northbound, only single lane closures will be allowed on two-lane roadways. The lane(s) will remain closed for the entire length of the segment that can completed in one night – a maximum length of 3 miles. All lanes and shoulders shall be paved to an even surface prior to the weekend.

Stage 3

Stage 3a: Place upper layer of HMA pavement on median lane.
Stage 3b: Place upper layer of HMA pavement on median shoulder.
Stage 3c: Place upper layer of HMA pavement on the center lane.
Stage 3d: Place upper layer of HMA pavement on outside lane and ramps.
Stage 3e: Place upper layer of HMA pavement on outside shoulder.

This staging will be identical to Stage 2 described above. Utilize single and double lane nighttime closures to perform the work during off peak hours as defined in the charts above.

Along IH 90/94 and IH 39 northbound, only single lane closures will be allowed on two-lane roadways. The lane(s) will remain closed for the entire length of the segment that can completed in one night – a maximum length of 3 miles. All lanes and shoulders shall be paved to an even surface prior to the weekend.

Stage 4

This stage may coincide with interstate traffic within Stage 1, Stage 2 or Stage 3 above. The work zone is isolated to overpass structures, however, install and remove painting containment over interstate lane closures similar to those defined in Stages 1 through 3. Stage 4a shall be be completed prior to May 26, 2017. Stages 4d and 4e may not occur simultaneously. All other stages may occur at the same time.

Stage 4a: STH 33

STH 33 shall remain open to traffic at all times. Work on B-11-30 will consist of replacement of the deck expansion joints and concrete repair. The joints shall be replaced approximately ½ at a time while maintaining one lane of traffic controlled by temporary signals. Stage 4a shall run contiguous with Stage 1a.

Stage 4b: Cascade Mountain Road

Cascade Mountain Road shall be closed at all times during this stage. Improvements under this stage include placement and cure of the concrete overlay, painting the structure rail, paving approaches and beam guard. A detour route will not be provided.

Stage 4c: CTH U

CTH U shall be closed at all times during this stage. Improvements under this stage include placement and cure of the concrete overlay, painting the structure rail, paving approaches and beam guard. A detour route will not be provided.

Stage 4d: CTH V

CTH V shall be closed at all times during this stage. Improvements under this stage include placement and cure of the concrete overlay, painting the structure rail, paving approaches and beam guard. A detour route will be signed by Columbia County utilizing CTH J and CTH CS.

Stage 4e: Kent Road

Kent Road shall be closed at all times during this stage. Improvements under this stage include placement and cure of the concrete overlay, painting the structure rail, paving approaches and beam guard. A detour route will not be provided.

Stage 5

Stage 5a: Construct base aggregate dense on shoulders and install guard rail.
Stage 5b: Install pavement marking grooved wet reflective.
Stage 5c: Construct rumble strips.

Utilize single and double lane nighttime closures to perform the work during off peak hours as defined in the charts above. Along IH 90/94 and IH 39 northbound, only single lane

closures will be allowed on two-lane roadways. The lane(s) will remain closed for the entire length of the segment that can completed in one night – a maximum length of 3 miles.

Stage 6
STH 78 intersection lighting shall be completed with shoulder closures to define the work zone in the median of the roadway.

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')	MINIMUM NOTIFICATION
Lane and shoulder closures	14 calendar days
Full roadway closures	14 calendar days
System and service ramp closures	14 calendar days
Full system and service ramp closures	14 calendar days
Detours	14 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction >16')	MINIMUM NOTIFICATION
Lane and shoulder closures	3 business days
System and service 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.
108-057 (20150630)

5. Lane Rental Fee Assessment.

A General
The contract designates some lane and shoulder closures to perform the work. The contractor will not incur a Lane Rental Fee Assessment for closing lanes or shoulders during the allowable lane and shoulder closure times. The contractor will incur a Lane Rental Fee Assessment for each lane or shoulder closure outside of the allowable lane or shoulder closure times. If a lane or shoulder is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to enforce compliance of lane restrictions and discourage unnecessary closures.

The allowable lane and shoulder closure times are shown in the Traffic article.

Submit the dates of the proposed lane, ramp, shoulder, and roadway restrictions to the engineer as part of the progress schedule.

Coordinate lane, ramp, shoulder, and roadway closures with any concurrent operations on adjacent roadways within 3 miles of the project. If other projects are in the vicinity of this project, coordinate lane and shoulder closures to run concurrent with lane and shoulder closures on adjacent projects when possible. When lane or shoulder closures on adjacent projects extend into the limits of this project, Lane Rental Fee Assessments will only occur if the closure facilitates work under this contract.

B Lane Rental Fee Assessment

The Lane Rental Fee Assessment incurred for each lane closure, each ramp closure, each shoulder closure, and each full closure of a roadway, per direction of travel, is as follows:

Lane Rental Fee Assessment						
	Start – May 25, 2017		May 30 – August 31, 2017		Sept 5, 2017 - Completion	
Roadway	Hourly	Quarter Hour	Hourly	Quarter Hour	Hourly	Quarter Hour
IH 39/90/94	$10,000	$2,500	$10,000	$2,500	$10,000	$2,500
IH 90/94	$5,000	$1,250	$10,000	$2,500	$5,000	$1,250
IH Shoulders	$5,000	$1,250	$10,000	$2,500	$5,000	$1,250

The Lane Rental Fee Assessment represents a portion of the cost of the interference and inconvenience to the road users for each closure. All lane, roadway, shoulder, or ramp closure event increments 15 minutes and less will be assessed as a 15-minute increment.

The engineer, or designated representative, will be the sole authority in determining time period length for the Lane Rental Fee Assessment.

Lane Rental Fee Assessments will not be assessed for closures due to crashes, accidents or emergencies not initiated by the contractor.

The department will assess Lane Rental Fee Assessment by the dollar under the administrative item Failing to Open Road to Traffic. The total dollar amount of Lane Rental Fee Assessment will be computed by multiplying the Lane Rental Assessment Rate by the number of 15-minute increments of each lane closure event as described above.

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance. If interim completion time or contract time expires prior to the completion of specified work in the contract, additional liquidated damages will be assessed according to standard spec 108.11 or as specified within this contract.

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 39, IH 39/90/94, and IH 90/94 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 periods:

- From noon Friday, April 14, 2017 to 6:00 AM Monday, April 17, 2017 for Easter;
- From noon Friday, May 26, 2017 to 6:00 AM Tuesday, May 30, 2017 for Memorial Day;
- From noon Friday, June 30, 2017 to 8:00 PM Wednesday, July 5, 2017 for Independence Day;
- From noon Friday, September 1, 2017 to 6:00 AM Tuesday, September 5, 2017 for Labor Day;
- From noon Friday, October 6, 2017 to 6:00 AM Monday, October 9, 2017 for Columbus Day.

107-005 (20050502)

7. Utilities.

This contract comes under the provisions of Wisconsin Administrative Code Chapter Trans 220.

There are underground and overhead utility facilities located within the project limits. The contractor shall coordinate his construction activities with a call to Diggers Hotline and/or a direct call to the utilities that have facilities in the area as required per statues. The contractor shall use caution to ensure the integrity of the underground facilities and shall maintain code clearances from overhead facilities at all times.

If utility conflicts occur during construction, facility adjustments shall be coordinated with the contractor. If these are conflicts with new beam guard, signs or other work under this project, the contractor shall work around the utility facilities. The engineer will adjust the location of items under this contract to avoid conflict with the existing utility facilities.

Alliant Energy – Gas
Alliant Energy has gas lines located within the project limits. The facilities are not anticipated to be in conflict.

The existing facility crosses IH 90/94 at approximately Station 887+60 SB, south of and running along Cascade Mountain Road. It also crosses IH 90/94 at approximately Station 969+40 SB.

Contact for Alliant Energy – Jason Hogan, 4902 N. Biltmore Lane, Suite 1000, Madison, WI, 53718, Phone (608) 458-4871, E-mail jasonhogan@alliantenergy.com.

Construction field contact – Matthew A Hosler, 2777 Columbia Drive, Portage, WI, 53901, Phone (608) 742-0835, Mobile (608) 963-3644, E-mail matthewhosler@alliantenergy.com.

Alliant Energy – Electric
Alliant Energy has overhead electric distribution lines located within the project limits. The facilities are not anticipated to be in conflict.

The existing facility crosses IH 39/90/94 at approximately Station 1126+65 SB, south of and running along CTH U overhead on poles and at Station 1167+05 SB, north of and running along CTH V overhead on poles. It also crosses IH 39/90/94 at approximately Station 1291+60 SB, north of and running along Kent Road overhead on poles. It also crosses IH 39/90/94 at Station 1305+50 SB.

Contact for Alliant Energy – Jason Hogan, 4902 N. Biltmore Lane, Suite 1000, Madison, WI, 53718, Phone (608) 458-4871, E-mail jasonhogan@alliantenergy.com.

Construction field contact – Matthew A Hosler, 2777 Columbia Drive, Portage, WI, 53901, Phone (608) 742-0835, Mobile (608) 963-3644, E-mail matthewhosler@alliantenergy.com.

American Transmission Company (ATC) – Electric
ATC has overhead electric transmission lines located within the project limits. The facilities are not anticipated to be in conflict.

The utility plans to construct a new electrical transmission facility along the length of this construction project. Construction is anticipated to occur in 2016 and 2017. The new facility will primarily be constructed off right-of-way for much of the planned installation; however, there are areas where the facility towers will be located within the right-of-way. The facility will also cross IH 39/90/94 at approximately Station 1002+00 SB. South of this station, the facility will be located along the east right-of-way line; north of this Station, the facility will be located along the west right-of-way line.

During facility construction, including in 2017, the ATC contractor will require periodic lane and shoulder closures for the delivery of equipment and materials as well as the progression of the utility work. Prior to submitting a bid proposal, contact the provided ATC representative to obtain the most current construction schedule from ATC. Coordinate with ATC to understand the utility's planned construction and potential lane and shoulder closures.

Contact for ATC – Alex Metz, 5303 Fen Oak Drive, Madison, WI, 53718, Phone (608) 877-7105, E-mail ametz@atcllc.com.

Construction field contact – Doug Vosberg, 5303 Fen Oak Drive, Madison, WI, 53718, Phone (608) 877-7650, Mobile (608) 438-7670, E-mail ametz@atcllc.com.

AT&T Legacy - Communications
AT&T has underground fiber optic and communications lines located within the project limits. The facilities are not anticipated to be in conflict.

The existing facility runs parallel and within the eastern right-of-way line along IH 90/94 and IH 39/90/94. AT&T facilities also cross the interstate at approximately Station 870+00 SB and 969+05 SB.

Contact for AT&T – Carl Donahue, 866 Rock Creek Road, Plano, IL, 60545, Phone (815) 833-2054, E-mail cdonahue@att.net.

Construction field contact – William Koenig, 128 W Sunset Avenue, Appleton, WI, 54911, Phone (608) 628-0575, E-mail wekoenig@att.net.

CenturyLink - Communications
CenturyLink has underground fiber optic and telephone communications lines located within the project limits. The facilities are not anticipated to be in conflict.

The facility runs outside of the west right-of-way line from CTH V southerly to the exit ramp to Rest Area 11. It also runs parallel to and along the south side of Kent Road.

Contact for CenturyLink – Steve Blado, 333 N. Front Street, La Crosse, WI, 54602, Phone (608) 796-5543, E-mail steve.blado@centurytel.com.

Construction field contact – Tim Kroeze, 201 Stark Street, Randolph, WI, 53956, Phone (920) 326-2224, Mobile (920) 219-0112, E-mail tim.kroeze@centurylink.com.

Charter Communications - Communications
Charter has overhead communications lines located within the project limits. The facilities are not anticipated to be in conflict.

The facility runs south of and parallel to STH 33 within the project limits along STH 33.

Contact for Charter Communications – Brandon Storm, 2701 Daniels Street, Madison, WI, 53718, Phone (608) 274-3822, E-mail Brandon.storm@charter.com.

Construction field contact – Harlow Jarvis, E 10704 State Hwy 33, Baraboo, WI, 53913, Phone (608) 235-1911, E-mail harlow.jarvis@charter.com.

Frontier Communications of WI LLC - Communications
Frontier has overhead and underground communications lines located within the project limits. The facilities are not anticipated to be in conflict.

The facility crosses IH 90/94 at approximately Station 969+00 SB. The facility also runs south of and parallel to STH 33 within the project limits along STH 33.

Contact for Frontier Communications – Robert Church, 2222 W Wisconsin Street, Portage, WI, 53901, Phone (608) 742-1817, E-mail Robert.church@ftr.com.

Construction field contact – Jerry Moore, 2222 W Wisconsin Street, Portage, WI, 53901, Phone (608) 742-9507, Mobile (608) 346-0353, E-mail jerald.r.moore@ftr.com.

Dekorra Utility District 1 – Sanitary Sewer
Dekorra has underground sanitary sewer lines located within the project limits. The facilities are not anticipated to be in conflict.

The facility crosses IH 39/90/94 at approximately Station 1345+60 SB.

Contact for Dekorra Utility District 1 – Jerry Foellmi, 916 Silver Lake Road, Portage, WI, 53901, Phone (608) 742-2169, E-mail jfoellmi@generalengineering.net.

Merrimac Communications, LTD - Communications
Merrimac has underground fiber optic communications lines located within the project limits. The facilities are not anticipated to be in conflict.

The facility crosses IH 90/94 at approximately Station 969+50 SB and along the south side of CTH U from Station 14+00 to Station 22+00.

Contact for Merrimac Communications – Kirk Olson, 327 Pallisades Street, Merrimac, WI, 53561, Phone (608) 493-2291, E-mail kolson@merr.com.

Construction field contact – Brandon Suchla, 327 Pallisades Street, Merrimac, WI, 53561, Phone (608) 493-9470 extension 204, Mobile (608) 370-1608, E-mail Brandon.suchla3@gmail.com.

Northern Natural Gas Company – Gas Pipeline
Northern Natural Gas has underground gas lines located within the project limits. The facilities are not anticipated to be in conflict.

The facility crosses IH 90/94 at approximately Station 884+10 SB.

Contact for Northern Natural Gas Company – Tom Dickson, 1120 Centre Point Drive, Suite 400, Mendota Heights, MN, 55120, Phone (651) 456-1777, E-mail tom.dickson@nngco.com.

Construction field contact – Leonard Klaas, 5557 County Road D, Platteville, WI, 53818, Phone (402) 530-2806, Mobile (608) 778-8514, E-mail Leonard.klaas@nngco.com.

WisDOT – Communications
WisDOT has underground fiber optic communication and ITS facilities located within the project limits. WisDOT's fiber optic facility is co-located within the AT&T Legacy facility.

WisDOT also has ITS facilities at Station 1150+00 northbound LT; on the south side of STH 33; and at Station 985+00 SB LT. These facilities have been considered in the design of the project. Modifications to facilities are included in the plans.

Contact for WisDOT – Jeff Madson, 433 W St Paul Avenue, Suite 300, Milwaukee, WI, 53203, Phone (414) 225-3723, E-mail jeffery.madson@dot.wi.gov.

8. Notice to Contractor Other Contracts– WisDOT Project 1016-02-60.

The department has plans to install median cable barrier west of the project beginning during the 2017 construction season between August and November. Construction operations are expected to be completed concurrently with work under this contract, and includes shoulder and lane closures. Coordinate work activities and traffic control with the project contractor of ID 1016-02-60. The design contact for ID 1016-02-60 is Brandyn Mecum, PE, WisDOT Design Project Manager, (608) 758-9070; brandyn.mecum@dot.wi.gov.

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

The department has obtained U.S. Army Corps of Engineers Section 404 permits under non-reporting categories 1 and 13. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the correspondence is available from the regional office by contacting Brian Taylor at (608) 245-2630.

10. Environmental Protection – Endangered Species.

The eastern massasauga rattlesnake is located in portions of the project area. The species can be found in wetland and upland habitat. The species is on the Federal Endangered species list.

Exclusion Fencing
Prior to any soil disturbance, line the lower perimeter of the area of slope grading with properly installed (entrenched) silt fence to discourage snakes from entering the work area. Place any snakes found within the work area outside the silt fence.

Contact Eric Heggelund of the Department of Natural Resources, (608) 275-3301, eric.heggelund@wisconsin.gov and the engineer a minimum of one week in advance of installing the exclusion fence to allow for consultation with the DNR to provide guidance as to the appropriate locations of the exclusion fence. The locations of silt fence shown in the plans are approximate.

Consult with the engineer prior to beginning any ground disturbing activity after installation of the exclusion fence to verify that the exclusion fence was properly installed and that the enclosed area has been cleared by a DNR representative.

Inspect the fence at least twice weekly on non-consecutive days and after significant rain events to ensure the integrity of the fence. Make repairs to the fence within 24 hours of the inspection that first noted the breach.

11. Erosion Control.

Supplement standard spec 107.20 as follows:

Provide the Erosion Control Implementation Plan (ECIP) 14 days prior to the reconstruction conference. Prepare and submit an ECIP for the project, including borrow sites and material disposal sites, according to Wis. Adm. Code Chapter TRANS 401 requirements. Supplement the information shown on the plans, do not reproduce it. Identify how the project's erosion control plan will be implemented.

Stockpile spoil material on upland sites an adequate distance from the stream and any open water created by excavation. Install filter fabric silt fence between spoil material and the stream and between the entire disturbed area and the waterway.

WDNR mandates that appropriate erosion control measures be applied to borrow and waste areas during and following construction. Following completion of the project, restore borrow and waste areas and properly seed, mulch and protect them from the effects of erosion.

When engaged in roadway cleaning operations, the contractor shall use equipment having vacuum or water spray mechanisms to eliminate the dispersion of particulate matter into the atmosphere. If vacuum equipment is employed, it must have a suitable self-contained particulate collector to prevent discharge from the collector bin into the atmosphere.

Remove all temporary erosion control measures after disturbed areas are stabilized or at the direction of the engineer.

Existing waterways and sensitive areas shall be protected. Do not disturb or store any equipment or materials in these areas without prior approval from the engineer. Store materials upland and away from the waterway.

Keep all public roadways clean and free from dirt and debris at all times. Provide a self-contained mechanical or air conveyance street sweeper, and dispose of the accumulated material. All street sweeping due to contractor hauling operations is considered incidental to the contract.

Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial topsoil stripping operation through the subsequent grading and re-topsoiling to minimize the period of exposure to possible erosion. Re-topsoil graded areas, as designated by the engineer, immediately after grading is completed within those areas. Landscape all topsoiled areas as the plan shows or as directed by the engineer within 5 calendar days after placement guardrail. Temporary seed all topsoil piles inactive for longer than 14 days.

Do not wash out equipment in drainage ways or direct conduits to waters of the state. Keep slurry out of inlets and drainage ways. Remove all temporary erosion control measures after disturbed areas are stabilized or at the direction of the engineer.

CAT or upslope tracking required on all slopes greater than 30 feet in length and steeper than 3H:1V or as directed by the engineer.

12. QMP Base Aggregate.

A Description

A.1 General

(1) This special provision describes contractor quality control (QC) sampling and testing for base aggregates, documenting those test results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.

(2) Conform to standard spec 301, standard spec 305, and standard spec 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.

(3) Do not apply this special provision to material placed under the Aggregate Detours, Salvaged Asphaltic Pavement Base, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.

(4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
1. Production and placement control and inspection.
2. Material sampling and testing.

(5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at: http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/rdwy/default.aspx

A.2 Contractor Testing for Small Quantities

(1) The department defines a small quantity, for each individual Base Aggregate bid item, as a plan quantity of 9000 tons or less of material as shown in the schedule of items under that bid item.

(2) The requirements under this special provision apply equally to a small quantity for an individual bid item except as follows:

1. The contractor need not submit a full quality control plan but shall provide an organizational chart to the engineer including names, telephone numbers, and current certifications of all persons involved in the quality control program for material under affected bid items.
2. Divide the aggregate into uniformly sized sublots for testing as follows:

Plan Quantity	Minimum Required Testing
≤ 1500 tons	One test from production, load-out, or placement at the contractor's option[1]
> 1500 tons and ≤ 6000 tons	Two tests of the same type, either from production, load-out, or placement at the contractor's option[1]
> 6000 tons and ≤ 9000 tons	Three placement tests[2] [3]

[1] If using production tests for acceptance, submit test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.

[2] For 3-inch material, obtain samples at load-out.

[3] If the actual quantity overruns 9000 tons, create overrun sublots to test at a rate of one additional placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Department verification testing is optional for quantities of 6000 tons or less.

(3) Material represented by a sublot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B Materials

B.1 Quality Control Plan

(1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not place base before the engineer reviews and comments on the plan. Construct the project as that plan provides.

(2) Do not change the quality control plan without the engineer's review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in each of the contractor's laboratories 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 means that will be used, and action time frames.
3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.

4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
5. Descriptions of stockpiling and hauling methods.
6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2 Personnel

(1) Have personnel certified under the department's highway technician certification program (HTCP) perform sampling, testing, and documentation as follows:

Required Certification Level:	Sampling or Testing Roles:
Aggregate Technician IPP Aggregate Sampling Technician Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Sampling[1]
Aggregate Technician IPP Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Gradation Testing, Aggregate Fractured Particle Testing, Aggregate Liquid Limit and Plasticity Index Testing

[1] Plant personnel under the direct observation of an aggregate technician certified at level one or higher may operate equipment to obtain samples.

(2) 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.

B.3 Laboratory

(1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: (608) 246-5388

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/qual-labs.aspx

B.4 Quality Control Documentation

B.4.1 General

(1) Submit base aggregate placement documentation to the engineer within 10 business days after completing base placement. Ensure that the submittal is complete, neatly organized, and includes applicable project records and control charts.

B.4.2 Records

(1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

(1) Plot gradation and fracture on the appropriate control chart as soon as test results are available. Format control charts according to CMM 8.30. Include the project number on base placement control charts. Maintain separate control charts for each base aggregate size, source or classification, and type.

(2) Provide control charts to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:

1. Contractor individual QC tests.
2. Department QV tests.
3. Department IA tests.
4. Four-point running average of the QC tests.

(3) Except as specified under B.8.2.1 for nonconforming QV tests, include only QC tests in the running average. The contractor may plot process control or informational tests on control charts, but do not include these tests, conforming QV tests, or IA tests in the running average.

B.5 Contractor Testing

(1) Test gradation, fracture, liquid limit and plasticity index during placement for each base aggregate size, source or classification, and type.

(2) Test gradation once per 3000 tons of material placed. Determine random sample locations and provide those sample locations to the engineer. Obtain samples after the material has been bladed, mixed, and shaped but before compacting; except collect 3-inch samples from the stockpile at load-out. Do not sample from material used to maintain local traffic or from areas of temporary base that will not have an overlying pavement. On days when placing only material used to maintain local traffic or only temporary base that will not have an overlying pavement, no placement testing is required.

(3) Split each 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.

(4) The engineer may require additional sampling and testing to evaluate suspect material or the technician’s sampling and testing procedures.

(5) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.

(6) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

B.6 Test Methods

B.6.1 Gradation

(1) Test gradation using a washed analysis conforming to the following as modified in CMM 8.60:

Gradation..... AASHTO T 27
Material finer than the No. 200 sieve..... AASHTO T 11

(2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.

(3) Maintain a separate control chart for each sieve size specified in standard spec 305 or standard spec 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:

1. Control limits are at the upper and lower specification limits.
2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.
3. Dense graded warning limits, except for the No. 200 sieve, are 2 percent within the upper and lower control limits. Warning limits for the No. 200 sieve are set 0.5 percent within the upper and lower control limits.
4. Open graded warning limits for the 1-inch, 3/8-inch, and No. 4 sieves are 2 percent within the upper and lower control limits. Upper warning limits for the No. 10, No. 40, and No. 200 sieves are 1 percent inside the upper control limit.

B.6.2 Fracture

(1) Test fracture conforming to CMM 8.60. The engineer will waive fractured particle testing on quarried stone.

(2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec 301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

B.6.3 Liquid Limit and Plasticity

(1) Test the liquid limit and plasticity according to AASHTO T 89 and T 90.

(2) Ensure the material conforms to the limits specified in standard spec table 301-2.

B.7 Corrective Action

B.7.1 General

(1) Consider corrective action when the running average trends toward a warning limit. Take corrective action if an individual test exceeds the contract specification limit. Document all corrective actions both in the project records and on the appropriate control chart.

B.7.2 Placement Corrective Action

(1) Do not blend additional material on the roadbed to correct gradation problems.

(2) Notify the engineer whenever the running average exceeds a warning limit. When two consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:

1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
2. For fracture, increase the QC testing frequency to at least one test per gradation test.

(3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.

(4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.

(5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:

1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
3. The fracture control limit is exceeded by more than 10.0 percent.

B.8 Department Testing

B.8.1 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.

B.8.2 Verification Testing

B.8.2.1 General

(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 B.2 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 of each base aggregate size, source or classification, and type during placement conforming to the following:

1. One non-random test on the first day of placement.
2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.

(3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates, the department will collect samples from the stockpile at load-out. The department will split each sample, test half for QV, and retain half.

(4) 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.

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

B.8.3 Independent Assurance

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

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.

4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in B.9.

B.9 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 may review the data, examine data reduction and analysis methods, evaluate sampling and testing 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 the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, 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 (Vacant)

D (Vacant)

E Payment

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to this work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the non-performance of QMP administrative item.

(2) For material represented by a running average exceeding a control limit, the department will reduce pay by 10 percent of the contract price for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base

Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

301-010 (20151210)

13. Nighttime Work Lighting-Stationary.

A Description

Provide portable lighting as necessary to complete nighttime work. Nighttime operations consist of work specifically scheduled to occur after sunset and before sunrise.

B (Vacant)

C Construction

C.1 General

This provision shall apply when providing, maintaining, moving, and removing portable light towers and equipment-mounted lighting fixtures for nighttime stationary work operations, for the duration of nighttime work on the contract.

At least 14 days prior to the nighttime work, furnish a lighting plan to the engineer for review and acceptance. Address the following in the plan:

1. Layout, including location of portable lighting – lateral placement, height, and spacing. Clearly show on the layout the location of all lights necessary for every aspect of work to be done at night.

2. Specifications, brochures, and technical data of all lighting equipment to be used.

3. The details on how the luminaires will be attached.

4. Electrical power source information.

5. Details on the louvers, shields, or methods to be employed to reduce glare.

6. Lighting calculations. Provide illumination with average to minimum uniformity ratio of 5:1 or less throughout the work area.

7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

If portable generators are used as a power source, furnish adequate power to operate all required lighting equipment without any interruption during the nighttime work. Provide wiring that is weatherproof and installed according to local, state, federal (NECA and OSHA) requirements. Equip all power sources with a ground-fault circuit interrupter to prevent electrical shock.

C.3 Light Level and Uniformity
Position (spacing and mounting height) the luminaires to provide illumination with an average to minimum uniformity ratio of 5:1 or less throughout the work area.

Illuminate the area as necessary to incorporate construction vehicles, equipment, and personnel activities.

C.4 Glare Control
Design, install, and operate all lighting supplied under these specifications to minimize or avoid glare that interferes with all traffic on the roadway or that causes annoyance or discomfort for properties adjoining the roadway. Locate, aim, and adjust the luminaires to provide the adequate level of illumination and the specified uniformity in the work area without the creation of objectionable glare.

Provide louvers, shields, or visors, as needed, to reduce any objectionable levels of glare. As a minimum, ensure the following requirements are met to avoid objectionable glare on the roadways open to traffic in either direction or for adjoining properties:

1. Aim tower-mounted luminaires, either parallel or perpendicular to the roadway, so as to minimize light aimed toward approaching traffic.

2. Aim all luminaires such that the center of beam axis is no greater than 60 degrees above vertical (straight down).

If lighting does not meet above-mentioned criteria, adjust the lighting within 24 hours.

C.5 Continuous Operation
Provide and have available sufficient fuel, spare lamps, generators, and qualified personnel to ensure that the lights will operate continuously during nighttime operation. In the event of any failure of the lighting system, discontinue the operation until the adequate level of illumination is restored. Move and remove lighting as necessary.

D (Vacant)

E Payment
Costs for furnishing a lighting plan, and for providing, maintaining, moving, and removing portable lighting, tower mounted lighting, and equipment-mounted lighting required under this special provision are incidental to the contract.
643-010 (20100709)

14. Removing Raised Pavement Markers, Item 204.9060.S.01.

A Description
This special provision describes removing raised pavement markers according to the pertinent requirements of standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Raised Pavement Markers by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Raised Pavement Markers	EACH

Payment is full compensation for furnishing all materials and disposal where necessary.
204-050 (20080902)

15. Removing Lighting Control Cabinet, Item 204.9060.S.02.

A Description
This special provision describes removing lighting control cabinets according to the pertinent requirements of standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Lighting Control Cabinet by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.02	Removing Lighting Control Cabinet	EACH

Payment is full compensation for furnishing all materials and excavating and backfilling where necessary.
204-050 (20080902)

16. Removing Electrical Meter Breaker, Item 204.9060.S.03.

A Description
This special provision describes removing electrical meter breakers according to the pertinent requirements of standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Electrical Meter Breaker by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.03	Removing Electrical Meter Breaker	EACH

Payment is full compensation for furnishing all materials and disposal where necessary.
204-050 (20080902)

17. Removing Light and Pole, Item 204.9060.S.04.

A Description
This special provision describes removing lights and poles according to the pertinent requirements of standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Light and Pole by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.04	Removing Light and Pole	EACH

Payment is full compensation for furnishing all materials and disposal where necessary.
204-050 (20080902)

18. Removing Flexible Tubular Markers, Item 204.9060.S.05.

A Description
This special provision describes removing existing flexible tubular markers according to the pertinent requirements of standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Flexible Tubular Markers by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.05	Removing Flexible Tubular Markers	EACH

Payment is full compensation for furnishing all materials and disposal where necessary.
204-050 (20080902)

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

Revise standard spec 301.2.4.3 as follows:

Furnish aggregate classified as crushed stone, from a department-approved quarry, for ¾-Inch base when used in the top 3 inches of the unpaved portion of the shoulder or for unpaved driveways and field entrances.

20. Base Aggregate Dense 1¼-Inch, Item 305.0120.

Revise standard spec 305.2.2.1 as follows:

Use 1 ¼-Inch base aggregate that conforms 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	2 - 12 [1], [2]

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

[2] 3 - 10 percent passing when base is ³ 50% crushed gravel.

21. Base Patching Asphaltic, Item 390.0203.

Provide a minimum thickness of 5 inches HMA pavement conforming to the material requirements for HMA Pavement 4 HT 58-28 S.

The work shall be according to the pertinent requirements of standard spec 390, except that requirement in standard spec 390.3.3 (2) is waived. Material to be placed in the patch area may be placed through mechanical means. The patch areas vary in length. Coordinate with the engineer on the method of material placement for small patches.

Replace standard spec 390.3.1 (3) with the following:

(3) Prepare the foundation as specified in standard spec 211 using engineer-approved methods.

Base aggregated dense incorporated below the base patching will be paid under Base Aggregate Dense 1 1/4-Inch.

22. Reheating HMA Pavement Longitudinal Joints, Item 460.4110.S.

A Description

This special provision describes reheating the abutting edge of the previously compacted layer in the adjacent lane while paving mainline asphalt pavements.

B (Vacant)

C Construction

C.1 Equipment

Provide a self-contained heating unit that heats by convection only. Do not use forced air to enhance the flame. Provide a fireproof barrier between the flame and the heater's fuel source. The heater must produce a uniform distribution of heat within the heat box. Provide

automatic controls to regulate the heater output and shutoff the heater when the paver stops or the heater control system loses power.

Mount the heater on the paver inside the paver's automatic leveling device.

C.2 Reheating Joints
Evenly reheat at least an 8 inch (200 mm) wide strip of the previously compacted layer in the adjacent lane as follows:

- Reheat the joint to within 60 degrees F (15 degrees C) of the mix temperature at the paver auger. Measure joint temperature immediately behind the heater.

The engineer may allow the required joint reheat temperatures to be cooler than specified to adjust for weather, wind, and other field conditions. Coordinate the heater output and paver speed to achieve the required joint reheat temperature without visible smoke emission.

D Measurement
The department will measure Reheating HMA Pavement Longitudinal Joints by the linear foot, acceptably completed as measured along each joint for each layer of asphalt placed.

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

ITEM NUMBER	DESCRIPTION	UNIT
460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF

Payment is full compensation for furnishing all the work required under this bid item.
460-015 (20140630)

23. QMP HMA Pavement Nuclear Density.

A Description
Replace standard spec 460.3.3.2 (1) and standard spec 460.3.3.2 (4) with the following:

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:
1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures. Obtain the CMM from the department's web site at:

http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:

http://www.atwoodsystems.com/mrs

B Materials

B.1 Personnel

(1) Perform HMA pavement density (QC, QV) testing using a HTCP certified nuclear technician I, or a nuclear assistant certified technician (ACT-NUC) working under a certified technician.

(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.

B.2 Testing

(1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter position. Perform each test for 4 minutes of nuclear gauge count time.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges from the department's approved product list at http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm.

(2) Have the gauge calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.

(3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:

Materials Management Section
3502 Kinsman Blvd.
Madison, Wisconsin 53704
Telephone: (608) 243-5998

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

(1) Select a representative section of the compacted pavement prior to or on the first day of paving for the correlation process. The section does not have to be the same mix design.

(2) Correlate the 2 or more gauges used for density measurement (QC, QV). The QC and QV gauge operators will perform the correlation on 5 test sites jointly located. Record each density measurement of each test site for the QC, QV and back up gauges.

(3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/ft^3. Measure and record the density on the 5 additional test sites for each gauge.

(4) Calculate the average of the difference in density of the 10 test sites between the QC and QV gauges. Replace one or both gauges if the average difference of the 10 tests exceeds 1.0 lb/ft^3 and repeat correlation process from B.3.2.1 (2).

(5) Furnish one of the QC gauges passing the allowable correlation tolerances to perform density testing on the project.

B.3.2.2 Correlation Monitoring

(1) After performing the gauge correlation specified in B.3.2.1, establish a project reference site approved by the department. Clearly mark a flat surface of concrete or asphalt or other material that will not be disturbed during the duration of the project. Perform correlation monitoring of the QC, QV, and all back-up gauges at the project reference site.

(2) Conduct an initial 10 density tests with each gauge on the project reference site and calculate the average value for each gauge to establish the gauge's reference value. Use the gauge's reference value as a control to monitor the calibration of the gauge for the duration of the project.

(3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft^3 of its reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft^3 of its reference value established in B.3.2.2(2).

(4) Maintain the reference site test data for each gauge at an agreed location.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.

(2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.

(3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.

(4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full sublot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate sublot for that partial quantity.

(5) Randomly select test locations for each sublot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.

(6) Use Table 1 to determine the number of tests required at each station, depending on the width of the lane being tested. When more than one test is required at a station, offset the tests 10 feet longitudinally from one another to form a diagonal testing row across the lane.

Lane Width	No. of Tests	Transverse Location
5 ft or less	1	Random
Greater than 5 ft to 9 ft	2	Random within 2 equal widths
Greater than 9 ft	3	Random within 3 equal widths

Table 1

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) A lot represents a combination of the total daily tonnage for each layer and target density.

(2) Each side road, crossover, turn lane, ramp, and roundabout must contain at least one sublot for each layer.

(3) If a side road, crossover, turn lane, or ramp is 1500 feet or longer, determine sublots and random test locations as specified in B.4.1.1.

(4) If a side road, crossover, turn lane, or ramp is less than 1500 feet long, determine sublots using a maximum of 750 tons per sublot and perform the number of random tests as specified in Table 2.

Side Roads, Turn Lanes, Crossovers, Ramps, Roundabouts: Sublot/Layer tonnage	Minimum Number of Tests Required
25 to 100 tons	1
101 to 250 tons	3
251 to 500 tons	5
501 to 750 tons	7

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay according to standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be according to standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If 2 consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft^3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each

tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft^3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft^3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge correlation according to B.3.2.1.

(2) The testers may use correlation monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-correlated gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

E.2 Disincentive for HMA Pavement Density

(1) The department will administer density disincentives according to standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

(1) Delete standard spec 460.5.2.3.

(2) If the lot density is greater than the minimum specified in standard spec table 460-3 and all individual air voids test results for that mixture are within +1.0 percent or -0.5 percent of the design target in standard spec table 460-2, the department will adjust pay for that lot as follows:

Percent Lot Density Above Minimum	Pay Adjustment Per Ton
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

(3) The department will adjust pay under the Incentive Density HMA Pavement bid item. Adjustment under this item is not limited, either up or down, to the bid amount shown on the schedule of items.

(4) If a traffic lane meets the requirements for disincentive, the department will not pay incentive on the integrally paved shoulder.

(5) Submit density results to the department electronically using the MRS software. The department will validate all contractor data before determining pay adjustments.

460-020 (20100709)

24. Expansion Device, B-11-30 and B-11-33.

A Description

This special provision describes furnishing and installing an expansion device in accordance to standard spec 502, as shown on the plans, and as hereinafter provided.

B Materials

The minimum thickness of the polychloroprene strip seal shall be ¼-inch for non-reinforced elastomeric glands and 1/8-inch for reinforced glands. Furnish the strip seal gland in lengths suitable for a continuous one-piece installation at each individual expansion joint location. Provide preformed polychloroprene strip seals that conform to the requirements ASTM D3542, and have the following physical properties:

Property Requirements	Value	Test Method
Tensile Strength, min.	2000 psi	ASTM D412
Elongation @ Break, min	250%	ASTM D412
Hardness, Type A, Durometer	60 ± 5 pts.	ASTM D2240
Compression Set, 70 hours @212˚F, max.	35%	D395 Method B Modified
Ozone Resistance, after 70 hrs. at 100˚F under 20% Strain with 100 pphm ozone	No Cracks	ASTM D1149 Method A
Mass Change in Oil 3 after 70 hr. 212˚F Mass Change, max.	45%	ASTM D471

Install the elastomeric strip seal gland with tools recommended by the manufacturer, and with a lubricant adhesive conforming to the requirements of ASTM D4070.

The manufacturer and model number shall be one of the following approved strip seal expansion device products:

	Model Number Strip Seal Gland Size*		
Manufacturer	**4-Inch**	**5-Inch**	**6-Inch**
D.S. Brown	SSA2-A2R-400	SSA2-A2R-XTRA	SSA2-A2R-XTRA
R.J. Watson	RJA-RJ400	RJA-RJ500	RJA-RJ600
Watson Bowman Acme	A-SE400	A-SE500	A-SE800
Commercial Fabricators	A-AS400	-----	-----

*Expansion device strip seal gland size requirement of 4”, 5”, and 6” shall be as shown on the plans.

Furnish manufacturer’s certification for production of polychloroprene represented showing test results for the cured material supplied, and certifying that it meets all specified requirements.

The steel extrusion or retainer shall conform to ASTM designation A 709 grade 36 steel. After fabrication, steel shall be galvanized conforming to the requirements ASTM A123.

Manufacturer’s certifications for adhesive and steel shall attest that the materials meet the specification requirements.
502-020 (20110615)

25. Removing Concrete Masonry Deck Overlay B-11-33, Item 509.9005.S.02; B-11-35, Item 509.9005.S.03; B-11-37, Item 509.9005.S.04; and B-11-39, Item 509.9005.S.05.

A Description

Remove the concrete masonry deck overlay by milling the entire bridge deck, according to standard spec 204, the plans, and as hereinafter provided.

B (Vacant)

C Construction

C.1 Milling

Use a self-propelled milling machine that is specially designed and constructed for milling bridge decks. It shall mill without tearing or gouging the concrete masonry underlying the deck overlay. The machine shall consist of a cutting drum with carbide or diamond tip teeth. 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.

Perform milling in a manner that precludes damage to the bridge floor and results in a uniform textured finish that:

1. Is free of sharp protrusions;
2. Has uniform transverse grooves that measure up to ¼-inch vertically and transversely; and
3. If applicable, is acceptable to the manufacturer of the sheet waterproof membrane.

Windrowing and storing of the removed milled concrete masonry on the bridge is only permitted in connection with the continuous removal and pick-up operation. During nonworking hours, clear the bridge of all materials and equipment.

C.2 Cleaning

Blast-clean the entire surface of the deck, the vertical faces of curbs, sidewalks and parapets to the depth of the adjoining concrete overlay. Blast-clean all exposed existing reinforcing steel.

Clean the surface on which the new concrete will be placed to remove all loose particles and dust by either brooming and water pressure using a high-pressure nozzle, or by water and air pressure. Use water for cleaning that conforms to specifications for water under standard spec 501.2.4.

The removed concrete masonry shall become the property of the contractor; properly dispose of it according to standard spec 204.

D Measurement

The department will measure Removing Concrete Masonry Deck Overlay (Structure) in area by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.9005.S.02	Removing Concrete Masonry Deck Overlay B-11-33	SY
509.9005.S.03	Removing Concrete Masonry Deck Overlay B-11-35	SY
509.9005.S.04	Removing Concrete Masonry Deck Overlay B-11-37	SY
509.9005.S.05	Removing Concrete Masonry Deck Overlay B-11-39	SY

Payment is full compensation for removing the concrete masonry; cleaning the concrete surfaces; and for properly disposing of all materials.
509-005 (20150630)

26. Epoxy Crack Sealing, Item 509.9020.S.

A Description
Seal vertical cracks in the abutments according to the plan details and as hereinafter provided.

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

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
509.9020.S	Epoxy Crack Sealing	LF

Payment is full compensation for cleaning the cracks; and for furnishing and placing the epoxy sealant.
509-020 (20100709)

27. Concrete Staining S-11-25, Item 517.1010.S.01.

A Description
Furnish and apply a two coat concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

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, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, as part of the two coat finish system:

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, prior to staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish according to 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 stain shall be as given on the plan. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

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
Prior to 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, prior to staining. 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 the stones produced by the form liner if applicable. 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 (Structure) 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
517.1010.S.01	Concrete Staining S-11-25	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.
517-110 (20140630)

28. Structure Repainting General.

A General

A.1 Inspection

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

A.2 Date Painted

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

A.3 Graffiti Removal

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

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

B (Vacant)

C Construction

C.1 Repainting Methods

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

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

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

C.2 Inspection
Add the following to standard spec 105.9:

Furnish, erect and move scaffolding and other appropriate equipment to permit the inspector the opportunity to closely observe all affected surfaces. The scaffolding, with appropriate safety devices, shall meet the approval of the engineer.
517-005 (20150630)

29. Structure Repainting Recycled Abrasive B-11-33, Item 517.1800.S.02; B-11-35, Item 517.1800.S.03; B-11-37, Item 517.1800.S.04; and B-11-39, Item 517.1800.S.05.

A Description
This special provision describes surface preparation and painting of the metal surfaces according to the manufacturer's recommendations and as hereinafter provided.

A.1 Areas to be Cleaned and Painted
All structural metal surfaces of:

- Structure B-11-33 2070 SF
- Structure B-11-35 1839 SF
- Structure B-11-37 1888 SF
- Structure B-11-39 1856 SF

Areas are approximate and given for informational purposes only.

B Materials
B.1 Coating System
Furnish a complete coating system from the department's approved list for "Structure Repainting Recycle Abrasive Structure". The color for the finish coating material shall match the color number shown on the plans according to Federal Standard Number 595B, as printed in 1989. Supply the engineer with the product data sheets for approval before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, and the minimum drying time between coats.

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

C Construction
C.1 Surface Preparation
Prior to blast cleaning, solvent clean all surfaces to be coated according to SSPC-SP1.

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

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

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

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

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

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

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

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

C.2 Coating Application

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

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

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

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

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

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

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

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

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

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

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

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

D Measurement
The department will measure Structure Repainting Recycled Abrasive (Structure) as a single complete lump sum unit of work, completed according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1800.S.02	Structure Repainting Recycled Abrasive B-11-33	LS
517.1800.S.03	Structure Repainting Recycled Abrasive B-11-35	LS
517.1800.S.04	Structure Repainting Recycled Abrasive B-11-37	LS
517.1800.S.05	Structure Repainting Recycled Abrasive B-11-39	LS

Payment is full compensation for preparing and cleaning the designated surfaces; furnishing and applying the paint; and for providing the listed equipment.
517-050 (20150630)

30. Labeling and Disposal of Waste Material.

The EPA ID number for Structure B-11-33 is WIR000126557.
The EPA ID number for Structure B-11-35 is WIR000152405.
The EPA ID number for Structure B-11-37 is WIR000152389.
The EPA ID number for Structure B-11-39 is WIR000152397.

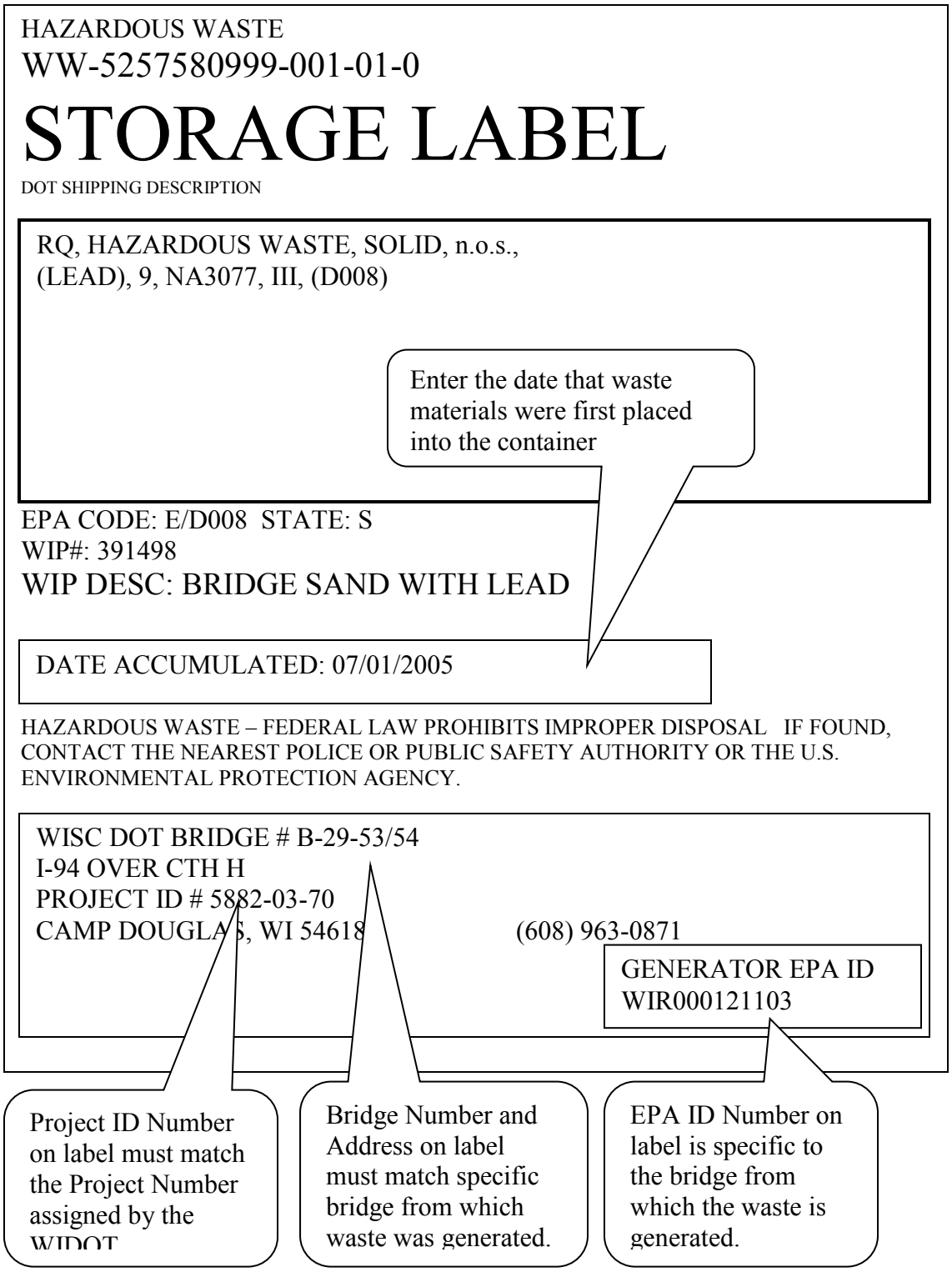
Presently, the state has an exclusive mandatory use contract with a private waste management contractor to transport and dispose of hazardous waste.

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

Report all reportable spills and discharges in accordance to the contingency plan.

Labels are site-specific. Check the labels to ensure that the project ID, structure number, and EPA ID match the structure generating the waste. Apply a label to each drum when it is opened for the first time. Fill in the date on the label the first day material is accumulated in the drum. The following page is an example of a properly filled-in label.

During paint removal operations, continuously monitor and notify the project inspector of the status of waste generation and quantity stored so that timely disposal can be arranged.
517-055 (20100709)


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

31. Negative Pressure Containment and Collection of Waste Materials, B-11-33, Item 517.4500.S.02; B-11-35, Item 517.4500.S.03; B-11-37, Item 517.4500.S.04; and B-11-39, Item 517.4500.S.05.

A Description

This special provision describes providing a dust collector to maintain a negative air pressure in the enclosure; furnishing and erecting enclosures as required to contain, collect and store waste material resulting from the preparation of steel surfaces for painting, and repainting, including collection of such waste material, and the labeling and storage of waste material in approved hazardous waste containers, all as hereinafter provided.

B (Vacant)

C Construction

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

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

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

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

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

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

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

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

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

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

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

D Measurement

The department will measure Negative Pressure Containment and Collection of Waste Materials (Structure) as a single complete lump sum unit of work for each structure designated in the contract, completed according to the contract and accepted,.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.4500.S.02	Negative Pressure Containment and Collection of Waste Materials B-11-33	LS
517.4500.S.03	Negative Pressure Containment and Collection of Waste Materials B-11-35	LS
517.4500.S.04	Negative Pressure Containment and Collection of Waste Materials B-11-37	LS
517.4500.S.05	Negative Pressure Containment and Collection of Waste Materials B-11-39	LS

Payment is full compensation for designing, erecting, operating, maintaining, and disassembling the containment devices; providing negative pressure exhaust ventilation; collecting, labeling, and for storing spent materials in provided hazardous waste containers.
517-065 (20140630)

32. Portable Decontamination Facility, Item 517.6001.S.

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

B Materials
Supply and operate all equipment according to OSHA.

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

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

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

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

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

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

C Construction
Properly contain, store, and dispose of the wastewater.

D Measurement
The department will measure Portable Decontamination Facility by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.6001.S	Portable Decontamination Facility	EACH

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

517-060 (20140630)

33. Culvert Pipe Liners 16-Inch, Item 520.9700.S.01, 22-Inch, Item 520.9700.S.02, 28-Inch, Item 520.9700.S.03, 42-Inch, Item 520.9700.S.04, Cleaning Culvert Pipes for Liner Verification, Item 520.9750.S.

A Description

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

B Materials

B.1 General

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

B.2 Flexible Pipe Liner

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

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

B.3 Grout

Provide grout consisting of:

- One part of type I or II portland cement
- Three parts sand conforming to standard spec 501.2.5.
- Water to achieve required fluidity.

Alternatively the contractor may use an engineer-approved commercial cellular concrete grout conforming to the following:

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

C Construction

C.1 General

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

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

Obtain easements if necessary for installing long sections of pipe.

C.2 Excavating and Cleaning

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

C.3 Placing Liners

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

Connect joints conforming to the manufacturer's recommendations.

C.4 Pressure Grouting

After the liner is in place, fill the area between the original pipe and the liner completely with grout to provide uniform space between the liner and the original pipe. Block, grout in lifts, or otherwise secure liners to prevent floatation associated while grouting.

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

C.4 Site Restoration

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
520.9700.S.01	Culvert Pipe Liners 16-Inch	LF
520.9700.S.02	Culvert Pipe Liners 22-Inch	LF
520.9700.S.03	Culvert Pipe Liners 28-Inch	LF
520.9700.S.04	Culvert Pipe Liners 42-Inch	LF
520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH

Payment for the Culvert Pipe Liners bid items is full compensation for providing pipe liners; obtaining easements; for excavation and pumping; for cleaning the existing pipe before liner installation; for pressure grouting; for replacing contractor-damaged pipe and endwalls; and for restoring the grade and disposing of waste materials.

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

Payment for Cleaning Culvert Pipes for Liner Verification is full compensation for cleaning required to verify liner length and diameter; for excavation and pumping; and for disposing of waste material.

The department will pay separately for replacing unserviceable endwalls not rendered unserviceable by contractor operations under the appropriate contract endwall bid item, or absent the appropriate item as extra work.
520-015 (20140630)

34. Reseal Crushed Aggregate Slope Paving, Item 604.9015.S.

A Description
Seal the existing crushed aggregate slope paving according to standard spec 604, as directed by the engineer, and as hereinafter provided.

B Materials
Furnish materials conforming to standard spec 604.2.

C Construction
Clean all debris from the surface of the slope paving before applying asphalt. Apply sufficient asphalt so that it penetrates to seal the top two inches of aggregate; where existing asphalt is closer to the surface of the aggregate, apply less asphalt.

D Measurement
The department will measure Reseal Crushed Aggregate Slope Paving in area by the square yard of slope paving, acceptably resealed.

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

ITEM NUMBER	DESCRIPTION	UNIT
604.9015.S	Reseal Crushed Aggregate Slope Paving	SY

Payment is full compensation for cleaning the surface; furnishing and applying the asphalt.
604-015 (20100709)

35. Cable Barrier Type 1, Item 613.1100.S; Cable Barrier End Terminal Type 1 Item 613.1200.S.

A Description
This special provision describes providing socketed high-tension TL-4 cable guard meeting the National Cooperative Highway Research Program (NCHRP) Report 350, Test Level 4.

B Materials
Provide a cable barrier system that is on the approved product list.

Provide a calibrated tension gauge to the department.

Provide video training material on the proper maintenance techniques and recovery of vehicles entrapped in cables. At a minimum, this training is to address, proper tension techniques, proper operation of calibrated tension gauge, proper repair techniques, and proper methods to removed vehicles entrapped in the cable barrier.

B.2 Design Requirements
Thirty days before installation provide the engineer with two sets of manufacturer prepared drawings, Wisconsin P.E. stamped calculations, documentation, notes, plan details, and construction specifications. Provide required information in a PDF format or other in electronic format that the department can review information.

Obtain prior approval from the Bureau of Project Development (Erik Emerson at (608) 266-2842) for all hardware substitutions before delivering the hardware on the project.

C Construction
Construct concrete as specified in standard spec 501.

Construct steel reinforcement as specified in standard spec 505.

Construct terminal units at each end of a run of cable guard as shown in the plans. The contractor may determine the location of anchors subject to the engineer's approval.

Tension the cable according to the manufacturer's recommendations at the time of installation, and then check and adjust approximately three weeks after installation. If system is not maintaining proper tension, adjust tension and return three weeks later. Provide engineer documentation of date, time, location, tension value, and who checked the tension for each barrier run.

Use only one-half the available adjustment in each turnbuckle or tension adjustment connection to achieve manufacture's recommend tension values.

Certify that the installation was done according to manufacturer's recommendations and the plan requirements.

The engineer will allow the contractor to open the roadway to traffic or remove traffic control devices if concrete attains manufacture's compressive strength. Without compressive strength information, the engineer may allow the contractor to remove traffic control devices 14 equivalent curing days. Equivalent curing days are defined in standard spec 415.3.

D Measurement
The department will measure Cable Barrier Type 1 by the linear foot, acceptably completed, measured as the length from end of terminal to end of terminal and rounded to the nearest linear foot.

The department will measure Cable Barrier End Terminal Type 1 as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
613.1100.S	Cable Barrier Type 1	LF
613.1200.S	Cable Barrier End Terminal Type 1	EACH

Payment is full compensation for designing and providing cable barrier end terminal and cable barrier.
613-010 (20150630)

36. Topsoil, Item 625.0105.

Topsoil may be placed in sliver fills in lieu of the traditional excavation method of strip topsoil, place borrow, salvage topsoil. Sliver fills are loosely defined as those interstate mainline fill sections where the existing slopes are to be flattened to 4H:1V and the fill height is typically less than eight inches measured perpendicular to the slope.

The quantity of topsoil to be incorporated into the project is tied to a decrease in the item of borrow.

Where placing topsoil in lieu of traditional excavation, scarify the existing surface prior to placing topsoil. Provide for mowing of grassy areas prior to topsoil placement.

37. Traffic Control Flexible Tubular Marker Bases and Posts.

Flexible tubular marker bases and posts installed under this contract will be left in place upon completion of the work.

38. Traffic Control Signs, Item 643.0900.

Append standard spec 643.3.8.1 with the following:

For signs mounted on portable sign supports, use supports that provide a minimum of 5 feet from the bottom of the sign to the adjacent pavement.

39. Pavement Marking Epoxy 4-Inch, Item 646.0106.

This work shall be according to the pertinent requirements of standard spec 646, except that it shall also conform to the requirements of standard spec 646.3.1.3 to apply edge lines on the same day the upper layer is placed.

40. Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch, Item 646.0841.S; 8-Inch, Item 646.0843.S.

A Description

This special provision describes furnishing, grooving and installing preformed wet reflective pavement marking contrast tape for grooved applications as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish wet reflective pavement marking contrast tape and adhesive material, per manufacturer's recommendation if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the project engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking contrast tape.

Plane the grooved lines according to details in the plan and per manufacturer's recommendations. Use grooving equipment with a free-floating, independent cutting head. Plane a minimum number of passes to create a grooved surface per manufacturer's recommendations.

C.2 Groove Depth

Cut the groove to a depth of 120 mils ± 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and the pavement marking tape. Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.6 Tape Application

Apply the tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive

1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:

   · Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations..

   · Apply P-50 during October 1 to April 30, both dates inclusive. –

2) For the remainder counties:

   · Apply either adhesive.

Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

Tamp the wet reflective pavement marking contrast tape with a tamper cart roller, with a minimum of a 200-lb load, cut to fit the groove. Tamp a minimum of three complete cycles (6 passes) with grooved modified tamper roller cart.

D Measurement

The department will measure Pavement Marking Grooved Wet Reflective Contrast Tape (Width) for grooved applications in length by the linear foot of tape, placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF
646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-022 (20120615)

41. Pavement Marking Grooved Wet Reflective Tape 4-Inch, Item 646.0881.S; 8-Inch, Item 646.0883.S.

A Description

This special provision describes furnishing, grooving and installing preformed wet reflective pavement marking tape for grooved applications as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish grooved wet reflective pavement marking tape and adhesive material per manufacturer's recommendations, if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking tape.

Plane the grooved lines according to details in the plan and per manufacturer's recommendations. Use grooving equipment with a free-floating, independent cutting head. Plane a minimum number of passes to create a grooved surface per manufacturer's recommendations.

C.2 Groove Depth

Cut the groove to a depth of 120 mils ± 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and pavement marking tape. Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove.

C.6 Tape Application

Apply the wet reflective pavement marking tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive

1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:

   · Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations.

   · Apply P-50 during October 1 to April 30, both dates inclusive.

2) For the remainder counties:

   · Apply either adhesive.

Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

Tamp the wet reflective pavement marking tape with a tamper cart roller, with a minimum of a 200-lb load, cut to fit the groove. Tamp a minimum of three complete cycles (6 passes) with grooved modified tamper roller cart.

D Measurement
The department will measure Pavement Marking Grooved Wet Reflective Tape (Width) for grooved applications in length by the linear foot of tape, placed according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0881.S	Pavement Marking Grooved Wet Reflective Tape 4-Inch	LF
646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-018 (20120615)

42. Install Conduit Into Existing Item, Item 652.0700.S.

A Description
This special provision describes installing proposed conduit into an existing manhole, pull box, junction box, communication vault, or other structure.

B Materials
Use Conduit Rigid Nonmetallic Schedule 40 2-Inch, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the requirements of pertinent provisions of the standard specifications.

C Construction
Expose the outside of the existing structure without disturbing existing conduits or cabling. Drill the appropriate sized hole for the entering conduit(s) at a location within the structure without disturbing the existing cabling and without hindering the installation of new cabling within the installed conduit. Fill void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure. Tamp backfill into place.

D Measurement
The department will measure Install Conduit Into Existing System by the unit, acceptably installed. Up to five conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of five, or conduits entering at

significantly different entry points into the existing pull box, manhole, or junction box will constitute multiple units of payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
652.0700.S	Install Conduit Into Existing Item	Each

Payment is full compensation for excavating, drilling holes; furnishing and installing all materials, including bricks, coarse aggregate, sand, bedding, and backfill; for excavating and backfilling; and for furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; and for making inspections.

652-070 (20100709)

43. Ramp Closure Gates Hardwired 30-FT, Item 662.1030.S; Ramp Closure Gates Hardwired 37-FT, Item 662.1037.S.

A Description

This special provision describes providing hardwired freeway on-ramp closure gates on type 5 steel luminaire poles.

B Materials

B.1 General

Provide five user manuals and a listing of vendors and contact information for each manufactured component including flasher electrical components.

The engineer may allow alternates equal to specified manufactured components. The engineer may require plan detail modifications to accommodate alternates. The engineer may accept alternate arms or mounting adaptors only if the contractor can demonstrate that the department can easily remove and replace the arms.

B.2 Components

Furnish type 5 steel poles designed to carry twin 15-foot luminaire arms and conforming to standard spec 657 and with dimensions for acceptable installation of the ramp gate hardware as shown on the detail. Ensure a contiguous pole by eliminating the hand hole near base of pole, thus allowing uninhibited mounting of the gate pivot assembly.

Furnish galvanized steel nuts and bolts conforming to ASTM A307 except where designated as high strength (HS), conform to ASTM A325. For the ramp closure gate locking mechanism, furnish a handle nut to fit on a 3/4-inch.

Furnish grade A36 steel for the gate supports, gate pivot assembly, and associated hardware galvanized after fabrication by either a mechanical or hot-dip process. Grind welded connections, rough edges, and burrs smooth before galvanizing to ensure a finished appearance. Ensure that the galvanized coating conforms to ASTM A 153.

Provide aluminum/fiberglass gate arms of the nominal length the bid item indicates and conforming to plan dimensions. Cover gate arms on two sides with alternating red and white shop-applied type H reflective from the department's approved products list. Also provide a shear pin base that is the manufacturer's "permanent pivot" style. Obtain components from:

B&B Roadway
15191 Hwy 243
Russellville, AL 35654
Tel: (888) 560-2060

Gate arm: model MU605

Furnish a worm gear winch with a single line vertical lift capacity of 2000 lbs. Ensure that the winch has hardened steel gears, a handgrip, permanently lubricated bearings, a reinforced arc-welded reel assembly, and mounting plate. Ensure that the winch can be mounted to the winch mount plate shown on the construction details and the handgrip can be operated without conflict with the pole or ramp gate assembly. Furnish a 2-inch outdoor rated, rot resistant polyester strap for the connection between the worm gear winch and the gate arm pivot assembly.

Furnish hardwire power system and connections conforming to the following:

1. Cabinet
   Furnish cabinet assemblies, power wire terminal strips, and power supplies for the on-ramp closure gate systems.

   The cabinet shall be the following dimensions: 9-inches wide, 15-inches high, and 5-inches deep.

   Minimum wall thickness of the aluminum castings shall be 3/16-inch.

   Cabinet body shall have a cast rain hood over the top of the door opening.

   Hinges shall consist of 3/6-inch diameter pins in cast hinge bosses that allow door to swing no less than 180º when open.

   Cabinet shall be capable of being field prepared for top, bottom, or rear mounting and wire entrance holes.

   Set screws shall be stainless steel.

   Assembly shall be water resistant by the door flange in full contact with and compressing a neoprene gasket held by an adhesive to a groove cast into the cabinet body.

The cabinets shall consist of a cabinet body, door, and latch cast from aluminum alloy 319 or approved equivalent The door lock shall be a standard police lock reinforced with a steel plat which is keyed the same as the standard traffic control cabinets. The cast shall be free of voids, pits, dents, molding sand, and excessive foundry grinding marks. All radii shall be smooth and intact. Exterior and interior surfaces shall be smooth and cosmetically acceptable, free of molding fins, cracks, and other blemishes.

The aluminum shall meet the following minimum requirements:

- Yield Strength – 18 ksi
- Tensile Strength – 27 ksi
- Brinell Hardness – 70
- Elongation (% in 2 inches) – 2

The assembly shall have an alodine conversion coating to provide corrosion resistance and a proper base for paint adhesion.

Furnish a stainless steel or anodized steel mounting adapter plate to mount the cabinet to a pole with stainless steel banding straps.

2. Power Converter
   Furnish the cabinet with a 120 VAC to 12 VDC power converter.

   Furnish the cabinet with a 10 position terminal block for the 12 VDC power distribution. Power wire terminal strips 10 position feed-through terminal blocks UL recognized for No. 22 AWG wire through No. 16 AWG wire and UL rated for 15 amps. The terminals shall be tin-plated brass with brass clips and clamps.

Furnish gate flasher assemblies conforming to the following:

1. A 2-conductor connector, rated 12 volts at 5 amps minimum.

2. A 2-amp weather resistant in-line fuse and fuse holder.

3. Wiring harness made from 6-conductor 14 AWG stranded insulated control cable.

4. A 12 V flasher controller, capable of providing LED flashers with 5% to 100% duty cycle at a one-second pulse repetition rate.

5. A 4-conductor male/female electrical connector pair, 10 amp capacity for each connection, weather resistant, and mounted to allow rapid gate arm replacement.

6. A 5-amp mercury switch with less than 3 ohms “on” resistance and a 20 to 30 degree activation angle. Mount the switch on the gate arm to activate the flashers when the gate arm is lowered more than 45 degrees from vertical.

7. Furnish red LED flashers meeting the requirements of the MUTCD and/or AREMA standards for hue and brightness.

Power consumption	0.45 amp @ 10.5 V
Life expectancy	100,000 hrs
Directionality	0-degree cone orthogonal to face of flasher
Compliance temperature	-40° C to +70° C

Furnish electrical wires with jackets conforming to the following color scheme throughout the ramp closure gate system:

- Hot = Black or Red
- Neutral = White
- Ground = Green

Furnish a weatherproof hardened steel padlock with a minimum 2 1/4-inch shackle height and user programmable 4-digit combination.

C Construction

C.1 Ramp Closure Gates

Under the Ramp Closure Gates bid items, provide ramp closure gate at the locations the plans show. Apply marine grade anti seize compound compound to all bolt threads and to the interface between the aluminum base and steel pole. The engineer may direct adjustment of the gate arm assembly to ensure the correct vertical and angular orientation of the completed closure gate.

Install cabinet with power supply, flasher controller, and other components. Connect the 120 VAC to 12 VDC power supply to the circuit breaker in the breaker disconnect box. Connect the 120 VAC to 12 VDC power supply to the 10-position terminal block and connect the 12 VDC components to the terminal block.

Connect the 12 VDC terminal strip to the wiring harness through the female side of a 2-terminal polarized electrical connector. Connect male side of this connector to the flasher controller and the female side of a weatherproof polarized 4-conductor electrical connector.

Attach the male side of the 4 conductor electrical connector, mercury switch, wiring harness, and the three LED flasher units to the portion of the flasher assembly mounted on the breakaway portion of the gate arm. Adjust mercury switch so that as the gate arm is lowered to a maximum of 45 degrees from the vertical, the gate flasher assembly is energized, and the LEDs begin to flash. Ensure that when the gate arm is raised to a minimum of 15 degrees from vertical, the mercury switches the gate flasher assembly off.

Install structure identification plaques in the location the plan details show. Structure identification plaques shall be considered incidental to the Ramp Closure Gates Hardwired (length) bid item. Coordinate with Dena Dramm, WisDOT SW Region,
(608) 246-5360 for number issuance.

D Measurement
The department will measure the Ramp Closure Gates Hardwired bid items as each individual installation, 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
662.1030.S	Ramp Closure Gates Hardwired 30-FT	EACH
662.1037.S	Ramp Closure Gates Hardwired 37-FT	EACH

Payment for the Ramp Closure Gate Hardwired bid items is full compensation for providing ramp closure gates including support poles; for gate arm assemblies including guides, collars, and gate arms;for cabinets, wiring, and power converters; for structure identification plaques; for gate flashers; and for padlock.

44. Temporary Traffic Signals for Bridges B-11-30, Item 661.0100.01.

Add the following to standard spec 661.3:

Furnish and install non-intrusive vehicle detection systems to operate with the temporary traffic signal.

45. Install Pole Mounted Cabinet, Item 673.0225.S.

A Description
This special provision describes installing department furnished aluminum enclosures on poles for intelligent transportation systems equipment.

B Materials
Use stainless steel bolts, nuts, and washers unless otherwise specified.

All conductors, terminals, and parts that could be hazardous to maintenance personnel shall be protected with suitable insulating material.

The cabinet will be equipped with service panels. Two panels shall be provided and mounted on the cabinet sidewalls. The left side panel shall be designated as “Input/Communications,” and the right side panel shall be designated as the “Service Panel.”

The service panel will be equipped with a four-outlet handi-box. Wire the handi-box to the series portion of the filtering surge protector.

Use metallic conduit, fittings, and adapters required from the underground conduit transition point to the cabinet as part of this item. A typical installation requires on 2-inch conduit. Use metallic conduit according to standard spec 652.

C Construction
Fasten the field cabinet securely onto a pole. Provide bolted stainless steel connections with lock washers, locking nuts, or other engineer-approved means to prevent the connection nuts from backing off. Isolate dissimilar materials from one another using stainless steel fittings. Make all power connections to the cabinet as specified in standard spec 656.

Drill and tap the cabinet, as necessary, to mount the terminal blocks and other attachments to the service panel, to provide an entrance on the back of the cabinet for cable from the pole mounted intelligent transportation systems equipment, and to mount the service panel to the cabinet as shown in the details. Remove all sharp edges or burrs, or both, caused by the cutting or drilling process. Seal all openings to prevent water from entering the cabinet. Mount the surge protector to the service panel.

Install metallic conduit on the exterior of the pole (for entrance to the cabinet from the ground) as shown in the plans, and according to the applicable requirements of standard spec 652.

D Measurement
The department will measure Install Pole Mounted Cabinet as each individual assembly, 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
673.0225.S	Install Pole Mounted Cabinet	EACH

Payment is full compensation for installing the pole mounted cabinet; for making all connections and conduit/wire entrances; and for furnishing all testing.
673-010 (20100630)

46. Install Ethernet Switch, Item 675.0400.S.

A Description
This special provision describes installing an Ethernet switch, and providing all necessary associated wiring.

B Materials
The department will furnish the Ethernet switch. Provide all necessary cables between the Ethernet switch and terminal server or other device.

C Construction
Install the Ethernet switch in a new or existing field cabinet. Connect it to devices as shown on the plans, or as directed by the engineer.

D Measurement
The department will measure Install Ethernet Switch by the unit, installed according to the contract, tested, and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
675.0400.S	Install Ethernet Switch	EACH

Payment is full compensation for installing an Ethernet switch; furnishing all necessary incidental hardware; and making all necessary connections.
675-040 (20100630)

47. Install Overhead Freeway DMS Full Matrix, Item 678.0100.S.

A Description
This special provision describes installing a state-furnished dynamic message sign on a new sign structure.

B Materials
The department will provide the sign, controller, and control cable.

Provide all required conduit, fittings, and cables recommended by the sign manufacturer between the cabinet and the sign.

Use an AWG #6 copper wire or equivalent bonding straps to bond the sign and cabinet to the structure. Use an AWG #6 solid, bare copper wire to bond the sign structure to the ground rod(s). For the three wires carrying 120/240 VAC power from the cabinet to the sign, use single conductor, stranded copper, 120/240 VAC, XLP insulated, USE rated wire. Size the wire to carry the maximum amperage permitted by the main breakers in the sign.

Provide a 100-amp 120/240-VAC load center in the controller cabinet, along with breakers recommended by the sign manufacturer.

C Construction
Install the sign as indicated on the plans.

Install the load center so that the main breakers control all power to the sign and cabinet. Provide at least three branch circuits, one for the sign, one for the controller and communication equipment, and one for all cabinet accessories, such as fan, light, and heater. Only protect the branch serving the controller and communication equipment with the second stage of the surge protector. Connect the power and control cables according to the manufacturer's recommendations. Run the cables in rigid metallic conduit or flexible metallic conduit, or combination of these, within the sign structure.

Bond the bottom of the sign structure to one or more ground rods. Use exothermic welding at each end of the ground wire, unless the steel structure has a suitable grounding lug. Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement
The department will measure Install Overhead Freeway DMS Full Matrix by each sign, acceptably installed and tested.

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

ITEM NUMBER	DESCRIPTION	UNIT
678.0100.S	Install Overhead Freeway DMS Full Matrix	EACH

Payment is full compensation for installing the sign, controller, and communications cables; furnishing and install power cables, conduits, and fittings; for testing the sign; and for transporting materials.

48. Intelligent Transportation Systems (ITS) – Control of Materials.

Standard spec 106.2 – Supply Source and Quality
Add the following to standard spec 106.2:

The department will furnish a portion of equipment to be installed by the contractor. This department-furnished equipment includes the following:

Department-Furnished Items
(6) Microwave Detector
(1) Ethernet Switch
(1) Pole-Mounted Cabinet
(1) Roadside DMS
(2) Overhead DMS
(1) IP Camera
(4) IP Radio

Contact Dean Beekman, State Traffic Operations Center (STOC), at (414) 227-2154 to obtain a copy of the manufacturer list and contact names for department-furnished equipment.

Pick-up small department-furnished equipment, such as communications devices and cameras, from the department's Statewide Traffic Operations Center (STOC), 433 W. St. Paul Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal state office hours. Contact the department's STOC at (414) 227-2166 to coordinate pick-up of equipment.

Large department-furnished equipment, such as dynamic message signs, will be delivered by the supplier to a contractor-controlled site within Columbia County. Delivery will not necessarily be in a "just in time" manner. Store the equipment until field installation. Provide location details and a contact for delivery coordination upon receiving the contract's Notice to Proceed.

Transportation of the equipment between the electric shop and the field or interim location(s) shall be the responsibility of the contractor.

Standard spec 106.3 – Approval of Materials
Add the following to standard spec 106.3:

Design/Shop Drawings
Prior to the purchase and/or fabrication of any of the components listed herein, and for any non-catalog item shown on the Material and Equipment List specified above, and no more than 30 days after notice to proceed, submit five copies of design drawings and shop drawings, as required, to the department for review. The items and the drawings that represent them shall meet the requirements of the standard specifications.

Design drawing submissions shall consist of signed and certified designs, design drawings, calculations, and material specifications for required items.

Shop drawings will be required for, but not limited to the following:

1. Mounting assemblies for the vehicle speed and classification sensors, including their attachment to the structure.
2. Mounting detail for dynamic message signs.
3. Any contractor-designed structure or foundation.

The department will complete its review of the material within 30 days from the date of receipt of the submission, unless otherwise specified. The department will advise the contractor, in writing, as to the acceptability of the material submitted. The department may determine that if no exceptions were taken for the item, it is approved, and no further action is required by the contractor; or the item may be partially or totally rejected, in which case modify and/or amend the submittal as required by the department and resubmit the item within 14 days. At this time, the review and approval cycle described above will begin again.

49. Intelligent Transportation Systems – General Requirements.

A Description
A.1 General
This contract includes furnishing and installing elements for an Intelligent Transportation System (ITS) in or along the existing roadway as shown on the plans.

Unusual aspects of this project include:

1. The project includes working on cables and equipment that are carrying data between roadside equipment and the department's Statewide Traffic Operations Center (STOC). Interruption of this service is not expected to perform this work. If an interruption is determined necessary, it must be done on a weekend, and must be done in a way that minimizes communication outages for the existing equipment. Notify the department's STOC at least 48 hours in advance of the planned interruption.
2. The department will furnish some of the equipment to be installed. Make a reasonable effort to discover defects in that equipment prior to installing it.

A.2 Surge Protection

Equip every ungrounded conductor wire entering or leaving any equipment cabinet with a surge protector. For purposes of this section, multiple cabinets on a single pole or foundation are considered a single cabinet.

B Materials

B.1 General

Only furnish equipment and component parts for this work that are new and have high quality workmanship. All controls, indicators, and connectors shall be clearly and permanently labeled in a manner approved by the engineer. All equipment of each type shall be identical.

All electrical equipment shall conform to the standards and requirements of the Wisconsin Electrical Code, the National Electrical Manufacturers Association (NEMA), National Electric Safety Council (NESC), Underwriter's Laboratory Inc. (UL) or the Electronic Industries Association (EIA), when applicable. All materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rural Electrification Administration (REA), Standards of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), requirements of the plans these special provisions, the standard specifications, and to any other codes, standards, or ordinances that may apply. All system wiring, conduit, grounding hardware and circuit breakers shall be in conformance with the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference shall be considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

B.2 Outdoor Equipment

All conductive connectors, pins (except pins connected by soldering), and socket contacts shall be gold plated. Acrylic conformal coating shall protect each circuit board side that has conductive traces. Except for integrated circuits containing custom firmware, all components shall be soldered to the printed circuit board.

To prevent galvanic corrosion, all connections between dissimilar metals shall incorporate a means of keeping moisture out of the connection. Where the connection need not conduct electricity, interpose a non-absorbing, inert material or washer between the dissimilar

metals. Use nonconductive liners and washers to insulate fasteners from dissimilar metals. Where the connection must conduct electricity, use a conductive sealant between the dissimilar metals. Alternatively, use an insulating gasket and a bond wire connecting the two metal parts.

B.3 Custom Equipment

Equipment that is not part of the manufacturer's standard product line, or that is made or modified specifically for this project, shall conform to the following requirements:

Where practical, electronics shall be modular plug-in assemblies to facilitate maintenance. Such assemblies shall be keyed to prevent incorrect insertion of modules into sockets.

All components shall be available from multiple manufacturers as part of the manufacturers' standard product lines. All must be clearly labeled with the value, part number, tolerance, or other information sufficient to enable a technician to order an exact replacement part.

Lamps used for indicator purposes shall be light-emitting diodes.

The printed circuit boards shall be composed of "two-ounce" copper on 1/16-inch thick fiberglass epoxy or equivalent type construction. Holes that carry electrical connections from one side of the boards to the other shall be completely plated through. Multilayer printed circuit boards shall not be used. The name or reference number used for the board in the drawings and maintenance manuals supplied to the department shall be permanently affixed to each board.

All components shall be mounted so that the identifying markings are visible without moving or removing any part, if practical.

B.4 Environmental Conditions

Equipment shall continue to operate as specified under the following ranges of environmental conditions, except as noted in the specifications for individual pieces of equipment.

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
    a. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.

b. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.
c. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.

5. **Temperature and Humidity:**
   a. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
   b. **Equipment in Controlled Environments** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

All cables and wiring between devices installed in a single cabinet, or in separate cabinets sharing a single concrete base, will be considered incidental to the installation of the devices and no separate payment will be made for them. It is anticipated that this will include fiber optic patch cables between termination panels and Ethernet switches, 10 / 100 MBPS Ethernet cables, RS-232 cables between individual devices and terminal servers, and power cables between individual devices and power sources within the cabinets.

B.6 Surge Protection

Low-voltage signal pairs, including twisted pair communication cable(s) entering each cabinet shall be protected by two-stage, plug-in surge protectors and shall be installed on both ends of camera control cables. The protectors shall meet or exceed the following minimum requirements:

1. The protectors shall suppress a peak surge current of up to 10k amps.
2. The protectors shall have a response time less than one nanosecond.
3. The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage, and clamp the voltage between each wire and ground at 50 volts.
4. The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
5. The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
6. There shall be no more than two pairs per protector.
7. It shall be possible to replace the protector without using tools.

Cables carrying power to curve signs shall be protected at the cabinet by grounded metal oxide varistors of appropriate voltages. The varistors must be at least 0.8 inch in diameter.

C Construction

C.1 Thread Protection

Provide rust, corrosion, and anti-seize protection at all thread assemblies of metallic parts by coating (non-spray) the mating surfaces with an approved compound. Failure to use an approved compound will result in no payment for the items to which coating was to have been applied.

C.2 Cable Installation

When installing new cables into conduits containing existing cables, remove the existing cables and reinstall the existing cables simultaneously with the new cables. Take every precaution necessary to protect the existing cables. In the event of avoidable damage to the existing cables, replace all damaged cables, in-kind, at no additional expense to the department. When cables are pulled into conduit, use a cable pulling lubricant approved by the cable manufacturer. Submit documentation supporting manufacturer approval of the lubricant to the engineer.

C.3 Wiring

Every conductor, except a conductor contained entirely within a single piece of equipment, must terminate either in a connector or on a terminal block. Provide and install the connectors and terminal blocks where needed, without separate payment. Use approved splice kits instead of connectors and terminal blocks for underground power cable splices.

Permanently label and key connectors to preclude improper connection. Obtain prior engineer approval for the labeling method(s) prior to use.

Terminal blocks must be affixed to panels that permanently identify the block and what wire connects to each terminal. This may be accomplished by silk screening or by installing a laminated printed card under the terminal block, with the labels on portions of the card that extend beyond the block. Installation of terminal blocks by drilling holes in the exterior wall of the cabinet is not acceptable.

Use barriers to protect personnel from accidental contact with all dangerous voltages.

Do not install conductors carrying AC power in the same wiring harness as conductors carrying control or communication signals.

Arrange wiring, including fiber optic pigtails, so that any removable assembly can be removed without disturbing wiring that is not associated with the assembly being removed.

Communication and control cables may not be spliced underground, except where indicated on the plans.

Cables in the Statewide Traffic Operations Center or in communication hubs, which are not contained within a single cabinet, shall have at least 10 feet of slack.

C.4 System Operations
If the contractor's operations unexpectedly interrupt Intelligent Transportation Systems (ITS) service, notify the engineer immediately and restore service within 24 hours. Repair all damaged facilities to the condition existing before the interruption. If service is not restored within 24 hours, the department may restore service to any operating device and deduct restoration costs from payments due the contractor.

C.5 Surge Protection
Arrange the equipment and cabinet wiring to minimize the distance between each conductor's point of entry and its protector. Locate the protector as far as possible from electronic equipment. Ensure that all wiring between the surge protectors and the point of entry is free from sharp bends.

D Measurement
No separate measurement will be made for the work described in this article.

E Payment
No separate payment will be made for the work described in this article. All work described in this article shall be included under the ITS items in the contract.
670-010 (20100709)

50. Intelligent Transportation Systems – Conduit.

Add the following to standard spec 671.2:

671.2.4 Locate Wire
Furnish and install a No. 14 AWG stranded copper wire for future locate purposes through each conduit run. Connect the locate wire by using a wire nut at each pull box, manhole, or other access point. Alternatively, use a single wire through the access points. All material furnished under this item shall meet the requirements of standard spec 655.
671-005 (20150630)

51. Pressure Grouting, Item SPV.0035.01.

A Description
This special provision describes furnishing and pressure grouting existing pipe liners as shown on the plans and as hereinafter provided.

B Materials
B.1 Grout
Provide grout consisting of:

- One part of type I or II portland cement
- Three parts sand conforming to standard spec 501.2.5.
- Water to achieve required fluidity.

Alternatively the contractor may use an engineer-approved commercial cellular concrete grout conforming to the following:

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

C Construction

C.1 General

As soon as possible after contract execution, survey existing culvert pipe liners to determine which culvert liners need cleaning in order to perform pressure grouting.

C.2 Excavating and Cleaning

Before pressure grouting, clean and dry the pipes. Excavate and pump as required to remove debris and other materials that would interfere with pressure grouting. Ensure that endwall condition have been approved by the engineer, and replace and disposal of unserviceable endwalls.

C.3 Pressure Grouting

Fill the area between the original pipe and the existing pipe liner completely with grout to provide uniform space between the liner and the original pipe. Block, grout in lifts, or otherwise secure liners to prevent floatation associated while grouting.

Use a grout plant that is capable of accurately measuring, proportioning, mixing, and discharging by volume and at discharge pressures the liner manufacturer recommends. Do not exceed manufacturer-specified maximum pressures. If the manufacturer of the existing pipe liner cannot be determined, then use pressures not exceeding the following:

Original Pipe Diameter (Inches)	Safe Comprehensive Jacking Loads (Pounds)
12	3,200
15	9,100
18	14,000
21	19,000
24	23,800
30	30,900
36	37,000

Grout may be placed in lifts to prevent exceeding maximum allowable pressures.

C.4 Site Restoration
Replace pipe sections damaged or collapsed during installation or grouting operations. Restore the grade to its original or improved cross section. Dispose of waste material.

D Measurement
The department will measure Pressure Grouting by the cubic yard, acceptably furnished and completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Pressure Grouting	CY

Payment is full compensation for furnishing and pressure grouting; for replacing contractor-damaged pipe and endwalls; and for restoring the grade and disposing of waste materials.

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

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

52. Replace Conduit Plug, Item SPV.0060.01.

A Description
This special provision describes replacing missing conduit plugs as shown on the plans, and as hereinafter provided.

B Materials
Furnish materials that are according to standard spec 652 and as shown in the plans.

C Construction
Use construction methods that are according to standard spec 652 and as shown in the plans.

Field verify the size of the conduit plug required. Lubricate the conduit plug threads with an approved anti-seize compound.

D Measurement
The department will measure Replace Conduit Plug as each individual conduit plug, 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	Replace Conduit Plug	Each

Payment is full compensation for field verifying existing conditions; and for furnishing and installing the new conduit plug, including anti-seize compound.

53. Tension Post to Truss Connection Bolt, Item SPV.0060.02.

A Description

This special provision describes replacing post-to-truss and mast arm connection high strength bolts as shown on the plans, and as hereinafter provided.

B Materials

Furnish materials that are in accordance to the pertinent provisions of standard spec 641 and as shown in the plans.

C Construction

Use construction methods that are in accordance to the pertinent provisions of standard spec 641 and as shown in the plans. The contractor shall follow the re-tensioning procedure outlined herein:

1. Each bolt to be tensioned shall be replaced in kind with a new bolt in order to properly tension the bolt. Bolts should be removed one at a time in a connection. The new bolt installed will follow the below procedure.
2. The contractor shall field verify the size and number of bolts, nuts, flat washers, and DTI washers at each structure to be replaced. Note that since the DTI's are to be utilized, the number of washers may change and the lengths of the bolts may need to be increased.
3. The contractor shall furnish bolts, flat washers, heavy hex nuts, and DTI's conforming to standard spec 506.
4. Perform the pre-installation test in accordance to the department's form DT2322.
5. Tighten all nuts that are loose to snug tight. Note that this is to be done for stability purposes.
6. Once all nuts are snug, remove one and only one[1] bolt at a time and follow the remaining procedure. Existing bolts shall be discarded.
7. Repeat steps 5 through 9 in this specification until all bolts have been replaced.
8. Follow the department's Form DT2322 installation procedure for tensioning of the replacement bolts.
9. Complete Form DT2322 for each structure and submit to Matthew Dapp for transmittal to BOS and inclusion in HSIS.

Note[1] – All work under this item, including site cleanup, shall be completed within one shift. If it is a cantilever structure with a connection which has 6 or less bolts, the truss or mastarm shall be supported by a crane during bolt replacement. In lieu of a supporting

crane, the contractor may instead submit a structural analysis of the structure addressing proposed constructability which ensure the stability and safety of workers and the traveling public. Analysis computation and support document shall be signed, sealed and dated by a professional engineer, and shall be submitted to the project engineer and BOS for permanent record.

D Measurement

The department will measure Tension Post to Truss Connection Bolt as each individual connection bolt, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Tension Post to Truss Connection Bolt	Each

Payment is full compensation for tensioning post to truss and mast arm connection bolts; for removing and properly disposing of existing materials being replaced; for furnishing all materials and miscellaneous items to complete the repair.

54. Tension Anchor Rods, Item SPV.0060.03.

A Description

This s special provision describes re-tensioning loose anchor rod nuts as shown on the plans, and as hereinafter provided.

B Materials

Furnish materials that are in accordance to the pertinent provisions of standard spec 641 and as shown in the plan

C Construction

Use construction methods that are in accordance to the pertinent provisions of standard spec 641 and as shown in the plans. This work will consist of re-tensioning all loose anchor rod nuts as specified in the plans. The contractor shall follow the re-tensioning procedure outlined herein:

1. The contractor shall verify the grade of the anchor bolt. If an anchor bolt grade cannot be verified, the department shall be contacted for direction. Note that A36 bolts have different tensioning requirements.
2. The contractor shall field verify the size and number of nuts required to be replaced. Note that if one or more are found to be loose, all are required to be replaced.
3. Remove all jam nuts[1].
4. The contractor shall furnish flat washers and heavy hex nuts conforming to standard spec 641.2.2.3. Existing jam nuts[1] may be reused.
5. Remove rodent screen[1].
6. Remove and dispose grout[1] in accordance to standard spec 509.3.4.
7. Tighten all nuts that are loose to snug tight (leveling and top nut). Reference the department's Form DT2321 for snug tight torque values.

8. Contact the department for directions if the top nuts is not fully snugged and cannot be turned.
9. Once all nuts are snug, remove one and only one top nut at a time and follow the remaining procedure. Top nuts and flat washers shall be discarded, the leveling nuts shall remain, and jam nuts[1]may be reused. Contact the department for direction if the top nut is not fully snugged and cannot be turned.
10. Remove rust and dirt, from anchor rod and base plate with a wire brush.
11. Apply one light coat of fast drying zinc rich primer or spray-on cold galvanized (if rust is present) to the full length of the anchor rod and at damaged base plates. Repair any damaged galvanized coating incidental to the re-tensioning process.
12. Apply wax-based lubricant to the anchor rod.
13. Install top nut to snug tight. Reference the department's form DT2321 for snug tight torque values.
14. Repeat steps 3 through 13 in this specification until all washers and nuts have been replaced.
15. Tension the anchor rod nuts. Follow the department's Form DT2321 procedure steps 5 through 7 and record the tensioning process.
16. Clean, lubricate and install jam nut[1] per step 8 of Form DT2321.
17. Apply two coats of zinc rich primer to any damaged areas of the structure base plates, and used jam nuts.
18. Reinstall the rodent screen[1].
19. Complete Form DT2321 for each structure and submit to Matthew Dapp for transmittal to BOS and inclusion in HSIS.

Note[1] – Only for structures that have jam nuts, grout, or rodent screens.

All work under this item, including site cleanup, shall be completed within one shift. If it is a cantilever structure with a connection which has 6 or less bolts, the truss or mastarm shall be supported by a crane during bolt replacement. In lieu of a supporting crane, the contractor may instead submit a structural analysis of the structure addressing proposed constructability which ensure the stability and safety of workers and the traveling public. Analysis computation and support document shall be signed, sealed and dated by a professional engineer, and shall be submitted to the project engineer and BOS for permanent record.

D Measurement

The department will measure Tension Anchor Rods as each individual base plate location, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Tension Anchor Rods	EACH

Payment is full compensation for tensioning loose anchor rod nuts; for removing and properly disposing of existing materials being replaced; for furnishing all materials and miscellaneous items to complete the repair; and for fabricating, handling, transporting, and erecting.

55. Replace Sign Panel Connector, Item SPV.0060.04.

A Description
This special provision describes furnishing and installing sign panel connectors and removing and replacing existing defective or damaged sign panel connectors as shown in the plans, and as hereinafter provided.

B Materials
Provide sign panel connectors meeting the requirements of standard spec 637.2.4 and Sign Plate A5-2. Connectors may be stainless steel or aluminum alloy, 356-T6.

C Construction
Use construction methods that are according to the pertinent provisions of standard spec 637 and as shown in the plans.

Remove and properly dispose of defective or damaged existing sign panel connectors.

Tighten the bolts and nuts to the manufacturer's recommended torque value.

D Measurement
The department will measure Replace Sign Panel Connector as each individual sign panel connector, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Replace Sign Panel Connector	Each

Payment is full compensation for furnishing and installing sign panel connectors; and for removing and properly disposing of existing defective or damaged sign panel connectors.

56. Install / Replace U-Bolt, Item SPV.0060.05.

A Description
This special provision describes installing U-bolts as shown on the plans, and as hereinafter provided.

B Materials
Stainless steel U-bolts and lock washers shall conform to ASTM 304.

Stainless steel hex nuts shall conform to ASTM A276.

C Construction
Use construction methods that are according to the pertinent provisions of standard spec 641 and as shown in the plans.

D Measurement
The department will measure Install U-bolt as each individual U-bolt, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Install / Replace U-bolt	EACH

Payment is full compensation for installing U-bolts; for removing and properly disposing of existing materials; and for furnishing all materials and miscellaneous items to complete the repair; for fabricating, handling, transporting, and erecting.

57. Replace Sign Bridge ID Plaque, Item SPV.0060.06.

A Description
This special provision describes replacing sign bridge ID plaques as shown on the plans, and as hereinafter provided.

B Materials
Furnish materials that are according to SDD Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Support, and Traffic Signals.

C Construction
Install the sign bridge ID plaque according to SDD Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Support, and Traffic Signals.

D Measurement
The department will measure Replace Sign Bridge ID Plaque as each individual sign bridge ID plaque, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.06	Replace Sign Bridge ID Plaque	EACH

Payment is full compensation for furnishing and installing sign bridge ID plaques.

58. Removing Raised Pavement Markers and Filling Voids, Item SPV.0060.07.

A Description
This special provision describes removing existing raised pavement markers and filling voids with patching material.

B Materials

Furnish one of the following materials:

- A commercial patching material selected from the department's approved products list for rapid setting concrete patch material that does not contain magnesium phosphate.
- Fibrecrete G by Marketing Associates, Inc. with suitable bulking stone
- TechCrete R by Crafco, Inc. with suitable bulking stone
- TechCrete TBR by Crafco, Inc.

C Construction

Remove existing raised pavement markers. Raised pavement markers are approximately 10 inches long x 5.5 inches wide x 1.75 inches deep (existing voids may be larger) located every 100 feet along lane lines and every 25 feet along exit ramp channelizing lines. Prepare the void and apply patch material according to manufacturer's recommendations.

D Measurement

The department will measure Removing Raised Pavement Markers and Filling Voids by each filled void, 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.0060.07	Removing Raised Pavement Markers and Filling Voids	EACH

Payment is full compensation for removing and disposing of existing raised pavement markers; for providing all required materials, including primer and bulking stone, if required; for preparing the void; and for applying patch material.

59. Pull Box Non-Conductive 24x42-Inch, Item SPV.0060.08; 24x36-Inch, Item SPV.0060.10.

A Description

This special provision describes furnishing and installing Pull Boxes Non-Conductive (size) as shown on the plans.

B Materials

Furnish pull boxes, frames, and lids made of non-conductive material. Pull boxes, frames, and lids shall be suitable for Tier 15 loading as specified in ANSI/SCTE 77.

C Construction

The contractor may extend Pull Boxes Non-Conductive (size) as the plan details show using the same material as the pull box. Saw extensions parallel to the extension ring. Secure extension to original box as shown in the plan details.

Excavate, place coarse aggregate drain material, and backfill as the plan details show. Dispose of surplus or unsuitable materials as specified under standard spec 205.3.12.

Use covers stamped with "ELECTRIC" for traffic signal and lighting pull boxes or "WISDOT COMMUNICATIONS" for communications pull boxes.

Provide one 24-inch length of #6 reinforcing steel to be driven vertically on the north side of the pull box to be used for locating purposes.

D Measurement
The department will measure Pull Boxes Non-Conductive (Size) as each individual pull box, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.08	Pull Boxes Non-Conductive 24x42-Inch	EACH
SPV.0060.10	Pull Boxes Non-Conductive 24x36-Inch	EACH

Payment for Pull Boxes Non-Conductive (size) is full compensation for furnishing and installing pull boxes, frames, lids, aggregate, fasteners, reinforcing steel; conduit extensions less than 10 feet long including fittings; and for furnishing all excavating, backfilling and disposing of surplus material. The department will pay separately for engineer-directed pull box drain duct under the Conduit Rigid Nonmetallic bid items as specified in standard spec 652.5.

60. Concrete Barrier Wall Surface Repair, Item SPV.0060.09.

A Description
This special provision describes concrete barrier wall surface repair as shown on the plans.

B Materials
Furnish an approved non-shrink commercial grout prepared according to the manufacturer's specifications. Provide manufacturer information to the engineer. At the interface of the existing concrete and grout patch, provide standardized commercial concrete anchor screws to aid in binding the two materials.

C Construction
Preparation

1. Clean the entire surface of the repair receiving the new grout by using a suitable mechanical chipper. Accomplish this in a way that prevents hooking or tearing the reinforcing steel and that removes any deteriorated or loose concrete from the wall.

2. Blast clean the entire surface of all exposed reinforcing steel.

3. Clean the surface receiving the new grout by mechanically dislodging contamination or debris and removing loose particles and dust with high pressure water or air. Ensure that no free-standing water remains before placing grout and that cleaning water conforms to standard spec 501.2.4.

4. Install concrete anchor screws by drilling and placing in epoxy at the depth and quantity shown in the plans.

Placement

1. Place the non-shrink commercial grout according to the manufacturer's specifications. Provide forming as needed to maintain the line and shape of the existing barrier. Remove forms only after curing has occurred per the manufacturer's requirements.
2. Form or saw contraction joints to the width, depth and at the locations of the existing barrier.

D Measurement

The department will measure Concrete Barrier Wall Surface Repair as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Concrete Barrier Wall Surface Repair	EACH

Payment for Concrete Barrier Wall Surface Repair is full compensation for removing and disposing of deteriorated concrete, for sawing, for cleaning reinforcing steel, for placing concrete anchors, for patching materials, for forming, furnishing, hauling, placing, curing, and protecting all materials.

61. Cleaning and Painting Bearings, Item SPV.0060.11.

A Description

This special provision describes cleaning and painting the existing steel bearings on structures as shown on the plans, as directed by the engineer, and according to standard spec 517.

B Materials

Furnish a complete epoxy coating system from the department's approved product list. Use the same coating system for all repairs due to handling, shipping and erecting, and for all other uncoated areas. The color of epoxy shall be white and the urethane coating material shall match the color number shown on the plans according to Federal Standard Number 595B, as printed in 1989. Supply the engineer with the product data sheets before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the minimum drying time for shop or field applied coats, and the recommended procedures for coating galvanized bolts, nuts, and washers.

C Construction

C.1 Surface Preparation

Clean areas of loose paint and rust by wire brushing, grinding, or other mechanical means. Sound paint does not need to be removed.

After clean up and storage of waste material, blast cleaning is allowed for only those areas where paint has been removed. Shield adjacent painted areas during blast cleaning operations. The blasting sand does not have to be collected.

Furnish adequate containment methods as required to contain and collect waste material resulting from the preparation of painted steel surfaces for painting. All clean-up activities should minimize dust. Store waste materials in hazardous waste containers provided by the department.

C.2 Coating Application

Apply paint in a neat, workmanlike manner, and according to the manufacturer's instructions and recommendations. Paint application shall be brushed on.

D Measurement

The department will measure Cleaning and Painting Bearings as each individual bearing, 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.0060.11	Cleaning and Painting Bearings	EACH

Payment is full compensation for preparing and cleaning the designated bearings; furnishing and applying the paint; and for cleaning up, and containing and collecting all waste materials.

62. Install Vibration Control Damper, Item SPV.0060.12.

A Description

This special provision describes installing a vibration control damper as shown on the plans, and as hereinafter provided.

B Materials

All component material for the stockbridge damper shall be per the manufactures' recommendation. Contractor shall supply the stockbridge dampers for installation.

C Construction

Install a Stockbridge type damper per manufactures recommendation. Field verify web member sizes prior to ordering vibration damper to ensure a secure fit.

D Measurement
The department will measure Install Vibration Control Damper completed according to the contract and accepted, as a single complete unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.12	Install Vibration Control Damper	EACH

Payment is full compensation for furnishing and installing the vibration control damper per the manufactures recommendation.

63. Bearing Repair, Item SPV.0060.13.

A Description
This special provision describes removing damaged portions of steel bearing assemblies, furnishing replacement material as required, resetting the bearings if required, blast cleaning and priming the bearings. All work shall be according to standard spec 506, the plans, and as hereinafter provided.

B Material
Steel shall be AASHTO M270 (ASTM A709) Grade 50 steel.

C Construction
Weld according to AWS D1.1 using 7018 electrodes which are sealed and properly stored prior to use. Bearings may be reset at the direction of the engineer. Clean the bearings to a near white finish. Prime the bearings with one coat of organic zinc primer.

D Measurement
The department will measure Bearing Repair as each individual bearing 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.0060.13	Bearing Repair	EACH

Payment is full compensation for removing, cleaning, painting, and resetting bearings; and for furnishing, painting, and placing shim plates and anchor bolts.

64. Install IP Radio, Item SPV.0060.14.

A Description
This special provision describes installing an IP radio, associated riser, and associated cabling.

B Materials
The department will furnish the IP Radio. Provide the antenna riser (including conduit rigid metallic 11/2-inch, condulet, and weatherhead) and cabling to make the IP radio operational.

C Construction
Mount the IP radio and associated riser as indicated on the plans. Connect it to devices as shown on the plans, or as directed by the engineer.

D Measurement
The department will measure Install IP Radio as each individual IP radio, 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.0060.14	Install IP Radio	EACH

Payment is full compensation for installation of the IP radio and associated riser and cabling; furnishing and installing all necessary hardware; and for making all necessary connections.

65. Install Roadside Dynamic Message Sign, Item SPV.0060.15.

A Description
This special provision describes installing a dynamic message sign on a new sign structure.

B Materials
The department will provide the sign, controller, and control cable.

Provide all required conduit, fittings, and cables recommended by the sign manufacturer between the cabinet and the sign.

Use an AWG #6 copper wire or equivalent bonding straps to bond the sign and cabinet to the structure. Use an AWG #6 solid, bare copper wire to bond the sign structure to the ground rod(s). For the three wires carrying 120/240 VAC power from the cabinet to the sign, use single conductor, stranded copper, 120/240 VAC, XLP insulated, USE rated wire. Size the wire to carry the maximum amperage permitted by the main breakers in the sign.

C Construction
Install the sign as indicated in the plans.

Connect the power and control cables according to the manufacturer's recommendations.

Bond the bottom of the sign structure to one or more ground rods. Use exothermic welding at each end of the ground wire, unless the steel structure has a suitable grounding lug. Use a device that measures resistance to ground using the three-point fall-of-potential method to

ensure that the resistance from the sign's ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement
The department will measure Install Roadside Dynamic Message Sign as each individual sign, successfully 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.0060.15	Install Roadside Dynamic Message Sign	EACH

Payment is full compensation for installing the sign, controller, and communications cables; furnishing and install power cables, conduits, and fittings; for testing the sign; and for transporting materials.

66. Salvage Camera Assembly, Item SPV.0060.16.

A Description
This special provision describes salvaging an existing camera assembly as shown on the plans.

B Materials
Provide all tools and equipment necessary to salvage the existing camera assembly.

C Construction
Prior to salvaging, the Field System Integrator must determine if the ITS equipment is fully functional. If any part of the ITS equipment is found to not meet original manufacturer's specifications, contact Kyle Hemp of the WisDOT SW Region at (608) 246-5367.

Carefully salvage the existing camera assembly at the location indicated on the plans. Salvage all mounting hardware and cables/wires associated with the camera assembly.

Deliver camera assemblies that will not be reinstalled to the department's SW Region at 2101 Wright St, Madison, WI. Contact Kyle Hemp at (608) 246-5367 at least 24 hours prior to delivery to determine the delivery location and time at the SW Region.

Storage of the salvaged materials prior to delivery to the SW Region is the responsibility of the contractor.

Any salvaged materials which are damaged during salvaging or transport will be repaired or replaced at the expense of the contractor.

D Measurement
The department will measure Salvage Camera Assembly as each individual camera, successfully 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.0060.16	Salvage Camera Assembly	EACH

Payment is full compensation for salvaging the camera assembly.

67. HMA Pavement Percent Within Limits QMP.

A Description

This special provision describes the data collection, statistical analysis, and procedure used for determination of pay adjustments for HMA pavement using Percent Within Limits (PWL) specification methodology. Pay adjustments will be made for the properties of air voids and density.

This special provision describes PWL pay determination, providing and maintaining a contractor Quality Control Program, department Quality Verification 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 results conducted according to the Quality Control Program and Quality Verification Program as specified in standard spec 460 and modified here within.

The Quality Management Program (QMP) detailed in standard spec 460.2.8 is supplemented by this article.

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 type of mix required for the project 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.

Replace standard spec 460.2.8.2.1.3.1 for contracts with 5000 Tons of Mixture or Greater with the following Contracts under Percent Within Limits to require a 3-way split, modify retained sample procedure, add ignition oven for AC determination for information, and modify lot and sublot sizes:

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 Appendix A Test Methods & Sampling for PWL QMP HMA Pavements. Obtain HMA mixture samples from trucks at the plant. The QV-split acts as the QC sample for a sublot where a QV sample is taken. For the sublot in which a QV sample is collected, the QC sample shall be discarded, and the QC team shall test the QV-split in its place.

(3) The department will retain the split portion(s) of the contractor HMA mixture and blended aggregate samples. The department will take possession of retained samples collected to date each day QV samples are collected. Samples shall be labeled in accordance with Appendix A. Additional handling instructions for retained samples are found in CMM 8-36.

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

Blended aggregate gradations:

- Field extraction by CMM 8-36 WisDOT Test Method or ignition oven according to AASHTO T 308.
- Asphalt content (AC) in percent
- AC by calculation.
- AC by nuclear gauge reading, optional.
- AC by inventory, optional.
- AC by ignition oven according to AASHTO T 308 (required, but informational only)
- Bulk specific gravity of the compacted mixture according to AASHTO T166.
- Maximum specific gravity according to AASHTO T209.
- Air voids (V_a) by calculation according to AASHTO T269.
- VMA by calculation according to AASHTO R35.

(5) Test each design mixture at a frequency of 1 test per 750 tons of mixture produced and placed on the project. Add a random sample for any fraction of 750 tons at the end of a project. Lot size will consist of 3750 tons with sublots of 750 tons. Partial lots with less than three sublot tests shall be included into the previous lot. Lots for PWL Air voids may include areas other than the main travel lane which may include shoulders, bypass/turn lanes, etc. as specified in the plan. Lot sizes for PWL Density and PWL Air Voids will not match in size.

(6) Also conduct field tensile strength ratio tests according to ASTM D4867 on all mixtures requiring an antistripping additive. Test each full 50,000 ton production increment, or fraction of an increment, after the first 5000 tons of production. Perform required increment testing in the first week of production of that increment. If field tensile strength ratio values are either below the spec limit or less than the mixture design JMF percentage value by 20 or more, 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 to add stop criteria and individual test tolerances:

460.2.8.2.1.7 Corrective Action

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

ITEM	ACTION LIMITS	CONFORMANCE 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		- 0.5
Air Voids		- 1.0 & +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 test results will be determined for air voids, VMA, Gmm, and Gmb, and AC Content.

(3) If any individual test results fall outside the action limits, notify the engineer, investigate the cause, and take corrective action to return to within limits. If two consecutive test results fall outside the action limits, stop production. Production may not resume until approved by the engineer. An additional QV sample may be collected upon resuming production, at the discretion of the engineer. Any additional QV tests must meet the tolerances of the action limits or be subject to additional stoppage and/or remove and replace.

(4) For any additional tests outside the random number testing conducted for density or volumetrics, the data collected will not be entered into PWL calculations. However, additional QV testing shall meet the tolerances for material acceptance as specified in the Standard Specification and this document. If additional density data identifies nonconforming material, proceed in accordance with CMM 8-15.11.

(5) Remove and replace nonconforming material at no additional expense to the department. The engineer may allow nonconforming material to remain in place. The department will pay for the nonconforming HMA Pavement that remains in place at 50 percent of the contract price. Nonconforming material is defined as individual QC or QV tests resulting in material outside of the conformance limits or a PWL value < 50.

Delete standard spec 460.2.8.2.2

Replace standard spec 460.2.8.3.1.2 with the following:

(1) The department will provide at least one HTCP-certified HMA technician, certified at a level appropriate for sampling and mixture production control testing, to observe QV sampling of project mixtures.

(2) Under departmental observation, a contractor HMA technician certified at a level appropriate for sampling and mixture production control testing will collect and split samples.

(3) For QV testing, a department HMA technician certified at a level appropriate for sampling and mixture production control testing will ensure that all sampling is performed correctly and conduct testing, analyze test results, and post resulting data.

(4) The department will make an organizational chart available at the testing laboratory and to the contractor before mixture production begins. The department's 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 with the following to require and explain 3-way split testing, add ignition oven for QV tests, and define QV frequency.

(1) HTCP-certified department personnel will obtain 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 accommodate a three-way split for all random sampling per sublot. All QC samples shall provide the following: QC, QC-split, and QC-retained. All QV samples shall provide the following: QV, QV-split, and QV-retained. The contractor will take possession and test the QC and QV-split portions. The engineer will observe the splitting and take possession of the samples intended for QV testing (i.e., QV and QC-split) and the retained portions. Additional sampling details are found in Appendix A.

(2) The department will verify product quality using the test methods enumerated here in 460.2.8.3.1.4(2), other engineer-approved methods, or other methods the industry and department HMA technical team recognizes. The department will identify test methods before construction starts and use only those methods during production of that material unless the engineer and contractor mutually agree otherwise.

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

- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T166.
- Maximum specific gravity (Gmm) according to AASHTO T209.
- Air voids (Va) by calculation according to AASHTO T269.
- VMA by calculation according to AASHTO R35.
- AC by ignition oven according to AASHTO T 308 (required, but informational only).

(4) The department will randomly test each design mixture at the minimum frequency of one test for each lot (Normal lot size is 3750 tons).

Delete standard spec 460.2.8.3.1.6

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following Data Acceptance for Volumetrics to define statistical analysis and dispute resolution process:

460.2.8.3.1.7 Data Acceptance for Volumetrics

(1) Acceptance of test data for pay determination will be contingent upon test results from both the contractor (QC) and the department (QV). Statistical analysis will be conducted on maximum specific gravity (Gmm) and bulk specific gravity (Gmb) data. The analysis determines the appropriate Gmm and Gmb to be used to calculate air voids. If either Gmm or Gmb result in non-comparable data as described in standard spec 460.2.8.3.1.7(2), the subsequent testing will be performed for both parameters.

(2) The engineer, upon completion of the lot, will compare the variances (F-test) and the means (t-test) of the verification test results with the quality control test results. If the F- and t-tests report comparable, the QC and QV data sets are determined to be statistically similar and QC data will be used to calculate air voids which in turn are used for PWL and pay adjustment calculations. If the F- and t-tests result in non-comparable data, proceed to the *dispute resolution* steps found below. Dispute resolution via further investigation is as follows:

[1] The QV-retained portion of the split from the most recent lot in the analysis window (specifically the sublot which triggered the warning that variances or means do not compare) shall be referee tested by the bureau's AASHTO accredited laboratory and certified personnel. This referee test result will replace the QV data of the sublot.

[2] A secondary statistical analysis shall be conducted inclusive of the referee test result. If The F- and t-tests now indicate that variances and means compare, no further testing is needed for the lot as QC data is determined to be appropriate to carry forward into subsequent calculations.

[3] If, however, the secondary statistical analysis inclusive of the referee test result yields an F- or t-test indicating non-comparable variances or means, the QC-splits will be tested by the department’s regional lab for the remaining 4 sublots of the lot which generated the warning. This data shall be used with the initial referee test result in subsequent calculations.

[4] The contractor may choose to *dispute* the QC-split data collected on a lot basis. In this event, the QC-retained portion of each sublot shall be referee tested by the bureau's AASHTO accredited laboratory and certified personnel and the referee test results will supersede the regional results for the disputed lot. Dispute resolution testing shall include both Gmm and Gmb, i.e., not solely the individual parameter causing the warning.

[5] If the referee testing results in an increased calculated pay factor, the department will absorb the cost of the additional referee testing.

[6] If the additional referee testing of a disputed lot results in a lower calculated pay factor, the contractor pays for the additional referee testing.

[7] The cost of referee testing is $2000/lot.

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

(4) The department will determine mixture conformance and acceptability by analyzing referee test results, reviewing mixture project data, and inspecting the completed pavement all according to Standard Spec, this document, and accompanying Appendices.

(5) Nonconforming mix (i.e., resulting in a PWL value less than 50 or not meeting the requirements of standard spec 460.2.8.2.1.7 as modified here within) may be subject to remove and replace, at the discretion of the engineer. 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 shall replace the original data for the sublot. Any remove and replace shall be performed at no additional cost to the department. If the engineer approves the nonconforming material to remain in place, it will be paid at 50% of the HMA Pavement contract price. (See the *About* worksheet of the WisDOT PWL Analysis Template for additional information regarding Dispute Resolution.)

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 to define lot sizes and locations of density testing:

460.3.3.2 Pavement Density Determination

(1) The engineer will determine the target maximum density using department procedures described in CMM 8-15. 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 15 QC tests per complete lot (3 randomly per sublot) and the department will randomly conduct one QV test per sublot. A partial quantity less than 1500 lane feet will be included with the previous sublot at the end of the project. Partial lots with less than three sublots shall be included into the previous lot. [Exclusions such as shoulders and appurtenances shall be tested in

accordance with CMM 8-15. However, all acceptance testing of shoulders and appurtenances will be conducted by the department.]

(4) The three QC locations per sublot will represent the outside, middle, and inside of the paving lane (i.e., the lane width will be divided into thirds as shown in Appendix A and random numbers will be used to identify the specific transverse location within each third in accordance with CMM 8-15). Each location will be measured with two one-minute gauge readings oriented 180 degrees from one another, in the same footprint as detailed in Appendix A. Each location will be the average of the two readings. If the two readings exceed 1.0 lb/ft^3 of one another, a third reading shall be conducted at either orientation. In this event, all three readings shall be averaged, discard the initial of the three readings which falls farthest from the average value and then average the remaining two values to represent the location for the gauge. Multiple locations are not to be averaged together.

(5) QV nuclear testing will consist of a randomly selected location per sublot. The QV is also comprised of two one-minute readings, averaged as described in (4) above.

(6) A certified nuclear density technician shall locate samples and perform the testing. 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, at the completion of each lot.

Replace standard spec 460.3.3.3 Waiving Density Testing with Acceptance of Density Data to define statistical analysis and dispute resolution:

460.3.3.3 Acceptance of Density Data

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

(2) The engineer, upon completion of the lot, will compare the variances (F-test) and the means (t-test) of the verification test results with the quality control test results. 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.

(3) If the F- and t-tests indicate variances and means compare, QC data is determined to be appropriate to carry forward into subsequent calculations. If the F- and t-tests indicate variances or means do not compare, the QV data will be used for subsequent calculations.

(4) The department will determine mixture density conformance and acceptability by analyzing test results, reviewing mixture project data, and inspecting the completed pavement all according to Standard Spec, this document, and accompanying Appendices.

(5) Nonconforming mix (i.e., resulting in a PWL value less than 50 or not meeting the requirements of standard spec 460.3.3.1) may be subject to remove and replace, at the discretion of the engineer. 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 shall

replace the original data for the sublot. Any remove and replace shall be performed at no additional cost to the department. If the engineer approves the nonconforming material to remain in place, it will be paid for at 50% of the HMA Pavement contract price.

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 here within.

E Payment

Replace standard spec 460.5.2 HMA Pavement with the following to add payment for PWL:

460.5.2 HMA Pavement

460.5.2.1 General

(1) Payment for HMA Pavement Type LT, MT, HT, and SMA mixes is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting mixture; for 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 a unit price of 65 dollars per ton of HMA pavement. The analysis template, including data, will be provided 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 the unit price multiplied by the following pay adjustment calculated in accordance with the *Calculations* worksheet of the WisDOT PWL Analysis Template:

PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY

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

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

[1] Any material resulting in PWL value of 50 or less 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 above stated unit price of 65 dollars per ton 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 shall be in accordance with Table 460-3. 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 (unit price)

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, and $PF_{density}$ will be multiplied by the tonnage used to pave the mainline only (i.e., excluding shoulder) as calculated in accordance with CMM 8-15.

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

ITEM NUMBER	DESCRIPTION	UNIT
460.2000	Incentive Density 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.

Note: PWL value determination is further detailed in the *Calculations* worksheet of the WisDOT PWL Analysis Template.

68. HMA Percent Within Limits (PWL) Test Strip, Item SPV.0060.17.

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 projects constructed under HMA Percent Within Limits QMP. A test strip is required for each pavement layer. Each project is restricted to a single mix design for each mix type required (e.g., upper layer and lower layer may have different mix type specified).

B (Vacant)

C Construction

C.1 Test Strip

Notify the department at least 48 hours in advance of construction of the test strip. On the first day of production of each new mix design requiring a test strip, produce approximately 750 ton of HMA and cease production until the required testing is completed. Test strips shall be located in a section of the roadway to allow a representative (i.e. not a ramp or shoulder, etc.) rolling pattern.

C.1.1 Sampling and Testing Intervals

Laboratory testing will be conducted from a three-way split sample, with portions designated for QC, QV, and retained. Required field tests include contractor quality control (QC) and department quality verification (QV) nuclear density gauge tests and pavement coring.

During production for the test strip, HMA mixture samples shall be obtained from trucks prior to departure from the plant. Three four-way split samples shall be collected during the production of test strip material. Sampling and splitting shall be in accordance with Appendix C: *Sampling for WisDOT PWL QMP*. These three samples shall be randomly selected from the following production intervals and will be identified by the engineer:

Sample Number	Production Interval (tons)
1	50-250
2	251-500
3	501-750

The engineer will identify two zones in which gauge/core correlation is to be performed. These two zones will be randomly selected within each of two density sublots of the 750 ton test strip. Test strip sublots 1 and 2 are identified as between 50-400 tons and 401-750 tons, respectively. Each zone shall consist of five locations across the mat as identified in Appendix A. 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 lb/ft^3 of one another, a third reading shall be conducted at either orientation. In this event, all three readings shall be averaged, discard the initial of the three readings which falls farthest from the average value and then average the remaining two values to represent the location for the gauge.

Both the QV and QC teams shall have two nuclear density gauges present for correlation at the time the test strip is constructed. The above testing shall be conducted in accordance with Appendix A: *Test Methods & Sampling for PWL QMP HMA Pavements*. All test reports shall be submitted to the department upon completion, and approved before paving resumes.

C.1.1.1 Field Tests

Daily standardization of gauges on reference blocks and a reference site shall be performed in accordance with CMM 8-15. Nuclear gauge readings and pavement cores shall be used to determine nuclear gauge correlation in accordance with Appendix A. The two readings per location per gauge shall be averaged. The 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 is to be used to adjust raw density readings for the specific gauge for the remainder of the project and shall appear on the density data sheet along with gauge and project identification. An offset is specific to the mix and layer, and therefore a separate value shall be determined for each layer of each mix of the project. This constitutes correlation of that individual gauge. Each team must have two gauges correlated at the time of the test strip. Any data collected by a team without an acceptable gauge (i.e., correlated during test strip) will not be accepted.

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. 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 initial testing and will be responsible for any verification testing.

Each core 100 or 150 mm (4 or 6 inches) in diameter shall be taken at locations identified in Section C.1.1 [Appropriate core diameter shall be selected based on layer thickness and shall be decided at the prepave meeting and remain consistent for the duration of the project.] Each random core shall be full thickness of the layer being placed. Thoroughly dry cores obtained from the mat in accordance with ASTM D 7227 prior to using specimens for in-place density determination in accordance with AASHTO T 166.

Fill all core holes with non-shrink grout or HMA. When using rapid hardening 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 that day's production mix type at that day's compaction temperature +/- 20F. The core holes shall be dry and coated with tack before filling, filled with a minimum of two layers (single layer allowed for pavement layers $\leq$ 2 inches in thickness), 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.

All laboratory and field testing associated with the test strip shall be completed the same day as paving of the test strip. All test reports shall be submitted to the department upon completion, and approved before paving resumes. The department will notify the contractor by the end of the day regarding approval to proceed with paving beyond the test strip.

C.1.1.2 Laboratory Tests

Material shall be collected from trucks at the plant according to the frequency described in section C.1.1 above. Sample sizes shall be consistent with the minimums for a three-way split as shown below:

Mixture NMAS	Sample Size
≤ 12.5mm (1/2")	105 lb
19.0mm - 25.0mm (3/4" – 1")	150 lb
≥ 37.5mm (1-1/2")	240 lb

Bulk specific gravities shall be determined for cores in accordance with AASHTO T 166. The bulk specific gravity values determined from field cores shall be used to calculate a correction factor (i.e., offset) for the QC and QV nuclear density gauges to be used throughout the remainder of the project. QC and QV teams may wish to scan with additional gauges at the locations detailed in C.1.1 above, as only gauges used during the test strip correlation phase will be allowed on the remainder of the project.

C.2 Acceptance

Conform to the following limits based on individual QC and QV test results (tolerances based on initial JMF/mix design):

ITEM	CONFORMANCE 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	- 0.5
Air Voids	-1.0 & +2.0
VMA in percent[1]	- 1.0
Maximum specific gravity	+/- 0.024

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

QV test results will be determined for air voids and VMA, Gmm, and Gmb, and AC Content.

Compact all layers of test strip HMA mixture to the applicable density shown in the following table:

	MIXTURE TYPE	
LAYER	LT & MT	HT
LOWER	93.0[1]	93.0[2]
UPPER	93.0	93.0

[1] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[2] Minimum reduced by 1.0 percent for lower layer constructed directly on crushed aggregate or recycled base courses.

Differences between the QC and QV split sample test results are acceptably identified by conducting a paired t-test in accordance with the WisDOT PWL Analysis Template.

If QC and QV test results do not correlate as determined by the paired t-test, the retained split sample will be tested by the bureau's AASHTO accredited laboratory and certified personnel as a referee test. Any referee test results will be used for subsequent calculations and material acceptance. Additional investigation shall be conducted to identify the source of the difference between QC and QV data. QV or referee data will be used to determine material acceptance and pay.

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 the mix design. The documentation must accompany the gauge any time the gauge appears on the project and the department may confirm at any time that the offset value being used matches that documented.

The core densities collected from the 10 locations of the test strip and the QV results from the three split samples will be used to determine material acceptance and pay. The PWL value is calculated in accordance with Appendix A.

A PWL value for air voids and density shall be calculated after completion of the testing. An acceptable test strip is defined as the individual PWL values for air voids and density are both above 75 or the average of the two are above 80. Full production may not continue until an acceptable test strip has been completed. If a PWL value on the test strip is below 50, the material is considered nonconforming and the test strip is unacceptable. If the material is allowed to remain in place, a second test strip shall be constructed. If the material is determined to be removed and replaced, a new test strip will replace the previous one at no additional cost to the department. If a PWL value is between 50 and 75, the material is considered conforming, although a second test strip will need to be constructed. If the second test strip is not acceptable as defined above, it shall be removed and replaced. A maximum

of two test strips may be left in place on the project. Additional guidance on test strip and material acceptance is found in Appendix A.

PWL Value	Test Strip & Material Acceptance
≥75 (individual) & 80 (combined)	Material conforms, Test Strip is acceptable
50 ≤ PWL < 75	Material conforms, Test Strip is not acceptable*
< 50	Material nonconforming, may be removed & replaced, Test Strip not acceptable*

* A maximum of two test strips may be left in place on the project.

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 tests for a Test Strip only. Material quantities shall be determined in accordance with standard spec 450.4 and detailed here within.

E Payment

The department will pay for HMA Percent Within Limits (PWL) Test Strip work at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.17	HMA Percent Within Limits (PWL) Test Strip	EACH

Payment for HMA Percent Within Limits (PWL) Test Strip is full compensation for providing HMA mixture designs; for preparing foundation; for volumetric and density testing and aggregate source testing; for asphalt binder from recycled sources, and for warm mix asphalt additives or processes. Acceptable HMA mixture placed on the project as part of the test strip will be compensated by the appropriate HMA Pavement bid item.

This item is intended to compensate the contractor for the construction of the test strip for projects paved under the HMA Pavement Percent Within Limits QMP article.

Pay adjustments will be calculated using a unit price of 65 dollars per ton of HMA pavement. The department will pay for measured quantities of mix based on the unit price multiplied by the following pay adjustment calculated in accordance with Appendix A:

PAY ADJUSTMENT FOR HMA PAVEMENT AIR VOIDS & DENSITY

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

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

[1] Any material resulting in PWL value of 50 or less 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 above stated unit price of 65 dollars per ton 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 in accordance with 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 (unit price)

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, and $PF_{density}$ will be multiplied by the tonnage used to pave the mainline only (i.e., excluding shoulder) as calculated in accordance with CMM 8-15.

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

ITEM NUMBER	DESCRIPTION	UNIT
460.2000	Incentive Density 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.

Appendix A

TEST Methods & Sampling for PWL QMP HMA Pavement.

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

- WisDOT Test Strip for Nuclear Gauge/Core Correlation

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

WisDOT Test Strip for Nuclear Gauge/Core Correlation

The engineer is responsible for identifying the two zones in which gauge/core correlation is to be performed. These two zones are to be randomly selected within each of two sublots of the 750 ton test strip. Test strip sublots 1 and 2 are identified as between 50-400 tons and 401-750 tons, respectively.

Required field tests include contractor quality control (QC) and department quality verification (QV) nuclear density gauge tests and pavement coring. 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*
- one pavement core sample

*If the two readings performed with the same gauge by the same team are not within +/- 1.0 lb/ft^3 of one another, a third reading shall be conducted. In this event, all three readings shall be averaged, discard the initial of the three readings which falls farthest from the average value and then average the remaining two values to represent the location for the gauge.

This appears as follows, in the field:

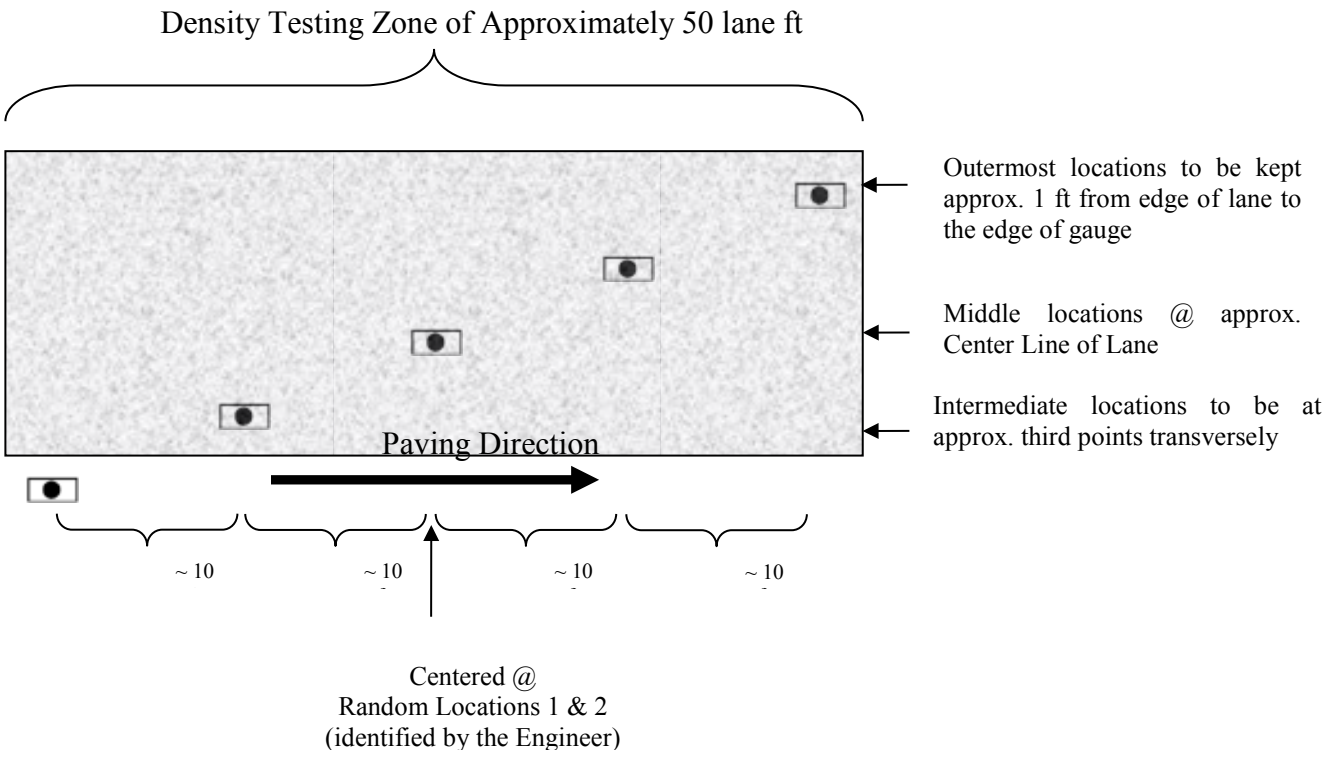


Figure 1: Nuclear/Core correlation locations depicted

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 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

The core shall then be taken from the center of said footprint to 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 second core is needed, it shall be obtained from within the same gauge footprint. 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 shall be conducted by the contractor and witnessed by department personnel. The contractor is responsible for drying the cores following testing. The department shall take possession of cores following initial testing and shall be responsible for any verification testing.

Each core 100 or 150 mm (4 or 6 inches) in diameter will be taken at locations identified in Figure 1. [Appropriate core diameter shall be selected based on layer thickness and shall be decided at the prepave meeting and remain consistent for the duration of the project.] Each random core will be full thickness of the layer being placed. The contractor is responsible for thoroughly drying cores obtained from the mat in accordance with ASTM D 7227 prior to using specimens for in-place density determination in accordance with AASHTO T 166.

All core holes shall be filled with non-shrink grout or HMA. When using rapid hardening grout, all water shall be removed from the core holes prior to filling and the mortar or concrete shall be mixed in a separate container prior to placement in the hole. If HMA is used, fill all core holes with hot-mix matching that day's production mix type at that day's compaction temperature +/- 20F. The core holes shall be dry and coated with tack before filling, filled with a minimum of two layers (single layer allowed for pavement layers $\leq$ 2 inches in thickness), 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.

The core densities collected from the 10 locations of the test strip and the QV results from the three split samples will be used to determine material acceptance and pay. The PWL value is calculated in accordance with the calculations worksheet in the WisDOT PWL Analysis Template.

A PWL value for air voids and density shall be calculated after completion of the testing. An acceptable test strip is defined as the individual PWL values for air voids and density are both above 75 or the average of the two are above 80. Full production may not continue until an acceptable test strip has been completed. If a PWL value on the test strip is below 50, the material is considered nonconforming and the test strip is unacceptable. If the material is allowed to remain in place, a second test strip shall be constructed. If the material is determined to be removed and replaced, a new test strip will replace the previous one at no additional cost to the department. If a PWL value is between 50 and 75, the material is considered conforming, although a second test strip will need to be constructed. If the second test strip is not acceptable as defined above, it shall be removed and replaced. A maximum of two test strips may be left in place on the project. Additional guidance on test strip and material acceptance is found in Figure 3.

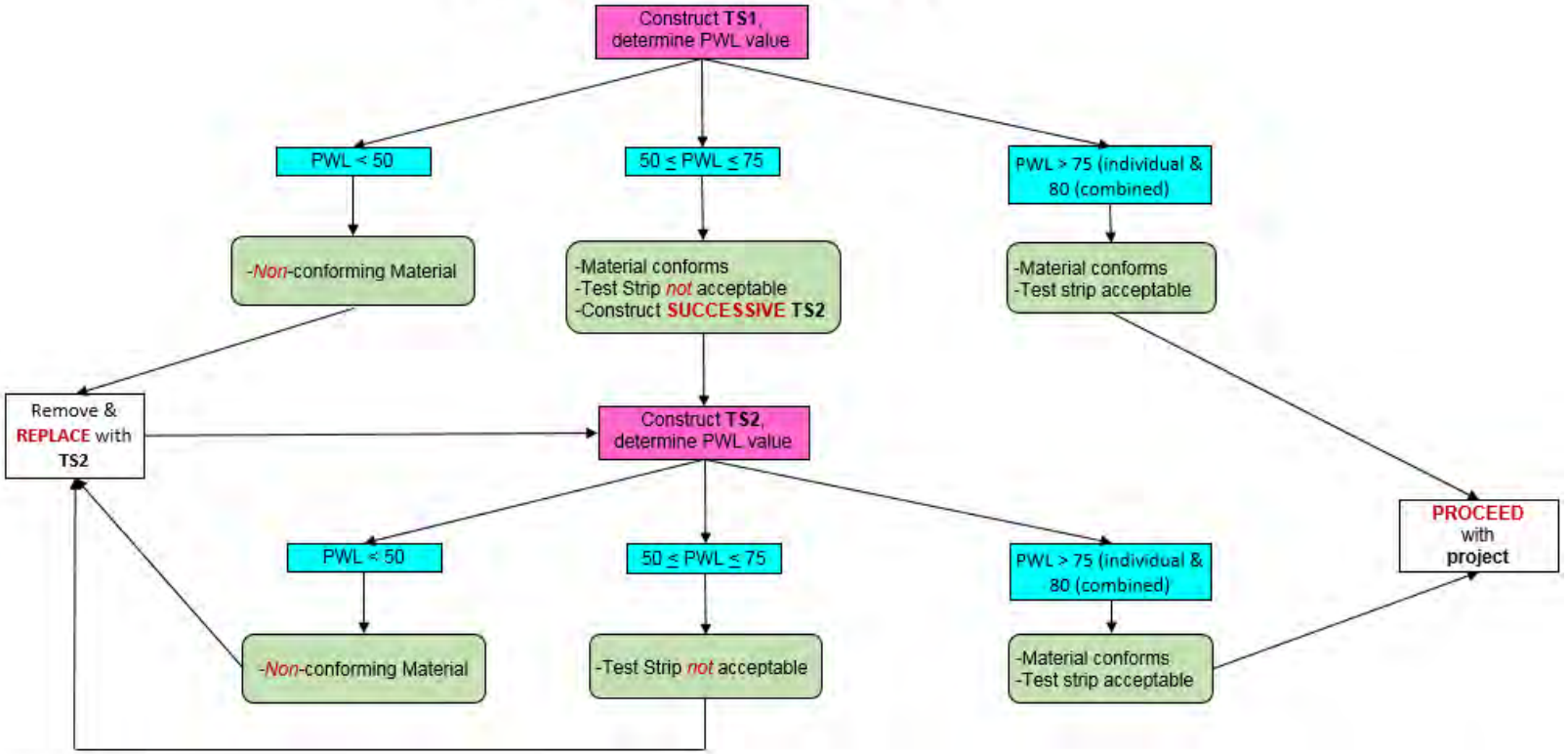
.

PWL Value	Test Strip & Material Acceptance
>75 (individual) & 80 (combined)	Material conforms, Test Strip is acceptable
50 ≤ PWL ≤ 75	Material conforms, Test Strip is not acceptable*
< 50	Material nonconforming, may be removed & replaced, Test Strip not acceptable*

* A maximum of two test strips may be left in place on the project.

All test reports shall be submitted to WisDOT upon completion, and approved before paving resumes. The department shall notify the contractor within as soon as practicable after completion of the test strip regarding approval to proceed with paving beyond the test strip.

Test Strip & Material Acceptance



FOOTNOTES:
TS1 = First Test Strip
TS2 = Second Test Strip

* A maximum of two test strips may be left in place on the project.

Figure 3: Flowchart for guidance of material and test strip acceptance for PWL

WisDOT Test Method for 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 in accordance with CMM 8-15). Longitudinal locations within each sublot shall be determined with 3 independent random numbers. Each location will be measured with two one-minute gauge readings oriented 180 degrees from one another, in the same footprint as detailed above. Each location will be the average of the two readings. Multiple locations are not to be averaged together. QV nuclear testing will consist of randomly selected location per sublot. The QV is also comprised of two one-minute readings. This is depicted as follows, with QC test locations shown as solid lines and QV as dashed.

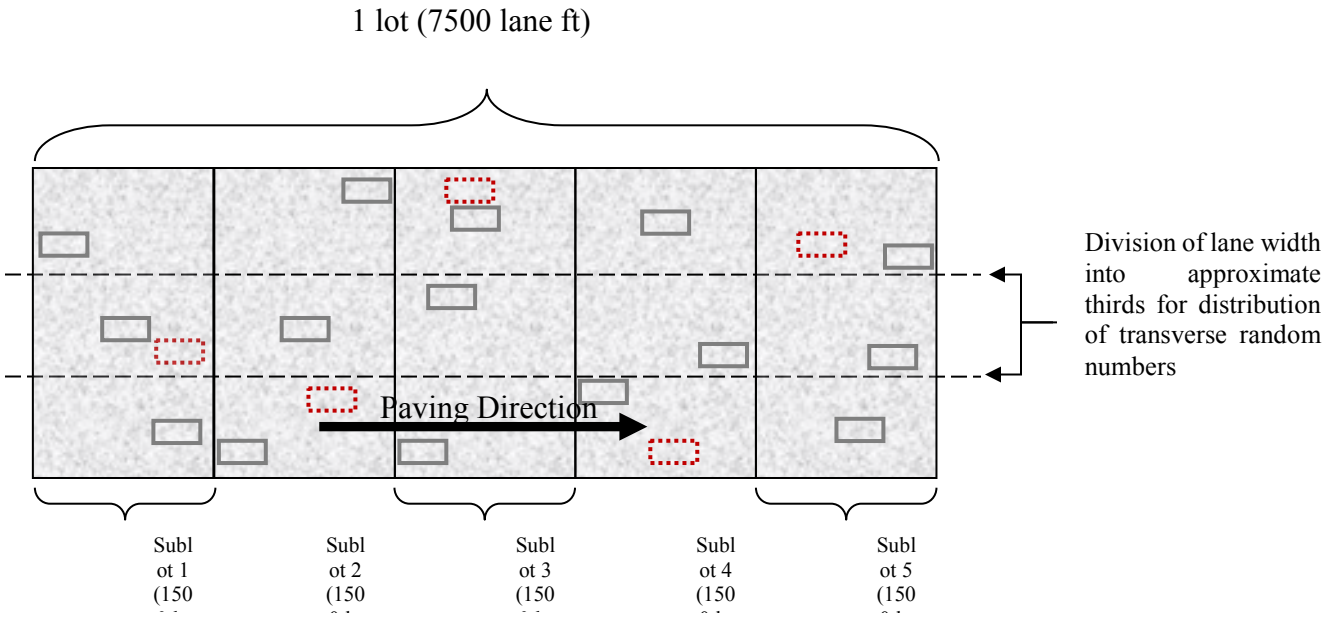


Figure 3: Locations of main lane HMA density testing (QC=solid lines, QV=dashed)

QC and QV nuclear density gauge readings will be statistically analyzed in accordance with the following section of this Appendix. (Note: For density data, if F- and t-tests pass, QC data will be used for the subsequent calculations of PWL value and pay determination. However, if an F- or t-test failure occur, the QV data will be used in subsequent calculations.)

Sampling for WisDOT PWL QMP

Delete CMM 8-36.4 Sampling Hot Mix Asphalt and replace with the following to update sublot tonnages:

(a) Sampling Hot Mix Asphalt

At the beginning of each day the contractor determines the anticipated tonnage to be produced. The frequency of sampling (minimum number of required tests for the day's anticipated production) is defined by the PWL QMP SPV. A test sample is obtained randomly from each sublot.

· *Example 1*

Expected day's production is 2,400 tons. The number of required samples is determined based on this expected production (per 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

The approximate location of each sample within the prescribed sublots is determined by selecting random numbers using ASTM Method D-3665 or by using a calculator or computerized spreadsheet that has a random number generator. The random numbers selected are used in determining when a sample is to be taken and will be multiplied by the 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).

· *Example 2*

(a) Required Sample	**(b) Sublot Sample Tonnage (c) Range**	**(d) Random No. (e) ASTM D-3665**	**(f) Sublot Sample Ton (Random No. x Sublot ton)**	**(g) End of Previous. Range**	**(h) Cumulative Sample (i) Tonnage**
(j) 1	(k) 50 - 750	(l) 0.572	(m) RN x 750= 429	(n) 0	(o) 429
(p) 2	(q) 751 - 1500	(r) 0.353	(s) RN x 750= 265	(t) 750	(u) 1015
(v) 3	(w) 1501 - 2250	(x) 0.656	(y) RN x 750= 492	(z) 1500	(aa) 1992
(bb) 4	(cc) 2251 -3000	(dd) 0.251	(ee) RN x 750= 188	(ff) 2250	(gg) 2438

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

If the day's production is less than the final randomly generated sample tonnage for that day, then the random sample is to be collected from the remaining portion of that sublot on a subsequent day 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 project. Lot size will consist of 3750 tons with sublots of 750 tons. Partial lots with less than three sublot tests shall be included into the previous lot.

It's intended that the plant operator not be advised ahead of time when samples are to be taken. If the plant operator is involved in recording a Pb (%AC) to match up with the mix sample tonnage, then notification need not be earlier than 60 minutes before the mix sample being 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.

(hh)
(ii)
(a)
(b) *Delete CMM 8-36.4.2.1 through 8-36.4.2.3 and replace with the following PWL (3-way) Split Sample Sizes*

(c) PWL (3-way) Split Sample Sizes

- Minimum sample sizes are referenced below and are guidance for meeting requirements for test completion.

(hh) Mixture NMAS	**(ii) Sample Size**
(jj) ≤ 12.5mm (1/2")	(kk) 105 lb
(ll) 19.0mm - 25.0mm (3/4" – 1")	(mm) 150 lb
(nn) ≥ 37.5mm (1-1/2")	(oo) 240 lb

- The total sample for larger NMAS (nominal maximum aggregate size) mixtures will be enough to provide the required minimum testing sample size as defined in Figure 3.

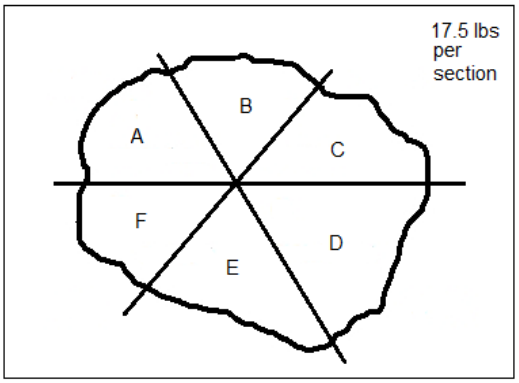
(d)
(e)
(ss)
Delete 8-36.5.1.1 Step 1 and replace with the following Initial Splitting of Sample

Initial Splitting of Sample

For QC sample reduction the HMA sample in the containers is mixed and quartered. The quartering process should then proceed as follows:

i. Collect the minimum sample size given in the *PWL Split Sample Size* section above. Split the sample into "Test" and "Retained" samples. Place entire sample on table, quickly re-mix and split to minimize temperature loss. Split the Test & Retained samples as shown on Figure 3. For 1/2" mixes start with at least a total of 105 lbs of HMA.

Figure 3 Superpave Sample for 105 lbs for three-way split for QC, QV, and retained samples



(a) *(b)*

ii. For a three-way split shown in Figure 3, *diagonal sections*, as indicated on the sketch, must be combined to form the QV sample (A+D), retained sample (B+E) and the QC test sample (C+F). The retained sample must be bagged, labeled, and stored in a safe dry place. The retained samples may be tested using the "rule of retained" (see "Definitions" section).

iii. The QC & QV test samples are then further split for the specified tests. Continue the splitting process in *Further Reduction of Samples to Test Sizes* for the test materials until individual samples are in the oven.

Delete CMM 8-36.5.2 Use of Alternative Sampling / Quartering Devices (ex: Quartermaster) and replace with the following:

(tt) Use of Alternative Sampling / Quartering Devices (ex: Quartermaster)
Use of other devices to assist in the sampling and splitting procedures may be used with approval of the department. The Quartermaster is one such device. A picture of a Quartermaster device is shown in Figure 6.

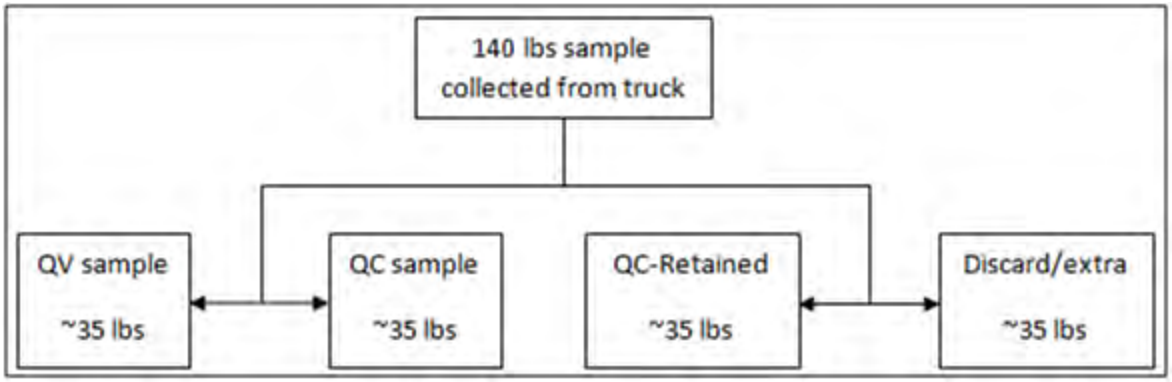
Figure 6 Quartermaster Quartering Device

(uu)

(vv) Example 3

(ww) If a quartermaster is used to reduce a three-way split sample into the proper quanitites, it is required to collect approximately 133% the minimum sample size shown in *PWL Split Sample Sizes* (e.g. 133% of 105 is approximately 140 lbs), use the selected device to split, and discard the extra quadrant of material.

(xx)



(yy)

69. EMSEAL - Bridge Expansion Joint System, Item SPV.0090.01.

A Description

This special provision describes the installation of proprietary product "EMSEAL – Bridge Expansion Joint System" where indicated in the plans, and as directed by the engineer.

B Materials

Furnish EMSEAL – Bridge Expansion Joint System, appropriately sized based on manufacturer's recommendations for the joint opening indicated in the plans. Also furnish all supplementary materials for proper installation per manufacturer's recommendations (e.g. solvent, epoxy adhesive, silicone, etc.).

C Construction

C.1 Surface preparation

Prepare concrete surfaces per manufacturer's recommendations.

C.2 Installation

Install per manufacturer's recommendations.

D Measurement

The department will measure EMSEAL – Bridge Expansion Joint System per linear foot of length, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	EMSEAL – Bridge Expansion Joint System	LF

Payment is full compensation for installing EMSEAL – Bridge Expansion Joint System according to manufacturer's recommendations.

70. Removing HMA Pavement Longitudinal Joint Milling, Item SPV.0090.03.

A Description

This special provision describes removing the notched wedge longitudinal joint prior to paving the adjacent lane in order to create a vertical longitudinal joint.

B (Vacant)

C Construction

Remove the notched wedge longitudinal joint constructed according to standard spec 450.3.2.8 prior to paving the adjacent lane. Provide a uniform milled surface that is reasonably plane, free of excessively large scarification marks, and has the grade and transverse slope the plans show or the engineer directs. Do not damage the remaining pavement.

Use a self-propelled milling machine with depth, grade, and slope controls. Shroud the drum to prevent discharging loosened material onto adjacent work areas or live traffic lanes. Provide an engineer-approved dust control system.

Maintain one lane of the roadway for traffic at all times during working hours. Do not windrow or store material on the roadway. Clear the roadway of all materials and equipment during now-working hours.

D Measurement

The department will measure Removing HMA Pavement Longitudinal Joint Milling by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	Removing HMA Pavement Longitudinal Joint Milling	LF

Payment is full compensation for removing HMA pavement; and for hauling and disposal of materials.

71. Concrete Approach Curb and Gutter, Item SPV.0090.04.

A Description

This special provision describes furnishing and placing concrete approach curb and gutter as shown on the plans and as hereinafter provided.

B Materials

Provide concrete approach curb and gutter that conforms to the details shown on the plans.

Furnish concrete material conforming to standard spec 501.

C Construction
Construct conforming to the pertinent provisions of standard spec 601.3.

D Measurement
The department will measure Concrete Approach Curb and Gutter per linear foot unit, acceptably completed. The length measured equals the distance along the back of the curb.

The department will measure all excavation required for and performed during this work, as specified in the specifications.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Concrete Approach Curb and Gutter	LF

Payment is full compensation for providing all materials, including concrete, expansion joints; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site.

72. Sawing Concrete Partial Sawcut, Item SPV.0090.05.

Construct Sawing Concrete Partial Sawcut conforming to standard spec 690 for the item Sawing Concrete except for the following:

Saw to the depth shown on the plan or as the engineer directs.

73. Cleaning Concrete Girder Ends, Item SPV.0090.06.

A Description
This special provision describes the removing of any loose, delaminated, or deteriorated concrete from end of concrete girders, cleaning and painting any exposed bar steel reinforcement or steel prestressing strand - where shown in the plans, and as directed the engineer.

B (Vacant)

C Construction
C.1 Surface preparation
Use construction methods according to standard spec 203 and standard spec 517, and as hereinafter provided:

1. Take necessary precautions while removing deteriorated concrete to preclude damage to the remaining sound concrete and preserve all existing reinforcing steel and prestressing strand. Clean, realign and retie existing reinforcing steel, as the engineer considers necessary.

2. Blast clean all exposed bar steel reinforcement and steel prestressing strand to remove all rust and corrosion prior to painting.

3. Where removal of the deteriorated concrete extends to a depth behind the bar steel reinforcement or steel prestressing strand, repair the area after painting bar steel reinforcement and steel prestressing strand. This repair work shall be done according to, and paid for as, concrete surface repair.

C.2 Coating Application
Apply organic zinc rich primer and a top coat in a neat, workmanlike manner, and according to the Manufacturer's instruction and recommendations. Paint application shall be by brush. The color of the primer shall be such that a definite contrast between it and the color of the blasted steel is readily apparent. The color of the paint's top coat shall be concrete grey.

D Measurement
The department will measure Cleaning Concrete Girder Ends per linear foot of length of end section of concrete girder, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.06	Cleaning Concrete Girder Ends	LF

Payment is full compensation for removing loose, delaminated, or deteriorated concrete; preparing and cleaning exposed steel; furnishing and applying paint to exposed steel surfaces; cleaning up; and for containing, collecting, and disposal of all waste materials.

74. Concrete Curb and Gutter 30-Inch Type A Special, Item SPV.0090.07.

Construct Concrete Curb and Gutter 30-Inch Type A Special conforming to standard spec 601.

75. Clean and Fill Crack Treatment, Item SPV.0090.08.

A Description
This special provision describes removing and loose or spalled concrete and cleaning the locations of existing cracks and subsequently filling with asphaltic surface, as shown on the plans.

B Materials
Furnish asphaltic mixture as specified for asphaltic surface under standard spec 465.2.
Furnish tack coat according to the pertinent requirements of standard spec 455.

C Construction
Remove existing concrete pavement by chipping or other approved methods to sound concrete. Apply tack coat according to standard spec 455. Fill the locations of removed pavement with asphaltic surface according to standard spec 465 and as shown on the plans.

D Measurement
The department will measure Clean and Fill Crack Treatment by the linear foot along the crack, 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.0090.08	Clean and Fill Crack Treatment	LF

Payment is for full compensation for removing loose concrete pavement; properly disposing of all waste materials; furnishing and applying tack coat; and for furnishing and constructing the asphaltic surface.

76. Remove Catwalk, Item SPV.0105.01.

A Description
This special provision describes removing an existing catwalk from S-11-07 as shown on the plans, and as hereinafter provided.

B (Vacant)

C Construction
Remove and dispose of all portions of the existing catwalk and catwalk connections according to standard spec 204.

Exercise care when removing the existing catwalk so the existing sign structure truss is not damaged. Any damage to the sign truss due to the removal operations shall be repaired by the contractor at the contractor's expense.

D Measurement
The department will measure Remove Catwalk, completed according to the contract and accepted, as a single complete lump sum unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Remove Catwalk	LS

Payment is full compensation for removing and disposing of the catwalk; and for repairing damage to the existing sign truss.

77. Cable Barrier Mow Strip, Asphalt, Item SPV.0180.01.

A Description
This special provision describes constructing an asphalt mow strip along cable barrier, as shown on the plans.

B Materials
Furnish asphaltic mixture as specified for asphaltic surface under standard spec 465.2.

C Construction
Construct asphalt as specified for asphaltic surface under 465, except that the requirement of standard spec 465.3.1(3) is omitted.

D Measurement
The department will measure Cable Barrier Mow Strip, Asphalt 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	Cable Barrier Mow Strip, Asphalt	SY

Payment is for full compensation for properly shaping subgrade; and for furnishing and constructing the asphaltic surface.

78. Continuously Reinforced Concrete Pavement SHES Repair, Item SPV.0180.02.

A Description
This special provision describes repairing continuously reinforced concrete pavement. Conform to standard spec 416.

B Materials
Furnish SHES concrete conforming to standard spec 416.2.5.1 and 416.2.5.2, but using a non-chloride accelerator. Furnish tie bars and steel reinforcement conforming to standard spec 505.2.4 and 505.2.6.

C Construction
Construct as specified in in standard spec 416.3.8. Use extreme care when removing concrete at the ends of the repair between the full depth and partial depth saw cuts. Repair any damage to the existing reinforcing steel or concrete that is to remain in place. Reinforce the concrete as the plans specify. Keep reinforcement clean and free from rust scale, straight, and free from distortion. Store all reinforcement steel, received on the job, in engineer-approved storage and distribute only as needed for immediate placement. Place the bar steel reinforcement after properly preparing the subgrade. Place the longitudinal bars on top of

the transverse bars and firmly tie or fasten together at each intersection. Support the assembled bars on bar chairs at a depth the plans show. Bar chairs are subject to the engineer's approval. Use bar chairs sufficient in strength and number to hold the steel reinforcement in position during construction.

Splice longitudinal bars by lapping, as the plans show, and firmly tie or fasten together. Arrange splices as the plans show. Protect all bar steel reinforcement left protruding from the slab for any extended period from deterioration caused by exposure. Do not bend bar steel reinforcement or subject to loading or forces that distort the steel or weaken the bond to the concrete. Tie coated bars using a procedure, equipment, and materials that do not damage or cut the coating. Use one or more of the following materials to tie coated bars:

- Engineer-approved plastic or nonmetallic material.
- Stainless steel wire.
- Nylon, epoxy, or plastic-coated wire.

D Measurement

The department will measure Continuously Reinforced Concrete Pavement SHES Repair 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	Continuously Reinforced Concrete Pavement SHES Repair	SY

Payment is full compensation for removing the existing concrete and properly disposing of removed materials; for preparing the foundation; and for furnishing, hauling, preparing, placing, curing, protecting concrete, and repairing damages. Payment includes providing tie bars in unhardened concrete and all reinforcing steel within the repair as shown in SDD *Continuously Reinforced Concrete Pavement Repair and Replacement,* except that for tie bars provided in concrete not placed under the contract, the department will pay separately under the Drilled Tie Bars bid item as specified in standard spec 416.5. The department will pay separately for sawing existing concrete for removal under the bid items Sawing Concrete and Sawing Concrete Partial Sawcut.

79. Deck Patching B-11-30, Item SPV.0180.03.

A Description

This special provision describes removing unsound or disintegrated portions of the concrete deck below the existing surface, and placing a new concrete surface, according to the plans and standard spec 509, as directed by the engineer, and as hereinafter provided.

B Materials
Furnish Grade E concrete.

C Construction
Outline areas designated for removal with a 1/2-inch deep sawcut. Remove designated portions of the deck according to the requirements of standard spec 509.3.3.

Thoroughly clean all exposed reinforcing steel by blast cleaning.

Thoroughly clean the surface upon which the new concrete is to be placed by brooming and water pressure utilizing a high-pressure nozzle or by using air pressure, to remove all loose particles and dust. Furnish water for cleaning that meets the requirements of standard spec 501.2.4.

Keep the surface upon which the new concrete is to be placed continuously wet for a period of 12 hours immediately prior to placing the concrete, except remove all freestanding water from such surface in time to permit a surface dry condition before placement of the concrete.

Immediately prior to placing the concrete, coat the surface upon which the new concrete is to be placed, and vertical joints, with a neat cement mixture that is according to the requirements of standard spec 509.2 and 509.3.8.2.

Strike-off and finish the surface of the deck patching so that it matches the existing deck surface.

D Measurement
The department will measure Deck Patching B-11-30 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.0180.03	Deck Patching B-11-30	SY

Payment is full compensation for removing and disposing of unsound and disintegrated concrete; furnishing, mixing, hauling, placing, and curing the concrete masonry, including the neat cement and non-shrink additive.

80. HMA Pavement 4 HT 58-28 S 3.0% Va Regression Special, Item SPV.0195.01.

A Description

This special provision describes providing HMA pavement including the binder under a combined bid item along with air void regression as described here within. Where the plans refer to HMA pavement, they refer to this bid item.

Define gradations, traffic levels, and asphaltic binder designation levels as follows:

GRADATIONS (NMAS)		TRAFFIC VOLUME		DESIGNATION LEVEL	
1	37.5 mm	LT	Low	S	Standard
2	25.0 mm	MT	Medium	H	Heavy
3	19.0 mm	HT	High	V	Very Heavy
4	12.5 mm			E	Extremely Heavy
5	9.5 mm				
6	4.75 mm				

Construct HMA pavement of the type the bid item indicates encoded as follows:

3 LT 58-34 S

Gradation Traffic Binder Designation

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

B Materials

Add the following to standard spec 460.2:

Design mixtures conforming to tables 460-1 and 460-2 to 4.0% air voids to establish the aggregate structure.

Determine the target JMF Asphalt Binder content for production from the mix design data corresponding to 3.0% air voids (97% Gmm) target at Ndes. The air voids at the design number of gyrations, (Ndes) shall be achieved by the addition of liquid asphalt meeting the contract specifications.

Production shall conform to VMA and Dust to Binder Ratio requirements of table 460-1 and 460-2.

Replace standard spec table 460-1 with the following to change the footnotes to refer to LT and MT mixes instead of E-0.3 and E-3 mixes:

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm (#1)	25.0 mm (#2)	19.0 mm (#3)	12.5 mm (#4)	9.5 mm (#5)	SMA 12.5 mm (#4)	SMA 9.5 mm (#5)
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for LT and MT mixes

[2] 15.5 for LT and MT mixes

Replace standard spec table 460-2 with the following to switch from E mixes to LT, MT, and HT mixes; and change the tensile strength ratio requirements to 0.75 without antistripping additive and 0.80 with antistripping additive:

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	LT	MT	HT	SMA
ESALs x 106 (20 yr design life)	<2.0	2 - <8	>8	> 5 mil
LA Wear (AASHTO T96)				
100 revolutions(max % loss)	13	13	13	13
500 revolutions(max % loss)	50	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18

Mixture type	LT	MT	HT	SMA
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	65/ __	75 / 60	98 / 90	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1 ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	43	45	45
Sand Equivalency (AASHTO T176, min)	40	40	45	50
Gyratory Compaction				
Gyrations for Nini	6	7	8	8
Gyrations for Ndes	40	75	100	65
Gyrations for Nmax	60	115	160	160
Air Voids, %Va (%Gmm Ndes)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% Gmm Nini	<= 91.5[1]	<= 89.0[1]	<= 89.0	___
% Gmm Nmax	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/Pbe)	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 – 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)				
no antistripping additive	0.75	0.75	0.75	0.75
with antistripping additive	0.80	0.80	0.80	0.80
Draindown at Production Temperature (%)	___	___	___	0.30

[1] The percent maximum density at initial compaction is only a guideline.

[2] For a gradation that passes below the boundaries of the caution zone (ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

[3] For #5 (9.5mm) and #4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For #2 (25.0mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For #1 (37.5mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

Replace standard spec 460.2.8.2.1.7 paragraph six with the following to base payment adjustment on the combined bid item unit price:

(6) The department will reduce payment for nonconforming QMP HMA mixtures, starting from the stop point to the point when the running average is back inside the warning limits, as follows:

PAYMENT FOR MIXTURE[1] [2]

ITEM	PRODUCED WITHIN WARNING BANDS	PRODUCED OUTSIDE JMF LIMITS
Gradation	90%	75%
Asphalt Content	85%	75%
Air Voids	70%	50%
VMA	90%	75%

[1] For projects or plants where the total production of each mixture design requires less than 4 tests refer to CMM 8-36.

[2] Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. The department will administer pay reduction under the Nonconforming QMP HMA Mixture administrative item.

Replace standard spec 465.2 with the following:

(1) Under the Asphaltic Surface, Asphaltic Surface Detours, and Asphaltic Surface Patching bid items; submit a mix design. Furnish asphaltic mixture meeting the requirements specified for either type LT or MT mix under standard spec 460.2; except the engineer will not require the contractor to conform to the quality management program specified under standard spec 460.2.8.

(2) Under the other 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

C Construction

Replace standard spec table 460-3 with the following to switch from E mixes to LT, MT, and HT mixes and to increase field density requirements by 1.5% when operating under this HMA Pavement 3.0% Va Regression SPV:

TABLE 460-3 MINIMUM REQUIRED DENSITY[1]

LOCATION	LAYER	PERCENT OF TARGET MAXIMUM DENSITY		
		MIXTURE TYPE		
		LT AND MT	HT	SMA[5]
TRAFFIC LANES[2]	LOWER	93.0[3]	93.0[4]	____
	UPPER	93.0	93.0	____
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	93.0[3]	93.0[4]	____
	UPPER	93.0	93.0	____
SHOULDERS & APPURTENANCES	LOWER	91.0	91.0	____
	UPPER	92.0	92.0	____

[1] The table values are for average lot density. If any individual density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer may investigate the acceptability of that material.

[2] Includes parking lanes as determined by the engineer.

[3] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[4] Minimum reduced by 1.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[5] The minimum required densities for SMA mixtures are determined according to CMM 8-15.

Delete standard spec 460.2.8.2.1.5(1) and replace with the following:

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

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+ 1.3/-1.0	+ 1.0/-0.7
VMA in percent[1]	- 0.5	- 0.2

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

Delete standard spec 460.2.8.3.1.6(1) and replace with the following:

(1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:

- Va is within a range of 2.0 to 4.3 percent.
- VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.

D Measurement

The department will measure HMA Pavement (type) 3.0% Va Regression Special conforming to standard spec 460.4.

E Payment

Add the following to standard spec 460.5 to switch from E mixes to LT, MT, and HT mixes; to combine the pavement and binder bid items; and to specify a pay reduction for pavement placed with nonconforming binder:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	HMA Pavement 4 HT 58-28 S 3.0% Va Regression Special	TON

Payment is full compensation for providing HMA Pavement including asphaltic binder.

In addition to any pay adjustment under standard spec 460.2.8.2.1.7(6), the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item. The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

Delete standard spec 460.5.2.3(1) and replace with the following:

(1)If the lot density is greater than the minimum specified in table 460-3 and all individual air voids test results for that mixture placed during the same day are within 2.5 - 4.0 percent, the department will adjust pay for that lot as follows:

INCENTIVE PAY ADJUSTMENT FOR HMA PAVEMENT DENSITY

PERCENT LOT DENSITY ABOVE SPECIFIED MINIMUM	PAY ADJUSTMENT PER TON[1]
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

[1] The department will prorate the pay adjustment for a partial lot.

Appendix A:

Test Procedures for HMA Pavement 3% Va Regression SPV

Delete CMM 8-15.10.1 Target maximum Density and replace with the following:

For pavement density determination, the target value in lb/ft^3 (PCF) is established using the mixture maximum specific gravity (G_{mm}). For the first day of a paving mixture design, the target maximum density will be the G_{mm} value corresponding to 3.0% air voids on the mix design multiplied by 62.24 lb/ft^3 (PCF). The target maximum density for all other days will be the four G_{mm} test running average value from the end of the previous days' production multiplied by 62.24 lb/ft^3 (PCF). If four tests have not been completed by the end of the first day, the average of the completed G_{mm} test values multiplied by 62.24 lb/ft^3 (PCF) will be used until a running average of 4 is established.

The following data must be recorded for each test on the worksheet for MRS entry

- Density standard and moisture standard
- Density count, moisture counts or contact and air gap counts
- Total wet density or bulk density
- % Compaction
- Manufacturer name and serial number
- Operators name
- Mix design number (WisDOT 250 ID) and daily Target max density target number (G_{mm} x 62.24 lb/ft^3)

Delete CMM 8-15.15.2.1 Examples of Computing Incentive/Disincentive for Density and replace with the following:

Example 1 (nominal tonnage lots):

HMA Pavement, Type 4 HT 58-34 S Lot 2R
Total HMA Tonnage for Project: 20,000 Tons
% Density of Target Maximum (G_{mm}) = 90.4%
Required % Density of the G_{mm} = 93.0%
Lot Tonnage = 750
Contract Price per Ton = $26.50
From Table 460-3 of this SPV.0195 and 460.5.2.2:

- Amount below Specified Minimum (Table 460-3 of this SPV) = 93.0 - 90.4 = 2.6
- Payment Factor (SS 460.5.2.2) = 70% (30% Credit to the Department)
- Credit to the Department (HMA Mix) = 30% x $26.50/Ton x 750 Tons = $5,962.50

If this were the only failing lot on the project, the final quantities on the estimate would be as shown in Table 3.

Example 2 (nominal tonnage lots):

HMA Pavement, Type 4 HT 58-34 S Lot 3R
% Density of Target Maximum (G_{mm}) = 94.6%
Required % Density of the G_{mm} =93.0%
Lot Tonnage = 750
Air Voids for day = 2.9-3.2%
Payment Factor = 94.6 – 93.0 (Table 460-3)= 1.6
Adjusted Unit Price = $0.40/Ton x 750 Tons (SS 460.5.2.3(1) of this SPV)= $300

If this is the only lot with a higher density than required on the project, the final quantities on the estimate would be as shown in Table 3 below:

Table 3 Estimate for Pay Adjustment for Incentive/Disincentive Density

Bid Item	Description	Unit	Cost/Unit	Total Quantity	Total
460.7244	HMA Type 4 HT 58-34 S	TON	$26.50	20,000	$530,000.00
460.2000	Incentive Density HMA Pavement	DOL	$1.00	300.00	$300.00
804.2005	Disincentive Density HMA Pavement	DOL	$1.00	-(5,962.5)	-($5,962.50)

Project Information for Examples 3 and 4 (daily tonnage lots & linear sublots):

A project begins at station 56+78 and ends at station 234+25. It is a 2-lane roadway with a shoulder on each side. The traffic lanes are 12 feet wide and the shoulders are 3 feet wide. Shown in the figure below is the eastbound traffic lane and shoulder for the length of the project. The contractor will be paving the shoulder integrally with the traffic lane. The pavement is a 2-inch overlay and the same HMA mix type is used on the entire project. The HMA mixture includes 5.5% asphaltic material. The bid price for the HMA pavement item is $41.75 per ton. The specified target density for the traffic lane is 93.0%. The target density for the shoulder is 92.0%.

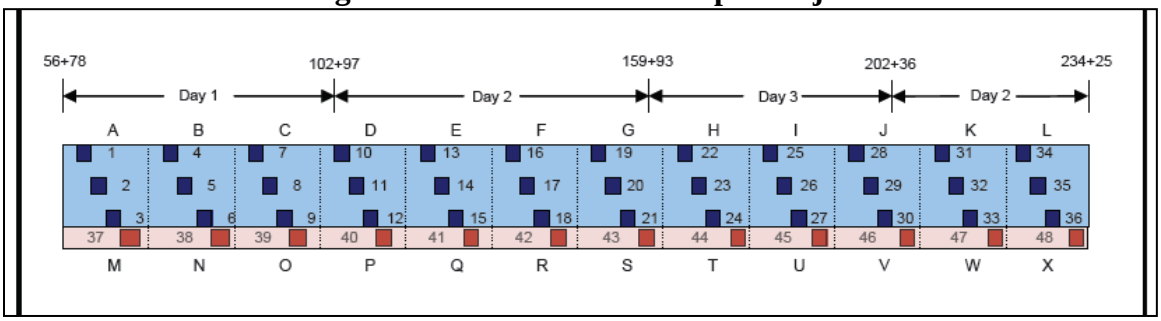
Day 1:
The contractor begins paving at station 56+78 and ends the day at station 102+97, a total length of 4,619 feet. A quantity of 677 tons was placed on the eastbound traffic lane, and 169 tons was placed on the integral shoulder.

Day 2:
The contractor begins paving at station 102+97. Due to traffic staging requirements, the contractor stops paving at station 159+93, 5,696 feet, and begins paving again at station 202+36. They end the day at the end of the project, station 234+25, 3,189 additional feet. A

quantity of 1303 tons was paved on the eastbound traffic lane, and 326 tons was placed on the integral shoulder.

Day 3:
The contractor begins paving at station 159+93 and ends the day at station 202+36, 4,243 feet. A total of 622 tons was placed on the eastbound traffic lane, and 156 tons was placed on the integral shoulder.

Figure 6 Linear Sublot Example Project



Example 3 (daily tonnage lot & linear sublots):

Use the example project information and the following test results from day 1. All of the day's air voids tests were acceptable. (Density Calculated off the PCF value, sublot is the average of the density %)

Sublot ID	Test ID	% Density	Sublot Avg % Density
A 56+78 to 71+78	1	93.8	94.1
	2	94.2	
	3	94.4	
B 71+78 to 86+78	4	94.1	94.5
	5	94.7	
	6	94.6	
C 86+78 to 101+78	7	93.6	94.1
	8	94.5	
	9	94.3	
M	37	93.2	93.2
N	38	94.2	94.2
O	39	93.0	93.0

1. Compute the average density for each traffic lane sublot and each shoulder sublot.

SOLUTION: See the results in the table above.

2. Compute the density incentive or disincentive for the day's paving.

SOLUTION:

- Traffic Lane:

The specified target density for the traffic lane is 93.0%. All of the sublot averages were no more than one percent below the target density, so all of the day's traffic lane test results are used to compute the daily lot density and the lot incentive pay.

- Lot density = (93.8 + 94.2 + 94.4 + 94.1 + 94.7+ 94.6+ 93.6 + 94.5 + 94.3) / 9 tests = 94.2%

According to standard spec 460.5.2.3(1) of this SPV, this lot density is eligible for incentive pay of $0.40 per ton. 677 tons of HMA was placed on the traffic lane on day 1, therefore the contractor receives $270.80 density incentive for the day 1 traffic lane lot. This is for all of sublot A, B & C and the 119' in sublot D that did not reach the random number.

- Shoulder:

The minimum required density is 92.0%. All of the sublot averages were acceptable, so all of the day's shoulder tests are used to compute the shoulder lot density. The average of all the shoulder tests is 93.5%. According to the specification, this lot density is eligible for incentive pay of $0.40 per ton. 169 tons of HMA was placed on the shoulder on day 1, therefore the contractor receives $67.60 density incentive for the day 1 shoulder lot.

Example 4 (daily tonnage lot & linear sublots):

Use the example project information and the following test results from day 3. All of the day's air voids tests were acceptable.

Sublot ID	Test ID	% Density	Sublot Avg % Density
H 161+78 to 176+78	22	91.8	91.8
	23	91.9	
	24	91.7	
I 176+78 to 191+78	25	95.1	94.9
	26	94.8	
	27	94.9	
J 191+78 to 202+36	28	92.0	91.9
	29	91.8	
	30	91.9	
T	44	91.9	91.9
U	45	94.4	94.4
V	46	92.1	92.1

Compute the density incentive or disincentive for the day's paving.

SOLUTION:

1. Traffic Lane:

According to the specification, a minimum density of 93.0% is required for the traffic lane. When verifying whether or not the sublot densities meet the requirements, it is found that sublot H and sublot J have average densities that are more than one percent below the required minimum. According to the specification, the quantity of HMA pavement placed this day in each of these sublots is subject to disincentive, and the day's test results within these sublots are not included when computing the incentive for the remainder of the lot.

2. Sublot H:

Day 3 began inside the limits of sublot G, at station 159+93, but beyond its random test location. The tests for sublot G represent material placed on day 2. The tests in sublot H represent the day 3 material from station 159+93 to 176+78, a total length of 1685 feet long (185' from sublot G, paved on day 3, and 1500' in sublot H) by 12 feet wide.

Quantity represented by tests in sublot H =

$$\frac{(1685' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 247\ tons$$

According to the disincentive pay table in the specification, the quantities are subject to a pay factor equal to 95 percent of the contract price. This is equivalent to a 5 percent pay reduction.

Disincentive Density HMA Pavement = 247 tons x ($41.75/ton x 0.05) = -$515.61

3. Sublot I:
Quantity represented by tests in sublot I =

$$\frac{(1500' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 220\ tons$$

According to the incentive pay table, 220 tons of the HMA pavement item are eligible for an incentive of $0.80 per ton, or a total of $176.00.

4. Sublot J:
Day 3 ended within the limits of sublot J, beyond its random test location. The day 3 quantity placed within sublot J, from station 191+78 to 202+36, at length of 1,058 feet, is represented by its tests. The day 2 quantity placed toward the end of sublot J is represented by the tests taken on day 2 within sublot K.

Quantity represented by tests in sublot J=

$$\frac{(1058' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 155\ tons$$

According to the disincentive pay table in the specification, the quantities are subject to a pay factor equal to 95 percent of the contract price. This is equivalent to a 5 percent pay reduction.

Disincentive Density HMA Pavement = 155 tons x ($41.75/ton x 0.05) = -$323.56

5. Shoulder:
All of the day 3 shoulder sublots have acceptable density values, so we use all of the results to compute the day's shoulder lot density.
Day 3 shoulder lot density = (91.9 + 94.4 + 92.1) / 3 tests = 92.8%
The lot density of 92.8% is not more than 1.0% above the required minimum of 92.0%, therefore the day 3 shoulder pavement does not receive any density incentive.

Day 3 Incentive/Disincentive Summary:
Incentive Density HMA Pavement (Lot I) = $176.00
Disincentive Density HMA Pavement (Lot H) = -$515.61
Disincentive Density HMA Pavement (Lot J) = -$323.56

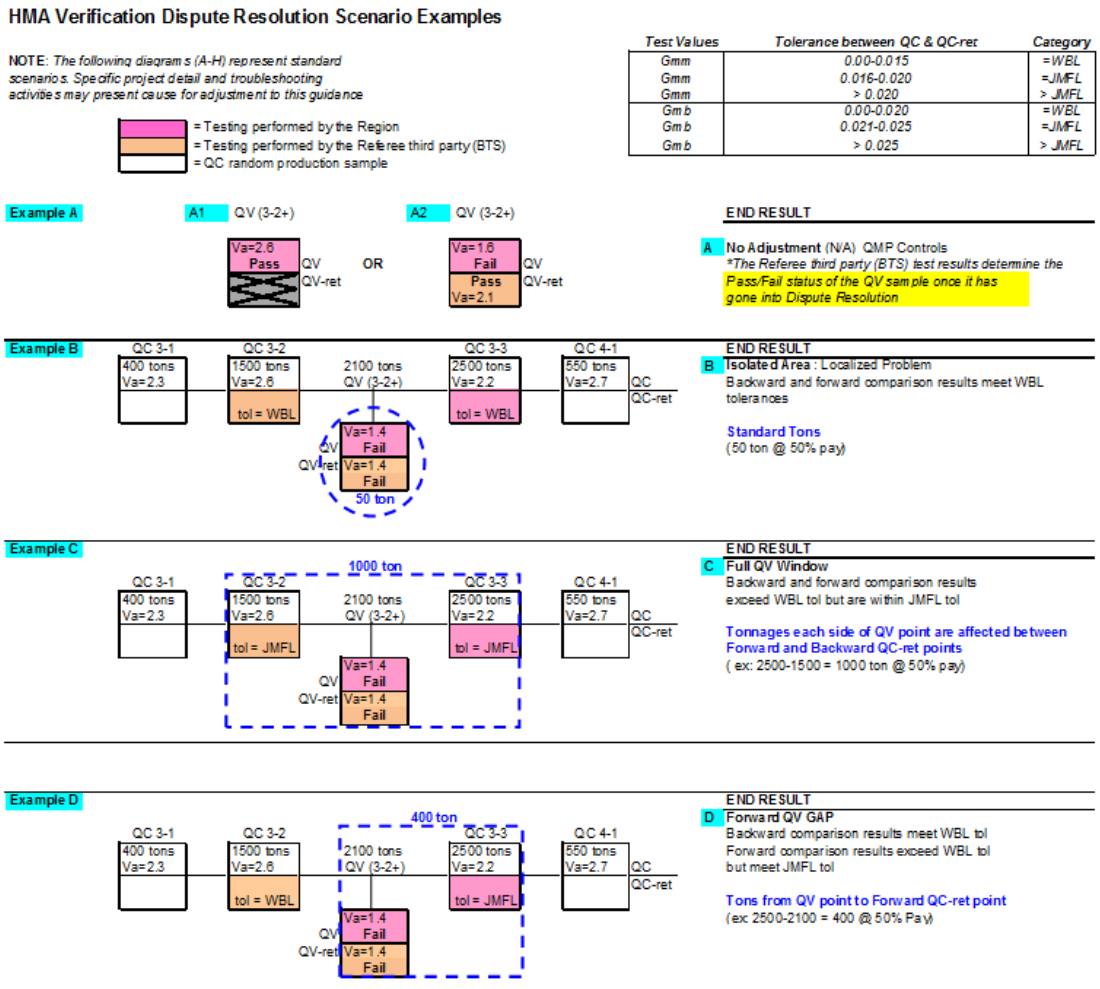
Delete CMM 8-36.6.1 QC Tests and replace with the following:

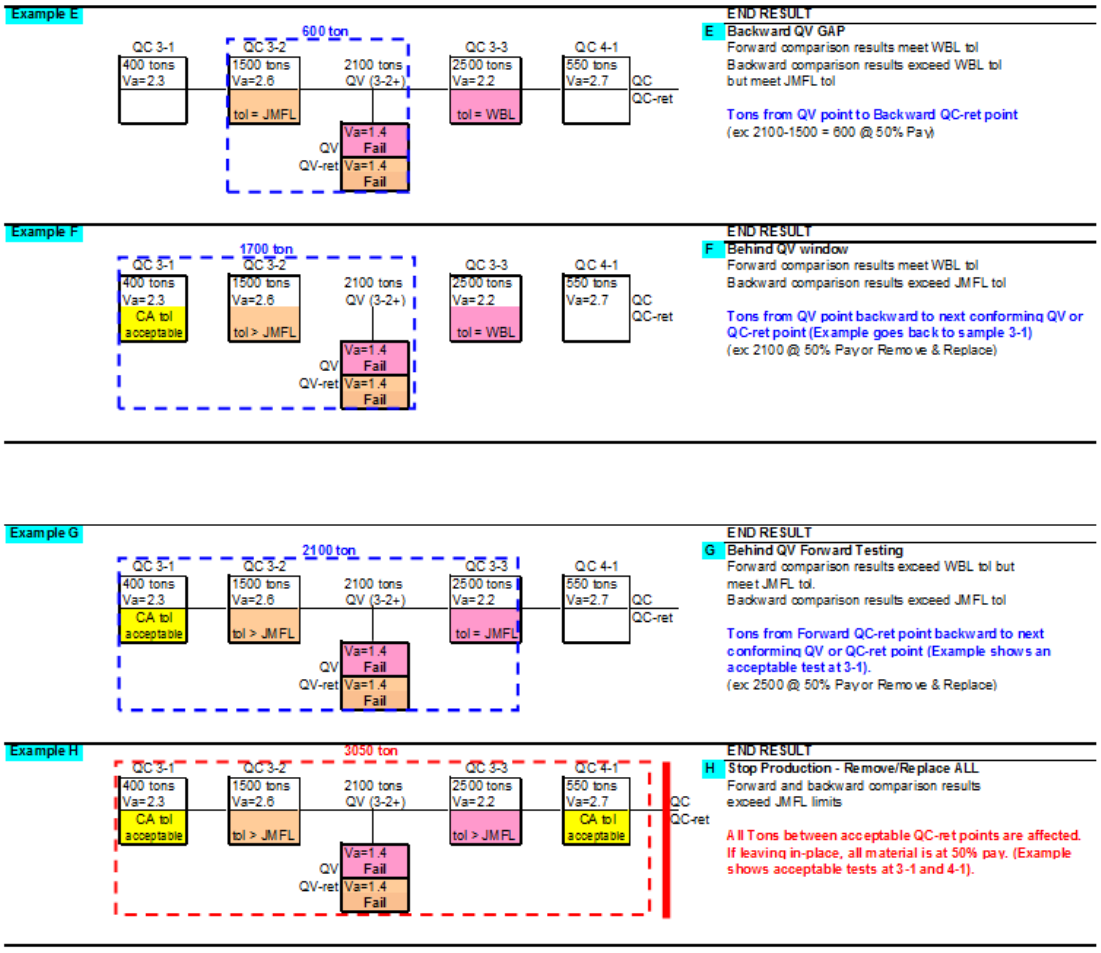
QC testing must be completed, and data posted, on the day the sample was taken or as approved by the engineer**.**

For administration of projects requiring only one, two, or three single tests per mix design, apply the following tolerances table for mixture evaluation:

- Va = 2.0 – 5.0%
- VMA = - 1.3 from required minimums for Table 460-1 as revised in STSP 460-025
- AC = within -0.1of JMF Pb after regression

Delete CMM 8-36 Figure 8 HMA Verification Dispute Resolution Scenarios and replace with the following:





Delete CMM 8-66.2.2(3) and replace with the following:

3. Determine trial asphalt binder contents (estimated by experience or by calculation based on aggregate properties of trial blends).

- Compact gyratory specimens using a minimum of 3 asphalt binder contents (0.5% increments) and covering a range to include the estimated optimum design binder content as well as 3.0% air voids. Use N_{des} for compaction effort.
- Compare trial binder content results. The design binder content (by either graphing or interpolating the trial data results) is determined as that meeting requirements stated in standard spec 460. The department will determine the optimum binder content corresponding to 3.0% air voids by linear regression of the trial gyratory specimens.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __2__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __2__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:

   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

   http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

2. Definitions

a. Interpret these terms, used throughout this additional special provision, as follows:

   i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
   ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
   iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
   iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as “Disc” on the cover of the Highway Work Proposal, which is enforced as committed.
   v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
   vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
   vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually

commits to DBE participation at or above the bid percentage, or certifies that they have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. Department's DBE Evaluation Process

a. Documentation Submittal

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

i. Bidder Meets DBE Goal

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

ii. Bidder Does Not Meet DBE Goal

(1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.

(2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:

a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.

b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define “good faith” but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they

have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

c. Prime Contractors should:

i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, ***as required by federal rules***. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

(1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.

(2) SBN is the preferred outreach tool. https://www.bidx.com/wi/main Other acceptable means include postal mail, email, fax, phone call.

a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.

(3) Second solicitation should take place within 5 days

a. An email solicitation is highly recommended for this second solicitation

(4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

(5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.

(6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

a. Email to all prospective DBE firms in relevant work areas
b. Phone call log to DBE firms who express interest via written response or call.
c. Fax/letter confirmation
d. Copy of the DBE quotes
e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.

   i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.

   ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

   iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

      (1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.

      (2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

e. After notification of contract award, submit **'Commitment to Subcontract'** form within the time period specified in the contract.

   i. Provide the following information along with department form DT1202:

      (1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.

      (2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.

      (3) Photocopies or electronic copies of all written solicitations to DBE's.

      (4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.

      (5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office
6150 Fond du Lac Ave.
Milwaukee, WI 53218
Phone: 414-438-4583 / 608-266-6961
Fax: 414-438-5392
E-mail: DOTDBESupportServices@dot.wi.gov

6. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

7. Department's Criteria for DBE Participation

Department's DBE List

a. The department maintains a DBE list on the department's website

http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/ucp-directory.xlsx

b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor's responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.
b. A DBE is performing a commercially useful function if the following conditions are met:
c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website

http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

11. Manufacturers and Suppliers

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

12. DBE Prime

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

13. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

14. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm
b. On every other project that the mentor protégé team identifies itself on.
c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/policy-statement.pdf

16. Changes to the approved DBE Commitment Form DT1506

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

17. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors that were committed to equal work items, in the original contract.

18. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS

FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR

SUBJECT: **REQUEST FOR DBE QUOTES**

LET DATE & TIME

DATE: MONTH DAY YEAR

CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have some one contact me at this number

Prime Contractor 's Contact Person		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		Email	

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
    d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
    c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
    c. Add attachments to a sub-quote
    d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

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 may also withhold routine 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.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

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 and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

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.

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

440.3.5.2 Corrective Actions for Localized Roughness

Replace paragraph two with the following effective with the September 2016 letting:

(2) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without physically riding that work. The engineer will not direct corrective action on bridges without authorization from the department's bureau of structures.

450.3.2.1 General

Replace the entire text with the following effective with the June 2016 letting:

450.3.2.1.1 Preparation and Paving Operations

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 36 F for upper layers or 32 F for lower layers unless the engineer allows in writing. The contractor should place HMA pavement for projects in the northern asphalt zone between May 1 and October 15 inclusive and for projects in the southern asphalt zone between April 15 and November 1 inclusive. CMM 4-53 figure 2 defines asphalt zones. Notify the engineer at least one business day before paving.

(2) Unless the contract specifies otherwise, conform to the following:

- Keep the road open to all traffic during construction.
- Prepare the existing foundation for treatment as specified in 211.
- Incorporate loose roadbed aggregate as a part of preparing the foundation, in shoulder construction, or dispose of as the engineer approves.

(3) Place asphaltic mixture only on a prepared, firm, and compacted base, foundation layer, or existing pavement substantially surface-dry and free of loose and foreign material. Do not place over frozen subgrade or base, or where the roadbed is unstable.

450.3.2.1.2 Cold Weather Paving

450.3.2.1.2.1 General

(1) Conform to these cold weather paving provisions for work performed under the following:

- The 460 HMA Pavement bid items.
- The 465 Asphaltic Surface bid items.
- Special provisions that require placing mixture conforming to the contract requirements under 460 for HMA pavement or under 465 for asphaltic surface.

450.3.2.1.2.2 Cold Weather Paving Plan

(1) Submit a written cold weather paving plan to the engineer at the preconstruction meeting. In that plan outline material, operational, and equipment changes for paving when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F. Include the following:

- Use a department-accepted HMA mix design that incorporates a warm mix additive from the department's approved products list. Do not use a foaming process that introduces water into the mix.
- Identify the warm mix additive and dosage rate.
- Identify modifications to the compaction process and when to use them.

(2) Engineer written acceptance is required for the cold weather paving plan. Engineer acceptance of the plan does not relieve the contractor of responsibility for the quality of HMA pavement placed in cold weather except as specified in 450.5.2(3).

450.3.2.1.2.3 Cold Weather Paving Operations

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F unless a valid engineer-accepted cold weather paving plan is in effect.

(2) If the national weather service forecast for the construction area predicts ambient air temperature less than 40 F at the projected time of paving within the next 24 hours, confirm or submit revisions to the cold weather paving plan for engineer validation. Update the plan as required to accommodate the conditions anticipated for the next day's operations. Upon validation of the plan, the engineer will allow paving for the next day. Once in effect, pave conforming to the engineer-accepted cold weather paving plan for the balance of that work day or shift regardless of the temperature at the time of paving.

450.4 Measurement

Add the following as paragraph three effective with the June 2016 letting:

(3) The department will measure HMA Cold Weather Paving by the ton of HMA mixture placed conforming to an engineer-accepted cold weather paving plan.

450.5 Payment

Replace the entire text with the following effective with the June 2016 letting:

450.5.1 General

(1) All costs of furnishing, maintaining, and operating the truck scale or other weighing equipment and furnishing the weigh tickets are incidental to the contract.

(2) Nonconforming material allowed to remain in place is subject to price adjustment under 105.3.2.

(3) Full-depth sawing to remove integrally placed safety edge where not required is incidental to the contract.

(4) The contractor is responsible for the quality of HMA placed in cold weather.

450.5.2 Cold Weather Paving

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

ITEM NUMBER	DESCRIPTION	UNIT
450.4000	HMA Cold Weather Paving	TON

(2) Payment for HMA Cold Weather Paving is full compensation for additional materials and equipment specified for cold weather paving under 450.3.2.1.2 including costs for preparing, administering, and following the contractor's cold weather paving plan. The department will not pay for HMA Cold Weather Paving for HMA placed as follows:

- If the lot density is less than the minimum specified in table 460-3 for mixture placed under 460.
- On days when the department is assessing liquidated damages.

(3) If because of an excusable compensable delay under 108.10.3, the engineer directs the contractor to pave when the temperature is less than 36 F for the upper layer or less than 32 F for lower layers, the department:

- Will relieve the contractor of responsibility for damage and defects the engineer attributes to cold weather paving.
- Will not assess disincentives for density or ride.

(4) If HMA pavement is placed under 450.3.2.1.2 and the HMA Cold Weather Paving bid item is not in the contract, the department will pay for the additional costs specified in 450.5.2(2) as extra work. The department will pay separately for providing HMA pavement and HMA surface under 460.5, 465.5, and the contract special provisions.

460.3.4 Cold Weather Paving

Delete the entire subsection effective with the June 2016 letting:

460.5.1 General

Replace the entire text with the following effective with the June 2016 letting:

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

ITEM NUMBER	DESCRIPTION	UNIT

460.5000 - 5999	HMA Pavement (gradation) LT (binder)(designation)	TON
460.6000 - 6999	HMA Pavement (gradation) MT (binder)(designation)	TON
460.7000 - 7999	HMA Pavement (gradation) HT (binder)(designation)	TON
460.8000 - 8999	HMA Pavement (gradation) SMA (binder)(designation)	TON
460.2000	Incentive Density HMA Pavement	DOL

460.5.2.2 Disincentive for HMA Pavement Density

Replace paragraph two with the following effective with the June 2016 letting:

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

460.5.2.4 Cold Weather Paving

Delete the entire subsection effective with the June 2016 letting:

501.2.6 Fly Ash

Replace paragraph four with the following effective with the July 2016 letting:

(4) Use only one source of fly ash for a bid item of work under the contract, unless the engineer directs or allows otherwise in writing.

502.3.7.8 Floors

Replace paragraph sixteen with the following effective with the September 2016 letting:

(16) The finished bridge floor shall conform to the surface test specified in 415.3.10. The engineer will not direct corrective grinding without authorization from the department's bureau of structures.

550.5.2 Piling

Add the following as paragraph three effective with the December 2015 letting:

(3) The department will not entertain a change order request for a differing site condition under 104.2.2.2 or for a quantity change under 104.2.2.4.3 for the Piling bid items. Instead the department will adjust pay under the Piling Quantity Variation administrative item if the total driven length of each size is less than 85 percent of, or more than 115 percent of the contract quantity as follows:

Percent of Contract Length Driven	Pay Adjustment
< 85	(85% contract length - driven length) x 20% unit price
> 115	(driven length - 115% contract length) x 5% unit price

643.2.1 General

Replace paragraph two with the following effective with the December 2015 letting:

(2) Use reflective sheeting from the department's approved products list on barricades, drums, and flexible tubular marker posts.

715.3.1.2.1 General

Replace paragraph one with the following effective with the July 2016 letting:

(1) Designate the location and size of all lots before placing concrete. Ensure that no lot contains concrete of more than one mix design or placement method defined within 715.3.1.2 as follows:

Mix design change A modification to the mix requiring the engineer's approval under 710.4(5).

For paving mixes, a source change under item 1 of 710.4(5) for fly ash of the same class that does not require a modification under items 2 through 4 of 710.4(5) does not constitute a mix design change.

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

Errata

Make the following corrections to the standard specifications:

460.2.7 HMA Mixture Design - TABLE 460-2 MIXTURE REQUIREMENTS

Correct errata in the Fractured Faces row of table 460-2 to reference ASTM D5821.

Fractured Faces (ASTM D5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90

Correct errata in footnote two of table 460-2 to reference AASHTO M323.

[2] For a gradation that passes below the boundaries of the caution zone (ref. AASHTO M323), the dust to binder ratio limits are 0.6 - 1.6.

641.2.9 Overhead Sign Supports

Correct errata adding back accidentally deleted paragraphs one through three.

(1) Provide commercially fabricated overhead sign supports conforming to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years with a wind importance factor of 1.00. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the methods of appendix C of those AASHTO standards.

(2) Design structures, listed as applicable structure types in the AASHTO standards, to the fatigue category criteria as follows:

1. Structures carrying variable message signs:
   - Category I criteria for structures over all roadway types.
2. Structures carrying type II or III signs:
   - Category I criteria for structures used over highways and free flow ramps.
   - Category II criteria for structures with arms greater than 30 feet used over local roads and city streets.
   - Category III criteria for structures with arms 30 feet or less used over local roads and city streets.

(3) Use the posted speed limit of the roadway beneath the structure for truck-induced gusts.

(4) Submit shop drawings identified by structure number, design computations, and material specifications, to the engineer before erecting sign supports. Provide tightening procedures for mast arm or luminaire arm to pole shaft connections on the shop drawings. Have a professional engineer registered in the state of Wisconsin sign, seal, and date the shop drawings and certify that the design conforms to AASHTO standards and the contract.

(5) Provide steel pole shafts and mast arms zinc coated according to ASTM A123. Provide tapered pole and arm shafts with a minimum taper of 0.14 inch per foot for single-member vertical and single-member horizontal structure components. Provide bolts and other hardware conforming to 641.2.2.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

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

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

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls 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 payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 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 data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant 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 first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction 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 or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant 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 or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

(2) 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;

(3) 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 offenses enumerated in paragraph (a)(2) of this certification; and

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

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

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction 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 or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. 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 participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant 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 or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

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).

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Effective August 2015 letting

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials 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 this 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. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

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

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://wisconsindot.gov/hcciDocs/contracting-info/ws4567.doc

Effective February 2016 letting

Cargo Preference Act Requirement

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) *Agreement Clauses.* "Use of United States-flag vessels:"

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees—"

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
COLUMBIA COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2016

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	31.55	18.52	50.07
Carpenter	33.02	17.12	50.14
Future Increase(s): Add $1.42/hr on 6/1/2016.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	35.97	17.85	53.82
Future Increase(s): Add $1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	35.75	19.97	55.72
Future Increase(s): Add $1.25/hr on 6/1/16.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	35.62	0.00	35.62
Ironworker	32.50	20.58	53.08
Line Constructor (Electrical)	40.81	18.06	58.87
Painter	29.87	18.79	48.66
Pavement Marking Operator	30.00	18.53	48.53
Piledriver	30.11	21.09	51.20
Roofer or Waterproofer	30.40	2.23	32.63
Teledata Technician or Installer	22.50	13.16	35.66
Tuckpointer, Caulker or Cleaner	32.82	18.67	51.49
Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	17.32	49.97
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.09	39.62
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.97	34.72
TRUCK DRIVERS			
Single Axle or Two Axle	36.72	21.15	57.87
Three or More Axle	25.78	18.96	44.74
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	30.82	21.85	52.67
Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.			
Pavement Marking Vehicle	23.82	17.72	41.54
Shadow or Pilot Vehicle	25.28	18.31	43.59
Truck Mechanic	25.28	18.31	43.59
LABORERS			
General Laborer	30.67	15.65	46.32
Future Increase(s): Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	17.00	4.60	21.60
Landscaper	30.67	15.65	46.32
Future Increase(s): Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	27.30	15.65	42.95
Future Increase(s): Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	3.35	18.35
Railroad Track Laborer	24.22	5.09	29.31
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.	38.27	21.85	60.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.	37.77	21.85	59.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type);	37.27	21.85	59.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.	37.01	21.85	58.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.	37.27	21.85	59.12
Fiber Optic Cable Equipment.	29.50	0.82	30.32

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI160010
DATE: September 2, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$30.67	16.55
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);	30.77	16.55
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	30.82	16.55
Group 4: Line and Grade Specialist	31.02	16.55
Group 5: Blaster and Powderman	30.87	16.55
Group 6: Flagperson; Traffic Control	27.30	16.55

CLASSES OF LABORER AND MECHANICS

Bricklayer	32.86	17.22
Carpenter	30.48	15.80
Millwright	32.11	15.80
Piledriverman	30.98	15.80
Ironworker	32.85	21.84
Cement Mason/Concrete Finisher	35.07	19.75
Electrician		See Page 3
Line Construction		
Lineman	42.14	32% + 5.00
Heavy Equipment Operator	40.03	32% + 5.00
Equipment Operator	33.71	32% + 5.00
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	23.18	32% + 5.00
Painter, Brush	27.50	17.72
Painter, Spray, Structural Steel, Bridges	28.50	17.72
Well Drilling:		
Well Driller	16.52	3.70

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	26.63	19.85
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	26.78	19.85

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0 dated January 8, 2016; Modification #1 dated January 29, 2016; Modification #2 dated February 26, 2016; Modification #3 dated March 11, 2016; Modification #4 dated April 8, 2016; Modification #5 dated June 17, 2016; Modification #6 dated July 1, 2016; Modification #7 dated July 22, 2016; Modification #8 dated July 29, 2016; Modification #9 dated August 19, 2016; Modification #10 dated August 26, 2016; Modification #11 dated September 2, 2016.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI160010
DATE: September 2, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$39.27	$21.80
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.....	$38.77	$21.80
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$38.27	$21.80
Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	$38.01	$21.80
Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.....	$37.72	$21.80
Group 6: Off – road material hauler with or without ejector	$31.82	$21.80

Premium Pay:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hours

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI160010
DATE: September 2, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$30.68	17.28
Area 2:		
Electricians	32.00	19.28
Area 3:		
Electrical contracts under $130,000	28.96	18.26
Electrical contracts over $130,000	31.16	18.34
Area 4:	30.50	29.50% + 9.57
Area 5	28.96	24.85% + 9.70
Area 6	37.02	29%+9.77
Area 8		
Electricians	32.45	26.10% + 10.56
Area 9:		
Electricians	36.50	20.39
Area 10	29.64	20.54
Area 11	34.92	25.05
Area 12	34.98	19.89
Area 13	35.13	23.26
Teledata System Installer		
Area 14		
Installer/Technician	24.35	13.15
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	26.00	17.70

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

CONTRACT: 20161108002 PROJECT(S): 1010-02-84 FEDERAL ID(S): WISC 2016338

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Contract Items					
0010	201.0105 Clearing	21.000 STA		.		.
0020	201.0205 Grubbing	21.000 STA		.		.
0030	203.0100 Removing Small Pipe Culverts	2.000 EACH		.		.
0040	204.0105 Removing Pavement Butt Joints	9,390.000 SY		.		.
0050	204.0115 Removing Asphaltic Surface Butt Joints	1,409.000 SY		.		.
0060	204.0157 Removing Concrete Barrier	50.000 LF		.		.
0070	204.0165 Removing Guardrail	13,314.000 LF		.		.
0080	204.0170 Removing Fence	290.000 LF		.		.
0090	204.0180 Removing Delineators and Markers	255.000 EACH		.		.
0100	204.0195 Removing Concrete Bases	4.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.9060.S Removing (item description) 01. Raised Pavement Markers	750.000 EACH		.		.
0120	204.9060.S Removing (item description) 02. Lighting Control Cabinet	1.000 EACH		.		.
0130	204.9060.S Removing (item description) 03. Electrical Meter Breaker	1.000 EACH		.		.
0140	204.9060.S Removing (item description) 04. Light and Pole	3.000 EACH		.		.
0150	204.9060.S Removing (item description) 05. Flexible Tubular Markers	70.000 EACH		.		.
0160	205.0100 Excavation Common	12,407.000 CY		.		.
0170	208.0100 Borrow	10,758.000 CY		.		.
0180	213.0100 Finishing Roadway (project) 01. 1010-02-84	1.000 EACH		.		.
0190	305.0110 Base Aggregate Dense 3/4-Inch	10,039.000 TON		.		.
0200	305.0120 Base Aggregate Dense 1 1/4-Inch	3,937.000 TON		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0210	305.0500 Shaping Shoulders	384.000 STA		.		.
0220	390.0203 Base Patching Asphaltic	10,799.000 SY		.		.
0230	416.0610 Drilled Tie Bars	372.000 EACH		.		.
0240	440.4410 Incentive IRI Ride	60,000.000 DOL	1.00000		60000.00	
0250	455.0605 Tack Coat	44,361.000 GAL		.		.
0260	460.2000 Incentive Density HMA Pavement	82,720.000 DOL	1.00000		82720.00	
0270	460.2010 Incentive Air Voids HMA Pavement	82,720.000 DOL	1.00000		82720.00	
0280	460.4110.S Reheating HMA Pavement Longitudinal Joints	87,396.000 LF		.		.
0290	465.0105 Asphaltic Surface	498.000 TON		.		.
0300	465.0315 Asphaltic Flumes	27.000 SY		.		.
0310	465.0400 Asphaltic Shoulder Rumble Strips	116,572.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0320	502.0100 Concrete Masonry Bridges	117.000 CY		.		.
0330	502.3100 Expansion Device (structure) 01. B-11-30	LUMP	LUMP			.
0340	502.3100 Expansion Device (structure) 02. B-11-33	LUMP	LUMP			.
0350	502.3200 Protective Surface Treatment	2,984.000 SY		.		.
0360	502.3210 Pigmented Surface Sealer	8.000 SY		.		.
0370	502.5005 Masonry Anchors Type L No. 5 Bars	72.000 EACH		.		.
0380	502.6110 Masonry Anchors Type S 3/4-Inch	126.000 EACH		.		.
0390	505.0600 Bar Steel Reinforcement HS Coated Structures	19,020.000 LB		.		.
0400	505.0905 Bar Couplers No. 5	12.000 EACH		.		.
0410	506.0605 Structural Steel HS	475.000 LB		.		.
0420	509.0301 Preparation Decks Type 1	819.000 SY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	509.0302 Preparation Decks Type 2	615.000 SY		.		.
0440	509.1000 Joint Repair	54.000 SY		.		.
0450	509.1200 Curb Repair	425.000 LF		.		.
0460	509.1500 Concrete Surface Repair	840.000 SF		.		.
0470	509.2000 Full-Depth Deck Repair	6.000 SY		.		.
0480	509.2500 Concrete Masonry Overlay Decks	276.000 CY		.		.
0490	509.9005.S Removing Concrete Masonry Deck Overlay (structure) 02. B-11-33	654.000 SY		.		.
0500	509.9005.S Removing Concrete Masonry Deck Overlay (structure) 03. B-11-35	617.000 SY		.		.
0510	509.9005.S Removing Concrete Masonry Deck Overlay (structure) 04. B-11-37	644.000 SY		.		.
0520	509.9005.S Removing Concrete Masonry Deck Overlay (structure) 05. B-11-39	581.000 SY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0530	509.9020.S Epoxy Crack Sealing	8.000 LF		.		.
0540	517.1010.S Concrete Staining (structure) 01. S-11-25	545.000 SF		.		.
0550	517.1800.S Structure Repainting Recycled Abrasive (structure) 02. B-11-33	LUMP	LUMP			.
0560	517.1800.S Structure Repainting Recycled Abrasive (structure) 03. B-11-35	LUMP	LUMP			.
0570	517.1800.S Structure Repainting Recycled Abrasive (structure) 04. B-11-37	LUMP	LUMP			.
0580	517.1800.S Structure Repainting Recycled Abrasive (structure) 05. B-11-39	LUMP	LUMP			.
0590	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 02. B-11-33	LUMP	LUMP			.
0600	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 03. B-11-35	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0610	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 04. B-11-37	LUMP	LUMP			.
0620	517.4500.S Negative Pressure Containment and Collection of Waste Materials (structure) 05. B-11-39	LUMP	LUMP			.
0630	517.6001.S Portable Decontamination Facility	4.000 EACH		.		.
0640	520.9700.S Culvert Pipe Liners (size) 01. 16-Inch	263.000 LF		.		.
0650	520.9700.S Culvert Pipe Liners (size) 02. 22-Inch	254.000 LF		.		.
0660	520.9700.S Culvert Pipe Liners (size) 03. 28-Inch	523.000 LF		.		.
0670	520.9700.S Culvert Pipe Liners (size) 04. 42-Inch	259.000 LF		.		.
0680	520.9750.S Cleaning Culvert Pipes for Liner Verification	9.000 EACH		.		.
0690	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	1.000 EACH		.		.
0700	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	2.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0710	521.1030 Apron Endwalls for Culvert Pipe Steel 30-Inch	2.000 EACH		.		.
0720	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	2.000 EACH		.		.
0730	528.0112 Culvert Pipe Corrugated Steel Polymer Coated 12-Inch	50.000 LF		.		.
0740	603.0105 Concrete Barrier Single-Faced 32-Inch	50.000 LF		.		.
0750	603.8000 Concrete Barrier Temporary Precast Delivered	555.000 LF		.		.
0760	603.8125 Concrete Barrier Temporary Precast Installed	555.000 LF		.		.
0770	604.9015.S Reseal Crushed Aggregate Slope Paving	290.000 SY		.		.
0780	606.0200 Riprap Medium	195.000 CY		.		.
0790	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	40.000 LF		.		.
0800	611.0430 Reconstructing Inlets	2.000 EACH		.		.
0810	611.8115 Adjusting Inlet Covers	12.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0820	613.1100.S Cable Barrier Type 1	1,900.000 LF		.		.
0830	613.1200.S Cable Barrier End Terminal Type 1	2.000 EACH		.		.
0840	614.0150 Anchor Assemblies for Steel Plate Beam Guard	5.000 EACH		.		.
0850	614.0200 Steel Thrie Beam Structure Approach	49.000 LF		.		.
0860	614.0220 Steel Thrie Beam Bullnose Terminal	4.000 EACH		.		.
0870	614.0230 Steel Thrie Beam	275.000 LF		.		.
0880	614.0400 Adjusting Steel Plate Beam Guard	1,060.000 LF		.		.
0890	614.0905 Crash Cushions Temporary	2.000 EACH		.		.
0900	614.2300 MGS Guardrail 3	24,123.000 LF		.		.
0910	614.2330 MGS Guardrail 3 K	212.500 LF		.		.
0920	614.2500 MGS Thrie Beam Transition	939.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0930	614.2610 MGS Guardrail Terminal EAT	45.000 EACH		.		.
0940	614.2620 MGS Guardrail Terminal Type 2	29.000 EACH		.		.
0950	616.0100 Fence Woven Wire (height) 01. 4-FT	230.000 LF		.		.
0960	618.0100 Maintenance And Repair of Haul Roads (project) 01. ID 1010-02-84	1.000 EACH		.		.
0970	619.1000 Mobilization	1.000 EACH		.		.
0980	624.0100 Water	279.000 MGAL		.		.
0990	625.0105 Topsoil	1,500.000 CY		.		.
1000	625.0500 Salvaged Topsoil	66,365.000 SY		.		.
1010	627.0200 Mulching	5,500.000 SY		.		.
1020	628.1504 Silt Fence	35,620.000 LF		.		.
1030	628.1520 Silt Fence Maintenance	35,620.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1040	628.1905 Mobilizations Erosion Control	12.000 EACH		.		.
1050	628.1910 Mobilizations Emergency Erosion Control	8.000 EACH		.		.
1060	628.2002 Erosion Mat Class I Type A	69,578.000 SY		.		.
1070	628.7005 Inlet Protection Type A	22.000 EACH		.		.
1080	628.7504 Temporary Ditch Checks	480.000 LF		.		.
1090	628.7555 Culvert Pipe Checks	116.000 EACH		.		.
1100	628.7560 Tracking Pads	2.000 EACH		.		.
1110	628.7570 Rock Bags	1,180.000 EACH		.		.
1120	629.0210 Fertilizer Type B	48.100 CWT		.		.
1130	630.0120 Seeding Mixture No. 20	50.000 LB		.		.
1140	630.0130 Seeding Mixture No. 30	1,257.000 LB		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1150	630.0200 Seeding Temporary	120.000 LB		.		.
1160	633.0100 Delineator Posts Steel	295.000 EACH		.		.
1170	633.0500 Delineator Reflectors	290.000 EACH		.		.
1180	633.1000 Delineator Brackets	25.000 EACH		.		.
1190	633.5200 Markers Culvert End	1.000 EACH		.		.
1200	634.0612 Posts Wood 4x6-Inch X 12-FT	74.000 EACH		.		.
1210	634.0616 Posts Wood 4x6-Inch X 16-FT	33.000 EACH		.		.
1220	634.0618 Posts Wood 4x6-Inch X 18-FT	44.000 EACH		.		.
1230	634.0620 Posts Wood 4x6-Inch X 20-FT	27.000 EACH		.		.
1240	634.0622 Posts Wood 4x6-Inch X 22-FT	20.000 EACH		.		.
1250	635.0200 Sign Supports Structural Steel HS	2,361.000 LB		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1260	636.0100 Sign Supports Concrete Masonry	36.000	CY	.		.	
1270	636.0500 Sign Supports Steel Reinforcement	186.000	LB	.		.	
1280	636.1500 Sign Supports Steel Coated Reinforcement HS	6,340.000	LB	.		.	
1290	637.1220 Signs Type I Reflective SH	4,628.920	SF	.		.	
1300	637.1230 Signs Type I Reflective F	49.000	SF	.		.	
1310	637.2210 Signs Type II Reflective H	1,627.340	SF	.		.	
1320	637.2220 Signs Type II Reflective SH	46.500	SF	.		.	
1330	637.2230 Signs Type II Reflective F	417.000	SF	.		.	
1340	638.2102 Moving Signs Type II	10.000	EACH	.		.	
1350	638.2601 Removing Signs Type I	20.000	EACH	.		.	
1360	638.2602 Removing Signs Type II	147.000	EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1370	638.3000 Removing Small Sign Supports	175.000 EACH		.		.
1380	638.3100 Removing Structural Steel Sign Supports	18.000 EACH		.		.
1390	638.4000 Moving Small Sign Supports	9.000 EACH		.		.
1400	641.0600 Sign Bridge Single Pole Sign Support Two Signs (structure) 01. S-11-25	LUMP	LUMP			.
1410	642.5401 Field Office Type D	1.000 EACH		.		.
1420	643.0200 Traffic Control Surveillance and Maintenance (project) 01. 1010-02-84	233.000 DAY		.		.
1430	643.0300 Traffic Control Drums	42,000.000 DAY		.		.
1440	643.0420 Traffic Control Barricades Type III	5,434.000 DAY		.		.
1450	643.0500 Traffic Control Flexible Tubular Marker Posts	75.000 EACH		.		.
1460	643.0600 Traffic Control Flexible Tubular Marker Bases	75.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1470	643.0705 Traffic Control Warning Lights Type A	10,828.000	DAY		.		.
1480	643.0715 Traffic Control Warning Lights Type C	3,184.000	DAY		.		.
1490	643.0800 Traffic Control Arrow Boards	2,689.000	DAY		.		.
1500	643.0900 Traffic Control Signs	6,820.000	DAY		.		.
1510	643.0910 Traffic Control Covering Signs Type I	17.000	EACH		.		.
1520	643.0920 Traffic Control Covering Signs Type II	948.000	EACH		.		.
1530	643.1050 Traffic Control Signs PCMS	600.000	DAY		.		.
1540	643.2000 Traffic Control Detour (project) 01. 1010-02-84	1.000	EACH		.		.
1550	643.3000 Traffic Control Detour Signs	1,880.000	DAY		.		.
1560	645.0120 Geotextile Type HR	719.000	SY		.		.
1570	646.0103 Pavement Marking Paint 4-Inch	5,094.000	LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1580	646.0106 Pavement Marking Epoxy 4-Inch	154,237.000 LF		.		.
1590	646.0600 Removing Pavement Markings	950.000 LF		.		.
1600	646.0841.S Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	4,100.000 LF		.		.
1610	646.0843.S Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	390.000 LF		.		.
1620	646.0881.S Pavement Marking Grooved Wet Reflective Tape 4-Inch	92,548.000 LF		.		.
1630	646.0883.S Pavement Marking Grooved Wet Reflective Tape 8-Inch	7,157.000 LF		.		.
1640	647.0196 Pavement Marking Arrows Epoxy Type 5	4.000 EACH		.		.
1650	647.0746 Pavement Marking Diagonal Epoxy 24-Inch	1,430.000 LF		.		.
1660	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	1,500.000 LF		.		.
1670	649.0403 Temporary Pavement Marking Epoxy 4-Inch	96,575.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1680	649.1400 Temporary Pavement Marking Stop Line Removable Tape 24-Inch	48.000 LF		.		.
1690	650.4500 Construction Staking Subgrade	4,395.000 LF		.		.
1700	650.5000 Construction Staking Base	4,395.000 LF		.		.
1710	650.5500 Construction Staking Curb Gutter and Curb & Gutter	1,589.000 LF		.		.
1720	650.6000 Construction Staking Pipe Culverts	2.000 EACH		.		.
1730	650.6500 Construction Staking Structure Layout (structure) 01. S-11-25	LUMP	LUMP			.
1740	650.8000 Construction Staking Resurfacing Reference	57,411.000 LF		.		.
1750	650.8500 Construction Staking Electrical Installations (project) 01. 1010-02-84	LUMP	LUMP			.
1760	650.8500 Construction Staking Electrical Installations (project) 02. 1010-02-84 ITS	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1770	650.9910 Construction Staking Supplemental Control (project) 01. 1010-02-84	LUMP	LUMP			.
1780	650.9920 Construction Staking Slope Stakes	39,045.000 LF		.		.
1790	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	4,180.000 LF		.		.
1800	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	135.000 LF		.		.
1810	652.0605 Conduit Special 2-Inch	2,295.000 LF		.		.
1820	652.0615 Conduit Special 3-Inch	120.000 LF		.		.
1830	652.0700.S Install Conduit into Existing Item	4.000 EACH		.		.
1840	654.0105 Concrete Bases Type 5	9.000 EACH		.		.
1850	654.0106 Concrete Bases Type 6	3.000 EACH		.		.
1860	654.0230 Concrete Control Cabinet Bases Type L30	1.000 EACH		.		.
1870	655.0615 Electrical Wire Lighting 10 AWG	8,733.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1880	655.0635 Electrical Wire Lighting 2 AWG	8,965.000 LF		.		.
1890	656.0200 Electrical Service Meter Breaker Pedestal (location) 01. STH 78	LUMP	LUMP			.
1900	656.0200 Electrical Service Meter Breaker Pedestal (location) 02. DMS-11-0057(NB)/DMS-11-0058(SB)	LUMP	LUMP			.
1910	656.0500 Electrical Service Breaker Disconnect Box (location) 01. DMS-11-0056	LUMP	LUMP			.
1920	656.0500 Electrical Service Breaker Disconnect Box (location) 02. DMS-11-0057(NB)/DMS-11-0058(SB)	LUMP	LUMP			.
1930	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	12.000 EACH		.		.
1940	657.0322 Poles Type 5-Aluminum	5.000 EACH		.		.
1950	657.0327 Poles Type 6-Aluminum	3.000 EACH		.		.
1960	657.0615 Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	3.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1970	659.1125 Luminaires Utility LED C	3.000 EACH		.		.
1980	659.2130 Lighting Control Cabinets 120/240 30-Inch	1.000 EACH		.		.
1990	661.0100 Temporary Traffic Signals for Bridges (structure) 01. B-11-30	LUMP	LUMP			.
2000	662.1030.S Ramp Closure Gates Hardwired 30-FT	2.000 EACH		.		.
2010	662.1037.S Ramp Closure Gates Hardwired 37-FT	2.000 EACH		.		.
2020	670.0100 Field System Integrator	LUMP	LUMP			.
2030	670.0200 ITS Documentation	LUMP	LUMP			.
2040	673.0225.S Install Pole Mounted Cabinet	2.000 EACH		.		.
2050	674.0200 Cable Microwave Detector	5,936.000 LF		.		.
2060	675.0300 Install Mounted Controller Microwave Detector Assembly	6.000 EACH		.		.
2070	675.0400.S Install Ethernet Switch	1.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2080	677.0200 Install Camera Assembly	1.000 EACH		.		.
2090	678.0100.S Install Overhead Freeway DMS Full Matrix	2.000 EACH		.		.
2100	690.0150 Sawing Asphalt	2,595.000 LF		.		.
2110	690.0250 Sawing Concrete	25,919.000 LF		.		.
2120	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	1,500.000 HRS	5.00000		7500.00	
2130	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	1,050.000 HRS	5.00000		5250.00	
2140	SPV.0035 Special 01. Pressure Grouting	15.300 CY		.		.
2150	SPV.0060 Special 01. Replace Conduit Plug	3.000 EACH		.		.
2160	SPV.0060 Special 02. Tension Post to Truss Connection Bolt	7.000 EACH		.		.
2170	SPV.0060 Special 03. Tension Anchor Rods	1.000 EACH		.		.
2180	SPV.0060 Special 04. Replace Sign Panel Connector	13.000 EACH		.		.

CONTRACT: 20161108002 PROJECT(S): 1010-02-84 FEDERAL ID(S): WISC 2016338

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2190	SPV.0060 Special 05. Install / Replace U-Bolt	1.000 EACH		.		.
2200	SPV.0060 Special 06. Replace Sign Bridge ID Plaque	3.000 EACH		.		.
2210	SPV.0060 Special 07. Removing Raised Pavement Markers and Filling Voids	310.000 EACH		.		.
2220	SPV.0060 Special 08. Pull Box Non-Conductive 24x42-Inch	20.000 EACH		.		.
2230	SPV.0060 Special 09. Concrete Barrier Wall Surface Repair	100.000 EACH		.		.
2240	SPV.0060 Special 10. Pull Box Non-Conductive 24x36-Inch	11.000 EACH		.		.
2250	SPV.0060 Special 11. Cleaning And Painting Bearings	140.000 EACH		.		.
2260	SPV.0060 Special 12. Install Vibration Control Damper	1.000 EACH		.		.
2270	SPV.0060 Special 13. Bearing Repair	2.000 EACH		.		.
2280	SPV.0060 Special 14. Install IP Radio	4.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2290	SPV.0060 Special 15. Install Roadway Dynamic Message Sign	1.000 EACH		.		.
2300	SPV.0060 Special 16. Salvage Camera Assembly	1.000 EACH		.		.
2310	SPV.0060 Special 17. HMA Percent Within Limits (PWL) Test Strip	2.000 EACH		.		.
2320	SPV.0090 Special 01. EMSEAL - Bridge Expansion Joint System	446.000 LF		.		.
2330	SPV.0090 Special 03. Removing HMA Pavement Longitudinal Joint Milling	87,396.000 LF		.		.
2340	SPV.0090 Special 04. Concrete Approach Curb and Gutter	160.000 LF		.		.
2350	SPV.0090 Special 05. Sawing Concrete Partial Sawcut	1,992.000 LF		.		.
2360	SPV.0090 Special 06. Cleaning Concrete Girder Ends	196.000 LF		.		.
2370	SPV.0090 Special 07. Concrete Curb & Gutter 30-Inch Type A Special	1,450.000 LF		.		.
2380	SPV.0090 Special 08. Clean and Fill Crack Treatment	4,152.000 LF		.		.
2390	SPV.0105 Special 01. Remove Catwalk	LUMP	LUMP			.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2400	SPV.0180 Special 01. Cable Barrier Mow Strip, Asphalt	650.000 SY		.		.
2410	SPV.0180 Special 02. Continuously Reinforced Concrete Pavement SHES Repair	1,430.000 SY		.		.
2420	SPV.0180 Special 03. Deck Patching B-11-30	9.000 SY		.		.
2430	SPV.0195 Special 01. HMA Pavement 4 HT-28 S 3.0% Va Regression Special	63,626.000 TON		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE