

HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
06/2017 s.66.0901(7) Wis. Stats

Proposal Number: **001**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Dane	1007-11-79	WISC 2018433	Illinois State Line - Madison; East Church Rd To Church St-Sb	IH 039
Dane	1007-11-80	WISC 2018434	Illinois State Line - Madison; Church Street To Cth Ab-Sb	IH 039

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: \$900,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: November 13, 2018 Time (Local Time): 9:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time December 15, 2021	SAMPLE NOT FOR BIDDING PURPOSES
Assigned Disadvantaged Business Enterprise Goal 8%	This contract is subject to federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(Bidder Signature)

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

(Print or Type Bidder Name)

(Date Commission Expires)

(Bidder Title)

Notary Seal

Type of Work: Grading, Base, Concrete Pavement, Asphalt Pavement, Bridge Construction, Box Culvert Culvert Construction, Culvert Pipe, Storm Sewer, Curb and Gutter, Sidewalk, Beam Guard, Concrete Barrier, Fence, Retaining Walls, Plantings, Signs, Overhead Sign Supports, Pavement Markings, Weigh-in-Motion System	For Department Use Only
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:
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>

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

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

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

- (5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.
- (6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>

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

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

B Submitting Electronic Bids

B.1 On the Internet

- (1) Do the following before submitting the bid:
 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:
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>
Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.
- (2) Staple an 8 1/2 by 11 inch printout of the Expedite™ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal, not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

- (3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.
- (4) The bidder-submitted printout of the Expedite™ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.
- (5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
 1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
 2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.

3. The diskette or CD ROM is not submitted at the time and place the department designates.

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

DT1303 1/2006

Wisconsin Department of Transportation

Proposal Number	Project Number	Letting Date
Name of Principal		
Name of Surety	State in Which Surety is Organized	

We, the above-named Principal and the above-named Surety, are held and firmly bound unto the State of Wisconsin in the sum equal to the Proposal Guaranty for the total bid submitted for the payment to be made; we jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. The condition of this obligation is that the Principal has submitted a bid proposal to the State of Wisconsin acting through the Department of Transportation for the improvement designated by the Proposal Number and Letting Date indicated above.

If the Principal is awarded the contract and, within the time and manner required by law after the prescribed forms are presented for signature, enters into a written contract in accordance with the bid, and files the bond with the Department of Transportation to guarantee faithful performance and payment for labor and materials, as required by law, or if the Department of Transportation shall reject all bids for the work described, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. In the event of failure of the Principal to enter into the contract or give the specified bond, the Principal shall pay to the Department of Transportation **within 10 business days of demand** a total equal to the Proposal Guaranty as liquidated damages; the liability of the Surety continues for the full amount of the obligation as stated until the obligation is paid in full.

The Surety, for value received, agrees that the obligations of it and its bond shall not be impaired or affected by any extension of time within which the Department of Transportation may accept the bid; and the Surety does waive notice of any such extension.

IN WITNESS, the Principal and Surety have agreed and have signed by their proper officers and have caused their corporate seals to be affixed this date: **(DATE MUST BE ENTERED)**

PRINCIPAL

(Company Name) **(Affix Corporate Seal)**

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

(Signature of Attorney-in-Fact)

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

DT1305 8/2003

Wisconsin Department of Transportation

Time Period Valid (From/To)	
Name of Surety	
Name of Contractor	
Certificate Holder	Wisconsin Department of Transportation

This is to certify that an annual bid bond issued by the above-named Surety is currently on file with the Wisconsin Department of Transportation.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the annual bid bond.

Cancellation: Should the above policy be cancelled before the expiration date, the issuing surety will give thirty (30) days written notice to the certificate holder indicated above.

(Signature of Authorized Contractor Representative)

(Date)

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.

[illegible]

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.

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STSP'S Revised November 30, 2017

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1007-11-79; Illinois State Line – Madison, East Church Rd to Church St-SB; 1007-11-80; Illinois State Line – Madison, Church Street to CTH AB-SB, IH 39, Dane County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2018 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 (20171130)

2. Scope of Work.

The work under this contract shall consist of grading, embankment, base aggregate, concrete pavement, HMA pavement, Structures B-13-712, B-13-714, B-13-716, B-13-722, B-13-724, C-13-3083 Stg 2, C-13-3084 Stg 3, C-13-3089 Stg 3, R-13-260 Stg 2, R-13-261 Stg 2, S-13-501, S-13-502, culvert pipe, storm sewer, permanent signing and marking, and ITS, weigh-in-motion, native prairie seeding (with follow-up surveillance and care), tree/shrub installation (with follow-up surveillance and care), and living snow fence installation at various locations including highway right-of-way lines, embankments, interchanges, overpasses, and infiltration basins; and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

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

Provide the 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.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment. The contract completion date indicates that 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 or work periods other than a completion date.

The contractor is advised that there may be multiple mobilizations for such items as erosion control, traffic control, detours, signing items, temporary pavement markings and other incidental items related to the staging. The department will make no additional payment for said mobilizations.

IH 39 is an oversize-overweight (OSOW) route. Maintain access for all OSOW movements during all stages of construction.

Conform the schedule of operations to the construction staging as shown in the traffic control plans and as described herein unless modifications to the schedule are approved in writing by the engineer.

When engaged in roadway cleaning operations, 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 suitable self-contained particulate collectors to prevent discharge from the collection bin into the atmosphere.

Sequence of Operations

The department anticipates that the schedule for each stage shall be as follows, unless modifications are approved in writing by the engineer:

1007-11-79 (IH 39)

Stage 1

- Construct IH 39 southbound concrete pavements
- Construct bridge Structures B-13-712, B-13-714, and B-13-716
- Construct culvert Structures C-13-3083 (Stg 2) and C-13-3084 (Stg 3)

Stage 2

- Remove median crossover X279
- Construct median restoration

1007-11-80 (IH 39)

Stage 1

- Work by Others - temporary ramp HMA pavements constructed under Project 1007-11-81 in 2018.

Stage 2

- Construct IH 39 southbound concrete pavements
- Construct bridge Structures B-13-722 and B-13-724
- Construct culvert Structure C-13-3089 (Stg 3)
- Construct retaining wall Structures R-13-260 (Stg 2) and R-13-261 (Stg 2)

Stage 3

- Remove temporary ramps and median crossover X280
- Construct median restoration

Do not switch traffic over to the next construction stage unless all signing, pavement marking, reflectors, tubular marker posts, and traffic control drums for the stage are in place, and conflicting pavement markings and signs are removed as shown in the traffic control plans and as directed by the engineer. Allowable exceptions to this specification are crossover and intersection areas where traffic control cannot be placed until the switch is made.

Work Restrictions

Do not close traffic lanes on IH 39 outside of Permitted Lane Closure Times specified in the Traffic article. Assessment per the Lane Rental Fee Assessment article will be charged for lane closures outside of the Permitted Lane Closure Times.

A 2-foot minimum paved shoulder shall be maintained on IH 39 at all times adjacent to travel lane. No aggregate shoulders shall be permitted adjacent to travel lanes at any time. During the night time lane closure for shoulder work on IH 39, the existing shoulder pavement within 2 feet of the travel lane shall not be removed until the shoulder can be paved within the same night.

Do not close CTH B and CTH W concurrently.

Contractor Coordination

The prime contractor shall have a superintendent or designated representative on the job site during all controlling work operations, including periods limited to only subcontractor work operations, to serve as a primary contact person and to coordinate all work operations.

Hold progress meetings once a week for Projects 1007-11-79 and 1007-11-80. These meetings will take place at the Department Owned Field Office located at 2863 County Hwy N, Stoughton, WI 53589. The contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work expected to begin within the next two weeks are to attend and provide a written schedule of the next week(s)' operations. Include begin and end dates of specific prime and subcontractor work operations including lane closures and traffic switches. Invite utilities, Town of Pleasant Springs, and Dane County Sheriff representatives to attend the progress meetings. Agenda items at the meeting will include review of the contractor's schedule and subcontractors' schedule, utility conflicts and relocation schedule, evaluation of progress and pay items, and making revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems or conflicts between contractors.

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

It is expected that routine maintenance by the county and town personnel may be required at certain times concurrently with work being done under this contract.

Based on the progress meeting, if the engineer requests a new revised schedule, submit it within seven calendar days. Failure to submit a new schedule within seven days shall result in the engineer holding pay requests until received.

Fish Spawning

There shall be no instream disturbance of Door Creek for Structure B-13-724 as a result of construction activity under or for this contract, prior to May 15 or after September 15, in order to avoid adverse impacts upon the spawning of sunfish, J. darter, bluntnose, stickleback, bluegill, white sucker, and fathead.

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

Migratory Birds

Swallow and other migratory birds' nests have not been observed on or under the existing bridge, but conditions to support nesting exist. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

The nesting season for swallows and other birds is usually between May 1 and August 30. Either prevent active nests from becoming established, or apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds, or clearing nests from all structures before the nests become active in early spring. As a last resort, prevent birds from nesting by installing a suitable netting device on the remaining structure prior to nesting activity. Include the cost for preventing nesting in the cost of Removing Old Structure.

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 may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

According to the final 4(d) rule issued for the NLEB, the department has determined that the proposed activity may affect, but will not result in prohibited take of the NLEB. The activity involves tree removal, but will not occur within 0.25 miles of a known hibernacula, nor will the activity remove a known maternity roost tree or any other tree within 150 feet of a known maternity roost tree.

If additional trees need to be removed, no Clearing shall occur without prior approval from the engineer, following coordination with the WisDOT REC. Additional tree removal beyond the area originally specified will require consultation with the United States Fish and Wildlife Service (USFWS) and may require a bat presence/absence survey. Notify the engineer if additional Clearing cannot be avoided to begin coordination with the WisDOT REC. The WisDOT REC will initiate consultation with the USFWS and determine if a survey is necessary.

Submit a schedule and description of Clearing operations with the ECIP 14 days prior to any Clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of Clearing operations, and list those additional measures in the ECIP.

Permanent Pavement Marking

Coordinate installation of permanent pavement markings such that all lanes can be opened following the completion of Project 1007-11-79 Stage 2A.

Vegetation Mitigation

This contract contains native prairie seeding, tree/shrub installation, and living snow fence installation outside the highway construction project limits.

The contractor is advised that there will be multiple mobilizations, at multiple sites within and outside the highway construction limits, for native prairie seeding, tree/shrub installation, and living snow fence installation. The department will make no additional payment for said mobilizations.

The department will locate and mark the native seed planting beds, tree/shrub locations, and living snow fence locations. The department will also locate and mark the sign locations for the native prairie seed planting areas. Notify the Corridor Vegetation Inspector 14 days in advance of any planting work or any native seed signing work to allow adequate locating time.

Notify the Corridor Vegetation Inspector at least 3 days prior to the planned delivery date of planting stock and replacement planting stock to allow for inspection scheduling.

Native prairie seed, tree/shrub, and living snow fence planting work will not be allowed at sites where there is active highway construction, or where there will be an upcoming highway construction contract. Prior to March 1 of every year, verify with the Corridor Vegetation Inspector the availability of planting sites.

Interim Completion of Work

Complete construction operations on projects 1007-11-79 and 1007-11-80 including all work except for all plantings, Landscape Planting Surveillance and Care Cycles, Native Seed Surveillance and Care Cycles, and portions of the weigh-in-motion system (equipment and signage north of Station 2415+00'SB' and the testing and warranty periods for the WIM and static scale), and reopen it to through traffic prior to 12:01 AM November 16, 2019.

If the contractor fails to complete all work, except for the items noted in the preceding paragraph, and to reopen IH 39 to through traffic prior to 12:01 AM November 16, 2019, the department will assess the contractor \$8,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, November 16, 2019. 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 remaining work (including the weigh-in-motion system equipment and signage north of Station 2415+00'SB', testing for the WIM and static scale, and all plantings) except for Landscape Planting Surveillance and Care Cycles, Native Seed Surveillance and Care Cycles, and the warranty periods for the WIM and static scale and reopen it to through traffic prior to 12:01 AM December 16, 2020.

If the contractor fails to complete all work, except for the items noted in the preceding paragraph, and to reopen IH 39 to through traffic prior to 12:01 AM December 16, 2020, the department will assess the contractor \$2,070 in interim liquidated damages for each calendar day that this work remains incomplete after 12:01 AM, December 16, 2020. An entire calendar day will be charged for any period of time within a calendar day that this work remains incomplete 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.

4. Traffic.

General

Accomplish the construction sequence, including the associated traffic control as detailed in the Construction Staging section of the plans, and as described in this Traffic article.

Do not begin or continue any work that closes traffic lanes outside the permitted lane closure times specified in this article.

Any revisions to traffic control plans shall adhere to article 'Notice to Contractor, Revisions to Traffic Control Plans' of these special provisions.

IH 39 shall remain open to through traffic at all times for the duration of this project except for approved lane closures or rolling closures as approved by the engineer. Single lane operation on IH 39 is only allowed during Permitted Lane Closure Times with approval of the engineer. Lane closures shall be according to the traffic control plans and shall have the approval of the engineer and the Traffic Management Center (TMC) at (414) 227-2142.

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

Stoughton School District

Stoughton Area School District
Department of Transportation
(608) 877-5063

McFarland School District

Nelson's Bus Service
(608) 205-9040

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

Cottage Grove

451 W Cottage Grove Rd
Cottage Grove, WI 53527
(608) 839-3931

Stoughton

246 E Main St
Stoughton, WI 53589
(608) 877-9020

Traffic operations during all stages

- Maintain two lanes of traffic in each direction at all times on IH 39**.
- Maintain mainline traffic on IH 39 on a paved concrete or hot mix asphalt surface at all times.
- Maintain a minimum lane width of 12-feet on IH 39 (16-foot minimum clear width when restricted to one lane).
- Maintain local access to residences.

*** Except during lane closures allowed as specified in the Lane Closures section.*

Coordinate and stage all construction activities within the areas of local traffic routes, as required to maintain a traveled way conforming to all above requirements.

Use drums and barricades to direct local vehicular and pedestrian traffic in the work zone and to protect and delineate hazards such as open excavations, abrupt drop-offs, and exposed manholes, inlets, hydrants, etc. The use of such devices shall be incidental to the operation which creates the hazard.

Place roadway signing as detailed on the plans and in conformance to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition. Traffic control shall be completely in place by the end of the working day of a traffic switch.

Do not deliver or store materials and equipment within open travel lanes or open side roads during any stage of construction.

Conduct operations in a manner that will cause the least interference to traffic and pedestrian movements. Maintain vehicle and pedestrian access at all times to buildings within the limits of construction.

Definitions

The following definitions apply to this contract:

Lane Closures

Single lane and shoulder closures on IH 39 may be permitted during permitted lane and shoulder closure times for work required to complete the HMA pavements. During the times when one lane is allowed to be closed, a minimum clear width of 16 feet, including the adjacent shoulder, shall be maintained at all times. Times listed for permitted lane closures include setup and breakdown of any equipment and traffic control devices.

Request approval from the engineer for all lane closures according to the "Wisconsin Lane Closure System Advanced Notification" section in this article of the special provisions. Include justification for the lane closure and the anticipated duration in the request. A request does not constitute approval. Terminate single lane closures at the end of the Permitted Lane Closure Times. Failure to obtain approval or reopen closed lanes prior to the required time shall be subject to assessments specified under the article "Lane Rental Fee Assessment".

Shoulders may be closed if required by the work operation, but the right and left shoulder may not be closed in the same area at the same time.

All lane and shoulder closures shall be removed when work is not in progress.

Provide arrow boards for use during all single lane closures according to the MUTCD. Arrow boards for single lane closures will be paid for under the item Traffic Control Arrow Boards for each day with a single lane closure where an arrow board is in use.

Lane and Shoulder Closure Times

Shoulder closures on IH 39 are allowed for the duration of the project, except that shoulders in the same direction of travel may not be closed concurrently.

IH 39 lane closures are allowed only at the times in the following tables and text. At all other times all lanes shall be fully open to traffic.

The engineer will have the ability to suspend work activities during the periods listed below in the event that undesirable traffic congestion develops that has the potential to cause lengthy motorist delay or unsafe working conditions.

Permitted Lane Closure Times

Day of the Week	IH 39/90
Monday	12:00 AM – 5:00 AM 8:00 PM – 11:59 PM
Tuesday	12:00 AM – 5:00 AM 8:00 PM – 11:59 PM
Wednesday	12:00 AM – 5:00 AM 8:00 PM – 11:59 PM
Thursday	12:00 AM – 5:00 AM 8:00 PM – 11:59 PM
Friday	12:00 AM – 5:00 AM 10:00 PM – 11:59 PM
Saturday	12:00 AM – 7:00 AM 9:00 PM – 11:59 PM
Sunday	12:00 AM – 7:00 AM 10:00 PM – 11:59 PM

For all freeway closures, a maximum of one lane and one shoulder may be closed at any one time at a specific location.

Lane closures should be continuous when possible. A two mile minimum spacing is required where continuous lane closures are not feasible or desirable.

Coordinate with the State Patrol through Jeff Gustafson of the Wisconsin Department of Transportation Madison Office at (608) 516-6400 or jeffrey.gustafson@dot.wi.gov.

Roadway Closures

Place Traffic Control Signs Portable Changeable Message for all lane and roadway closures as shown on the plans at least seven days prior to the lane or roadway closure. Install all signing and devices for detour routes. All lane closures are subject to the approval of the Region traffic engineer.

Advance Notification

Notify Dane County, the Town of Christiana, the Town of Pleasant Springs, and Dane County Sheriff's Department 48 hours in advance of the start of work, closures of existing streets, and prior to traffic control changes. Notifications must be given by 4:00 PM on Thursday for any such work to be done on the following Monday.

Notify State Patrol 48 hours in advance of closure of Madison SWEF #16.

Notify Stoughton and McFarland School Districts two weeks prior to construction. Also notify them one week prior to traffic switches and lane closures.

Advance notification as described above is considered incidental to the Traffic Control bid item.

Clear Zone Working Restrictions

Do not leave any slopes steeper than 3:1 within the clear zone or any drop offs at the edge of the traveled way greater than 2 inches which are not protected by temporary precast barrier. The temporary clear zone for IH 39 is 30 feet.

Do not perform heavy equipment work in the IH 39/90 median or adjacent to the shoulder at any time unless protected by concrete barrier in both directions except during night work with permitted lane closures.

Store materials or park equipment a minimum of 30 feet from the edge of the IH 39 traveled way. Equipment may be parked in the median if it is protected by concrete barrier.

If the contractor is unsure whether an individual work operation will meet the safety requirements for working within the clear zone, review the proposed work operation with the engineer before proceeding with the work.

Portable Changeable Message Signs – Message Prior Approval

After coordinating with department construction field staff, notify Jeff Gustafson at the Southwest Region Madison Office, (608) 516-6400, 3 weeks prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The department will review the proposed message and either approve the message or make necessary changes.

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

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

stp-108-057 (20161130)

Notify the engineer and WisDOT Traffic Management Center (TMC) at (414) 227-2142 if there are any changes in the schedule, early completions, or cancellations of scheduled work.

The department has the authority to disallow any requested closures or width restrictions.

Protection of Bridge Pier Columns

Bridge pier columns are to remain protected at all times throughout construction with concrete barrier temporary precast or guardrail.

Construction Access

Restrict work on IH 39 within closed shoulders as allowed by the plans or engineer. All construction access is prohibited from live IH 39 lanes unless a single lane closure is in place and is subject to approval of the engineer.

Construction traffic cannot travel counter-directional adjacent to IH 39 traffic except behind temporary concrete barrier.

Construction traffic may cross exit and entrance ramps to get to work zones during daytime hours only. The contractor shall use a flagger to direct construction vehicles across a ramp when a gap in ramp traffic is available. Ramp traffic shall not be flagged or stopped. The location of all crossings shall be in a visible location to ramp traffic and is subject to approval of the engineer.

General Access

U-Turns at existing maintenance crossovers or temporary crossovers between IH 39 northbound and southbound will be allowed when lane closures are in place for inside northbound and southbound passing lanes.

Construction operations affecting the traveling public's safety on IH 39 will not be allowed during snow and ice conditions, or any other adverse weather conditions, unless approved by the engineer.

Delivery of equipment to IH 39 requiring the use of a semi-tractor and trailer shall only occur during those hours identified as Permitted Lane Closure Times.

Delivery and removal of materials and equipment via IH 39 shall only take place during nighttime traffic control operations when a lane closure is in place.

Except during bridge demolition or placement of girders, the contractor shall maintain access for emergency vehicles to pass through the construction site on CTH B, CTH W, Drotning Road, and CTH MN. Do not store equipment or materials on CTH B, CTH W, Drotning Road, or CTH MN.

Provide access for State Patrol to Madison SWEF #16.

Access to sites for Native Prairie Seeding, Tree/Shrub and Living Snow Fence Planting and Care

Obtain prior approval from the engineer for access location(s) to each site identified in the plans for native prairie seeding, tree/shrub installation, and living snow fence installation. Contractor access to the sites shall be from side roads and interchange ramps and not from I-39/90, to the extent possible. Conduct operations in a manner that will cause the least interference to traffic.

Workers, material, and equipment should plan to access sites by traveling off-road within the highway right-of-way to the extent that the routes are navigable by vehicles.

Temporary lane closures and/or halting of traffic on live roadways is restricted to side roads only and shall be no longer than 2 hours per day for delivery of material and/or equipment. A flagging operation is required for any temporary lane closure on a side road. Temporary lane closures shall be according to SDD "Traffic Control For Lane Closure With Flagging Operation". Flagging operations shall not delay either direction of traffic more than 15 minutes and the contractor shall allow all vehicles in the queue to clear prior to subsequent flagging operations.

Ramps shall remain open to traffic at all times. Ramp shoulder closures will not be allowed within 1000 feet of a ramp gore. Ramp shoulder closures are limited to 2 hours per day for material and/or equipment delivery.

Access to a planting site directly from I-39/90 will only be allowed from a closed shoulder that is 10-feet minimum width. The location of I-39/90 shoulder closures, if necessary for material and/or equipment delivery, must be requested and pre-approved by the department. Include written justification for the shoulder closure and the anticipated duration in the request. The shoulder closure must occur on the same side of the road as the planting work. Workers, equipment, and materials are prohibited from crossing I-39/90. A request for I-39/90 shoulder closure does not constitute approval. I-39/90 shoulder closures must be entered in the Wisconsin Lane Closure System (LCS) as specified in this article. I-39/90 shoulder closures are prohibited when traffic is in a counter-directional configuration on one side of the roadway.

Close shoulders according to the requirements of standard detail drawings 'Traffic Control, Shoulder Closure on Divided Roadway, Speeds Greater than 40 M.P.H.' and 'Traffic Control, Work on Shoulder or Parking Lane, Undivided Roadway.'

All materials and equipment may be stored at the planting sites if located outside the planting boundary and inside the highway right-of-way as shown in the plans. No materials and equipment may be stored closer than 36 feet from the edge of any traveled way.

The use of temporary construction access point(s) to I-39/90 from private property is prohibited without the prior written approval from FHWA and the department. Follow the requirements specified in article "Notice to Contractor - New or Revised Temporary Construction Access to I-39/90" to request this type of access point. Cutting of access control fence must be repaired by the contractor at their expense.

Construction traffic cannot travel counter-directional adjacent to I-39/90 traffic except behind concrete barrier or guardrail.

U-Turns at existing maintenance crossovers or temporary crossovers between the I-39/90 northbound and southbound lanes will not be allowed.

Planting operations affecting the traveling public's safety on I-39/90 will not be allowed during snow and ice conditions, or any other adverse weather conditions, unless approved by the engineer.

If the contractor is unsure whether an individual work operation, for planting or seeding, will meet the traffic safety requirements of the department, review the proposed work operation with the engineer before proceeding with the work.

5. Lane Rental Fee Assessment.

A General

The contract designates some lane closures to perform the work. The contractor will not incur a Lane Rental Fee Assessment for closing lanes during the allowable lane closure times. The contractor will incur a Lane Rental Fee Assessment for each lane closure outside of the allowable lane closure times. If a lane 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 closure times are shown in the Traffic article.

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

Coordinate lane, ramp, 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 closures to run concurrent with lane closures on adjacent projects when possible. When lane 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, and each full closure of a roadway, per direction of travel, is as follows:

- \$10,000 per lane, per direction of travel, per hour broken into 15 minute increments

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, 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.

stp-108-065 (20161130)

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 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:

2019

- From noon Friday, May 24, 2019 to 6:00 AM Tuesday, May 28, 2019 for Memorial Day;
- From noon Wednesday, July 3, 2019 to 6:00 AM Monday July 8, 2019 for Independence Day;
- From noon Friday, August 30, 2019 to 6:00 AM Tuesday, September 3, 2019 for Labor Day;
- From 12:00 AM to 11:59 PM Monday, October 14, 2019 for Columbus Day;
- From noon Friday, November 22, 2019 to 6:00 AM Monday, November 25, 2019 for opening weekend of gun deer season;
- From noon Wednesday, November 27, 2019 to 6:00 AM Monday December 2, 2019 for Thanksgiving Day;
- From noon Tuesday, December 24, 2019 to 6:00 AM Thursday December 26, 2019 for Christmas Day;
- From noon Tuesday, December 31, 2019 to 6:00 AM Thursday January 2, 2020 for New Year's Day.

2020

- From noon Friday, May 22, 2020 to 6:00 AM Tuesday, May 26, 2020 for Memorial Day;
- From noon Friday, July 3, 2020 to 6:00 AM Monday July 6, 2020 for Independence Day;
- From noon Friday, September 4, 2020 to 6:00 AM Tuesday, September 8, 2020 for Labor Day;
- From 12:00 AM to 11:59 PM Monday, October 12, 2020 for Columbus Day;
- From noon Friday, November 20, 2020 to 6:00 AM Monday, November 23, 2020 for opening weekend of gun deer season;
- From noon Wednesday, November 25, 2020 to 6:00 AM Monday November 30, 2020 for Thanksgiving Day;
- From noon Thursday, December 24, 2020 to 6:00 AM Monday December 28, 2020 for Christmas Day;
- From noon Thursday, December 31, 2020 to 6:00 AM Monday January 4, 2021 for New Year's Day.

2021

- From noon Friday, May 28, 2021 to 6:00 AM Tuesday, June 1, 2021 for Memorial Day;
- From noon Friday, July 2, 2021 to 6:00 AM Tuesday July 6, 2021 for Independence Day;
- From noon Friday, September 3, 2021 to 6:00 AM Tuesday, September 7, 2021 for Labor Day;
- From 12:00 AM to 11:59 PM Monday, October 11, 2021 for Columbus Day;
- From noon Friday, November 19, 2021 to 6:00 AM Monday, November 22, 2021 for opening weekend of gun deer season;
- From noon Wednesday, November 24, 2021 to 6:00 AM Monday November 29, 2021 for Thanksgiving Day.

stp-107-005 (20050502)

7. Utilities.

This contract comes under the provisions of Administrative Rule TRANS 220.

107-065 (20080501)

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

Project 1007-11-79

Alliant Energy (WPL) – Electric

Alliant Energy – Electric has an existing underground crossing of IH 39 southbound at approximately Station 2057+00'SB'. The contractor shall exercise caution when working near these facilities and shall coordinate with Alliant Energy – Electric when grading near this location.

Alliant Energy - has both underground and overhead facilities in other portions of the project area that are not anticipated to be in conflict. All known conflicts have previously been addressed in other projects (IDs 1007-11-70, 1007-10-89 and 1007-10-88). The contractor shall exercise caution when working around these facilities.

The field contact for Alliant Energy – Electric is Mike Brolin, 4902 N. Biltmore Lane, Madison, WI 53718, telephone (608) 458-4871, email MichaelBrolin@alliantenergy.com.

Alliant Energy (WPL) – Gas

Alliant Energy – Gas has a 20-inch High Pressure Gas Main in the project area that crosses beneath IH 39 southbound at approximately Station 2079+75'SB'. No conflicts are anticipated. However, the contractor shall either hand-dig or use a vac-truck when excavating within 30-inches of the center of the main (20-inch main plus 18-inches on each side). Also, the contractor shall continue to hand-dig in the ditch area until the 20-inch gas main is a minimum of 48-inches beneath the grade. After rough grading is completed, the contractor shall notify Alliant Energy – Gas so they can re-survey their facilities in that area.

The field contact for Alliant Energy – Gas is Mike Brolin, 4902 N. Biltmore Lane, Madison, WI 53718, telephone (608) 458-4871, email MichaelBrolin@alliantenergy.com.

ATC Management Inc.

ATC Management Inc. has overhead facilities in the project area. No conflicts are anticipated. The contractor shall exercise caution when working around these facilities.

The following items must be followed by the highway contractor when working around ATC facilities:

- Maintain safe working clearance to the 345kV conductors at all times based on the latest OSHA clearances.
- Exercise caution when working and driving near transmission line structures to avoid damage.
- Unobstructed ATC access to the transmission line and structures must be maintained at all times.
- No stockpiling or staging of equipment/materials under or near the ATC transmission lines and structures.
- Any damage to ATC facilities must be reported immediately to Doug Vosburg at telephone (608) 877-7650.
- Any proposed grade change of greater than 1-foot from what is shown on the plan, in the area of the transmission line structures must be approved by ATC prior to that grade change being constructed.
- Electrical fields under 345kV transmission lines can cause induced voltage on ungrounded equipment that is under the line (such as large vehicles). This can be uncomfortable to persons who come in contact with ungrounded equipment. The contractor is responsible for installing any grounding necessary on their equipment to minimize this issue.
- Transmission line structures may have multiple ground rods. These ground rods may be located a significant distance from the structure. All ground rods are connected to the structure via a ground wire and could be buried to a depth of 18-inches or deeper. If the ground rods are disturbed through highway construction activities, the location must be noted and promptly reported to ATC.
- Vehicles used for sign installations need to be sufficiently grounded. ATC cannot take an outage on those transmission circuits for installation or maintenance of the sign.
- The sign will pick up a voltage as it is being lifted into place unless an electrical connection between the ground and the sign is maintained.
- A minimum of 20 feet of clear space is required on all sides of the ATC pole and a truck or crane that may be used to install any signs.

The field contact for American Transmission Company is Doug Vosburg, 2489 Rinden Road, Cottage Grove, WI 53527, telephone (608) 877-7650, mobile (608) 438-7650, email dvosburg@atcllc.com.

AT&T Wisconsin

AT&T Wisconsin has underground and overhead facilities throughout the project area. All known conflicts have been addressed under a different state project (ID 1007-10-88). The contractor shall exercise caution when working near these facilities.

The field contact for AT&T Wisconsin is Carol Anason, 316 West Washington Avenue, Madison, WI, 53701, telephone (608) 252-2385, mobile (920) 475-2977, email ca2624@att.com.

Charter Communications

Charter Communications has underground and overhead facilities throughout the project area. All known conflicts have been addressed under a different state project (ID 1007-10-88). The contractor shall exercise caution when working near these facilities.

The field contact for Charter Communications is Brandon Storm, 2701 Daniels Street, Madison, WI 53718, office telephone (608) 274-3822 Ext. 86825, cell (608) 444-9493, email brandon.storm@charter.com.

Frontier Communications

Frontier Communications has existing buried facilities in the project area. No conflicts are anticipated. The contractor shall exercise caution when working near these facilities.

The field contact for Frontier Communications is Ed Stieber, 100 Communication Drive, Sun Prairie, WI 53590, telephone (608) 837-1410, mobile (262) 325-7048, email edward.o.stieber@ftr.com.

TransCanada a/k/a ANR Pipeline

TransCanada has existing facilities within the project area but no conflicts are anticipated. The contractor shall exercise caution when working near these facilities.

The field contact for TransCanada is Dick Mellom, 6827 Consolidated School Road, Janesville, WI 53545, telephone (608) 373-6923, mobile (331) 256-0815, email dick_mellom@transcanada.com.

Project 1007-11-80

Alliant Energy (WPL) – Electric

Alliant Energy – Electric has both underground and overhead facilities in the project area, in the vicinity of the CTH 'N' interchange. All known conflicts in this area have been addressed under a different state project (ID 1007-10-86). The contractor shall exercise caution when working near these facilities.

Alliant Energy – Electric has both underground and overhead facilities in the project area, in the vicinity of the Williams Drive bridge. All known conflicts in this area have been addressed under a different state project (ID 1007-10-87). The contractor shall exercise caution when working near these facilities.

Alliant Energy – Electric has both underground and overhead facilities in the project area, in the vicinity of the CTH 'MN' bridge. All known conflicts in this area have been addressed under a different state project (ID 1007-10-84). The contractor shall exercise caution when working near these facilities.

Alliant Energy - has both underground and overhead facilities in other portions of the project area that are not anticipated to be in conflict. The contractor shall exercise caution when working around these facilities.

The field contact for Alliant Energy – Electric is Mike Brolin, 4902 N. Biltmore Lane, Madison, WI 53718, telephone (608) 458-4871, email MichaelBrolin@alliantenergy.com.

Alliant Energy (WPL) – Gas

Alliant Energy – Gas has both underground facilities in the project area, in the vicinity of the CTH 'N' interchange. All known conflicts in this area have been addressed under a different state project (ID 1007-10-86). The contractor shall exercise caution when working near these facilities.

Alliant Energy – Gas has underground facilities in the project area, in the vicinity of the CTH 'MN' bridge. All known conflicts in this area have been addressed under a different state project (ID 1007-10-84). The contractor shall exercise caution when working near these facilities.

The field contact for Alliant Energy – Gas is Mike Brolin, 4902 N. Biltmore Lane, Madison, WI 53718, telephone (608) 458-4871, email MichaelBrolin@alliantenergy.com.

ATC Management Inc.

ATC Management Inc. has overhead facilities in other portions of the project area that are not anticipated to be in conflict. The contractor shall exercise caution when working around these facilities.

The following items must be followed by the highway contractor when working around ATC facilities:

- Maintain safe working clearance to the 345kV conductors at all times based on the latest OSHA clearances.
- Exercise caution when working and driving near transmission line structures to avoid damage.

- Unobstructed ATC access to the transmission line and structures must be maintained at all times.
- No stockpiling or staging of equipment/materials under or near the ATC transmission lines and structures.
- Any damage to ATC facilities must be reported immediately to Doug Vosburg at telephone (608) 877-7650.
- Any proposed grade change of greater than 1-foot from what is shown on the plan, in the area of the transmission line structures must be approved by ATC prior to that grade change being constructed.
- Electrical fields under 345kV transmission lines can cause induced voltage on ungrounded equipment that is under the line (such as large vehicles). This can be uncomfortable to persons who come in contact with ungrounded equipment. The contractor is responsible for installing any grounding necessary on their equipment to minimize this issue.
- Transmission line structures may have multiple ground rods. These ground rods may be located a significant distance from the structure. All ground rods are connected to the structure via a ground wire and could be buried to a depth of 18-inches or deeper. If the ground rods are disturbed through highway construction activities, the location must be noted and promptly reported to ATC.
- Vehicles used for sign installations need to be sufficiently grounded. ATC cannot take an outage on those transmission circuits for installation or maintenance of the sign.
- The sign will pick up a voltage as it is being lifted into place unless an electrical connection between the ground and the sign is maintained.
- A minimum of 20 feet of clear space is required on all sides of the ATC pole and a truck or crane that may be used to install any signs.

The field contact for American Transmission Company is Doug Vosburg, 2489 Rinden Road, Cottage Grove, WI 53527, telephone (608) 877-7650, mobile (608) 438-7650, email dvosburg@atcllc.com.

AT&T Wisconsin

AT&T Wisconsin has both underground and overhead facilities in the project area, but no conflicts are anticipated. The contractor shall exercise caution when working near these facilities.

The field contact for AT&T Wisconsin is Carol Anason, 316 West Washington Avenue, Madison, WI, 53701, telephone (608) 252-2385, mobile (920) 475-2977, email ca2624@att.com.

Charter Communications

Charter has existing buried and overhead fiber optic lines in the CTH 'N' interchange area. All known conflicts have been addressed under a different state project (ID 1007-10-86). The contractor shall exercise caution when working near these facilities.

Charter has existing buried fiber optic line near the CTH MN underpass area at Station 2388+75'SB'. All known conflicts have been addressed under a different state project (ID 1007-11-76). The contractor shall exercise caution when working near these facilities.

The field contact for Charter Communications is Brandon Storm, 2701 Daniels Street, Madison, WI 53718, office telephone (608) 274-3822 Ext. 86825, cell (608) 444-9493, email brandon.storm@charter.com.

Frontier Communications

Frontier Communications has existing buried facilities along the north side of CTH 'MN'; this buried copper cable crosses beneath northbound IH 39 at approximately Station 2388+75'SB'. No conflicts are anticipated. The contractor shall exercise caution when working near these facilities.

The field contact for Frontier Communications is Ed Stieber, 100 Communication Drive, Sun Prairie, WI 53590, telephone (608) 837-1410, mobile (262) 325-7048, email edward.o.stieber@ftr.com.

TransCanada a/k/a ANR Pipeline

TransCanada has a 16-inch steel high pressure gas pipeline that crosses beneath IH 39 near Station 2310+95'SB'. Relocation of this pipeline is not required. The contractor shall exercise caution when working near these facilities. In addition, the highway contractor shall employ the following special construction techniques when working in the vicinity of this gas pipeline.

- No ground disturbance shall be made within 25-feet, measured at right angles, of that pipeline except in the presence of a TransCanada field representative.
- Notice of at least 72 hours in advance of construction must be provided. The highway contractor shall contact the following TransCanada field representative: Dick Mellom, mobile phone number (331) 256-0815.
- TransCanada will arrange for a representative to be on site when work is occurring within 25-feet of the pipeline. After hours, the highway contractor shall call 1 (800) 447-8066.
- If needed, the highway contractor shall employ a hydro-vac or utilize hand methods to expose the TransCanada buried pipeline prior to the use of mechanical equipment within 15-feet of the pipeline.
- In the event of equipment crossings outside of existing road right-of-way or wherever the
- TransCanada representative determines that inadequate cover exists, the highway contractor shall install and maintain temporary crossings of TransCanada' pipeline(s) at location(s) specified by TransCanada and that are/is perpendicular to TransCanada pipeline(s). A minimum of 5 feet of total cover over TransCanada pipeline(s) is required. If fill is required to obtain the minimum cover, a suitable material (preferably a bank run gravel material, or a combination of wooden mats and bank run gravel, or a TransCanada approved "Portable Land Bridge") will be placed on the existing surface of the ground over the pipeline(s) from a point 15 feet ahead of the pipeline crossing to a point 15 feet beyond the pipeline crossing. The crossing area should be a minimum of 20 feet wide so as to adequately bear the crossing weights of the heavy equipment. All vehicular traffic will cross TransCanada pipeline(s) at these designated locations only.

The field contact for TransCanada is Dick Mellom, 6827 Consolidated School Road, Janesville, WI 53545, telephone (608) 373-6923, mobile (331) 256-0815, email dick_mellom@transcanada.com.

Windstream a/k/a McLeod USA

Windstream has existing underground facilities in the project area, in the vicinity of the CTH 'MN' bridge. All known conflicts in this area have been addressed under a different state project (ID 1007-10-84). The contractor shall exercise caution when working near these facilities.

The field contact for Windstream Communications is Kevin Parris, 1858 Wright Street, Madison, WI, 53714, telephone (608) 819-5016, mobile (608) 416-3291, email kevin.j.parris@windstream.com.

8. Other Contracts.

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

It is expected that routine maintenance by the county and town personnel may be required at certain times concurrently with work being done under this contract

The following contracts are anticipated to be under construction within the time period of the contract, unless otherwise indicated:

Project 1007-12-74

This project involves temporary widening of northbound IH 39 from CTH AB to the Beltline Interchange, Dane County in 2019. Traffic control coordination with this project will be required.

Project 1007-12-75

This project involves reconstruction of northbound and southbound IH 39 from CTH AB to the Beltline Interchange, Dane County in 2020. Construction coordination with this project will be required for installation of Weight-in-Motion equipment and Type 1 signs along southbound IH 39 from Station 2415+00'SB' to the Beltline Interchange.

9. Timely Decision Making Manual.

Use the Timely Decision Making Manual (TDM) on this contract. Coordinate with the department to modify the various published tools as necessary to meet the particular project needs and determine how to implement those tools under the contract. Ensure the full participation of the contractor and its principal subcontractors throughout the term of the contract.

Forms and associated guidance are published in the TDM available at the department's Highway Construction Contract Information (HCCI) web site at:

[Timely Decision Making Manual \(TDM\)](#)

stp-105-005 (20151210)

10. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment.

Construction operations will be allowed at night with the exception of the following operations:

Do not perform pile driving between 10:00 PM and 6:00 AM.

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

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Mark Sponem at (608) 245-2627. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

12. Erosion Control.

Supplement standard spec 107.20 with the following:

Unless otherwise directed by the engineer at the end of each day, drive a tracked vehicle up and down all untracked or newly graded slopes to reduce the erosive potential of the slopes. The tracks shall be roughly perpendicular to the direction of stormwater runoff flow down the slopes. Upslope tracking is incidental to the cost of grading.

Delete the last sentence of standard spec 107.20(7) and replace it with the following:

Provide the permanent erosion control measures immediately after performing grading operations, unless temporary erosion control measures are specified or authorized by the engineer.

(5/14/2013)

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Jennifer Grimes at (608) 884-1147.

stp-107-054 (20080901)

14. Environmental Protection.

Broom or brush any mud, dirt, or debris deposited on any roads, as a result of construction activity at the end of the day and as directed by the engineer.

Supplement standard spec 107.18 as follows:

All equipment to be used on the native seed and tree/shrub planting sites must be free of material that may contain weed seed upon entering or exiting the site.

Ensure that all equipment that has been in contact with areas potentially infested with invasive plant species has been decontaminated. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources) for disinfection:

1. Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Clean all equipment with hot water of 105°F to 110°F for a period of 30 minutes or hot water of 140°F for a period of 5 minutes. After cleaning, dry all equipment in a sunny location for at least three days.

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

Make equipment available for inspection by the Corridor Vegetation Inspector prior to operating within the planting site limits.

15. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels before being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Guidelines from the Wisconsin Department of Natural Resources for disinfection are available at:

<http://dnr.wi.gov/topic/invasives/disinfection.html>

Use the following inspection and removal procedures:

1. Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can before leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
 - 4.1. Washing with ~212 F water (steam clean), or
 - 4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
 - 4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104° F) application.

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

stp-107-055 (20130615)

16. Environmental Protection, Treatment of Water Adjacent to Wetlands or Waterways.

Spoil material should be stockpiled on uplands an adequate distance from a stream, wetland, and/or any open water created by excavation. Filter fabric silt fence shall be installed between spoil material and the stream or wetland, and between the entire disturbed area and the waterway.

If dewatering is required for any reason, the water must be pumped into a properly sized and constructed settling basin before the clean/filtered water is allowed to enter any waterway or wetland. The "clean/filtered" water must be free of suspended solids and contaminants. A properly designed and constructed settling basin will take into consideration the amount of space for construction, desired pumping speed, number/size of pumps likely to be used, and the sedimentation rate of soils to be encountered. See DNR Technical Standard 1061 for method selection by soil type. The final dewatering plan must be submitted and approved in the ECIP.

The cost of dewatering is considered incidental to construction.

17. Erosion Control Structures.

Within seven calendar days after the commencement of work on the bridge superstructure, place all permanent erosion control devices, including riprap, erosion mat, ditch checks, seed, fertilizer, mulch, soil stabilizer, or any other item required by the contract or deemed necessary by the engineer. These devices shall be in place in the area under the bridge and on both sides of the roadway, from the waterway to a point 100-feet behind the backwall of the abutment. Within said limits, place these devices to a height equivalent to the calculated water elevation resulting from a storm that occurs on the average of once every two years (Q2) as shown on the plan, or as directed by the engineer. Prior to initial

construction operations, place turbidity barriers, silt screens, and other temporary erosion control measures as shown on the plans, and remove them after the permanent erosion control devices are in place unless directed otherwise by the engineer.

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

107-070 (20030820)

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

James Gondek, License Number All-108099 and Angela Voit, License Number 112673, inspected Structures B-13-164, B-13-148, B-13-146, and B-13-140 for asbestos on December 5-7, 2005 and inspected Structure B-13-160 for asbestos on October 21, 2004. No regulated Asbestos Containing Material (RACM) was found on these structures. A copy of the inspection report is available from: Jennifer Grimes, (608) 884-1147.

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Jennifer Grimes, WisDOT SW Region, 2101 Wright Street, Madison, WI 53704 and DOT BTS-ESS attn: Hazardous Materials Specialist, PO Box 7965, Madison, WI. 53707-7965. In addition, comply with all local or municipal asbestos requirements.

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

Site Name: Structure B-13-164, IH 90 eastbound over CTH B
Site Address: Lat: 42°58'01.40"N, Long: 89°06'22.13"W
Section 20 Town 06N Range 12E Town-Christiana
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Mark Sponem
Phone: (608) 245-2627
Age: 57 years old. This structure was constructed in 1961.
Area: 6580 SF of deck

Site Name: Structure B-13-148, IH 90 eastbound over CTH W
Site Address: Lat: 42°58'45.03"N, Long: 89°07'18.02"W
Section 18 Town 06N Range 12E Town-Christiana
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Mark Sponem
Phone: (608) 245-2627
Age: 57 years old. This structure was constructed in 1961.
Area: 6718 SF of deck

Site Name: Structure B-13-146, IH 90 eastbound over Drotning Road
Site Address: Lat: 42°59'32.40"N, Long: 89°08'22.07"W
Section 12 Town 06N Range 11E Town-Pleasant Springs
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Mark Sponem
Phone: (608) 245-2627
Age: 57 years old. This structure was constructed in 1961.
Area: 7915 SF of deck

Site Name: Structure B-13-140, IH 90 eastbound over CTH MN
Site Address: Lat: 43°00'47.23"N, Long: 89°14'02.41"W
Section 06 Town 06N Range 11E Town-Pleasant Springs
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Mark Sponem
Phone: (608) 245-2627
Age: 57 years old. This structure was constructed in 1961.
Area: 7523 SF of deck

Site Name: Structure B-13-160, IH 90 eastbound over Door Creek
Site Address: Lat: 43°00'54.40"N, Long: 89°14'11.94"W
Section 06 Town 06N Range 11E Town-Pleasant Springs
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Mark Sponem
Phone: (608) 245-2627
Age: 57 years old. This structure was constructed in 1961.
Area: 4754 SF of deck

Insert the following paragraph in Section 6.g.:

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

107-125 (20120615)

19. Notice to Contractor - Construction Safety

Supplement standard spec 107 as follows:

Description

This specification describes minimum occupational safety and health requirements for the prime contractor and their subcontractors performing work on this project. The fundamental objective of these requirements is to eliminate construction related injuries and incidents so that their associated impacts to workers and the public, budgets and schedules are avoided or minimized.

Definitions

Certified Crane Operator. To be certified a crane operator one must pass both written and practical tests offered by a nationally accredited testing organization, such as the National Commission for the Certification of Crane Operators (NCCCO) or the Operating Engineers Certification Program (OECF).

Competent Person. One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Critical Lift. A critical lift applies to, but is not limited to the following: any crane lift or hoisting operation that exceeds 75 percent of the rated capacity of the crane, requires the use of more than one crane or hoisting device, involves barge-mounted cranes, where the center of gravity could change, lifts where existing outriggers cannot be fully extended due to site constraints, lifts involving multiple lift rigging assemblies or other non-routine/difficult rigging arrangements.

Project Safety Officer (PSO). The person or persons designated by the department to coordinate implementation of a construction safety management system, including risk assessment, training, evaluating effectiveness, corrective/preventive action, and management review.

Qualified Person. One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve or resolve problems relating to the subject matter, the work, or the project.

Safety Representative (SR). A person designated by the contractor to develop and implement the company's health and safety plan, assess job hazards, and identify and carry out corrective and preventive actions.

General Requirements

Notify the department immediately of any agency compliance inspections, including but not limited to the Occupational Safety and Health Administration (OSHA).

Report all project-related fatalities and OSHA-recordable injuries and illnesses that result in inpatient hospitalizations within 8 hours to the Project Safety Officer (PSO). Report all other project-related OSHA-recordable injuries and illnesses monthly to the PSO.

Safety Representative Requirements

Provide at least one Safety Representative (SR). Each SR shall perform inspections, safety observations and other safety-related duties on-site on a weekly basis, at a minimum. Provide an alternate SR in the event of illness or other unforeseen circumstances.

Each SR and alternate SR shall have training, knowledge and experience in construction safety and health, including but not limited to a current OSHA 10-hour Occupational Safety and Health Training Course in Construction Safety and Health. Provide evidence of SR certifications, qualifications and training to the PSO.

Each SR and alternate SR shall attend a 2-hour Construction Safety Awareness Training provided by the department at the beginning of the project and at least once every two years. The SR shall communicate and distribute materials provided in the 2-hour Construction Safety Awareness Training to their site workers prior to starting site construction activities.

Requirements for Construction Health and Safety Programs

In addition to implementing programs to meet the requirements of OSHA Construction Safety and Health standards, develop a written safety plan for the work to be performed. Note: General guidance is provided in Section 1-35.1.2 of the Construction and Materials Manual.

Traffic Control and Vehicle Collision Prevention/Risk Reduction

All vehicles and mobile equipment shall use high-intensity rotating, flashing, oscillating, or strobe lights according to Section 6G.02 of the Manual of Uniform Traffic Control Devices (FHWA, 2009).

Provide crash cushions or truck (or trailer)-mounted attenuators (TMAs) on shadow vehicles to protect workers, vehicles, and mobile equipment from vehicle collisions according to the Manual of Uniform Traffic Control Devices (FHWA, 2009, Section 6F.86). Coordinate with the engineer at least 72 hours before placing a TMA in service.

Personal Protective Equipment (PPE)

Minimum Requirement Personal Protective Equipment (PPE) to be worn in Construction Work Areas:

ASTM F2413-11 safety-toed boots rated for impact and puncture resistance (PR) shall be worn.

ANSI Z-87+ impact-resistant safety glasses with sideshields shall be worn. Requirements for faceshields, goggles, welding shades, etc. shall be determined by the SR.

ANSI Z-89.1 Class G or E hard hats where there is potential for impact or injury to the head.

Daytime Work: ANSI/ISEA 107-2004 Class 2 or 3 high visibility vests at all times and Type E pants for flaggers and other personnel working on the traffic side of concrete barriers (yellow/lime).

Nighttime Work: ANSI/ISEA 107-2004 Class 2 or 3 retro-reflective safety vests (yellow/lime) and Type E pants (Type 3 ensemble) and a hard-hat-mounted LED light ("miner's lamp").

Hearing protection shall be used, if the work site noise exceeds 90 decibels (dBA), as 8-hour average exposure measurements. [29 CFR 1926.52 and .101]

Walking and Working Surfaces

Keep all accessible work areas and passageways free from debris, obstructions and other slip, trip and fall hazards.

Excessive Driving Hours/Extended Work Shifts

Distribute a one-page handout to each truck driver accessing the work zone to increase their awareness of hazards related to extended work shifts. The department will make the handout available electronically.

Cranes and Hoists.

Ensure that all crane operators have been certified by the National Commission for the Certification of Crane Operators (NCCCO) or by the Operating Engineer Certification Program (OECF) if they will be operating a 10-ton or greater capacity crane or if they are involved in critical lifts.

Provide critical lift plans to the department at least 72 hours prior to a critical lift. The contractor is responsible for all submittals, assumptions, calculations, and conclusions. Have a professional engineer, registered in the state of Wisconsin and knowledgeable of the specific site conditions and requirements, verify the adequacy of the design. Submit one copy of each design, signed and sealed by the same professional engineer verifying the design, to the engineer.

Crane operators shall safely terminate hoisting operations in the event of wind conditions that exceed the original equipment manufacturer's specifications for safe operation.

Work near American Transmission Company (ATC) 69 kV, 138 kV, and 345 kV Overhead Electric Lines

WisDOT is aware of possible induced voltage on metal objects from overhead 69 kV, 138 kV, and 345 kV electric lines. WisDOT staff are utilizing personal protective equipment (PPE) in the form of insulated gloves when inspecting or working on metal objects in the vicinity of these lines. Please use PPE according to your company policies and OSHA requirements. Consult the current version of the ATC guidance document "Induced Voltage and Nuisance Shocks" (ATC, 2013) for best practices to prevent nuisance shocks when working around these overhead lines.

Documentation and Records

Maintain documents and records and ensure that they are readily available upon request. At a minimum this includes:

- a. Written Safety Plan for Work Activities to be Performed
- b. Names of Safety Representatives and copies of their OSHA 10-Hour Occupational Safety and Health Training Course in Construction Safety and Health training cards.

- c. Names of Competent Persons and Qualified Persons (if required by OSHA for the work performed).
- d. Reports of inspections of the job sites, materials, and equipment [29 CFR 1926.20(b)(2)].
- e. Documentation that the SR has communicated and distributed materials from the Construction Safety Awareness Training to their site workers. At a minimum this will include a dated sign-in sheet with the names and signatures of the workers trained. The department will provide a sign-in sheet template electronically.
- f. Project site OSHA 300 Log (no worker names)[29 CFR 1904.29]
- g. Project site OSHA 301 Incident Report (no worker names) [29 CFR 1904.29]
- h. Hazard Communication Program [29 CFR 1926.59]
 - i. Hazardous Chemical Inventory,
 - ii. Location of Safety Data Sheets (SDSs)
 - iii. Hazard Warning Symbols
 - iv. Information and training requirements.
- i. Exposure Monitoring results (if monitoring is required under a specific OSHA standard-no worker names)
- j. Crane operator certifications (if applicable)
- k. Fall Protection Plan (if applicable) [29 CFR 1926.500-.503 and 1926.104]
- l. Confined Space Entry Procedures (if applicable). [29 CFR 1926.1200-.1213]
- m. Lockout/Tagout Procedures (if applicable). [29 CFR 1926.417 and .702]
- n. Respiratory Protection Program (if applicable) [29 CFR 1926.103 and 1910.134(c)]
- o. Emergency Action Plan [29 CFR 1926.35]
 - v. Emergency escape procedures and emergency escape route assignments
 - vi. Procedures to be followed by employees who remain to operate critical equipment before they evacuate
 - vii. Procedures to account for all employees after emergency evacuation has been completed
 - viii. Rescue and medical duties for those employees who are to perform them;
 - First Aid and Medical Treatment Procedures [29 CFR 1926.50]
 - Equipment and Supplies
 - Names of persons certified in first aid
 - Location of the nearest medical facility.
 - ix. The preferred means of reporting fires and other emergencies
 - x. Prime contractor's alarm system
 - xi. Names or regular job titles of persons who can be contacted for further information or explanation of duties under the plan.
- p. Fire Protection Program (if applicable) [29 CFR 1926.150]
- q. Fire Prevention Plan and Hot Work Permit procedures (if applicable) [29CFR 1926.352]

(2/21/17)

20. Notice to Contractor – New or Revised Temporary Construction Access to I-39/90.

Traffic control and staging plans/details contained within the project plans shall be followed by the contractor. The contractor's use of any construction access point(s) to I-39/90 which is/are not shown in the plans is prohibited without the prior written approval from FHWA and the department. To obtain written approval for temporary access to I-39/90 during construction, the contractor shall provide the following:

Details on existing or new project plan sheets that show:

- The location, dimensions, grades, and slopes for any new/revised temporary construction access point(s) to I-39/90.
- Traffic control measures that are required to manage this access change.
- Traffic control measures that are required to secure/close any new/revised construction access points when not in use.
- Erosion control measures required to manage this change, including the location(s) of any tracking pad(s).

Written summary of proposed temporary construction access change including:

- Timeframe to construct, duration in place, and time to remove.
- Cost of proposed temporary access including grading, traffic control, erosion control, and all other items and incidentals to implement and remove the access.
- Benefits in implementing the change (i.e., cost or time savings, ease of construction, increased safety to workers, and the motoring public).
- Signed Construction Permit if temporary access traverses private property.

The above information shall be provided to the engineer a minimum of 14 calendar days prior to the contractor's anticipated implementation of the new/revised temporary construction access to I-39/90. The request will be reviewed, and if warranted, concurred with designated I-39/90 CMT Traffic and Project staff, the engineer, and WisDOT Central Office Field Construction Coordinator (if warranted). If these parties concur with the request, it will be forwarded to FHWA for review and processing a minimum of 7 calendar days in advance of the contractor's anticipated implementation.

The engineer shall correspond with the following FHWA and department staff for concurrence:

- Anna Varney, FHWA, Anna.Varney@dot.gov
- Rich Cannon, I-39 CMT Traffic, Richard.Cannon@dot.wi.gov
- Jeff Gustafson, I-39 CMT Traffic, Jeffrey.Gustafson@dot.wi.gov

In the event of an emergency situation the above review process, including the extent of information required to be submitted and approval timeframes, can be modified if agreed upon by all parties.

(10/3/2016)

21. Notice to Contractor – Revisions to Traffic Control Plans.

The traffic control and staging plans/details contained within the project plans have been developed from an FHWA approved Transportation Management Plan (TMP). According to TMP requirements, the DEPARTMENT shall revise the TMP during construction if conditions warrant. This specification shall be followed to obtain concurrence for implementation of any proposed changes to construction phasing/staging that will affect the traffic patterns depicted in the plans.

Submit traffic control revision(s) to the engineer a minimum of 21 calendar days prior to the anticipated implementation of the proposed change(s). Include the following:

Detail on existing or new project plan sheets that show:

- The revised traffic pattern, widths, grades, temporary pavement, signs, traffic control devices, pavement marking, flaggers, time of day, width restrictions, and any other details required to convey a new or revised traffic control design.
- Erosion control measures required, including the location(s) of any tracking pad(s).

Written summary of proposed traffic control change including:

- Benefits to implementing the change (i.e., cost or time savings, ease of construction, increased safety to workers, and the motoring public).
- Timeframe to construct, duration in place, and time to remove.

The request will be reviewed, and if warranted, concurred with designated I-39/90 Corridor Management Team (CMT) staff, the engineer, and WisDOT Central Office Field Construction Coordinator (if warranted). If the request is approved, it will be forwarded to FHWA for review and processing a minimum of 7 calendar days in advance of the contractor's anticipated implementation.

The engineer shall correspond with the following FHWA and department staff to obtain concurrence:

- Anna Varney, FHWA, Anna.Varney@dot.gov
- Rich Cannon, I-39 CMT Traffic, Richard.Cannon@dot.wi.gov
- Jeff Gustafson, I-39 CMT Traffic, Jeffrey.Gustafson@dot.wi.gov

(10/3/2016)

22. Notice to Contractor – Airport Operating Restrictions – Site Specific.

The Federal Aviation Administration (FAA) has height restrictions surrounding select airports. The department has obtained Temporary Determination of No Hazard to Air Navigation for all temporary structure (i.e. crane) erections associated with bridge, noise barrier, and retaining wall construction at the following location. A copy of the determination can be obtained through the engineer.

Project ID	Structure	Location	Latitude	Longitude	Heights	Issue Date	Expiration Date	Aeronautical Study No.
1007-11-79	Crane (Temporary for B-13-712)	SB IH 39 and CTH B	42-58-00.07 N NAD 83	89-06-20.25 W	160 feet AGL 1141feet AMSL	3/6/2018	9/6/2019	2018-AGL-3668-OE
1007-11-79	Crane (Temporary for B-13-714)	SB IH 39 and CTH W	42-58-43.96 N NAD 83	89-07-16.49 W	160 feet AGL 1119feet AMSL	3/6/2018	9/6/2019	2018-AGL-3669-OE
1007-11-79	Crane (Temporary for B-13-716)	SB IH 39 and Drotning Road	42-59-31.16 N NAD 83	89-08-18.99 W	160 feet AGL 1062feet AMSL	3/6/2018	9/6/2019	2018-AGL-3670-OE
1007-11-79	Crane (Temporary for C-13-3083)	SB IH 39 and Box Culvert	42-59-34.56 N NAD 83	89-08-25.72 W	160 feet AGL 1057feet AMSL	3/6/2018	9/6/2019	2018-AGL-3671-OE
1007-11-79	Crane (Temporary for C-13-3084)	SB IH 39 and Box Culvert	42-59-55.39 N NAD 83	89-09-48.53 W	160 feet AGL 1047feet AMSL	3/6/2018	9/6/2019	2018-AGL-3672-OE
1007-11-80	Crane (Temporary for C-13-3089)	SB IH 39 and Box Culvert	43-00-21.45 N NAD 83	89-12-49.11 W	160 feet AGL 1030feet AMSL	3/6/2018	9/6/2019	2018-AGL-3673-OE
1007-11-80	Crane (Temporary for B-13-722)	SB IH 39 and CTH MN	43-00-46.14 N NAD 83	89-13-59.43 W	160 feet AGL 1047feet AMSL	3/8/2018	9/8/2019	2018-AGL-3674-OE
1007-11-80	Crane (Temporary for B-13-724)	SB IH 39 and Door Creek	43-00-53.37 N NAD 83	89-14-11.61 W	160 feet AGL 1020feet AMSL	3/8/2018	9/8/2019	2018-AGL-3675-OE

As a condition of the Determinations, cranes shall be marked and/or lit according to FAA Advisory Circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, flags/red lights – Chapters 3 (Marked), 4, 5 (Red) and 12.

For all other locations not listed under the lighting requirements above, marking and lighting are not necessary for aviation safety. However, if marking and/or lighting are accomplished on a voluntary basis, the contractor is encouraged to install and maintain it according to FAA Advisory Circular 70/7460-1 K Change 2.

Lower any temporary structure (i.e. crane) to the ground when not in use and also during the hours between sunset and sunrise.

Notify the manager of Jana Airport at (608) 884-3403 and the manager of Blackhawk Airfield at (608) 334-4932 at least 3 business days prior to any temporary structure being erected and again when the temporary structure is removed from the site.

Any failure or malfunction that lasts more than 30 minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867, so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

Any height of a temporary structure exceeding above ground level (AGL) or above mean sea level (AMSL), as listed in the temporary determination, will result in a substantial adverse effect and will warrant a Determination of Hazard to Air Navigation.

The determination expires unless extended, revised or terminated by the issuing FAA office. If an extension is needed, the contractor must request an extension to the effective period of the determination. The request must be postmarked or delivered, to the office below, at least 30 days prior to the expiration date:

Federal Aviation Administration
Air Traffic Airspace Branch, ASW-520
2601 Meacham Blvd.
Fort Worth, TX 76137-0520

For questions on extensions to the effective period of the determinations, contact the FAA office at (847) 294-7575 and reference the Aeronautical Study Number.

Any changes in coordinates and/or heights will void the determination. Any future construction or alteration, including increase to height, requires a separate notice to the FAA.

Determinations include temporary construction equipment such as cranes, derricks, and other equipment, which may be used during actual construction. Equipment shall not exceed the overall heights as indicated in the determination. The contractor must request separate notice to the FAA if equipment has a height greater than the determination.

The contractor must copy the engineer on any correspondence with the FAA.

A determination concerns the effect of temporary structures on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

(1/5/2015)

23. Notice to Contractor, Subcontractor Pre-Certification.

Pre-certification is required for native prairie seeding (with follow-up surveillance and care), and tree/shrub installation (with follow-up surveillance and care).

Subcontractors from each of the pre-certified lists titled "Native Seed Installation and Restoration Management" and "Woody Vegetation Installation and Restoration Management" shall perform the work associated with the pertinent items listed further in this article. The same subcontractor is allowed if that subcontractor is on both lists.

The pre-certified lists are located on the department's Highway Construction Contract Information (HCCI) web site.

Subcontractors or entities not on the department list are not permitted to perform the work.

Native Seed Installation and Restoration Management pre-certification is required for the following pay items:

SPV.0005.501 Pre-Planting Vegetation Treatment
SPV.0005.502 Seed Bed Preparation
SPV.0060.506 Native Seed Surveillance and Care Cycles
SPV.0085.509 Seeding Native Mix N1
SPV.0085.510 Seeding Native Mix N2
SPV.0085.511 Seeding Native Mix N3
SPV.0085.512 Seeding Native Mix N4

Woody Vegetation Installation and Restoration Management pre-certification is required for the following pay items:

632.0101 Trees
632.0201 Shrubs
632.9101 Landscape Planting Surveillance and Care Cycles
SPV.0035.501 Topsoil Special
SPV.0060.508 Planting Living Snow Fence

At the preconstruction meeting or 14 days prior to the start of construction, whichever date is earlier, submit the names, positions, experience, and qualifications of any personnel to be used on this project that were not listed in the Request for Qualifications. Any new personnel must be approved by the department before vegetation management work begins.

24. Clearing and Grubbing, Items 201.0105 and 201.0205.

Supplement standard spec 201.3 with the following:

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

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

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

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

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

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

Follow and obey the following DATCP order:

ATCP 21.17 Emerald Ash Borer, Import Controls and Quarantine

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

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

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

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

2. Regulated items.

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

- a) The emerald ash borer, *Agrilus planipennis* Fairmaire in any living stage.
- b) Ash trees.
- c) Ash limbs, branches, and roots.
- d) Ash logs, slabs or untreated lumber with bark attached.
- e) Cut firewood of all non-coniferous species.
- f) Ash chips and ash bark fragments (both composted and uncomposted) larger than one inch in diameter.
- g) Any other item or substance that may be designated as a regulated item if a DATCP pest control official determines that it presents a risk of spreading emerald ash borer and notifies the person in possession of the item or substance that it is subject to the restrictions of the regulations.

Regulatory Considerations

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

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

Chipped ash trees

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

(8/18/2014)

25. Removing Old Structure Over Waterway With Minimal Debris Station 2400'SB'+48.95, Item 203.0600.S.704.

Conform to standard spec 203 as modified in this special provision.

Add the following to standard spec 203:

203.3.6 Removals Over Waterways and Wetlands

203.3.6.2 Removing Old Structure Over Waterway with Minimal Debris

- (1) Remove the existing Structure B-13-160 over the Door Creek in large sections and conforming to the contractor's approved structure removal and clean-up plan. During superstructure removal, prevent all large pieces and minimize the number of small pieces from entering the waterway or wetland. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.
- (2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:
 - Methods and schedule to remove the structure.
 - Methods to control potentially harmful environmental impacts.
 - Methods for superstructure removal that prevent all large pieces and minimize the number of small pieces from entering the waterway or wetlands.
 - Methods to control dust and contain slurry.
 - Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
 - Methods for cleaning the waterway or wetlands.
- (3) If stockpiling spoil material, place it on an upland site an adequate distance from the waterway, wetland, or any open water created by excavation. Install silt fence between the spoil pile and the waterway, wetland, or excavation site.

Add the following Removing Old Structure bid item to standard spec 203.5.1:

ITEM NUMBER	DESCRIPTION	UNIT
203.0600.S.704	Removing Old Structure Over Waterway With Minimal Debris Station 2400'SB'+48.95	LS

stp-203-020 (20170615)

26. Removing Crash Cushions, Item 204.9060.S.001.

A Description

This special provision describes removing crash cushions according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Crash Cushions in each, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.001	Removing Crash Cushions	EACH
stp-204-025 (20150630)		

27. Removing Gate, Item 204.9060.S.002.

A Description

This special provision describes removing gate according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Gate in each unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.002	Removing Gate	EACH
stp-204-025 (20150630)		

28. Removing Cables, Item 204.9090.S.001.

A Description

This special provision describes removal of groups of existing lighting cables and conduit.

B (Vacant)

C Construction

Existing lighting cables within conduit or direct buried will be removed from the project as a result of sub-cutting associated with roadway and sidewalk construction. Existing lighting cables not planned for reuse shall be disconnected from existing lighting units, service cabinets and panels prior to removal. Existing conduit not planned for reuse shall be cleanly disconnected from remaining existing conduit, lighting units and service cabinets prior to removal. The removal of existing conduit not planned for reuse shall be incidental to the removal of cables. Removed lighting cables and conduit shall become the property of the contractor.

D Measurement

The department will measure Removing Cables by the linear foot of a complete branch circuit (comprised of multiple conductors), acceptably removed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.001	Removing Cables	LF

Payment is full compensation for removing and disposing of cables and conduit.

stp-204-025 (20150630)

29. Removing Temporary Shoring Left In Place By Others, Item 204.9165.S.001.

A Description

This special provision describes removing temporary shoring left in place by others according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Temporary Shoring Left In Place By Others by the square foot, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9165.S.001	Removing Temporary Shoring Left In Place By Others	SF

stp-204-025 (20150630)

30. Embankment Construction.

Replace standard spec 205.3.2(4) with the following:

If placing embankment on side slopes 10-feet high or higher and steeper than one vertical to 3 horizontal, cut a minimum 2 foot horizontal bench into the existing embankment every 2 feet of vertical fill height.

31. General Requirements for Blasting Rock.

Add the following to standard spec 205.3.7:

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

Blasting Plan Submittal

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

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

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

Safety

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

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

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

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

Condition Surveys

Conduct and document pre-blast and post-blast surveys of any nearby buildings or structures as required by the scaled-distance equation specified in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43. Make right of entry arrangements with the property owners for these condition surveys. Prior to any blasting, make the pre-blast survey records available to the engineer for review. After completion of blasting operations, perform a post-blast survey and make these records available to the engineer for review. The contractor shall be responsible for any damage resulting from blasting.

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

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

Vibration Control and Monitoring

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

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

A vibration specialist, approved by the engineer, shall perform vibration monitoring. The vibration specialist shall monitor vibration levels according to the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 and interpret the seismograph records to ensure that the

seismograph data shall be effectively utilized in the control of the blasting operations with respect to the existing structures and utilities.

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

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

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

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

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

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

stp-205-050 (20141107)

32. Roadway Excavation.

Supplement standard spec 205.5.2(1) to include the following:

Provide the department with an earth flow diagram within 30 calendar days of receiving the contract Notice to Proceed.

Identify on the earth flow diagram, all excavation material within the project; material shrinkage and swell factors; acceptable on-site material available for use as embankment within the project; anticipated off-site material that will be required for use as embankment within the project (if applicable); and anticipated material to be disposed of off-site (if applicable). It is the sole responsibility of the contractor to prepare their individual investigation and testing program to establish material shrinkage and swell factors.

(6/29/2015)

33. Borrow.

Replace standard spec 208.1(1) with the following:

This section describes constructing embankments and other portions of the work consistent with the earthwork summary and defines the contract requirements for embankment material if required by the plans or if the contractor elects to utilize off-site material to complete the roadway embankments.

Delete standard spec 208.2.2(2).

Supplement standard spec 208.3 to include the following:

The contractor shall be responsible for complying with all permit requirements in obtaining embankment materials.

Supplement standard spec 208.4 with the following:

The department will not measure embankment material from its source.

Supplement standard spec 208.5 with the following:

The department will not pay directly for work specified under this section pertaining to Borrow. This work is included in the Roadway Embankment bid item.

(5/31/2016)

34. Select Borrow.

Conform to the requirements of standard spec 208 and as hereinafter provided.

Materials

Furnish and use material that consists of granular material meeting the following requirements: Maximum particle size of 12 inches when measured from any face. The material passing the No. 4 sieve shall have a maximum of 15% by weight passing the No. 200 sieve.

As a contractor's option, the department will allow the use of select crushed material for select borrow. The material shall conform to the requirements of standard spec 312, and will be measured and paid for as Select Borrow.

Measurement

Replace standard spec 208.4 with the following:

The department will measure select borrow by the cubic yard acceptably completed in its final location using the method of average end areas, with no correction for curvature or settlement, except as follows:

1. The engineer and contractor mutually agree to an alternative volume calculation method.
2. The method of average end areas is not feasible.

If it is not possible to compute volumes of select borrow by the method of average end areas due to erratic location of isolated deposits, the department may compute the volumes by alternative methods involving three-dimensional measurements.

The department will not measure select borrow material beyond the limits of the required slopes as shown on the plans.

(11/29/2016)

35. 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 and paid for under the Aggregate Detours, 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.

<https://wisconsin.gov/rdwy/cmm/cm-08-00toc.pdf>

A.2 Small Quantities

- (1) The department defines a small quantity, for each individual Base Aggregate bid item, as a contract 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:

A.2.1 Quality Control Plan

- (1) Submit an abbreviated quality control plan consisting of the following:
 1. Organizational chart including names, telephone numbers, current certifications with HTCP numbers, and expiration dates, and roles and responsibilities of all persons involved in the quality control program for material under affected bid items.

A.2.2 Contractor Testing

1. Testing frequency:

Contract Quantity	Minimum Required Testing per source
≤ 6000 tons	One stockpile test before placement, and two production or one loadout test. ^[1] ^[2]
> 6000 tons and ≤ 9000 tons	One stockpile and Three placement tests ^[3] ^[4] ^[5]

^[1] Submit production test results to the engineer for review before incorporating the material into the work. Production test results are valid for a period of 3 years.

^[2] If the actual quantity overruns 6,000 tons, on the next day of placement perform one randomly selected placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

^[3] If the actual quantity overruns 9000 tons, on the next day of placement perform one randomly selected placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

^[4] For 3-inch material or lift thickness of 3 inch or less, obtain samples at load-out.

^[5] Divide the aggregate into uniformly sized sublots for testing.

2. Stockpile testing for concrete pavement recycled in place will be sampled on the first day of production.
3. Until a four point running average is established, individual placement tests will be used for acceptance. 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. Material represented by a subplot 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.

A.2.3 Department Testing

- (1) The department will perform testing as specified in B.8 except as follows:
- Department testing may be waived for contract bid item quantities of 500 tons or less.

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:

SAMPLING AND TESTING ROLES	TEST STANDARD	REQUIRED CERTIFICATION
Random Sampling of Materials Sampling Aggregates	ASTM D3665 AASHTO T2 ^[1]	Transportation Materials Sampling Technician (TMS) Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG)
Percent passing the 200 Sieve Gradation Moisture Content Fractured Faces	AASHTO T11 AASHTO T27 AASHTO T255 ASTM D5821	Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG)
Liquid and Plasticity Index	AASHTO T89 AASHTO T90	Aggregate Testing for Transportation Systems (ATTS) Grading Technician I (GRADINGTEC-1) Grading Assistant Certified Technician (ACT-Grading)
Plasticity Check	AASHTO T90	Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG) Grading Technician I (GRADINGTEC-1) Grading Assistant Certified Technician (ACT-Grading)

^[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

<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/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 one business day after obtaining a sample. 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 one business day after obtaining a sample. 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 placement tests, include only QC placement 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) Perform one stockpile test from each source before placement. One stockpile test may be used for multiple projects up to 60 calendar days.
- (3) Test gradation once per 3000 tons of material placed or fraction thereof. 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 watering and compacting; except collect 3-inch samples or lift thickness of 3 inch or less 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.
- (4) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for seven calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.
- (5) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.

- (6) 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.
- (7) 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 four 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 four 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. Perform one stockpile test from each source before 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 watering and compacting; except, for 3-inch aggregates or for a lift thickness of 3 inch or less, the department will collect samples 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 according to CMM 8-10.5.2 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.

stp-301-010 (20171130)

36. 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.

(1/5/2017) (SWR 305.01-09212015)

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

Revise standard spec 305.2.2.1 when base is ≥ 50% crushed gravel as follows:

Use 1 1/4-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	3 - 10 ^[1]

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

(7/26/2017) (SWR 305.02-08032016)

38. Concrete Protective Surface Treatment.

Modify standard spec 415 as follows:

415.3.6 Placing Concrete

Add the following as standard spec 415.3.6.4:

415.3.6.4 Concrete Protective Surface Treatment

- This specification applies to all sawed concrete joints on the IH 39/90 and IH 43 interstate mainline and ramps, also including sawed joints on concrete shoulders, and to all concrete placement methods. Treat sawed surfaces of transverse and longitudinal joints with a silane joint sealant found on the department approved products list for Concrete Protective Surface Treatments. Prepare surface by pressure washing all saw slurry from sawed joints and allow to dry thoroughly prior to application of silane sealer. Apply the product directly to the interior of the sawed joint. Do not use the broadcast spray method of application.

(1/5/2017)

39. Rout and Seal, Item 415.6000.S.

A Description

This special provision describes routing, cleaning, drying, and sealing the longitudinal edge of pavement joints in new asphaltic pavement shoulders immediately adjacent to the edge of the concrete mainline pavement.

B Materials

Furnish material that conforms to the requirements of the Specifications for Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements, ASTM Designation: D 6690, Type II, modified to require that the bond strength test be run at -20 degrees F. (The unmodified ASTM D 6690, Type II allows this test to be run at either 0 degrees F or -20 degrees F.)

Deliver each lot or batch of sealing compound to the jobsite in the manufacturer's original sealed container. Mark each container with the manufacturer's name, batch or lot number, and the safe heating temperature. Present the manufacturer's certification stating that the compound meets the requirements of this specification. Before applying the sealant, furnish to the engineer a certificate of compliance and a copy of the manufacturer's recommendations on heating and applying the sealant.

C Construction

C.1 Equipment

Heat the sealing compound to the pouring temperature recommended by the manufacturer in an approved kettle or tank, constructed as a double boiler, with the space between the inner and outer shells filled with oil or other satisfactory heat transfer medium. If and when using the heating kettle on concrete or asphaltic pavement, properly insulate the heating kettle to ensure heat is not radiated to the pavement surface.

Make rout cuts in a single pass. Two-pass cutting will not be allowed. Use a self-propelled mechanical router capable of routing the bituminous pavement to provide a 1.0:1.0 depth to width ratio of all routed cracks. The router blade or blades shall be of such size and configuration to cut the desired joint reservoir in one pass. No spacers between blades shall be allowed unless the contractor can demonstrate to the engineer that the desired reservoir and rout cut can be obtained with them. Either wet or dry routing will be permitted provided the above conditions are met. Use a pressure distributor for applying sealing material through a hand-operated wand or nozzle according to sealant manufacturer's instructions.

C.2 Methods

Conduct the operation so that the routing, cleaning, and sealing are continuous operations. Traffic shall not be allowed to knead together or damage the routed joints. Rerout, if necessary, routed joints not sealed before traffic is allowed on the pavement when routing and sealing operations resume. Do not perform rout cutting, cleaning, and sealing, within 48 hours of the placement of the shoulder's surface course.

Rout the longitudinal joint to a minimum width of 3/4 inches and a minimum depth of 3/4 inches. Use a power vacuum or equivalent to immediately remove any routing slurry, dirt, or deleterious matter adhering to the joint walls or remaining in the joint cavity, or both. Before sealing, dry the cleaned joints either by air-drying or by using a high capacity torch. Immediately before sealing, blow out the dried crack with a blast of compressed air, 80-psi minimum. Continue cleaning until the joint is dry, and until all dirt, dust, or deleterious matter is removed from the joint and adjacent pavement to the satisfaction of the engineer. If the air compressor produces dirt or other residue in the joint cavity, the contractor shall be required to clean the joint again.

If cleaning operations could cause damage to, or interfere with, traffic in adjacent lanes, or both, provide protective screening that is subject to the approval of the engineer to the cleaning operation.

Following cleaning, dry the routed joints and warm them with a hot air lance. Take care not to burn the pavement surface. Under no circumstances shall more than two minutes elapse between the time the hot air lance is used and the sealant is placed.

Provide positive temperature control and mechanical agitation. Do not heat the sealant to more than 20 degrees F below the safe heating temperature. The safe heating temperature can be obtained from the manufacturer's shipping container. Provide a direct connecting pressure type extruding device with nozzles shaped for insertion into the joint. Immediately remove sealant spilled on the surface of the pavement.

Seal the joints when the sealant material is at the pouring temperature recommended by the manufacturer. Fill the joint such that after cooling, the sealant is flush with the adjacent pavement surface. Do not overfill the joint; the engineer may allow a very slight overband. Sand shall not be spread on the sealed joints to allow for opening to traffic. Before opening to traffic, the sealant shall be tack free.

D Measurement

The department will measure Rout and Seal in length by the linear foot, 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
415.6000.S	Rout and Seal	LF

Payment is full compensation for rout cutting; cleaning the joint; and rerouting as required under C.2.
stp-415-100 (20140630)

40. HMA Pavement Modification.

A Description

This special provision describes specialized material requirements for HMA Pavements. Conform to standard spec 460 as modified in this special provision.

Replace the noted HMA mixture values in Table 460-2 under 460.2.7 with the following:

1. LA Wear (AASHTO T96) – LT, MT, HT, and SMA mixtures:
 - 100 revolutions – 13% loss maximum
 - 500 revolutions – 40% loss maximum
2. Soundness (AASHTO T104) (sodium sulfate) – LT, MT, HT, and SMA mixtures:
 - 9.0% loss maximum
3. Freeze/ Thaw (AASHTO T103) (specified counties) – LT, MT, HT, and SMA mixtures:
 - 12% loss maximum

Replace Note 3 at the end of Table 460-2 under standard spec 460.2.7 with the following:

- [3] For No. 5 (9.5 mm) and No. 4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 73 – 76%.

(07/13/2016)

41. Concrete Pavements.

This special provision describes specialized material requirements for aggregates used in Concrete Pavements. Conform to standard spec 415 and 501, as modified in this special provision. Conform to standard spec 715 for QMP Concrete Pavement and Structures.

Replace standard spec 501.2.5.4.1 with the following:

501.2.5.4.1 General

(1) The department will sample and test aggregates as follows:

- LA Wear (100 and 500 revolutions)..... AASHTO T 96
- Sodium Sulfate Soundness (R-4, 5 cycles).....AASHTO T 104
- Freeze-Thaw Soundness.....AASHTO T 103
- Lightweight Pieces^[1]..... AASHTO T 113

^[1] Material having a bulk specific gravity (saturated surface-dry basis) of less than 2.45.
Determine the percentage of lightweight pieces by dividing the weight of lightweight pieces in the sample retained on the 3/8-inch sieve by the weight of the total sample.

(2) Contact the engineer a minimum of 4 weeks prior to paving to collect a sample of the aggregates proposed for the project. The engineer will obtain the sample, or observe the contractor obtaining the sample. The sampler must be HTCP certified to sample aggregates.

(3) The department will randomly sample coarse aggregate for lightweight pieces testing at least once per 10,000 cubic yards during placement of concrete pavement.

(4) Use clean, hard, durable crushed gravel or crushed limestone free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances, or adherent coatings considered injurious.

(5) Use virgin aggregates only.

Replace the first paragraph of standard spec 501.2.5.4.2 with the following:

(1) The amount of deleterious substances must not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale.....	1.0
Coal	1.0
Clay lumps	0.3
Soft fragments	5.0
Any combination of above	5.0
Thin or elongated pieces based on a 3:1 ratio	15.0
Materials passing the No. 200 sieve.....	1.5
Lightweight Pieces.....	5.0

Replace the first paragraph of standard spec 501.2.5.4.3 with the following:

- (1) The percent wear shall not exceed 40, the weighted soundness loss shall not exceed 9 percent, and the weighted freeze-thaw average loss shall not exceed 12 percent.

(10/26/2016)

42. Ice Hot Weather Concreting, Item 501.1000.S.

Conform to standard spec 501.3.8.2 except the department will pay for ice at the contract unit price under the Ice Hot Weather Concreting bid item. This special provision only applies to work done under the following contract bid items:

Concrete Masonry Bridges
Concrete Masonry Bridges HES
Concrete Masonry Culverts
Concrete Masonry Culverts HES
High Performance Concrete (HPC) Masonry Structures

Concrete Masonry Retaining Walls
Concrete Masonry Retaining Walls HES
Concrete Masonry Endwalls
Concrete Masonry Overlay Decks

Replace standard spec 501.4 and 501.5 with the following:

501.4 Measurement

- (1) The department will measure Ice Hot Weather Concreting by the pound, acceptably completed, measured only if the conditions prescribed in standard spec 501.3.8.2 are met.

501.5 Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
501.1000.S	Ice Hot Weather Concreting	LB

- (2) Payment for Ice Hot Weather Concreting is full compensation for ice used to cool concrete placed in hot weather as specified in standard spec 501.3.8.2.
- (3) The department will not pay directly for the concrete specified under this section. Concrete is incidental to the various bid items using it. Payment under those bid items includes providing all materials, including aggregates and associated aggregate source testing, cement, fly ash, slag, and admixtures; for preparing, transporting, storing, protecting and curing concrete; and for contractor requirements related to testing specified in standard spec 501.3.10.
- (4) If required to remove and replace any concrete damaged by lack of proper protection. Perform this work at no expense to the department.

stp-501-010 (20151210)

43. Expansion Device, B-13-716.

A Description

This special provision describes furnishing and installing an expansion device as the plans show conforming to standard spec 502 as modified in this special provision.

B Materials

The minimum thickness of the polychloroprene strip seal shall be 1/4 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	55 ± 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:

Manufacturer	Model Number Strip Seal Gland Size ^[1]		
	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	-----	-----

^[1] Expansion device strip seal gland size requirement of 4", 5", and 6" shall be as the plans show.

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.

stp-502-020 (20171130)

44. High Performance Dowel Bars Special.

A Description

This special provision describes the optional use of high performance dowel bars for use in mainline pavement. The contractor can use dowels as defined in standard spec 505.2.6.2 or as described below.

B Materials

Replace standard spec 505.2.6.2(1) with the following when using high performance dowel bars:

- Bars with a fully bonded longitudinal glass fiber reinforced polymer (GFRP) corrosion shield conforming to the GFRP materials requirements of AASHTO LRFD Bridge Design Guide Specifications for GFRP Reinforced Concrete Bridge Decks and Traffic Railings.
- Ensure that the bars have a smooth finished GFRP surface coating 0.125 inches thick or thicker over ASTM A615 grade 60 or higher carbon steel.
- Ensure that the bars are straight, round, smooth, and free from burrs or other deformations detrimental to the free movement of the bar in the concrete.

45. Bar Steel Reinforcement HS Stainless Structures, Item 505.0800.S.

A Description

This special provision describes furnishing and placing stainless steel reinforcing bars and associated stainless steel bar couplers.

Conform to standard spec 505 as modified in this special provision.

B Materials

B.1 General

Furnish stainless steel reinforcing bars conforming to ASTM A955 and to one of the following Unified Numbering System (UNS) designations: S31653, S31803, S32205, or S32304. Supply grade 60 bars, all

of the same UNS designation. Conform to the chemical composition specified for the given UNS designation in ASTM A276 table 1.

Supply bars that are free of dirt, mill scale, oil, and debris by pickling to a bright or uniform light finish. The department may reject bars displaying rust/oxidation, questionable blemishes, or lack of a bright or uniform pickled surface.

Furnish chairs or continuous supports made of stainless steel or recycled plastic to support high-strength stainless bar steel reinforcement subject to the plastic chair restriction stated in standard spec 505.3.4(1).

Furnish couplers made from one of the UNS alloys allowed for bar steel.

Furnish tie wire made from one of the UNS alloys allowed for bar steel or from an engineer-approved plastic or nonmetallic material. Ensure that stainless steel tie wire is dead soft annealed.

B.2 Fabrication

Before fabrication, supply test results from an independent testing agency certifying that the reinforcement meets the requirements of Annex A1 of ASTM A955.

Bend bars conforming to standard spec 505.3.2 and according to ASTM A955. Bend and cut bars using equipment thoroughly cleaned or otherwise modified to prevent contamination from carbon steel or other contaminants. Use tools dedicated solely to working with stainless steel.

B.3 Control of Material

Identify reinforcement bars delivered to the project site with tags bearing the identification symbols used in the plans. Include the UNS designation, heat treat condition, heat number, grade corresponding to minimum yield strength level, and sufficient documentation to track each bar bundle to a mill test report.

Provide samples for department testing and acceptance according to CMM 8-50 Exhibit 1 requirements for concrete masonry reinforcement for uncoated bar steel.

Provide mill test reports for the project that do the following:

1. Verify that sampling and testing procedures and test results conform to ASTM A955, ASTM A276 table 1, and these contract requirements.
2. Include a chemical analysis with the UNS designation, heat lot identification, and the source of the metal.
3. Include tensile strength, yield strength, and elongation tests results conforming to ASTM A955 for each size furnished.
4. Certify that the bars have been pickled to a bright or uniform light finish.

C Construction

C.1 General

Ship, handle, store, and place the stainless steel reinforcing as follows:

1. Separate from regular reinforcement during shipping. Pad points of contact with steel chains or banding, or secure with non-metallic straps.
2. Store on wooden cribbing separated from regular reinforcement. Cover with tarpaulins if stored outside.
3. Handle with non-metallic slings.
4. Do not flame cut or weld. Protect from contamination when cutting, grinding, or welding other steel products above or near the stainless steel during construction.
5. Place on plastic or stainless steel bar chairs. If placing stainless steel chairs on steel beams, use chairs with plastic-coated feet.
6. Tie with stainless steel wire or an engineer-approved plastic or nonmetallic material.

Do not tie stainless steel reinforcing bars to, or allow contact with, uncoated reinforcing bars or galvanized steel. Maintain at least 1-inch clearance between stainless steel bars or dowels and uncoated or galvanized steel. Where 1-inch clearance is not possible, sleeve bars with a continuous polyethylene or nylon tube at least 1/8-inch thick extending at least 1 inch in each direction and bind with nylon or polypropylene cable ties. Sleeves are not required between stainless steel bars and shear studs. Stainless steel bars can be in direct contact with undamaged epoxy-coated bars.

Cut flush with the top flange or remove uncoated fasteners, anchors, lifting loops, or other protrusions into a bridge deck before casting the deck on prestressed concrete beams.

C.2 Splices

Splice as the plans show. Provide stainless steel couplers conforming to the minimum capacity, certification, proof testing, and written approval requirements of standard spec 550.3.3.4. The contractor may substitute stainless steel couplers for lap splices the plans show if the engineer approves in writing.

If increasing or altering the number or type of bar splices the plans show, provide revised plan sheets to the engineer showing the reinforcement layout, type, length, and location of revised bar splices and revised bar lengths. Obtain engineer approval for the location of new lap splices or substitution of mechanical bar couplers before fabrication. Ensure that new lap splices are at least as long as those the plans show.

D Measurement

The department will not measure Bar Steel Reinforcement HS Stainless Structures. The department will use pay plan quantity conforming to standard spec 109.1.1.2. Plan quantities were computed from the nominal weights of corresponding sizes for carbon steel deformed bars in AASHTO M31 regardless of stainless steel alloy provided. The department will not measure extra material used if the contractor alters the reinforcement layout as allowed under C.2, extra material for splices or couplers the plans do not show, or the weight of devices used to support or fasten the steel in position.

The department will measure the Bar Couplers Stainless bid items as each individual coupler acceptably completed.

E Payment

The department will pay for plan quantities conforming to standard spec 109.1.1.2 at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB

Payment for Bar Steel Reinforcement HS Stainless Structures is full compensation for furnishing and placing stainless steel reinforcing bars, including supports. Where the plans specify bar couplers, the department will pay for the length of bars as detailed with no deduction or increase for installation of the coupler.

Payment for the Bar Couplers Stainless bid items is full compensation for providing couplers; including bar steel that is part of the coupler and not detailed in the plan; for threading reinforcing bars; for installing and coating the splice; and for supplying and testing 3 couplers.

46. Gates Pipe Single Leaf, 16 Ft., Item 616.0360.S.001.

A Description

This special provision describes providing single leaf pipe gates as the plan details show.

B Materials

Furnish black, round steel pipe conforming to ASTM A53, type F.

Furnish hot-rolled round bar and miscellaneous steel plates conforming to ASTM A36.

Furnish grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501.2 as modified in standard spec 716. Provide QMP for class II ancillary concrete as specified in standard spec 716.

Furnish zinc-coated bolts, nuts, and washers.

B.1 Paint

Provide one of the following paint systems:

- Rust-Oleum 9300 System Heavy-Duty Epoxy Finish with a 9334 Zinc Rich Primer.
- Sherwin Williams Hi-Solids Catalyzed Epoxy Finish with a Zinc Rich Primer.
- Devco Tru-Glaze-3 Epoxy Gloss Coating with a Zinc Rich Primer.

The engineer will determine the paint color.

C Construction

After fabrication of the entire pipe gate, including hinge and locking posts, abrasive blast clean the gate to the requirements of Grade SSPC-SP-10 as specified by the Steel Structures Painting Council.

Give all metal components two coats of epoxy paint over a zinc rich primer conforming to standard spec 517.

Shop apply the primer and first coat. Field apply second finish coat after erection of gate.

D Measurement

The department will measure Gates Pipe Single Leaf, (length) as each gate, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0360.S.001	Gates Pipe Single Leaf 16 FT	EACH

Payment is full compensation for providing gates; for concrete; and for painting.

stp-616-045 (20150630)

47. Fence Safety, Item 616.0700.S.

A Description

This special provision describes furnishing and installing a plastic fence at locations shown on the plans and as hereinafter provided.

B Materials

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

Furnish fence fabric meeting the following requirements.

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

C Construction

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

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

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

D Measurement

The department will measure Fence Safety in length by the linear foot along the base of the fence, center-to-center of posts, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0700.S	Fence Safety	LF

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

stp-616-030 (20160607)

48. Stone or Rock Ditch Checks, Item 628.7515.S.

A Description

This special provision describes furnishing and installing stone or rock ditch checks as shown on the plans or as directed by the engineer, or both, and as hereinafter provided.

B Materials

Provide materials conforming to size requirements for size no. 2 coarse aggregate for concrete masonry or riprap according to the standard spec 501.2.5.4.5. Railroad ballast or breaker run stone conforming to the following applicable gradations may also be used:

Railroad Ballast	
Sieve Size	Percent by Weight Passing
2 Inch	100
1 Inch	20 – 55
3/8 Inch	0 -5

Breaker Run Stone	
Sieve Size	Percent by Weight Passing
5 Inch	100
1½ Inch	0 – 50
3/8 Inch	0 - 5

Incorporate stone or rock in the ditch checks that is hard, sound, and durable, and meets the approval of the engineer.

C Construction

Place stone or rock ditch checks immediately after shaping of the ditches or slopes is completed. Place stone or rock ditch checks at right angles to the direction of flow and construct to the dimensions and according to the details shown in the plans.

Remove sediment from behind the stone or rock ditch checks when it has accumulated to one half of the original height of the dam.

D Measurement

The department will measure Stone or Rock Ditch Checks in volume by the cubic yard of material incorporated in the work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
628.7515.S	Stone or Rock Ditch Checks	CY

Payment is full compensation for furnishing, producing, crushing, loading, hauling, placing, and shaping and maintaining Stone or Rock Ditch Check.

The quantity of sediment removed shall be multiplied by a factor of ten and paid for as Common Excavation.

stp-628-050 (20170615)

49. Furnishing and Planting Plant Materials.

The work covered by this special provision is according to standard spec 632 except as hereinafter specified.

Supplement standard spec 632.2.2.1 with the following:

All plant material must conform to American Standard for Nursery Stock, ANSI Z60.1-2014 for type, shape, and height.

Provide plants grown within the states of Wisconsin, Minnesota, Michigan, or parts of northern Illinois, Indiana or Ohio located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January 1990, updated January 24, 2012.

Modify paragraph (1) of standard spec 632.2.2.2 as follows:

Collected grown stock is not allowed.

Supplement standard spec 632.2.2.4 as follows:

Requests for substitution(s) of root category (i.e. bare root vs. balled and burlapped) must be documented in writing to the Corridor Vegetation Inspector. Approval of a root category substitution is required and the department may execute a contract change order to adjust contract unit prices for the substituted materials.

Requests for substitution(s) of plant species must include written documentation from at least three (3) nurseries stating that the plant species is unavailable. Include the nursery's contact information with the documentation.

Supplement standard spec 632.2.2.8 with the following:

Plants with undersized, insufficient, unbalanced, damaged, or improperly stored, transported or handled root systems will be rejected.

To prevent stem-girdling roots over time, plants with encircling roots that cannot be properly repositioned during installation will be rejected.

Supplement standard spec 632.2.2.9.1 with the following:

Plants must be protected from excessive vibrations. Plants shall not be thrown or bounced off a truck or loader to the ground. Plants shall not be dragged, lifted, or pulled by the trunk or foliage parts in a manner that will loosen the roots in the ball.

Ensure there is adequate drainage in the planting holes and bed areas. If drainage is insufficient, perform a percolation test by filling a 16-inch-deep planting hole with water and measure the time it takes for the water to drain from the hole. Adequate drainage will be equal to or greater than ½ inch per hour. In the case of inadequate drainage, request approval from the Corridor Vegetation Inspector to either relocate or remove the planting location(s).

Supplement standard spec 632.2.2.9.3 with the following:

Roots cannot extend more than 4" beyond the burlap.

Numerous larger diameter root stubs must not be present.

Roots must fill the soil ball.

Plant must be no more than 10% off center in the soil ball, unless the ball is oversized allowing a centered plant within the minimum radius spread for the root type as specified in the plans.

Delete standard spec 632.2.3.1, 632.2.3.2, and 632.2.3.4.

Delete standard spec 632.2.4.1.

Supplement standard spec 632.2.6 with the following:

Mulch shall be hardwood chip mulch. Provide fibrous wood mulch not containing manufactured boards or chemically treated wood, including but not limited to wafer board, particle board, and chromated copper arsenate (CCA) or penta-treated wood. Ensure that the material does not contain bark of black walnut trees.

Replace standard spec 632.2.9(1) with the following:

Rodent protection consists of wire mesh material embedded and staked into the ground as shown in the construction detail in the plans.

Supplement standard spec 632.3.1 with the following:

Prior to proceeding with plant installation work and to the satisfaction of the Corridor Vegetation Inspector, schedule and perform a "Competency Test" demonstrating acceptable plant installation methods for each root category applicable to this project. The test will include handling plants, digging holes and beds, installing plants, initial watering, installing applicable protection materials, and mulching.

Supplement standard spec 632.3.2 with the following:

Store any trees or shrubs delivered before use in a way that protects them from damage by heat, moisture, rodents, or other causes. The storage locations and requirements are described elsewhere in these special provisions. Discard and replace, at no cost to the department, any previously accepted plant material that becomes damaged. Plant material should not be stored on site more than seven days.

Replace paragraph (2) of standard spec 632.3.4 with the following:

Excavate planting holes as shown in the plan details, and to minimum widths shown in the plant data charts. The planting hole diameter for trees shall be at least three times the diameter of the root ball or 8-ft minimum. The soil shall be loosened beyond the edge of the planting hole. Excavation may be done by shovel, backhoe, or stump grinder, but a soil auger may not be used.

For balled and burlapped (B&B) plants, determine the depth of plant hole by measuring the distance from the point at which the trunk flare begins to the bottom of the ball and subtracting 2 inches.

Excavated planting holes that will be left open when work is not in progress or pose an immediate and considerable hazard to pedestrians or vehicles shall be adequately barricaded with appropriate warning devices.

Delete standard spec 632.3.4 (4).

Supplement standard spec 632.3.7 with the following:

For B&B plants, loosen the burlap to the top of the ball and locate the trunk flare. Remove excess soil, without damaging the plant, if the trunk flare is buried less than 4 inches in the root ball soil. If trunk flare is buried in the root ball soil more than 4 inches it will be rejected. Keep the root ball intact until it is secure in the hole.

Test the soil ball by pulling on the stem or crown of the ball. If the stem or crown moves and the ball does not, the ball is broken and will be rejected.

The soil pad on which the B&B soil ball or root ball will be placed shall be of undisturbed soil. Carefully set the plant in the hole so that the trunk flare is 2 inches above the existing grade. Once the tree or shrub is set and backfilled, any rope, string, or twine should be removed from around the trunk. If the root ball appears in danger of completely collapsing, only remove twine and burlap from the top one-third of the ball. Remove the wire basket. If the root ball appears in danger of completely collapsing, the top 8-16 inches of the wire basket will be removed once the ball is stable in the planting hole. Cut wire basket and do not leave any protruding points of wire which could cause injury. Do not remove the wire basket by pulling on the root ball. Vertically slice through any remaining burlap at 6 inch intervals around the ball in a manner that does not damage the roots.

Verify within 60 days that all ropes, strings, burlap, and other wrappings have decomposed so as not to restrict growth of trunk and roots. If this has not occurred, remove the restricting materials within one week of notification by the Corridor Vegetation Inspector.

Prior to planting balled and potted (B&P) or container grown (CG) plants, remove the plastic, metal, or biodegradable container. If roots are crowded or coiled on the bottom, sides, or surface of the root ball, gently separate from the edges or surface.

Replace paragraph (3) of standard spec 632.3.7 with the following:

Use backfill material, Topsoil Special, for planting beds.

Carefully tamp the soil lightly to avoid leaving air pockets but not so firmly as to drive out all the fine air spaces needed for a well-aerated soil. Tamp each soil layer in a way that avoids injuring the roots or ball or disturbing the plant position. To avoid packing the soil too firmly, water the soil halfway through the backfill process and allow it to drain. After the water is absorbed, resume backfilling and water again thoroughly.

To complete backfilling, smooth the surface soil with a rake and check to ensure that the trunk flare is completely exposed and that the top of the rootball is not covered with soil. Build a "saucer" at the outer edge of the hole to retain water and allow it to soak down to the roots.

Any remaining burlap must be completely covered with soil. If exposed to the air, it will dry out, potentially wicking moisture from the ball and making it difficult to re-wet. If the root collar is deep in the ball and the ball planted high as a result, soil will have to be mounded above grade to assure the burlap is covered.

Supplement paragraph (5) of standard spec 632.3.7 with the following:

After planting, water the planting area deeply. Newly planted trees and shrubs must receive adequate water during the establishment period.

Supplement standard spec 632.3.9 as follows:

Shovel cut an edge around the perimeter of planting beds at the locations shown on the plans. Manually, or machine cut, edge to a minimum width and depth as shown in the plan detail. Fill shovel cut edge with the appropriate mulch and finish approximately 2 inches below adjacent lawn grades. Tamp mulch lightly and add additional mulch, as necessary, so that the final level of the mulch, after compacting, is level with adjacent lawn grades.

Place the hardwood chip mulch immediately after planting.

Replace standard spec 632.3.13(1) with the following:

Place rodent protection around deciduous, pine, and larch trees according to the detail shown in the plans.

Supplement standard spec 632.3.14 with the following:

If the root ball is not stable in the soil, at the direction of the Corridor Vegetation Inspector, brace the trunk as low as possible to keep the root ball stable while allowing the trunk to sway slightly. Only polyethylene straps are allowed for bracing. Bracing will be removed after one growing season, unless a longer period is directed by the Corridor Vegetation Inspector.

Delete standard spec 632.3.15.

Supplement standard spec 632.5.1 (2) with the following:

Payment for Topsoil Special will be paid for separately.

Delete standard spec 632.5.3.

50. Plant Delivery and Temporary Storage.

Supplement standard spec 632.3.2 with the following:

Determine location(s) for delivery of the trees, shrubs, and seeds, and submit the location(s) to the Corridor Vegetation Inspector for approval. The delivery location(s) may be on the public right-of-way or private property. The delivery location(s) must not directly access to/from I-39/90. The location(s) shall be secure, shaded, have water available for tree and shrub irrigation, and provide easy access for the department. The plant material must be planted within seven days of when the material is delivered to the plant material delivery location(s).

Each delivery location(s) must be approved by the Corridor Vegetation Inspector through the ECIP or an ECIP amendment.

51. Landscape Planting Surveillance and Care Cycles.

The work covered by this special provision is according to standard spec 632 except as hereinafter specified.

Replace paragraph (1) of standard spec 632.3.18.1.1 with the following:

A plant establishment period of one year shall follow the completion of planting. There is no plant establishment period for living snow fence plantings.

Delete standard spec 632.3.18.1.2.

Supplement standard spec 632.3.19.1 with the following:

Perform a complete and thorough spring clean-out of all planting beds that contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Perform spring clean-out during the first care cycle or as soon as weather and growing season conditions permit. Do not perform spring clean-out until the ground is no longer saturated from the spring thaw; walking on saturated soil will result in compaction. Ensure that Spring clean-out includes removal of past-season herbaceous material that was left standing over winter, cutting back ornamental grasses to within 3-inches of the mulched surface, removing any material damaged over the winter by pruning according to the language outlined in standard spec 632, removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, weeding, and any and all other clean-out and maintenance operations as directed by the Corridor Vegetation Inspector.

Perform a complete and thorough fall clean-out of all planting beds that contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Perform fall clean-out during the last care cycle. Do not perform fall clean-out if the soil is saturated from rain event; wait until the soil moisture levels have gone down before performing the final bed clean-out. Ensure that fall clean-out includes coordination with the Corridor Vegetation Inspector and the City of Janesville Forestry Department to determine which herbaceous perennial and ornamental grass material to leave standing through the winter and which to cut back to the ground, removing any material damaged during the growing season by pruning according to the language outlined in standard spec 632, removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, weeding, and any and all other clean-out and maintenance operations as directed by the Corridor Vegetation Inspector.

Top dress all mulched areas with 1"-2" of specified mulch material immediately prior to the end of the surveillance and care period.

Mow a 5-foot band of turf around the shrub bed limits. Mow to a 4-inch height when the turf height exceeds 9-inches. This requirement applies to standard turf grass only. Native prairie mowing specifications are described elsewhere.

Replace paragraph (1) of standard spec 632.3.19.1 with the following:

Properly care for trees and shrubs from the time of planting and during the period of establishment until final acceptance of the work. No follow-up care is required for living snow fence plantings.

At least 14 days prior to planting, submit a care cycle schedule to the Corridor Vegetation Inspector. Use a department provided template. Provide schedule updates to the Corridor Vegetation Inspector as necessary.

Replace item 3. of paragraph (10) of standard spec 632.3.19.1 with the following:

Following the completion of each care cycle, fill out the department provided worksheet "Tree and Shrub Scouting Report". Complete one worksheet per site, sign the worksheet, and submit to the Corridor Vegetation Inspector.

Supplement standard spec 632.3.19.2 with the following:

The department will assess daily damages in the amount of \$1,000.

Replace paragraph (2) of standard spec 632.3.20 with the following:

Remove and replace plants, as ordered by the Corridor Vegetation Inspector, that are not conforming to the above requirements, with satisfactory plants. Use the same materials and methods for replacement planting as specified for the original planting.

Removal and replacement of living snow fence plantings is not required.

Replace paragraph (2) of standard spec 632.4 with the following:

The department will measure Landscape Planting Surveillance and Care Cycles as each individual care cycle acceptably completed. All tree and shrub planting sites along the project, excluding living snow fence sites, are included in an individual care cycle.

52. Blue Specific Service Signs.

Add the following to standard spec 638.3.4:

Do not remove or move blue specific service signs or their associated posts. Specific service signs are signs with logos that identify commercial entities providing gas, food, lodging, camping, or attractions. A separate contractor, Interstate Logos - Wisconsin, is responsible for these signs. Contact Interstate Logos - Wisconsin at (844) 496-9163 a minimum of 14 calendar days in advance to coordinate removing, moving, or re-installation of these signs.

The contractor is responsible for damage done to these signs due to contractor operations.

stp-638-010 (20150630)

53. Traffic Control Signs.

A Description

This special provision describes mounting height requirements and sign support requirements. Conform to standard spec 643, as modified in this special provision.

Supplement standard spec 643.2.9.1(5) as follows:

Provide associated advanced signing, including portable traffic control signing, according to the MUTCD. Mount all portable traffic control sign at a minimum height of 5 feet, measured from the bottom of the sign, above the edge of pavement.

(7/6/2014)

54. 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.

stp-643-010 (20100709)

55. Removing Pavement Marking.

Perform this work according to standard spec 646 and as hereinafter provided.

Pavement Markings required to be removed on permanent pavement (pavement that will remain at the completion of the contract) shall be removed by a water blasting method. Grinding or sand blasting the markings off the pavement will not be allowed.

56. Cold Weather Marking Epoxy 4-Inch, Item 646.6464.S.

This special provision adds a bid item for the cold weather pavement marking work specified in standard spec 646.3.1.3.

Measurement

Replace standard spec 646.4(5) with the following:

- (5) The department will measure the Cold Weather Marking Epoxy bid items by the LF of marking acceptably replaced, measured after replacement. The department will not measure replaced marking as follows:
- If the contractor fails to maintain the initial marking as required in 646.3.1.3(2).
 - If initial marking is placed on days when the department is assessing liquidated damages.

Payment

Add the following bid items to standard spec 646.5(1):

ITEM NUMBER	DESCRIPTION	UNIT
646.6464.S	Cold Weather Marking Epoxy 4-Inch	LF

Replace standard spec 646.5(4) with the following:

- (4) Payment for the Cold Weather Marking Epoxy bid items is full compensation for providing replacement marking including maintenance of the initial marking, removal of the initial marking, and placing the final marking. The department will pay separately for the initial marking under the associated standard spec Marking bid items at the time of initial placement.

stp-646-010 (20170615)

57. Contractor Data Packet.

The department will provide electronic design data for projects 1007-11-79 and 1007-11-80. The data provided is for the bidder's general knowledge only and is not a part of the contract. The department assumes no responsibility for discrepancies between the data provided and the contract documents.

The department will provide the project contractor data packet before the project let date within five business days of a contractor request submitted by email to Craig Pringle at craig.pringle@dot.wi.gov.

The contractor data packet contains the following:

1. Field control data, LandXML v1.2 file
2. Existing topographic data, 2D AutoCAD DWG files
 - a. Mapping
 - b. Utilities
3. Reference line alignments and proposed profiles, LandXML v1.2 file(s)
4. Superelevation transition information, comma separated value (csv) text file(s)
5. Proposed roadway features, 2D AutoCAD DWG file
6. Proposed structure horizontal features, 2D in AutoCAD DWG file
7. Surface models, LandXML v1.2 files and AutoCAD DWG files containing 3D face objects representing surface TIN triangles of surface models as follows:
 - a. Existing ground surface
 - b. Proposed top surface
 - i. Top of topsoil outside the roadway subgrade shoulder points extended to the slope intercepts
 - ii. Top of shoulder and top of pavement within the roadway subgrade
 - c. Proposed datum surface
 - i. Top of topsoil outside the roadway subgrade shoulder points extended to the slope intercepts
 - ii. Subgrade surface within the roadway subgrade shoulder points
8. Proposed surface model longitudinal breaklines, 3D AutoCAD DWG files
9. Surface model outer boundaries, 3D AutoCAD DWG file
10. Slope stake report, comma separated value (csv) text file
11. Earthwork data, Excel spreadsheet xlsx file(s)
12. Right-of-Way and easement data, LandXML v1.2 file and 2D AutoCAD DWG file
13. Metadata information

(10/31/2017)

58. 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
(1) IP Camera
(4) Microwave Detectors
(1) Pole-Mounted Cabinet
(1) Solar Power System for Microwave Detectors
(1) 50-ft Camera Pole
(2) Cellular Modems
(2) Cellular Modem Antennas
(1) Terminal Server 4 Port

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, and 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 camera poles will be delivered by the supplier to a contractor-controlled site within Dane 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 locations are the responsibility of the contractor.

Standard spec 106.3 – Approval of Materials

Add the following to standard spec 106.3:

Design/Shop Drawings

Before 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. 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.

59. Intelligent Transportation Systems - General Requirements.

A Description

A.1 General

This special provision describes providing elements for an Intelligent Transportation System (ITS) in or along the roadway as the plans show.

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 TMC at least 48 hours in advance of the planned interruption.
2. The department will furnish some of the equipment to be installed. Inspection of this equipment for defects shall occur prior to installation.

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:**
 - 4.1. **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.
 - 4.2. **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.
 - 4.3. **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:**
 - 5.1. **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.
 - 5.2. **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 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 labeling methods before 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

The department will not measure the work performed under this special provision.

E Payment

The department will pay for the work performed under this special provision under the contract ITS bid items.

stp-670-010 (20100709)

60. 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 conforming 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 the plans show, 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 all testing.

stp-673-010 (20100630)

61. Install Cellular Modems, Item 678.0800.

Add the following to standard spec 678.2:

Furnish EIA-232/EIA-422 converters and associated hardware and cabling as indicated in the plans.

Add the following to standard spec 678.3.7:

Install EIA-232/EIA-422 converters and associated hardware and cabling as indicated in the plans.

62. Concrete Pavement Flexural Strength.

This special provision describes accepting concrete pavement based on flexural strength. Conform to standard spec part 7 as modified in this special provision.

Add the following to standard spec table 701-2:

TEST	TEST STANDARD
Flexural Strength of Concrete	AASHTO T97

Replace standard spec 710.5.5 with the following:

710.5.5 Strength

- (1) Cast all 6-inch by 12-inch cylinders or 6-inch x 6-inch x 21-inch beams in a set from the same sample. Do not cast more than one set of specimens from a single truckload of concrete. Mark each specimen to identify the lot and subplot or location on the project it represents.
- (2) Provide facilities for initial curing. For up to 48 hours after casting, maintain the temperature adjacent to the specimens in the range of 60 to 80 F and prevent moisture loss. Between 24 and 48 hours after casting, transport the specimens to a department-qualified laboratory for standard curing until testing at 28 days.
- (3) Determine the 28-day strength of each specimen in psi. Test each specimen to failure. Use a testing machine that automatically records the date, time, rate of loading, and maximum load of each specimen. Provide a printout of this information for each specimen tested.

Replace standard spec 715.2.1(2) with the following:

- (2) The contractor need not provide separate laboratory mix designs for high early strength concrete nor provide routine 28-day strength tests during placement for high early strength concrete.

Replace standard spec 715.2.3.1(1) with the following:

- (1) Use at least 5 pairs of beams to demonstrate the flexural strength of a mix design. Use either laboratory strength data for new mixes or field strength data for established mixes. Demonstrate that the 28-day flexural strength of the proposed mix will equal or exceed the 85 percent within limits criterion specified in standard spec 715.5.2.

Replace standard spec 715.3.1.1(1) with the following:

- (1) Provide slump, air content, concrete temperature, and strength test results as specified in standard spec 710.5. Provide a battery of QC tests, consisting of results for each specified property, using a single sample randomly located within each subplot. Cast 3 specimens for strength evaluation.

Replace standard spec 715.3.1.3(1) with the following:

- (1) The department will perform verification testing for air content, slump, temperature, and strength at a minimum of 1 verification test per lot.

Replace standard spec 715.3.2.1 with the following:

715.3.2.1 General

- (1) The department will make pay adjustments for strength on a lot-by-lot basis using the strength of contractor QC specimens. The department will use flexural strength for pavements and compressive strength for structures. The department will assess concrete for removal and replacement based on a subplot-by-subplot analysis of core strength. Perform coring and testing, fill core holes with an engineer approved non-shrink grout, and provide traffic control during coring.
- (2) Randomly select 2 QC strength specimens to test at 28 days for percent within limits (PWL). Compare the strengths of the 2 randomly selected QC specimens and determine the 28-day subplot average strength as follows:
 - If the lower strength divided by the higher strength is 0.9 or more, average the 2 QC specimens.
 - If the lower strength divided by the higher strength is less than 0.9, break one additional specimen and average the 2 higher strength specimens.

Replace standard spec 715.3.2.2.1 with the following:

715.3.2.2.1 Pavement

- (1) If a subplot strength is less than 500 psi, the department may direct the contractor to core that subplot to determine its structural adequacy and whether to direct removal. Cut and test cores according to AASHTO T24 as and where the engineer directs. Have an HTCP-certified PCC technician I perform or observe the coring.
- (2) The subplot pavement is conforming if the compressive strengths of all cores from the subplot are 2500 psi or greater or the engineer does not require coring.
- (3) The subplot pavement is nonconforming if the compressive strengths of any core from the subplot is less than 2500 psi. The department may direct removal and replacement or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

Replace standard spec 715.5.1 with the following:

715.5.1 General

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

ITEM NUMBER	DESCRIPTION	UNIT
715.0415	Incentive Strength Concrete Pavement	DOL
715.0502	Incentive Strength Concrete Structures	DOL
- (2) Incentive payment may be more or less than the amount the schedule of items shows.
- (3) The department will administer disincentives for strength under the Disincentive Strength Concrete Pavement and Disincentive Strength Concrete Structures administrative items.
- (4) The department will adjust pay for each lot using PWL of the 28-day subplot average strengths for that lot. The department will measure PWL relative to the lower specification limit of 650 psi for pavements and 4000 psi for structures. The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under standard spec 715.3.1.2.1.
- (5) Submit strength results to the department electronically using the MRS software. The department will validate contractor data before determining pay adjustments.
- (6) All coring and testing costs under standard spec 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

Replace standard spec 715.5.2 with the following:

715.5.2 Pavements

- (1) The department will adjust pay for each lot using equation "QMP 6.01" as follows:

Percent within Limits (PWL)	Pay adjustment (dollars per square yard)
≥ 95 to 100	$(0.2 \times \text{PWL}) - 19$
≥ 85 to < 95	0
≥ 50 to < 85	$(2.0/35 \times \text{PWL}) - 170/35$
< 50	-2

- (2) The department will not pay incentive if the lot standard deviation is greater than 60 psi.
- (3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive but the department will assess a disincentive based on the individual subplot average strengths. The department will reduce pay for sublots with an average strength below 600 psi by \$2 per square yard.
- (4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, the department will adjust pay using strength results of the travel lane for integrally placed concrete shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

63. Optimized Aggregate Gradation and Concrete Mixtures.

A Description

This special provision describes optimized aggregate gradation, optional optimized mixture designs, and associated additional requirements for class 1 concrete used in concrete pavements. Conform to standard specification part 7 and as follows:

Optimized Aggregate Gradation

A Job Mix Formula (JMF) contains all of the following:

- Proportions for each aggregate fraction conforming to Table 1.
- Individual gradations for each aggregate fraction.
- Composite gradation of the combined aggregates including working ranges on each sieve according to Table 2.
- Submit the target JMF and aggregate production gradation test results to the engineer for review 10 business days before initial concrete placement.

TABLE 1 TARANTULA CURVE GRADATION BAND

SIEVE SIZES	PERCENT RETAINED
2 in.	0
1 1/2 in.	≤5
1 in.	<16
3/4 in.	<20
1/2 in.	4-20
3/8 in.	4-20
No. 4	4-20
No. 8 ^[1]	<12
No. 16 ^[1]	<12
No. 30 ^{[1] [2]}	4-20
No. 50 ^[2]	4-20
No. 100 ^[2]	≤10
No. 200 ^[2]	≤2.3

^[1]Minimum of 15% retained on the sum of the #8, #16, and #30 sieves.

^[2]Conform to 24-34% retained of fine sand on the #30-200 sieves.

TABLE 2 JMF WORKING RANGE

SIEVE SIZES	WORKING RANGE ^[1] (PERCENT)
2 in.	±5
1 1/2 in.	±5
1 in.	±5
3/4 in.	±5
1/2 in.	±5
3/8 in.	±5
No. 4	±5
No. 8	±4
No. 16	±4
No. 30	±4
No. 50	±3
No. 100	±2
No. 200	≤ 2.3

^[1]Working range limits of composite gradation based on moving average of 4 tests.

Test each component aggregate once per 1,500 cubic yards during concrete production. Take samples by one of the following sampling methods:

1. At the belt leading to the weigh hopper.
2. Working face of the stock piles at the concrete plant if approved by the engineer.

The department will take independent QV samples using the same sampling method the contractor uses for QC sampling. QV samples may be taken by the contractor's QC personnel if witnessed by the department's QV personnel. The department will split each QV sample and retain half for all dispute resolutions. 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.

If, during concrete production, the moving average of four for any sieve fall outside the allowable JMF working range do the following:

1. Notify the engineer of the test results within 1 business day from the time of sampling;
2. Make immediate adjustments to the JMF, within the limits specified in Table 3;
3. Review JMF adjustments with the engineer. Both the contractor and engineer will sign the adjusted JMF if the adjustments comply with Table 3.
4. If the moving average of four falls outside the adjusted allowable working range, stop production and provide a new mix design including JMF to the engineer.

TABLE 3 ALLOWABLE JMF ADJUSTMENTS

SIEVE SIZES	ALLOWABLE ADJUSTMENT (PERCENT)
≥ No. 4	±5
No. 8 – No. 30	±4
No. 50	±3
No. 100	±2

Dispute Resolution

The department will resolve disputes as specified in standard spec 106.3.4.3.5 using QV split samples.

Sublot and Lot Size

A sublot consists of up to 1,500 cubic yards. A lot consists of two sublots.

Optimized Concrete Mixtures

The contractor may use a reduced cementitious content for concrete pavement placed if the contractor does the following:

1. Use an optimized aggregate gradation as defined in this special provision.
2. Conform to the additional testing requirements for flexural strength as specified in the contract special provisions.
3. Submit aggregate gradation result records no more than 2 years old when developing the mix design.
4. Determine the volume of voids in the optimized aggregates using ASTM C29.
5. Download and follow the instructions tab of the Optimized Gradation and Mix Design Spreadsheet located at:
<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/qmp/default.aspx>
6. Design an appropriate paste content based upon the Performance-based PCC Mix Design Guide located at:
<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/qmp/default.aspx>
7. Provide a minimum V_{paste}/V_{voids} of 1.25. (Paste/Void ratio equals the volume of paste divided by the volume of voids.).
8. Evaluate workability of trial batches by following section 6.8 of AASHTO Draft Performance Engineered Concrete Pavement Mixtures Specifications located at:
<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/qmp/default.aspx>
9. Submit trial batch workability results when submitting the mix design.
10. Submit the CP Tech center computer spreadsheet concrete mix design to the engineer for review at least 3 business days before producing concrete.
11. Provide a minimum cement content of 520 pounds per cubic yard, except if using type I, IL, or III cement in a mix where the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials, provide a minimum cement content of 660 pounds per cubic yard.
12. The contractor may use class C fly ash or grade 100 or 120 slag as a partial replacement for cement. For binary mixes use up to 30% fly ash or slag. For ternary mixes use up to 30% fly ash plus slag in combination. Replacement values are in percent by weight of the total cementitious material in the mix.
13. See CMM 8-70.2.2.3 for additional guidance.

B (Vacant)

C (Vacant)

D (Vacant)

E (Vacant)

(2/14/2018)

64. Subsoiling, Item SPV.0005.500.

A Description

This special provision describes subsoiling designated areas as shown on the plans or as directed by the engineer or Corridor Vegetation Inspector, and as hereinafter provided.

B (Vacant)

C Construction

Subsoil the designated area as shown in the plans or as directed by the Corridor Vegetation Inspector after topsoil or compost placement. Schedule a 500-square-foot test area and demonstrate competence to the Corridor Vegetation Inspector for either swale and slope subsoiling, or basin subsoiling, prior to continuing operations. The Corridor Vegetation Inspector shall identify the test area. Subsoiling shall consist of two operations: deep tilling passes and a surface mixing pass. For the deep tilling passes, loosen subsoiled areas to a depth of 20 inches of the in-place material and placed topsoil or compost. For the surface mixing pass, loosen the subsoiled areas to a depth of 6 to 8 inches. After obtaining approval by the Corridor Vegetation Inspector that the equipment and methods are sufficient to perform the work, complete the subsoiling operation for the designated areas within the project. Work done without the Corridor Vegetation Inspector's approval will be considered as unauthorized work.

For the deep tilling passes, create subsoiling channels with a commercially available, multi-shanked implement attached to track-type equipment. There shall be a minimum of two shanks on the equipment, with each shank located behind a track so that the soil is loosened after it is tracked. Do not pull the shanks through previous channels, but instead create multiple channels. The equipment shall be capable of exerting a penetration force necessary for the site. No disc cultivators, chisel plows, or spring-loaded equipment will be allowed. Space the grid channels 24 to 30 inches apart, depending on equipment, site conditions, and the plan. The channel depth shall be to a minimum of 20 inches.

For the surface mixing pass, use a disk chisel or coulter chisel plow with twisted points, or other approved implement, to mix the top 6 to 8 inches of the soil. Do the operation in one pass with a commercially available implement attached to track-type equipment applying no more than 5 psi of pressure or to a tractor with a minimum of two tires per axle. The equipment shall be capable of exerting a penetration force necessary for the site.

If soils are saturated, delay operations until the soil dries to field capacity or less. Field capacity is the amount of water retained in the soil after it has been saturated and allowed to drain freely.

C.1 Swale and Slope Subsoiling

Complete the deep tilling operation in three passes for each ten feet of swale width. On erodible slopes steeper than 6 horizontal to 1 vertical (6:1), work at right angles to the direction of surface drainage whenever practical. Follow this with a surface mixing pass parallel to the direction of ditch flow.

C.2 Basin Subsoiling

Perform the deep tilling operation in two sets of passes to form a two-directional (90°) grid. Follow this with a surface mixing pass completed in either direction.

C.3 Exceptions

Area exceptions to subsoiling include areas within the drip line of any existing trees, over utility installations within 30 inches of the surface, when trenching/drainage lines are installed, where compaction is by design (abutments, footings or inslopes steeper than 4:1), and inaccessible slopes, as approved by the Corridor Vegetation Inspector. In cases where exceptions occur, observe a minimum setback as directed by the Corridor Vegetation Inspector.

C.4 Finish Grading

Upon completion of the subsoiled area, finish grade the area as described in standard spec 625.3.3, except that only light-weight equipment as approved by the Corridor Vegetation Inspector may be used. Drive no other equipment over the subsoiled area after the area has been finish-graded. Any subsoiled areas that are re-compacted shall be subsoiled and finish-graded at no expense to the department.

D Measurement

The department will measure Subsoiling by the acre of area, 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.0005.500	Subsoiling	ACRE

Payment is full compensation for subsoiling designated areas shown on the plans or as directed by the Corridor Vegetation Inspector; and performing finished grading operations of these subsoiled areas.

(1/23/2018)

65. Pre-Planting Vegetation Treatment, Item SPV.0005.501.

A Description

This special provision describes applying pre-seeding broadcast herbicides onto the Invasive Species and Weed Management Areas (including native seed planting areas) shown in the plans.

B Materials

B.1 Herbicides

Provide manufacturers labels with appropriate application rates to the Corridor Vegetation Inspector.

The selection of herbicide(s) to be used for controlling each target weed species shall be based upon the guidelines of the Midwest Invasive Plant Network's Invasive Plant Control Database (<http://mipncontroldatabase.wisc.edu/>). This site provides broadleaf herbicides recommendations for controlling broadleaf weeds, as well as grass-selective herbicides for controlling non-native cool season perennial grasses in early spring or late fall when warm season native grasses are dormant.

If the following broadleaf weeds are present, mix the low residual broadleaf herbicide 2, 4-Dichlorophenoxyacetic acid (2, 4-D) with glyphosate herbicide to ensure control:

Field Bindweed (*Convolvulus arvensis*)

Canada Thistle (*Cirsium arvense*)

Crown Vetch (*Securigera varia*)

Many broadleaf herbicides have extended periods of activity in the soil and can retard the germination and survival of many wildflower seedlings. The use of any broadleaf herbicide other than 2, 4-D must be approved by the Corridor Vegetation Inspector prior to application. Do not apply any herbicides to the seeding site that will adversely affect the germination and growth of native prairie seedlings.

Use one of the following grass-selective herbicides to control unwanted cool season grasses in native prairies:

Poast (Sethoxydim)

Fusilade (Fluazifop-p-butyl)

Clethodim

Each species of non-native cool season grass is more susceptible to damage by one of the above herbicides. Select the most effective herbicide for use on each target weedy grass species. Follow manufacturer's directions when mixing and applying herbicides. The addition of crop oil concentrate to the herbicide mix may be required to ensure successful control.

B.2 Herbicide Applicator Certification

Provide a DATCP-certified and -licensed applicator to apply herbicides. Provide copies of certification paperwork to the Corridor Vegetation Inspector prior to herbicide treatment.

C Construction

C.1 Pre-Seeding Treatment

Apply herbicide to the areas delineated in the plans as Invasive Species and Weed Management Areas and Shrub Bed Limits. All existing weeds, grasses, and other vegetation must be eliminated prior to seeding or planting without disturbing the soil except for hand pulling individual weeds or woody vegetation.

After each herbicide application, fill out the department provided worksheet "Herbicide Treatment Summary". Complete one worksheet per site per application, sign the worksheet, and submit to the Corridor Vegetation Inspector.

Herbicides used to control weeds prior to seeding or planting must be selected to ensure that post-application carry over in the soil will not affect germination of native seeds or shrubs. Apply herbicide at appropriate concentration.

Existing vegetation shall be treated with herbicide at least once prior to seeding or planting to kill all existing vegetation. The treatment of the vegetation shall be timed to ensure optimal weed control. Follow the suggested eradication sequence described below or obtain approval for other methods from the Corridor Vegetation Inspector.

1. If vegetation to be sprayed is taller than 12 inches, mow vegetation to 4 inches or less in height, 4 to 6 weeks before the first application of herbicide.
2. Apply the appropriate herbicide(s) when vegetation is at 12 inches in height, or has regrown to a height of at least 12 inches following mowing.
3. Re-treat undesirable vegetation after allowing it to regrow to a height of 12 inches. Do not mow, till, drive vehicles over, or disturb the vegetation in any way between herbicide applications.
4. After the final herbicide application, the area may be seeded with the native seed mixtures or planted with the shrubbery. The timing of the planting shall be according to the herbicide manufacturer's instructions.

Prevent herbicide drift onto adjacent trees and shrubs. Plants damaged due to herbicide drift will be replaced at the expense of the contractor.

D Measurement

The department will measure Pre-Planting Vegetation Treatment by the acre 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.0005.501	Pre-Planting Vegetation Treatment	ACRE

Payment is full compensation for furnishing and applying herbicide; re-applying herbicide as needed; documenting herbicide applications: and for mowing.

66. Seed Bed Preparation, Item SPV.0005.502.

A Description

This special provision defines the work needed for the native seeding areas that require seed bed preparation.

B (Vacant)

C Construction

C.1 Inspection and Approval

The native seeding areas have been finished with topsoil installed by others under a highway construction contract. Verify, with approval from the Corridor Vegetation Inspector, that the existing topsoil does or does not provide a suitable native seed planting bed that meets the following criteria: for the upper 2 inches of the topsoil, 100 percent of the material must pass a 1-inch sieve and at least 90 percent must pass the No. 10 sieve.

C.2 Surface Treatment

For those areas identified by the Corridor Vegetation Inspector that do not meet the topsoil requirements listed above, break down all clods and lumps using the appropriate pulverizing equipment to meet the specified gradation. Remove rocks, twigs, foreign material, and clods that cannot be broken down. Dress the entire surface to present a uniform appearance.

Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, stones larger than 1" in diameter, and/or any other construction refuse has been deposited within area(s) to be seeded. Remove any non-hazardous materials from the seed bed and inform the Corridor Vegetation Inspector of any hazardous materials.

D Measurement

The department will measure Seed Bed Preparation by the acre, 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.0005.502	Seed Bed Preparation	ACRE

Payment is full compensation for providing the equipment and labor needed to prepare the seed beds, as approved by the Corridor Vegetation Inspector, to a uniform appearance, and for removing and disposing of unsuitable or foreign material.

67. Roadway Embankment, Item SPV.0035.001.

Conform to standard spec 207 unless modified by this special provision.

A Description

Replace standard spec 207.1(1) with the following:

This section describes providing and placing, in embankments and in miscellaneous backfills, material obtained under the bid items in the roadway and drainage excavation or excavation for structure sections; or material obtained under Borrow as specified in standard spec 208 and modified under these special provisions.

B Materials

Conform to standard spec 207.2.

C Construction

Conform to standard spec 207.3.

D Measurement

Replace standard spec 207.4(1) with the following:

The department will measure Roadway Embankment by the cubic yard, acceptably completed in its final location using the method of average end areas, with no correction for curvature or settlement, except as follows:

1. The engineer and contractor mutually agree to an alternative volume calculation method;
2. The method of average end areas is not feasible.

If it is not possible to compute volumes of the various classes of roadway and drainage embankment by the method of average end areas due to erratic location of isolated deposits, the department may compute the volumes by alternative methods involving three-dimensional measurements.

The department will not measure embankment material beyond the limits of the required slopes as shown on the plans.

E Payment

Replace standard spec 207.5(1) with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.001	Roadway Embankment	CY

Payment is full compensation for providing material from roadway excavation or borrow material; and for forming, compacting, shaping, sloping, trimming, finishing, and maintaining the embankments.

The department will pay for all work associated with select borrow material separately as specified under the Select Borrow bid item.

The department will pay for erosion control, fertilizing, and seeding of borrow sites and associated areas separately as specified for borrow sites and material disposal sites in standard spec 628.5.1.

ASP-5 will be applied to this item. The Fuel Usage Factor for this item is 0.23.

(10/31/2016)

68. Topsoil Special, Item SPV.0035.501.

A Description

This special provision describes furnishing and installing Topsoil Special at planting bed locations shown in the plans.

B Materials

Furnish topsoil materials according to standard spec 625.

C Construction

Remove construction materials, stone, or other debris larger than 2" in length or diameter, debris, slag piles and trash from area receiving Topsoil Special.

Till, disc, or hoe subgrade to loosen and de-compact. Obtain the Corridor Vegetation Inspector's approval of subgrade preparation including depth excavated, removal of trash materials, and loosening of subgrades before placing any Topsoil Special.

Provide Topsoil Special over entire planting bed area to the depth indicated on the plans. Fine grade to match adjacent grades, accounting for settling. Place Topsoil Special in 6-inch to 8-inch lifts, watering or tamping to reduce settling potential.

D Measurement

The department will measure Topsoil Special in volume by the cubic yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.501	Topsoil Special	CY

Payment is full compensation for excavating, site preparation, and disposing of surplus materials; and for furnishing and installing all materials.

69. High Performance Concrete (HPC) Masonry Structures, Item SPV.0035.700.

This special provision describes specialized material and construction requirements for high-performance concrete used in bridge structures. Conform to standard spec 501, 502, and 509, as modified in this special provision. Conform to standard spec 715 for QMP Concrete Pavement and Structures.

MODIFY STANDARD SPECIFICATIONS AS FOLLOWS:

501.2.5.4.1 General

(1) The department will sample and test aggregates as follows:

- LA Wear (100 and 500 revolutions) AASHTO T 96
- Sodium Sulfate Soundness (R-4, 5 cycles) AASHTO T 104
- Freeze-Thaw Soundness AASHTO T 103
- Lightweight Pieces^[1] AASHTO T 113

^[1]Material having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of lightweight pieces by dividing the weight of lightweight pieces in the sample retained on the 3/8-inch sieve by the weight of the total sample.

- (2) Contact the engineer a minimum of 4 weeks prior to placing concrete to collect a sample of aggregates proposed for the project. The engineer will obtain the sample, or observe the contractor obtaining the sample. The sampler must be HTCP certified to sample aggregates.
- (3) The department will randomly sample coarse aggregate for lightweight pieces testing at least once at least once per 10,000 cubic yards during HPC structure concrete production.
- (4) Use clean, hard, durable crushed limestone free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances, or adherent coatings considered injurious.
- (5) Use virgin aggregates only.

501.2.5.4.2 Deleterious Substances

Replace paragraph one with the following:

The amount of deleterious substances must not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0
Clay lumps.....	0.3
Soft fragments.....	5.0
Any combination of above.....	5.0
Thin or elongated pieces based on a 3:1 ratio.....	15.0
Materials passing the No. 200 sieve	1.5
Lightweight Pieces	2.0

501.2.5.4.3 Physical Properties

Replace paragraph one with the following:

The percent wear must not exceed 35, the weighted soundness loss must not exceed 6 percent, and the weighted freeze-thaw average loss must not exceed 12 percent.

501.3.2.4.3.3 Extended Delivery Time

Delete paragraph one.

501.3.5.1 General

Replace paragraph one with the following:

Use central-mixed concrete as defined in standard spec 501.3.5.1(2) for all work under this special provision.

501.3.5.2 Delivery

Replace paragraph three with the following:

Deliver and completely discharge concrete within one hour beginning when adding water to the cement, or when adding cement to the aggregates. A decrease in air temperature below 60° F or the use of department-approved retarders does not increase the discharge time.

501.3.7.1 Slump

Replace the entire text with the following:

Use a 2-inch to 4-inch slump.

Perform the slump tests for concrete according to AASHTO T 119.

501.3.8.2.1 General

Replace the entire text with the following:

The contractor is responsible for the quality of the concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions the contractor will take to control concrete temperature if the concrete temperature at the point of placement exceeds 80° F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

If the concrete temperature at the point of placement exceeds 80° F, do not place concrete for items covered in this special provision.

Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80° F. If project information is not available, the contractor should obtain information from similar mixes placed for other nearby work.

The department will pay \$0.75 per pound for the quantity of ice required to reach a target temperature of 75° F if the following conditions are met:

The un-iced concrete temperature exceeds 80° F.

The contractor has performed the actions outlined in the contractor's accepted temperature control plan.

The contractor elects to use ice.

501.3.8.2.2 Bridge Decks and Structural Approach Slabs

Replace the entire text with the following:

Do not place concrete for bridge decks or structural approach slabs when the ambient air temperature is above 80° F.

For concrete placed in bridge decks and structural approach slabs, submit a written evaporation control plan at each pre-pour meeting. In that plan, outline the actions the contractor will take to maintain concrete surface evaporation at or below 0.15 pounds per square foot per hour. Do not place concrete for bridge decks or structural approach slabs without the engineer's written acceptance of that evaporation control plan. Perform the work as outlined in the evaporation control plan.

If predicting a concrete surface moisture evaporation rate exceeding 0.15 pounds per square foot per hour, do not place concrete for bridge decks or structural approach slabs.

Provide evaporation rate predictions to the engineer 24 hours prior to each bridge deck or structural approach slab pour.

Compute the evaporation rate from the predicted ambient conditions at the time and place of the pour using the nomograph, or computerized equivalent, specified in CMM 5.25, figure 1. Use weather information from the nearest national weather service station. The engineer will use this information to determine if the pour will proceed as scheduled.

At least 8 hours before each pour, the engineer will inform the contractor in writing whether or not to proceed with the pour as scheduled. If the actual computed evaporation rate during the pour exceeds 0.15 pounds per square foot per hour, at the sole discretion of the engineer, the contractor may be allowed to implement immediate corrective action and complete the pour.

502.3.5.4 Superstructures

Delete paragraph five.

502.3.7.8 Floors

Delete paragraphs 13, 14 and 15.

Add the following to the end as paragraphs 19, 20 and 21:

- (19) Do not place bridge deck concrete more than 10 feet ahead of the finishing machine. If there is a delay of more than 10 minutes during the placement of a bridge deck, cover all concrete (unfinished and finished) with wet burlap to protect the concrete from evaporation until placement operations resume.
- (20) Hand finishing, except for the edge of deck, must be kept to a minimum. The finishing machine must be equipped with a pan behind the screed. Apply micro texture using a broom or turf drag following the use of a 10-foot straight edge. Only finish by hand as necessary to close up finished concrete. Begin wet curing the deck immediately following the micro texture.

- (21) For bridge decks with a design speed of 40 mph or greater, provide longitudinal grooving according to the provision included in this contract.

502.3.8.1 General

Replace paragraph one with the following:

Maintain adequate moisture throughout the concrete mass to support hydration for at least 14 days.

502.3.8.2.1 General

Replace the entire text with the following:

Wet cure the concrete for bridge decks, sidewalks and raised medians for 14 days by use of a soaker hose system, or other engineer-approved methods. Cover the finished surface of bridge decks and overlays with one layer of wetted burlap or wetted cotton mats within 10 minutes after the finishing machine has passed. Apply the burlap/cotton gently so as to minimize marking of the fresh concrete. Keep the first layer of burlap/cotton continuously wet until the bridge deck or overlay is sufficiently hard to apply a second layer of wetted burlap/cotton. Immediately after applying the second layer of burlap/cotton, continue to keep the deck wet until placing and activating the soaker hose system. Throughout the remainder of the curing period, keep the burlap/cotton continuously wet with soaker hoses hooked up to a continuous water source. Inspect the burlap/cotton twice daily to ensure the entire surface is moist. If necessary, alter the soaker hose system as needed to ensure the entire surface is completely covered and stays moist. After 48 hours from the time of completion of the bridge deck or overlay pour, the soaker hose system and burlap/cotton may be covered with polyethylene sheeting. Provide a continuous flow of water through the soaker hose system for the entire curing period.

Do not uncover any portion of the deck at any time for any reason during the first 7 days of the curing period.

Set up and test the fogging system before each bridge deck, raised median and sidewalk pour. The fogging system must remain set up and in operating condition for the duration of the pour.

502.3.8.2.3 Decks

Delete the entire text.

502.3.8.2.4 Parapets

Replace the entire text with the following:

Cure the inside and outside concrete faces and tops of railings or parapets by covering with wetted burlap immediately after form removal and surface finish application. Keep the burlap thoroughly wet for at least 7 days; or by covering for the same period with thoroughly wet polyethylene-coated burlap conforming to standard spec 501.2.9.

Secure coverings along all edges to prevent moisture loss.

502.3.9.6 Bridge Decks

Replace paragraph two with the following:

Protect the underside of the deck, including the girders, for bridge deck and overlay pours by housing and heating when the national weather service forecast predicts temperatures to fall below 32° F during the cold weather protection period. Maintain a minimum temperature of 40° F in the enclosed area under the deck for the entire 14-day curing period.

502.5.1 General

Replace paragraph one with the following:

The department will pay for plan quantities according to standard spec 109.1.1.2 at the contract unit price and incidentals necessary to complete the work under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.700	High Performance Concrete (HPC) Masonry Structures	CY

710.5 Sampling and Testing

Add the following:

710.5.7 Chloride Penetration Resistance

(1) For each new or changed mix design, measure chloride penetration resistance according to AASHTO T 277 (Rapid Chloride Permeability Test) at a frequency of 1 test per 3 months (quarterly) of production.

(2) Permeability samples for AASHTO T 277 testing must be stripped of their molds and wet cured to an age of 7 days in a standard moist room or water tank. After 7 days, submerge the samples in water heated to 100° F until an age of 28 days. Upon completion of the curing process, obtain one sample from each cylinder and test according to AASHTO T 277.

(3) Ensure that the initial accepted mix designs meet the chloride penetration resistance limit of 1500 coulombs based on the AASHTO T 277 Rapid Chloride Permeability test. Chloride resistance testing conducted quarterly using AASHTO T 277 Rapid Chloride Permeability Test during production will not be used for acceptance of previously accepted mixes and concrete masonry mixed and placed according to the contract requirements. For quarterly chloride resistance test results exceeding 1500 coulombs, the department may require adjustment of the concrete mix going forward to improve the chloride penetration resistance.

715.2.3.2 Structures

Replace paragraph one with the following:

(1A) Develop and test each mix to be used for HPC Masonry Structures. Produce a laboratory trial mix for each mix, as well as a trial mix from each plant used to supply the project. Test all mixes at a department-qualified laboratory.

(1B) The laboratory trial mix data must include the results of the following tests:

1. AASHTO T 119 Slump of Hydraulic Cement Concrete.
2. AASHTO T 121 Mass per Cubic Foot, Yield.
3. AASHTO T 152 Air Content.
4. AASHTO T 22 Compressive Strength.
5. AASHTO T 277 Rapid Determination of the Chloride Permeability of Concrete, using the modified curing procedure according to standard spec 710.5.7. (2) herein.
6. AASHTO T 309 Temperature.
7. Water Cement Ratio.

(1C) The 28-day compressive strength must be greater than or equal to 4000 psi. The 28-day results of the permeability test must be less than or equal to 1500 coulombs.

Replace paragraph two with the following:

(2) Provide a minimum cementitious content of 470 pounds per cubic yard and a maximum cementitious content of 540 pounds per cubic yard. For all superstructure and substructure concrete, unless the engineer approves otherwise in writing, conform to one of the following:

1. Use class C fly ash or grade 100 or 120 slag as a partial replacement for Portland cement. For binary mixes use 15% to 30% fly ash or 20% to 30% slag. For ternary mixes use 15% to 30% fly ash plus slag in combination. Percentages are stated as percent by weight of the total cementitious material in the mix.

Use a type IP or IS blended cement.

(10/26/2016)

70. Baseline CPM Progress Schedule, Item SPV.0060.001; CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.002.

Replace standard spec 108.4 with the following:

108.4 Critical Path Method Progress Schedule

108.4.1 Software

Use the latest version of Oracle (Primavera) Project Manager (P6) version 7.0 or newer to prepare the Initial Work Plan Schedule, Baseline CPM Progress Schedule, and all Monthly CPM Updates.

108.4.2 Personnel

Designate a Project Scheduler who will be responsible for scheduling the Work and submit for department approval a professional resume describing a minimum of three years of developing and managing specific CPM scheduling experience on major (interstate) highway reconstruction projects or projects of similar size and complexity. This includes recent experience using Oracle P6 software.

108.4.3 Definitions

The department defines terms used in standard spec 108.4 as follows:

Activity

A task, event or other project element on the schedule, during the course of the project that contributes to completing the project. Activities have a description, scheduled (or actual) start and finish dates, duration and one or more logic ties.

Critical Path

The longest continuous path of activities through the project that has the least amount of total float. In general, a delay on the critical path will extend the scheduled completion date.

Critical Path Method (CPM)

A network based planning technique using activity durations and the relationships between activities to mathematically calculate a schedule for the entire project.

Construction Activity

Construction activities are discrete work activities performed by the contractor, subcontractors, utilities, or third parties within the project limits.

CPM Progress Schedule

A Critical Path Method (CPM) Progress Schedule is a network of logically related activities. The CPM schedule calculates when activities can be performed and establishes the critical or longest continuous path or paths of activities through the project.

Data Date

The earliest work period after the date through which a schedule is current. Everything occurring earlier than the data date is "as-built" and everything on or after the data date is "as-planned."

Department's Preliminary Construction Schedule (PCS)

The department's schedule for the contract work, developed during design, and provided to the contractor for informational purposes only.

Float

Float, as used herein, is the total float of an activity; i.e., it is the amount of time between the date when an activity can start (the early start), and the date when an activity must start (the late start). In cases where the total float of an activity has a different value when calculated based on the finish dates, the lower (more critical) value will govern.

Forecast Completion Date

The completion date(s) predicted by the latest accepted CPM Update, which may be earlier or later than the contract completion date(s), depending on progress.

Fragnet

A group of logically-related activities, typically inserted into an existing CPM schedule to model a portion of the project, such as the work associated with a change order or delay impact.

Initial Work Plan Schedule

The Initial Work Plan (IWP) Schedule is a time-scaled CPM schedule showing detailed activities for the first 90 calendar days of work and summary level activities for the remainder of the project.

Intermediate Milestone Date

A contractually required date for the completion of a portion of the work, so that a subsequent portion of the work or stage of traffic phasing may proceed.

Master Program Schedule

The department's schedule for the overall I-39/90 Corridor Management Program, including intermediate milestone dates contract completion dates and codes.

Procurement Activity

Procurement activities are activities of duration reflecting contractor preparation and submittal of material submittals, department approval of material submittals, material fabrication durations, and material delivery durations.

Work Breakdown Structure (WBS)

A framework for organizing the activities that makes up a project by breaking the project into successively greater detail by level. A WBS organizes the project work. It does not address the sequencing and scheduling of project activities.

108.4.4 Department's Preliminary Construction Schedule

The department's Preliminary Construction Schedule was developed during the design phase of the contract. Its purpose was to illustrate work areas per Stage/Phase of construction. Durations and resource availability are department estimates only. Contractor is solely responsible for its use of means and methods and as such is fully responsible for determining durations based on own estimate of production and available resources. The suggested use of the department's Preliminary Construction Schedule is ease of identification of work availability during each Stage/Phase and the logical relationship between the Stages/Phases. The Preliminary Construction Schedule reflects one possible approach to completing the work, consistent with the traffic phasing requirements and the interim/final completion date(s) contained in the contract. The logic contained in the Preliminary Construction Schedule is not intended to alter or supplement contract requirements for the phasing of the work, but to reflect those requirements. Any reliance on the department's Preliminary Construction Schedule is at the sole risk of the contractor.

108.4.5 Contractor's Scheduling Responsibilities

The CPM Schedule shall be a tool capable of forward planning and monitoring the Project. The schedule will further be used as a communication tool between the contractor and the department. It will be used to illustrate the plan, develop what-if scenarios, and analyze impacts. The accuracy and completeness of the CPM Schedule will benefit both the contractor and the department. The CPM schedule is the contractor's committed plan to complete all work within the completion deadlines.

The contractor shall submit to the department initial and monthly update schedules, each consistent in all respects with the time and order of work requirements of the contract. The project work shall be executed in the sequence indicated on the current accepted schedule. Schedules shall show the order in which the contractor proposes to carry out the work with logical links between activities, and calculations made using the critical path method to determine the controlling operation or operations. The contractor is responsible for assuring that each schedule shows a coordinated plan for complete performance of the work. Schedule the Work in the manner required to achieve the completion date and intermediate milestone dates specified in the Prosecution and Progress Special Provision.

Contractor project management personnel shall actively participate in the schedule development, the monthly updating of progress, and all schedule revisions throughout the entire duration of the contract. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate schedule.

108.4.6 Submittals

108.4.6.1 Initial Work Plan Schedule

Submit an Initial Work Plan (IWP) Schedule consisting of the following:

1. Provide a detailed plan of activities to be performed during the first 90 calendar days of the contract. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
2. Provide activities as necessary to depict administrative work, including submittals, reviews, material procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days).
3. Provide activities as necessary to depict third-party work related to the contract.
4. Provide summary activities for the balance of the project beyond the first 90 calendar days of the project. Summary activities may have durations greater than 28 calendar days (20 business days).
5. Submit the IWP Schedule, including the P6 native data file (XER) and an electronic file (PDF). Submit the P6 native data file (XER) and an electronic file (PDF) to the following DOT email boxes; DOTDTSDSWMEGASCHEDULERS@dot.wi.gov and I39project@dot.wi.gov.

6. Following department receipt of the IWP Schedule, allow ten business days for department review and return of comments. Within five business days of receiving the IWP Schedule, the department will schedule a workshop for the contractor to present the IWP Schedule and to answer questions raised during the department's review. Provide formal responses to the comments and resubmit the IWP Schedule as necessary. A notice to proceed will not be issued until the engineer accepts the IWP Schedule. The department will use the IWP Schedule to monitor the progress of the work until the Baseline CPM Progress Schedule is accepted.
7. Submit an updated version of the IWP Schedule on a bi-monthly basis (every other week) until the engineer accepts the Baseline CPM Progress Schedule. With each update, include actual start dates, completion percentages, and remaining durations for activities started but not completed. Include actual finish dates for completed activities.

108.4.6.2 Baseline CPM Progress Schedule

Within ten business days of receiving an approved IWP Schedule, as required in the contract, submit a Baseline CPM Progress Schedule and written narrative consisting of the following:

1. Develop the Baseline CPM schedule. The Baseline CPM is the contractor's committed plan to complete the Work within the time frames required to achieve the contract completion date and intermediate milestone dates. The department will use the schedule to monitor the progress of the work. Include the following:
 - 1.1 Provide a detailed plan of activities to be performed during the entire contract duration, including all administrative and construction activities required to complete the work as described in the contract documents. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
 - 1.2 Provide activities as necessary to depict administrative work, including submittals, reviews, material procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days).
 - 1.3 Provide activities as necessary to depict third-party work related to the contract. Third-party work activities may include but is not limited to Railroads, Utilities, Real Estate and local government agencies.
 - 1.4 Make allowance for specified work restrictions, non-working days, time constraints, calendars, and potential or approved weather delays; reflect involvement and reviews by the department; and coordination efforts with adjacent contractors, utility owners, and other third parties.
 - 1.5 With the exception of the Project Start Milestone and Project Completion Milestone, all activities must have predecessors and successors. Predecessors and successors shall not be linked to the same activity with different relationship types. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag or overlap unless the engineer accepts requested exceptions. Include and discuss request for exceptions in the schedule narrative provided with each schedule submittal.
 - 1.6 Schedule activities shall include the following:
 - a. A clear and legible description. The use of abbreviations shall be limited. Descriptions shall include an action verb describing the work performed, a basic description of the materials used, and, where applicable, a general location of the work.
 - b. Codes for Contract ID / WisDOT Project ID, Responsibility, Stage, and Area. The department may provide additional codes for use within department reporting.
 - c. Activities shall carry a single Responsibility assignment.

- 1.7 Schedule all intermediate milestones in the proper sequence and input as either a “Start on or After” or “Finish on or Before” date. Do not use other constraint types, within the software, without prior approval by the engineer. Do not apply date constraints on any work tasks without prior approval by the engineer. Provide predecessors and successors for each intermediate milestone as necessary to model each Stage of the Work. Unless the engineer accepts a requested exception, the schedule shall encompass all the time in the contract period between the starting date and the specified completion date.
 - 1.8 Develop and submit an anticipated cash-flow curve for the project within the P6 application, based on the Baseline CPM schedule by assigning cost values to selective work tasks within the CPM schedule that total the value of the contract.
 - 1.9 Provide budgeted quantities consistent with the bid quantities on selective construction tasks within the CPM schedule. The engineer will provide a summarized list of 30 generalized quantity items that will be identified and applied by the contractor using the P6 software application.
2. Provide an electronic PDF of the CPM schedule depicting the CPM network. Organize the logic diagram by grouping related activities, based on the activity codes in the CPM.
 3. Provide a written narrative with the Baseline CPM explaining the planned sequence of work, as-planned critical path, critical activities for achieving intermediate milestone dates, traffic phasing, and planned labor and equipment resources. Use the narrative to further explain:
 - 3.1 The basis for activity durations in terms of production rates for each major type of work (number of shifts per day and number of hours per shift), and equipment usage and limitations.
 - 3.2 Use of constraints.
 - 3.3 Use of calendars.
 - 3.4 Estimated number of adverse weather days on a monthly-basis.
 - 3.5 Scheduling of permit and environmental constraints, and coordination of the schedule with other contractors, utilities, and public entities.
 4. Submit the Baseline CPM schedule including the P6 native data file (XER) and an electronic file (PDF). Submit the P6 native data file (XER) and an electronic file (PDF) to the following dot email boxes; DOTDTSDSWMEGASCHEDULERS@dot.wi.gov and I39project@dot.wi.gov.

Within ten business days of receiving the Baseline CPM schedule, the department will schedule a workshop, review the submittal, and return review comments.

Within five business days after the Baseline CPM scheduling workshop, the department will either accept the contractor’s Baseline CPM schedule or provide additional comments. Within five business days, address the department’s comments and resubmit a revised Baseline CPM, including formal responses to the department’s review comments. If the engineer requests justifications for activity durations provide information that may include estimated labor, equipment, unit quantities, and production rates used to determine the activity duration.

The engineer will accept the Baseline CPM based solely on whether the schedule is complete as specified in this section and meets the requirements of the contract. The engineer’s acceptance of the schedule does not modify the contract and does not relieve the contractor from meeting the contract requirements.

The department will not consider requests for contract time extensions as specified in standard spec 108.10 or additional compensation for delay specified in standard spec 109.4.7 until the department accepts the Baseline CPM schedule.

108.4.6.3 Monthly CPM Schedule Updates

Submit CPM Schedule updates on a monthly basis after acceptance of the Baseline CPM Schedule. With each CPM Schedule update, include the following:

1. Actual start dates, completion percentages, and remaining durations for activities started but not completed, and actual finish dates for completed activities, through the final acceptance of the project.
2. Additional activities as necessary to depict additions to the contract by changes and logic revisions as necessary to reflect changes in the contractor's plan for prosecuting the work.
3. Include a narrative report that includes a brief description of monthly progress, changes to the critical path from the previous update, sources of potential delay, work planned for the next 30 calendar days, and all changes to the CPM Schedule. Changes to the CPM Schedule include the addition or deletion of activities, changes to activity descriptions, original durations, relationships, overlap (lag/lead), constraints, calendars, or previously recorded actual dates. Justify changes to the CPM Schedule in the narrative by describing associated changes in the planned methods or manner of performing the work or changes in the work itself.
4. Submit each CPM Schedule update; including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's. Submit the P6 native data file (XER), the electronic file (PDF), responses to the DOT review comments, and the progress schedule update narrative to the following dot email boxes; DOTDTSWMEGASCHEDULERS@dot.wi.gov and I39project@dot.wi.gov.
5. Within ten business days of receiving each CPM Schedule update, the engineer will provide formal review comments and schedule a meeting, if necessary, to address comments raised in the department's review. Address the department's comments and resubmit a revised CPM Schedule update within five business days after the department's request.

108.4.6.4 Three-Week Look-Ahead Schedules

Submit Three-Week Look-Ahead Schedules on a weekly basis after NTP. The schedule shall be prepared by computer. Provide three hard copies (11" x 17") to the engineer. With each Three-Week Look-Ahead include:

1. Activities underway and as-built dates for the past week.
2. Actual as-built dates for completed activities through final acceptance of the project.
3. Planned work for the upcoming three-week period.
4. The activities of the Three-Week Look-Ahead schedule shall include the activities underway and critical RFIs and submittals, based on the CPM schedule. The Three-Week Look-Ahead may also include details on other activities not individually represented in the CPM schedule.
5. On a weekly basis, the department and the contractor shall agree on the as-built dates depicted in the Three-Week Look-Ahead schedule or document any disagreements. Use the as-built dates from the Three-Week Look-Ahead schedules for the month when updating the CPM schedule.

108.4.6.5 Weekly Production Data

Provide estimated and actual weekly production curves for items of work on a weekly basis for applicable items of work as requested by the department including but not limited to the following:

1. Provide data on the following items by the units specified:
 - 1.1 Underground Facilities – LF per week
 - 1.2 Retaining Walls – SF per week
 - MSE Walls
 - Other Wall Types
 - 1.3 Bridge Construction
 - Foundation Pile – EACH per week
 - Foundation/Substructure Concrete – CY per week
 - Structural Steel Girders – EACH per week
 - Prestressed Concrete Girders – EACH per week
 - Deck Formwork – SF per week
 - 1.4 Roadway Excavation – CY per week
 - 1.5 Roadway Embankment – CY per week
 - 1.6 Roadway Structural Section
 - Grading/Subgrade Preparation – SY per week
 - Base Material Placement – TON per week
 - Base Material Subgrade Preparation – SY per week

- Asphaltic Base – TON per week
 - Asphaltic and HMA Pavements – TON per week
 - Concrete Pavement – SY per week
 - Concrete Pavement – CY per week
- 1.7 Finishing Items – SY per week

Note: Base material shall include all breaker run, base aggregate, subbase items or other base items included in the contract. Provide production information for each individual base material item.

2. For each item, indicate the actual daily production for the past week and the anticipated weekly production for the next week. Also include cumulative production curves showing the production information for each item to date.
3. Submit the data in an electronic spreadsheet format at the same time the Three-Week Look-Ahead is submitted. On a weekly basis, the department and the contractor shall agree on the production data or document any disagreements.

108.4.7 Progress Review Meetings

After completing the weekly submittal of the Three-Week Look-Ahead Schedules and production data, attend a weekly progress review meeting to review the submittals with the department. At the meeting, address comments as necessary, and document agreement or disagreement with the department.

After submitting the monthly update and receiving the engineer's comments, attend a job-site meeting, as scheduled by the engineer, to review the progress of the schedule. At that meeting, address comments as necessary, and document agreement or disagreement with the department. The monthly meeting will be coordinated to take place on the same day and immediately before or after a weekly meeting, whenever possible.

108.4.8 CPM Progress Schedule Revisions

A CPM Progress Schedule Revision may be submitted, prior to the next CPM Monthly Update, if necessary due to changes in the Work or project conditions as authorized by the engineer. Prepare the CPM Revision in the same format as required for CPM Monthly Updates, including justification for changes to the schedule. The process for comment and acceptance of a CPM Revision will be the same as for CPM Monthly Updates. If the CPM Revision is accepted, prepare the next monthly update based on the revised CPM. If the CPM Revision is rejected, prepare the next monthly update based on the previous month's update.

The engineer will monitor the progress of the work and may request revisions to the CPM schedule. Revise the schedule as requested by the engineer, and submit a CPM Progress Schedule Revision within ten business days of the request. The process for comment and acceptance of a CPM Revision will be the same as for CPM Monthly Updates. The engineer may request that the contractor revise the CPM schedule for one or more of the following reasons:

1. The forecast completion date is scheduled to occur more than 14 calendar days after the contract completion date.
2. An intermediate milestone is scheduled to occur more than 14 calendar days after the date required by the contract.
3. The engineer determines that the progress of the work differs significantly from the current schedule.
4. A contract change order requires the addition, deletion, or revision of activities that causes a change in the contractor's work sequence or the method and manner of performing the work.

108.4.9 Documentation Required for Time Extension Requests

The information below is to be applied in compliance with Standard Specifications 108.9 and 108.10 and does not replace the above mentioned specifications. To request a time extension to an intermediate milestone date or the contract completion date associated with changes to the work, provide a narrative

document separate from the monthly schedule update narrative document that specifically details the work added or deleted and the other activities affected and or impacted based on the latest accepted CPM Monthly Update. For added work including impact delay activities, submit a proposed fragnet of activities to be added or revised in the CPM schedule, indicating how the fragnet is to be tied to the CPM schedule.

To request a time extension to an intermediate milestone date or the contract completion date associated with delays to the work, provide a narrative detailing the affected activities and the cause of the delay, based on the latest accepted CPM Monthly Update. Requests for time extensions due to delays shall meet the following criteria:

1. For requests to extend the contract completion date, include a detailed description of how the delay, or additional work, affected the project's critical path, based on the latest accepted CPM Monthly Update.
2. For requests to extend an intermediate milestone date, include a description of how the delay, or additional work, affected the controlling (longest) path to the milestone, based on the latest accepted CPM Monthly Update.
3. The department and the contractor agree that the float is not for the exclusive use or financial benefit of either party. Either party has the full use of the float on a first come basis until it is depleted.

108.4.10 Measurement for CPM Progress Schedule

The department will measure Baseline CPM Progress Schedule for each required submittal, acceptably completed.

The department will measure CPM Progress Schedule Updates and Accepted Revisions for each required submittal, acceptably completed.

108.4.11 Payment for CPM Progress Schedule

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.001	Baseline CPM Progress Schedule	EACH
SPV.0060.002	CPM Progress Schedule Updates and Accepted Revisions	EACH

Payment is full compensation for furnishing all work required under these bid items. The department will pay the contract unit price for the Baseline CPM Progress Schedule after the department accepts the schedule. Thereafter, the department will pay the contract unit price for each monthly CPM Progress Schedule update acceptably completed. The department will pay the contract unit price for CPM Revisions, if the department accepts the revision. The department will not pay for proposed revisions that are not accepted.

Failure to provide satisfactory schedule submittals within the times specified will result in liquidated damages being assessed and may result in the department managing to the contractor's latest accepted schedule until such time as the contractor submits an updated or revised schedule.

If the contractor does not provide satisfactory progress schedule submittals, updates and revisions, within the time specified by these specifications, the department will assess liquidated damages. The department will deduct the amount of \$500 per calendar day due to the contractor for every calendar day that the submission of the Initial Work Plan Schedule, Baseline CPM Progress Schedule, Revised CPM Progress Schedule, and the Monthly Progress Schedule is delinquent.

If the Initial Work Plan Schedule, Baseline CPM Progress Schedule, Revised CPM Progress Schedule, and the Monthly Progress Schedule update submittals are not received by the department within 10 business days after the submittal time specified, and, within 10 days of the submittal date, the engineer finds the schedule submittal unacceptable, the department will only make progress payments for the value of materials, as specified in standard spec 109.6.3.2.1, until the schedule is submitted and found acceptable.

(10/25/2017)

71. Removing Billboards, Item SPV.0060.003.

A Description

This special provision describes removing existing billboards and supports according to the applicable sections of standard spec 638 and as hereinafter provided.

B (Vacant)

C Construction

Remove the complete billboard unit including signs, supports, footings, ladders, walkways, electrical systems and all appurtenances from the locations designated on the plans. Excavate to remove the footings and provide adequate backfill and compaction of the removal area to eliminate settling. Restore the surface around the location to the same condition as surrounding area and as directed by the engineer. Billboards with multiple supports and signs at the same location, but not necessarily connected, will be considered one complete unit.

Coordinate with electric utility owner for disconnection of the power service prior to removal of the billboard and billboard supports, if applicable.

D Measurement

The department will measure Removing Billboards as each individual complete billboard unit removed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.003	Removing Billboards	EACH

Payment is full compensation for removing the signs, supports, footings, ladders, walkways, electrical systems and all appurtenances associated with the billboard; for removal from the project site; for backfilling any necessary areas; coordination with utilities and following utility and OSHA removal requirements; and all incidental items necessary to complete the work. Removed items are property of the contractor.

72. Test Pits, Item SPV.0060.004.

A Description

This special provision describes excavating test pits and backfilling as directed by the engineer and geotechnical engineer and as hereinafter provided. Test pits are for the purpose of locating and relieving trapped water within the existing roadway embankments.

B Materials

Construct test pits conforming to standard spec 205.2 for Roadway Excavation.

Provide materials to conform to standard spec 312.2 for Select Crushed Material.

C Construction

All excavation of test pits shall be performed during daytime hours. The engineer and geotechnical engineer (Hassen A. Hassen, hassen.hassen@dot.wi.gov) shall be present during excavation.

The location of test pits shall be determined by the engineer and geotechnical engineer. Contact the engineer at least 4 weeks prior to earthwork operations. Test pits shall be excavated at least 2 weeks prior to roadway excavation operations. Different timelines, to meet particular projects' needs, may be required by the engineer and geotechnical engineer.

Excavate the foreslope of the existing roadway embankment beginning at the edge of the existing subgrade shoulder point at a slope of 1:1 down to the elevation of the toe of existing slope, but no lower than 1 foot above the ditch flow line if a ditch is present. Excavations shall be 10 feet wide measured parallel to the roadway shoulder. The bottom of the test pit shall be sloped to drain away from the roadway.

If water is present or seeping from the embankment, backfill with select crushed where the test pit is located on an embankment that is supporting live traffic. Place select crushed to stabilize the test pit and allow water to seep out. If the embankment is not supporting live traffic, then the test pit shall remain open and maintained until seeping stops or as approved by the engineer and geotechnical engineer.

If water is not present or seeping from the embankment, backfill the test pit with roadway embankment or a material approved by the engineer and geotechnical engineer.

D Measurement

The department will measure Test Pits by each unit, acceptably installed.

The department will measure Select Crushed Material as specified in standard spec 312.4.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.004	Test Pits	EACH

Payment is full compensation for furnishing all engineer approved work specified including excavating, sloping, shaping, stockpiling, backfilling with roadway embankment, compacting, and maintaining.

If select crushed material is required for backfilling, the department will pay for select crushed under the select crushed item 312.0110. The department will pay for erosion control, if required, under the erosion control bid items.

(5/22/2017)

73. Department Owned Field Office Equipment and Maintenance Item SPV.0060.005.

A Description

This section describes equipping and maintaining Department Owned Field Office located at 2863 County Hwy N, Stoughton, WI 53589.

B Materials

Provide and maintain field office services beginning February 1, 2019.

Provide and maintain an adequate supply of bottled drinking water.

Maintain suitable interior sanitary facilities conforming to State and local health requirements, in clean and good working condition, provide a weekly cleaning service, and stock with sanitary supplies for the duration of the contract.

Supply a first aid kit in the field office. Ensure the kit is readily accessible to project personnel. Check the contents of the kit at least once each week and replenish expended items. Ensure the kit contains, at a minimum, a supply of latex or nitrile gloves, CPR masks, adhesive tape, pressure and cling bandages, antiseptic wipes, bite/sting swabs, cold packs, and safety goggles.

Equip with a 6-pound or larger fire extinguisher conforming to class A, B, and C of the NFPA Code.

Provide high-speed internet and voice with long distance communications services via a land line for exclusive department use that have the following:

- A dynamic IP address (DHCP).
- Ability to accommodate IPSec based VPN products.
- A modem router with a capacity for 4 or more personal computers.
- A connection speed of 3 Mbps or more with 4 computers operating simultaneously.
- Two programmable touch-tone phones, one of which is cordless. Ensure that phone operations will not interfere with other telecommunications equipment.
- Telephone voice mail service or a telephone answering machine.
- Provide CAT 5 services.

Provide and maintain a plain-paper photocopier with scanner with the following characteristics:

- Uses toner, not ink.
- Has auto-feed capability.
- Can copy and scan both 8 1/2" x 11" and 11" x 17" paper.
- Can output a PDF of a copied or scanned document.

Replenish paper, toner cartridges, and other supplies before fully expended.

C Construction

Equip and maintain Department Owned Field Office until the engineer approves their removal or discontinuation of services.

D Measurement

The department will measure the Department Owned Field Office Equipment and Maintenance as each field office, 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.0060.005	Department Owned Field Office Equipment and Maintenance	EACH

Payment is full compensation for equipping and maintaining the facility; for providing a weekly cleaning service for the field office and sanitary facilities, for providing sanitary supplies as necessary, for replenishing paper, toner cartridges, and other supplies before fully expended, for maintaining the photocopier/scanner in working order at all times and for providing and supporting CAT 5 services.

The department will pay for the cost of telecommunications usage fees incurred by department staff.

74. Salvage and Reinstall Lighting Unit, Item SPV.0060.006.

A Description

This special provision describes salvaging and reinstalling existing lighting unit at the I-39/90 southbound Madison (SWEF) according to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

Salvage lighting equipment and poles, including transformer bases, poles, luminaire arms, and luminaire fixtures per plan from their concrete footing and disassemble out of traffic. Existing 150W HPS luminaire shall become the property of the contractor. Remove wiring/cabling per plan. Ensure that access handhole doors and hardware remain intact. Inspect salvaged equipment for damage or defects.

If damage or defects discovered, contact Derrin Wolford of WisDOT SW Region at (608) 246-5360. The department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working lighting equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, shall be replaced by the contractor at no cost to the department.

Complete the removal work immediately following shut down of this equipment. All luminaires shall be operational and lit during nighttime hours for the duration of the project. Once the existing light poles are disconnected and removed, the light poles shall be reinstalled and reconnected to the system on the same working day so that the luminaires are operational and lit by the nighttime hours.

Furnish and install new Luminaires Utility LED B on salvaged lighting unit and reinstall the salvaged lighting equipment at the new locations shown on the Plan and according to standard spec 652.3, 657.3, 658.3, 659.3.

D Measurement

The department will measure Salvage and Reinstall Lighting Unit as each lighting unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.006	Salvage and Reinstall Lighting Unit	EACH

Payment is full compensation for removing, disassembling lighting equipment, scrapping of some materials, disposing of scrap material, salvaging the equipment, furnishing and installing Luminaires Utility LED B at the new locations of the salvaged equipment, stowing, protecting from damage, and reinstalling the lighting equipment at the new locations specified in the plan.

75. Roadway Cleanup, Item SPV.0060.007.

A Description

This special provision describes removing trash, tires and other debris from the IH 39 roadway during bi-directional traffic operations.

B (Vacant)

C Construction

Roadway cleanup will be scheduled by the department to occur on a once per month basis. For months with holiday work restrictions, the cleanup will be scheduled to occur immediately prior to the holiday break. The cleanup will occur on a weeknight, Tuesday through Thursday, during the time from 12:00 AM to 5:00 AM.

Traffic control for roadway cleanup will be provided by the department with the assistance of the Wisconsin State Patrol. A rolling slowdown will be used for traffic control. The necessary advanced signing and law enforcement personnel will be required to be on site prior to and during the rolling

slowdown operation. Arrangements for implementing a rolling slowdown on IH 39 will be made by Jeff Gustafson at the Southwest Region Madison Office, (608) 516-6400. A rolling slowdown will only be allowed in one direction (northbound or southbound) at a time. Concurrent northbound and southbound rolling slowdowns will not be allowed. A northbound rolling slowdown will occur immediately following a southbound rolling slowdown, or vice versa, to complete the roadway cleanup loop (both northbound and southbound) for the project length.

Provide personnel and equipment capable of retrieving and transporting all types of roadway debris from the travel lanes and shoulders. Temporary precast concrete barrier will be present on the left side and may be present on the right side (outside). All debris shall be removed from the roadway and shoulder areas within the concrete barriers. If no concrete barrier is located on the outside, the debris removal area shall be extended to include the construction clear zone.

D Measurement

The department will measure Roadway Cleanup as each individual unit, acceptably completed, which includes both directions of the roadway (northbound and southbound) for the project's length of bi-directional traffic.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.007	Roadway Cleanup	EACH

Payment is full compensation for providing personnel and equipment to remove debris from the traffic lanes and shoulders for both directions (northbound and southbound) of IH 39, and disposal of collected debris.

(10/16/2017)

76. Repair State Owned Energy Absorbing Terminal (EAT), Item SPV.0060.008. Repair State Owned Guardrail, Item SPV.0090.003.

A Description

This special provision describes providing emergency repair services, including the replacement of unusable components or hardware, for state owned energy absorbing terminals or guardrail located on IH 39 or an IH 39 ramp that is damaged due to a vehicular collision during the time this contract is in effect. This work shall be according to standard spec 614, as directed by the engineer, and as hereinafter provided. Responding to the incident site with the appropriate staff, equipment and materials is covered under a separate bid item.

B (Vacant)

C Construction

Repairs shall be completed as quickly as possible once repair work is started. Repair work shall be completed off of the traveled way to the maximum extent possible.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the engineer.

D Measurement

The department will measure Repair State Owned Energy Absorbing Terminal (EAT) as each individual unit, acceptably repaired. The department will measure Repair State Owned Guardrail by the linear foot, acceptably repaired.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.008	Repair State Owned Energy Absorbing Terminal (EAT)	EACH
SPV.0090.003	Repair State Owned Guardrail	LF

Payment is full compensation for completing the necessary repair work to restore the state owned semi-rigid barrier system to a safe and operational condition, including replacement of damaged, unusable hardware.

The department will pay for additional traffic control measures, if required, under the respective traffic control bid items in the contract.

(10/24/2017)

77. Salvage and Reinstall Crash Cushion, Item SPV.0060.009.

A Description

This special provision describes salvaging the existing crash cushion and reinstalling the crash cushion as shown on the plans or as directed by the engineer and as hereinafter provided.

B (Vacant)

C Construction

Dismantle and remove the rail, posts, blocks, steel thrie beam, bullnose terminals, or other component the salvaged bid item indicates from the locations the contract designates.

Minimize damage to reusable materials. Do not cut material that would be otherwise reusable. Replace contractor-damaged materials that are to remain in place or to be reinstalled at no cost to the department. Remove and dispose of all unwanted or damaged materials.

Sort by component part and load reusable materials onto separate pallets for each component part. The contractor may place hardware and smaller parts in clearly labeled crates or plastic buckets. Stockpile reusable material in engineer-approved locations on the project.

Reinstall the salvaged crash cushions, at the locations the contract designates or as directed by the engineer.

Do not use salvaged materials for temporary installations or for any other work under this contract.

D Measurement

The department will measure Salvage and Reinstall Crash Cushions as each unit, acceptably completed, including foundation, measured individually for each required plan location.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.009	Salvage and Reinstall Crash Cushion	EACH

Payment is full compensation for salvaging and reinstalling crash cushions; for the foundation pads, transitions, and backup blocks.

78. Temporary Concrete Barrier Gate, Item SPV.0060.200.

A Description

This special provision describes furnishing and installing Temporary Concrete Barrier Gate and removing upon completion of the project.

B Materials

Furnish a Temporary Concrete Barrier Gate and all necessary hardware and materials to install the gate.

The gate system shall be able to meet the recommended structural adequacy, occupant risk, and vehicle trajectory criteria set forth in the National Cooperative Highway Research Program Report (NCHRP) 350 for Test Level 3 for Longitudinal Barriers.

The gate shall be capable of preventing vehicle penetration, vaulting, and underriding during Test Level 3 Length of Need with Transition (TL-3 LON/T) impacts and shall smoothly redirect the vehicle.

The gate system shall be able to span a 24-foot minimum gap in concrete barrier.

The gate system shall fasten only to the temporary concrete barrier wall.

The gate system shall be able to be opened completely within 5 minutes once the moving process begins. The gate shall be able to be opened both by pivoting the gate on a hinge and by completely disconnecting the gate from the barrier wall and rolling it parallel to the temporary barrier wall.

Tools and materials required to open the gate system must be physically fastened to, or stored within, the gate system in such a way that prevents such tools and materials from becoming hazards during a crash. Tools and material must be accessible and usable immediately upon need.

C Construction

Install the gate system according to manufacturer's recommendations at contract-identified locations or as the engineer directs. Move and reinstall the gate system as required for contract staging.

Ensure that the gap between the traffic face of temporary barrier and the traffic face of the gate transition is to be less than $\frac{1}{4}$ of an inch. If manufacturer allows, the contractor may bolt thrie beam and thrie beam terminal connector to concrete barrier and the gate transition to bridge the gap in concrete barrier.

Provide and maintain the gates throughout the duration of the project. Repair any damage to the gates within 48 hours.

Upon completion of the work, remove the gate system and properly dispose of all materials.

D Measurement

The department will measure Temporary Concrete Barrier Gate as each individual gate system, acceptably completed.

The department will not make additional measurements for Temporary Concrete Barrier Gate if damaged during construction, including damage due to vehicular hits.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.200	Temporary Concrete Barrier Gate	EACH

Payment for Temporary Concrete Barrier Gate is full compensation for providing, installing, maintaining, and removing the gate system.

(3/1/2017)

79. Install Department Furnished Crash Cushion Low Maintenance, Item SPV.0060.201.

A Description

This special provision describes transporting, installing, and salvaging a department-furnished low maintenance crash cushion at a location as directed by the engineer according to standard spec 614, and as hereinafter provided. Maintenance/repair of a department furnished low maintenance crash cushion is covered under a separate bid item.

B Materials

Replace the first sentence of standard spec 614.2.7(1) with the following:

The department will furnish the low maintenance crash cushion (Model SCI 100GM Crash Attenuator from Smart Cushion Innovations (SCI) Products).

Pick-up and transport the department-furnished low maintenance crash cushion from the department's designated storage site to the project's installation site upon coordination and approval from the engineer.

C Construction

Replace the first sentence of standard spec 614.3.4(1) with the following:

Install a department-furnished low maintenance crash cushion at locations directed by the engineer within three days of receiving notification from the engineer.

When its use is no longer needed, the department-furnished low maintenance crash cushion shall be salvaged and returned to the department's storage site.

D Measurement

The department will measure Install Department Furnished Crash Cushion Low Maintenance, as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.201	Install Department Furnished Crash Cushion Low Maintenance	EACH

Payment is full compensation for pick-up and transport from the department's designated storage site to the project, installation, salvaging and transport back to the department's storage site of a department-furnished low maintenance crash cushion as described in this article.

(10/11/2017)

80. Repair State Owned Crash Cushion Low Maintenance, Item SPV.0060.202.

A Description

This special provision describes providing emergency repair services to a state owned low maintenance crash cushion located on IH 39 or an IH 39 ramp that becomes compressed/damaged due to a vehicular collision during the time this contract is in effect. This work shall be according to standard spec 614, as directed by the engineer, and as hereinafter provided. Responding to the incident site with the appropriate staff, equipment and materials is covered under a separate bid item.

B (Vacant)

C Construction

Repairs shall be completed as quickly as possible once repair work is started. Repair work shall be completed off of the traveled way to the maximum extent possible.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the engineer.

D Measurement

The department will measure Repair State Owned Crash Cushion Low Maintenance as each individual unit, acceptably repaired.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.202	Repair State Owned Crash Cushion Low Maintenance	EACH

Payment is full compensation for completing the necessary repair work to restore the state owned low maintenance crash cushion to a safe and operational condition.

The department will pay for additional traffic control measures, if required, under the respective traffic control bid items in the contract.

(10/24/2017)

81. Repair State Owned Crash Cushion, Item SPV.0060.203.

A Description

This special provision describes providing emergency repair services, including the replacement of unusable components or hardware, for state owned crash cushions located on IH 39 or an IH 39 ramp that are damaged due to a vehicular collision during the time this contract is in effect. This work shall be according to standard spec 614, as directed by the engineer, and as hereinafter provided. Repair of a state owned low maintenance crash cushion is covered under a separate bid item. Responding to the incident site with the appropriate staff, equipment and materials is covered under a separate bid item.

B (Vacant)

C Construction

Repairs shall be completed as quickly as possible once repair work is started. Repair work shall be completed off of the traveled way to the maximum extent possible.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the engineer.

D Measurement

The department will measure Repair State Owned Crash Cushion as each individual unit, acceptably repaired.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.203	Repair State Owned Crash Cushion	EACH

Payment is full compensation for completing the necessary repair work to restore the state-owned crash cushion to a safe and operational condition, including replacement of damaged, unusable components.

The department will pay for additional traffic control measures, if required, under the respective traffic control bid items in the contract.

(10/24/2017)

82. Emergency Response to Traffic Incident Involving Concrete Barrier Temporary Precast, Item SPV.0060.204.

A Description

This special provision describes providing prompt response to an emergency repair request for damaged and/or dislodged temporary concrete barrier located on IH 39 or an IH 39 ramp that is damaged or displaced due to a vehicular collision during the time this contract is in effect.

B (Vacant)

C Construction

The contractor shall provide staff, equipment, and materials to the incident site within 45 minutes of receiving a repair request from the responding agency. The contractor shall consult with the department's representative on potential repair or replacement options to restore the temporary concrete barrier to proper working condition. Staff and equipment deployed shall be capable of completing the needed repairs as quickly as possible once repair work is started. Repair work shall be completed off the traveled way to the maximum extent allowable. The contractor shall provide a time log of when the repair request was received and when staff arrived at the incident site. This information shall be submitted to the engineer, for verification, within 24 hours of the repair completion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating and completing repair efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to be on-site of an incident with appropriate staff and equipment within 45 minutes of receiving a repair request, the department will assess the contractor \$2500 in liquidated damages for each 15-minute interval that the contractor is not present following the allotted 45-minute response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item Failing to Open Road to Traffic.

For contractor owned temporary barrier, repair work shall be completed according to standard spec 603 and 643, and as directed by the engineer. For state-owned temporary barrier, repair work is covered under article Repair State Owned Concrete Barrier Temporary Precast of these special provisions.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the department's representative.

D Measurement

The department will measure Emergency Response to Traffic Incident Involving Concrete Barrier Temporary Precast as each individual response, 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.0060.204	Emergency Response to Traffic Incident Involving Concrete Barrier Temporary Precast	EACH

Payment is full compensation for providing prompt response to an emergency repair request for damaged and/or dislodged temporary concrete barrier located within the project limits.

The cost of providing the appropriate level of on-call staff, equipment, and materials for 24/7 incident response shall be included in the Mobilization bid item for this project.

The department will pay for any additional traffic control measures, if required, under the respective traffic control bid items in the contract.

(11/29/2017)

83. Emergency Response to Traffic Incident Involving Crash Cushion, Item SPV.0060.205.

A Description

This special provision describes providing prompt response to an emergency repair request involving a damaged crash cushion device on IH 39 or an IH 39 ramp that is displaced or damaged due to a vehicular collision during the time this contract is in effect.

B (Vacant)

C Construction

The contractor shall provide appropriate staff to the incident site within 45 minutes of receiving a repair request from the responding agency. Staff deployed shall be capable of immediately assessing the severity of the damage to the device and consult with the department's representative on potential repair or replacement options and the projected timeline to restore the roadside device to its proper working condition. The contractor shall provide a time log of when the repair request was received and when staff arrived at the incident site. This information shall be submitted to the engineer, for verification, within 24 hours of the repair completion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating repair efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to be on-site of an incident with appropriate staff within 45 minutes of receiving a repair request, the department will assess the contractor \$2500 in liquidated damages for each 15-minute interval that the contractor is not present following the allotted 45-minute response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item Failing to Open Road to Traffic.

For contractor owned devices, repair work shall be completed according to standard spec 614, and as directed by the engineer. For state-owned devices, repair work is covered under articles Repair State Owned Crash Cushion or Repair State Owned Crash Cushion Low Maintenance of these special provisions. In either case, once repair work has been started, work shall continue until completion. Repair work shall be completed off the traveled way to the maximum extent allowable.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the department's representative.

D Measurement

The department will measure Emergency Response to Traffic Incident Involving Crash Cushion as each individual response, 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.0060.205	Emergency Response to Traffic Incident Involving Crash Cushion	EACH

Payment is full compensation for providing a prompt staff response to an emergency repair request for a damaged crash cushion device located within the project limits.

The cost of providing the appropriate level of on-call staff for 24/7 incident response shall be included in the Mobilization bid item for this project.

The department will pay for any additional traffic control measures, if required, under the respective traffic control bid items in the contract.

(11/29/2017)

84. Emergency Response to Traffic Incident Involving Guard Rail or EAT, Item SPV.0060.206.

A Description

This special provision describes providing prompt response to an emergency repair request involving a damaged guard rail or an Energy Absorbing Terminal (EAT) device on IH 39 or an IH 39 ramp that is damaged due to a vehicular collision during the time this contract is in effect.

B (Vacant)

C Construction

The contractor shall provide appropriate staff to the incident site within 45 minutes of receiving a repair request from the responding agency. Staff deployed shall be capable of immediately assessing the severity of the damage to the device and consult with the department's representative on potential repair or replacement options and the projected timeline to restore the roadside device to its proper working condition. The contractor shall provide a time log of when the repair request was received and when staff arrived at the incident site. This information shall be submitted to the engineer, for verification, within 24 hours of the repair completion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating repair efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to be on-site of an incident with appropriate staff within 45 minutes of receiving a repair request, the department will assess the contractor \$2500 in liquidated damages for each 15-minute interval that the contractor is not present following the allotted 45-minute response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item Failing to Open Road to Traffic.

For contractor owned devices, repair work shall be completed according to standard spec 614, and as directed by the engineer. For state-owned devices, repair work is covered under articles Repair State Owned Guard Rail and Repair State Owned EAT of these special provisions. In either case, once repair work has been started, work shall continue until completion. Repair work shall be completed off the traveled way to the maximum extent allowable.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the department's representative.

D Measurement

The department will measure Emergency Response to Traffic Incident Involving Guard Rail or EAT as each individual response, 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.0060.206	Emergency Response to Traffic Incident Involving Guard Rail or EAT	EACH

Payment is full compensation for providing a prompt staff response to an emergency repair request for a damaged guard rail or an EAT located within the project limits.

The cost of providing the appropriate level of on-call staff for 24/7 incident response shall be included in the Mobilization bid item for this project.

The department will pay for any additional traffic control measures, if required, under the respective traffic control bid items in the contract.

(11/29/2017)

85. Install Solar Panel System – Microwave Detector, Item SPV.0060.401.

A Description

This special provision describes installing a department-furnished solar power system on a pole as part of a system detector station at locations as shown on the plans.

B Materials

The department-furnished solar power system consists of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.

Contractor furnished materials include outdoor rated power cable between solar power system output and department furnished microwave detector as well as mounting hardware for the solar power assembly.

C Construction

Install the microwave detector as required in standard spec 675. Additionally, integrate the microwave detector with communications equipment as shown on the plans.

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement

The department will measure Install Solar Power System – Microwave Detector as a unit, with each assembly installed, functioning, testing, and accepted according to the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.401	Install Solar Panel System – Microwave Detector	EACH

Payment is full compensation for installing a solar panel system; furnishing all necessary incidental hardware; and making all necessary connections.

86. Native Seed Surveillance and Care Cycles, Item SPV.0060.506.

A Description

This special provision describes the post-seeding monitoring, documentation, and care for the native seed planting areas.

A.1 Native Seed Establishment Period

The native seed surveillance and care period is from initial planting until December 15 of the succeeding year.

B Materials

B.1 Herbicides

Comply with the material requirements specified in the article Pre-Planting Vegetation Treatment.

C Construction

C.1 General

Proper care of native plants consists of weeding, re-seeding, and any other work necessary to maintain the native plants and promote continued establishment.

Remove any trash, debris, slurry, sediment, or other material deposited by wind, water, or other means in any of the native seeded areas.

C.2 Care Specialist

Provide one person, called the Care Specialist, responsible for the well-being of the native seed planting areas. Also provide any other personnel, vehicles, equipment, tools, and materials needed to carry out the Care Specialist's recommendations throughout the full term of the establishment period. The care specialist will do the following:

1. For each care cycle, perform surveillance and care of the native seed planting areas throughout the growing season to promote native seed growth. At least 14 days prior to planting, submit a native seed surveillance and care cycle schedule to the Corridor Vegetation Inspector. Use a department provided template. Provide schedule updates to the Corridor Vegetation Inspector as necessary.
2. After each visual inspection, but prior to executing the work for each care cycle, fill out the pertinent information required on the department provided worksheet "Native Seed Scouting Report". After all care activities have been completed for a care cycle, fill out the remainder of the same worksheet. Complete one worksheet per site per care cycle, sign the worksheet, and submit to the Corridor Vegetation Inspector.
3. Conduct a field assessment native plant survey during July or August for each seeding site. Fill out the department provided worksheet "Native Plant Survey" or an equivalent worksheet approved by the Corridor Vegetation Inspector. Complete one worksheet per site, sign the worksheet, and submit to the Corridor Vegetation Inspector.

4. Provide a final examination of the native seed planting sites by December 1 of the establishment period. Fill out the department provided worksheet "Final Assessment of Native Plantings". Required attachments to be included with this submittal include but are not limited to: photos, a dominant native and non-native species list, written assessment of standard performance achievements, summary of management efforts for the year, summary of management recommendations for the following year, map showing each established native seed mix area, and a list of the established plant species in each area. Complete one worksheet per site, sign the worksheet, and submit to the Corridor Vegetation Inspector.
5. Follow the Performance Standards contained in this article.

C.3 Re-Seeding

If bare ground exceeds 10% of the native seeded area, re-seed all bare spots larger than 4-square feet. Re-seed all areas, at the earliest appropriate planting time. Areas to be re-seeded must be approved by the Corridor Vegetation Inspector before work begins.

C.4 Invasive Species and Weed Management

Identify and manage weeds within the Invasive Species and Weed Management Areas (including native seeding areas) shown in the plans. Common approaches to control invasive species and weeds within and near native prairie sites are described below. Submit other techniques to the Corridor Vegetation Inspector for approval.

Do not begin the process of undesirable weed control and eradication, using herbicides, until native plant establishment is at a point where the native plants can be readily recognized and identified. Other weed control methods may be applied earlier as appropriate.

C.4.1 Spot Herbicide Treatment

Spot treatment entails the use of an absorbent material that has been soaked in an appropriate selective herbicide to control undesirable weeds. Apply herbicide at appropriate concentration. Identify all weeds and prairie plants when not in flower.

C.4.2 Spray Herbicide Treatment

Select the appropriate herbicide for treating newly-emerging weeds. Spray weeds in the spring when emerging from the soil, and no more than 6 inches in height. Focus the herbicide application at the ground level to minimize drift onto nearby desirable species.

C.4.3 Inverted Cone Herbicide Treatment

Place a 3- to 4-inch diameter inverted cone over the sprayer nozzle by affixing it to the sprayer wand just above the point of attachment to the nozzle. The cone can be constructed by cutting off the narrow stem of a funnel so that only the cone remains. Remove the sprayer nozzle, and fit the inverted funnel cone over the sprayer wand. Reattach the sprayer nozzle so the cone sits just above it, and affix the cone onto the sprayer wand. Cover the unwanted vegetation with the cone and spray herbicide so that the drift is contained within the cone.

Treat undesirable cool season weeds such as Quackgrass, Kentucky Bluegrass, and Smooth Bromegrass by using grass-selective herbicides. Remove weeds in mid- to late fall after the warm season prairie grasses are dormant and the cool season weedy grasses are actively growing. Air temperature must be above 60° F to ensure satisfactory results. If the site contains significant components of cool season native grasses, obtain approval of the Corridor Vegetation Inspector before proceeding.

C.4.4 Mowing

During each growing season, defined as May 1 – October 1, mow the Invasive Species and Weed Management areas (including the native seeding areas) per the specifications below.

Mow when vegetation reaches a height of 12 inches. Set the mower height to 6 inches. Multiple mowing's will be required.

Mowing should be timed to occur before any weeds produce viable seeds to prevent future weed infestations. Mowing will not be allowed if target weed species possess mature seeds. Coordinate the scheduling of all mowing's with the Corridor Vegetation Inspector prior to performing this work.

Mowing should be performed only when soils are dry and not subject to rutting or compaction. Areas that are damaged by indiscriminate mowing shall be re-seeded at the expense of the contractor.

Selective mowing may be required once the native vegetation is established to reduce weed seed production. Mowing may not be possible in very wet areas.

Use a flail-type mower. Verify that the cut vegetation does not bury small seedlings with large clumps of plant debris. Remove all undesirable plant material from the landscape site. Mowing equipment shall be washed prior to using at project sites to minimize the spread of weedy species.

C.4.5 Mechanical Methods

Techniques include hoeing, cutting, girdling, and tilling.

C.4.6 Digging/Hand-pulling

Remove entire root to prevent re-sprouting. Use with small or young plants, sandy or loose soils, or when soils are damp.

C.5 Weedy Species

The following weedy species must be controlled in the Invasive Species and Weed Management areas as soon as they become evident/visible:

GRASSES

<u>Common Name</u>	<u>Scientific Name</u>
Tall Fescue	Festuca arundinacea
Reed Canary Grass	Phalaris arundinacea
Giant Reed Grass	Phragmites australis
Kentucky Bluegrass	Pro pratensis
Smooth Brome	Bromus inermis
Orchard Grass	Dactylis glomerata
Quackgrass	Elytrigia repens

BROADLEAF WEEDS

<u>Common Name</u>	<u>Scientific Name</u>
Perennial Pepperweed*	Lepidium latifolium
Japanese Knotweed	Polygonum cuspidatum or Fallopia japonica
Canada Goldenrod	Solidago canadensis
Canada Thistle*	Cirsium arvense
Crown Vetch*	Securigera varia
Field Bindweed*	Convolvulus arvensis
Horsenettle*	Solanum carolinense
Leafy Spurge	Euphorbia esula
Wild Parsnip	Pastinaca sativa
White Sweet Clover	Melilotus alba
Yellow Sweet Clover	Melilotus officinale

**Denotes weeds that cannot be killed by Glyphosate and require the addition of the appropriate broadleaf herbicide to the glyphosate tank mix in the first herbicide treatment.*

C.6 Damages for Failing to Perform

If the Care Specialist fails to perform the surveillance or fails to perform the proper care for a period greater than three weeks, the department will assess daily damages in the amount of \$1,000 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of this special provision remain incomplete.

C.7 Acceptance Of Native Seed Areas

The Corridor Vegetation Inspector will make a final inspection of the native seeding areas and accept those areas conforming to the following performance standards:

Native Seed Performance Standards

1. Native plants must be established, healthy, thriving, upright and green.
2. The seeded areas show signs of satisfactory germination and growth of at least 50% of the planted species at the end of the establishment period.
3. Proper surveillance and care of the native seed beds has occurred and documentation has been delivered to the department.

D Measurement

The department will measure Native Seed Surveillance and Care Cycles as each individual care cycle, acceptably completed. All native seed planting sites along the project are included in the work for each care cycle.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.506	Native Seed Surveillance and Care Cycles	EACH

Payment is full compensation for providing a Care Specialist, inspecting and caring for the native plant sites, documenting site visits and care activities, identifying weeds for removal; furnishing and applying herbicide; re-applying herbicide as needed; mowing; hoeing; cutting; girdling; tilling; digging; hand-pulling; and for disposing of weeds off-site. Multiple mobilizations and work efforts at the same site will not be paid for separately.

The department will assess damages, as described in this specification, for failing to perform the required surveillance and care.

87. Delineator Post Steel Modified, Item SPV.0060.507.

A Description

This special provision describes furnishing and installing steel posts and attaching sign I56-50, 12"x18" to the post. The locations of the posts will be marked by the department and will be located at the native seed planting areas. Conform to the requirements of standard spec 633, the standard detail drawing, and the construction detail shown in the plans.

B (Vacant)

C Construction

Attach sign so message faces away from the native seed planting area.

D Measurement

The department will measure Delineator Post Steel Modified as each individual post, 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.0060.507	Delineator Post Steel Modified	EACH

Payment is full compensation for furnishing and installing posts and for installing the sign on the posts.

88. Planting Living Snow Fence, Item SPV.0060.508.

A Description

This special provision describes installing plants of the species, varieties and sizes furnished by the department, and includes furnishing all necessary materials, excavation, salvaging topsoil, backfilling, mulching, watering and disposing of surplus and waste materials.

B Materials

Plant material for living snow fence is furnished by the department. Pickup plant material at the following location and transport to the project site.

DNR Service Center
3911 Fish Hatchery Road
Fitchburg, WI 53711

Plant material will be bare root stock with a maximum length of 18".

Mulch shall be hardwood bark chips per standard spec 632.2.6.

C Construction

Install living snow fence stock in either a dug hole, dug trench or by machine specifically made for this purpose. Ensure tree is vertical and sufficiently supported by soil. Space plant rows as shown in the plan detail.

Planting shall occur in the spring and no later than June 1.

After initial planting, water each plant sufficiently to keep the topsoil in a moist condition. Immediately, place mulch around the plants as shown in the plan detail.

Identify and catalog any issues, concerns or problems with the plant stock. Identify and catalog any plants that need replacement within 2 weeks after planting.

D Measurement

The department will measure Planting Living Snow Fence as each individual plant, 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.0060.508	Planting Living Snow Fence	EACH

Payment is full compensation for picking up, transporting, handling, planting, mulching, initial watering, and cataloging of the plant material.

89. Seeding Native Mix N1, Item SPV.0085.509; Seeding Native Mix N2, Item SPV.0085.510; Seeding Native Mix N3, Item SPV.0085.511; Seeding Native Mix N4, Item SPV.0085.512.

A Description

This special provision describes furnishing and sowing the required native seed mix on areas shown in the plans.

B Materials

B.1 Native Seed

B.1.1 Labeling

Each native seed species shall be packaged separately for each seed mixture. Packages for each species shall document seed test and date, mix composition, and the following information:

1. Scientific name of genus and species (subspecies and variety as necessary)
2. Guarantee that seeds are true to species
3. Bulk Weight
4. PLS Weight
5. Percent PLS
6. Year of harvest and any specialized treatments that have been applied to ensure or enhance germination
7. Seed Origin (geographical location)
8. Seed supplier contact information including company name, address, phone number, and contact person's name and e-mail address
9. Percent Weed Seed
10. Noxious Weeds Found

Provide copies of shipment and certification paperwork to the Corridor Vegetation Inspector before the native seed mixtures arrive at the landscaping site.

B.1.2 Purity and Germination

Seed lots with testing data over 12-months old will be rejected. Seed tests shall be provided for each individual seed lot, with the following required information:

1. Seed Origin and Source
2. Crop Year
3. Date of Seed Test
4. % Purity
5. % Germination
6. % Inert Material
7. % Other Crop Seed and Other Crop Species
8. % Weed Seed (as allowed per standards of the Wisconsin Crop Improvement Association)
9. Noxious Weeds Found (none allowable)

No seed lots containing Wisconsin Noxious Weeds will be approved for native prairie plantings, as per the list of noxious weed species identified by the Wisconsin Crop Improvement Association, <https://wcia.wisc.edu/2015Standards09102015.pdf>.

B.1.3 Inoculation

All legume seeds shall be inoculated with fresh Rhizobium bacteria of the appropriate strain for each legume species prior to seeding.

B.1.4 Storing Seed

Store any seed delivered before use in a way that protects it from damage by heat, moisture, rodents, or other causes. Discard and replace, at no cost to the department, any previously tested and accepted seed that becomes damaged. Seed should not be stored on site more than seven days.

B.1.5 Native Seed Mixtures

The following Native Seed Mixtures shall be used within the native seed planting areas, dependent on soil and moisture conditions:

MIX N1 - NATIVE PRAIRIE SEED MIX – DRY SOILS

Sun Conditions: Full sun to one-half day full sun

Suitable Soil Moisture Conditions: Dry to dry-mesic soils

Suitable Soil Types: Well-drained sand and loamy sand

MIX N2 - NATIVE PRAIRIE SEED MIX – MESIC SOILS

Sun Conditions: Full sun to one-half day full sun

Suitable Soil Moisture Conditions: Mesic to wet-mesic soils

Suitable Soil Types: Well-drained sandy loam, loam, silt loam, clay loam

MIX N3 – WET PRAIRIE NATIVE SEED MIX

Sun Conditions: Full sun to one-half day sun

Suitable Soil Moisture Conditions: Wet-mesic to wet soils

Suitable Soil Types: Moist loamy sand, sandy loam, loam, silt loam, clay loam

MIX N4 - INFILTRATION AREA NATIVE SEED MIX FOR SANDY SOILS

Sun Conditions: Full sun to one-half day full sun

Suitable Soil Moisture Conditions: Wet-mesic to wet soils

Suitable Soil Types: Well-draining sand-based engineered soils

The appropriate mix for each landscaping site is identified in the plans. The seed mixtures shall be composed of seeds of the proportions, by weight, listed in Table 1 below:

	Table 1 - Native Seed Mixtures					
			<u>Mix N1</u>	<u>Mix N2</u>	<u>Mix N3</u>	<u>Mix N4</u>
	Species	Common Name	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre
Forbs	Agastache foeniculum	Lavender Hyssop	1.0	1.0		1.0
	Allium cernuum	Nodding Pink Onion		8.0		4.0
	Amorpha canescens	Leadplant	2.0			
	Asclepias incarnata	Marsh Milkweed		12.0	12.0	10.0
	Asclepias syriaca	Common Milkweed	4.0	5.0	9.0	6.0
	Asclepias tuberosa	Butterflyweed	12.0			
	Aster azureus	Sky Blue Aster	2.0	2.0		
	Aster laevis	Smooth Aster	2.0	2.0		
	Aster novae-angliae	New England Aster		2.0	3.0	2.0
	Aster ptarmicoides	White Aster	1.0			
	Astragalus canadensis	Canada Milkvetch	2.0			
	Baptisia alba	White Wild Indigo		8.0	9.0	6.0
	Coreopsis lanceolata	Lanceleaf Coreopsis	3.0			
	Dalea candida	White Prairie Clover	8.0			
	Dalea purpurea	Purple Prairie Clover	12.0			
	Echinacea purpurea	Purple Coneflower		8.0		
	Eryngium yuccifolium	Rattlesnake Master		8.0		
	Eupatorium maculatum	Spotted Joe Pye Weed			3.0	4.0
	Eupatorium perfoliatum	Boneset			1.5	2.0
	Helenium autumnale	Sneezeweed			1.5	2.0
	Helianthus pauciflorus	Showy Sunflower	1.0			
	Heliopsis helianthoides	Ox Eye Sunflower	2.0	3.0	4.5	5.0
	Lespedeza capitata	Roundhead Bushclover	6.0			
	Liatris aspera	Rough Blazingstar	8.0			

	Table 1 - Native Seed Mixtures					
			<u>Mix N1</u>	<u>Mix N2</u>	<u>Mix N3</u>	<u>Mix N4</u>
	Species	Common Name	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre
	Liatris pycnostachya	Prairie Blazingstar		8.0	9.0	16.0
	Liatris spicata	Marsh Blazingstar			9.0	
	Lobelia siphilitica	Great Blue Lobelia			1.5	
	Lupinus perennis	Wild Lupine	16.0			
	Monarda fistulosa	Bergamot	1.0	1.0	1.5	1.0
	Monarda punctata	Dotted Mint	1.0			
	Penstemon digitalis	Smooth Penstemon		2.0		
	Penstemon grandiflorus	Beardtongue	8.0			
	Ratibida pinnata	Yellow Coneflower	4.0	5.0	7.5	4.0
	Rudbeckia hirta	Black Eyed Susan	4.0	4.0	6.0	4.0
	Rudbeckia laciniata	Green Headed Coneflower			4.5	
	Rudbeckia subtomentosa	Sweet Black Eyed Susan		2.0	3.0	3.0
	Rudbeckia triloba	Brown Eyed Susan	2.0	2.0		3.0
	Senna hebecarpa	Wild Senna		6.0		7.0
	Siphium integrifolium	Rosinweed	1.0			1.0
	Silphium laciniatum	Compassplant	5.0	6.0		
	Silphium terebinthinaceum	Prairie Dock		4.0	12.0	6.0
	Solidago rigida	Stiff Goldenrod	1.0	1.0	1.5	1.0
	Solidago speciosa	Showy Goldenrod	1.0			
	Tradescantia ohiensis	Ohio Spiderwort	8.0	6.0		6.0
	Verbena hastata	Blue Vervain		1.0	1.5	2.0
	Verbena stricta	Hoary Vervain	2.0			
	Vernonia fasciculata	Ironweed		4.0		4.0
	Veronicastrum virginicum	Culver's Root		1.0		

	Table 1 - Native Seed Mixtures					
			<u>Mix N1</u>	<u>Mix N2</u>	<u>Mix N3</u>	<u>Mix N4</u>
	Species	Common Name	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre
	Zizia aurea	Golden Alexanders		8.0	7.5	8.0
		Sub Total:	120.0	120.0	108.0	108.0

	Table 1 - Native Seed Mixtures					
			<u>Mix N1</u>	<u>Mix N2</u>	<u>Mix N3</u>	<u>Mix N4</u>
	Species	Common Name	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre	PLS Oz/Acre
Graminoids	Andropogon gerardii	Big Bluestem	4.0	4.0	6.0	4.0
	Bouteloua curtipendula	Side Oats Grama	30.0	30.0		
	Bromus ciliatus	Fringed Brome			24.0	16.0
	Carex bebbii	Bebb's Sedge			6.0	6.0
	Carex stipata	Awl Fruited Sedge			6.0	6.0
	Carex vulpinoidea	Brown Fox Sedge			6.0	6.0
	Sporobolus heterolepis	Prairie Dropseed	12.0			
	Elymus canadensis	Canada Wild Rye	32.0	32.0		32.0
	Elymus virginicus	Virginia Wild Rye			66.0	32.0
	Glyceria striata	Fowl Manna Grass			4.5	
	Panicum virgatum	Switchgrass	2.0	2.0		4.0
	Schizachyrium scoparium	Little Bluestem	32.0	32.0		16.0
	Scirpus atrovirens	Dark Green Bulrush			6.0	
	Scirpus cyperinus	Woolgrass			4.5	
	Sorghastrum nutans	Indiangrass	8.0	8.0		8.0
	Spartina pectinata	Prairie Cordgrass			3.0	2.0
	Sporobolus heterolepis	Prairie Dropseed		12.0		
		Sub Total:	120.0	120.0	132.0	132.0

	Table 1 - Native Seed Mixtures					
			<u>Mix N1</u>	<u>Mix N2</u>	<u>Mix N3</u>	<u>Mix N4</u>
		TOTAL:	240.0	240.0	240.0	240.0
	Substitute Species					
	Anemone canadensis	Canada Anemone		X		
	Anemone cylindrica	Thimbleweed	X			
	Astragalus canadensis	Canada Milkvetch		X		
	Aster Ptarmicoides	White Aster	X			
	Aster puniceus	Swamp Aster			X	X
	Baptisia bracteata	Cream False Indigo	X			
	Ceanothus americanus	New Jersey Tea	X			
	Euphorbia corollata	Flowering Spurge	X			
	Gentiana andrewsii	Bottle Gentian			X	
	Helianthus occidentalis	Western Sunflower	X	X		
	Iris shrevei	Wild Iris			X	X
	Kuhnia eupatorioides	False Boneset	X			
	Mimulus ringens	Monkey Flower			X	X
	Pycnanthemum virginianum	Mountain Mint			X	X
	Ruellia humilis	Wild Petunia	X			
	Senna hebecarpa	Wild Senna			X	
	Solidago ohioensis	Ohio Goldenrod			X	X
	Solidago riddellii	Riddell's Goldenrod			X	X
	Solidago speciosa	Showy Goldenrod		X		
	Thalictrum dasycarpum	Purple Meadow Rue			X	X
	Vernonia fasciculata	Ironweed			X	
	Veronicastrum virginicum	Culver's Root			X	X
	Zizi Aurea	Golden Alexanders		X		

	Table 1 - Native Seed Mixtures					
			<u>Mix N1</u>	<u>Mix N2</u>	<u>Mix N3</u>	<u>Mix N4</u>
Substitute Graminoids	Bromus kalmii	Kalm's Bromegrass	X			
	Calamagrostis canadensis	Canada Blue Joint Grass		X	X	X
	Carex bicknellii	Copper Shouldered Oval Sedge	X			
	Carex crinita	Fringed Sedge		X	X	X
	Carex scoparia	Lance-Fruited Sedge		X	X	X
	Danthonia spicata	Poverty Oats Grass	X			
	Elymus trachycaulus	Slender Wheatgrass	X	X		

Verify and inspect individual seed species at the grower's nursery, the place of collection, or at the collector's holding site. Recommend the seed lots for mixture. Seed lots must be approved by the Corridor Vegetation Inspector prior to blending any seed. Verify and inspect the final mixtures and recommend the mixtures to the Corridor Vegetation Inspector for approval. Inform Corridor Vegetation Inspector of any concerns with the seed prior to sowing.

Furnish copies of seed bag tags and/or seed tests results for each seed lot, performed by a certified seed testing lab to the Corridor Vegetation Inspector.

All seed shall be Pure Live Seed (PLS) and originating and obtained from Wisconsin, Minnesota, Eastern Iowa or Northern Illinois nurseries, specializing in growing native species from Upper Midwestern genotypes in Zone 5a or lower of the US Agricultural Research Service, Plant Hardiness Zone Map, Miscellaneous Publication Vol. No. 1475, Issued January, 1990, Updated January 24, 2012, <http://planthardiness.ars.usda.gov/PHZMWeb/>

Ensure that all seed used is cold, dry stratified.

If a listed species is not available, substitutions may be made from the alternative seed species listed in Table 1 under **Substitute Species** for each of the seed mixtures. Before using an alternate, provide documentation showing that a required species is not available to the Corridor Vegetation Inspector. Obtain substitution approval from the Corridor Vegetation Inspector prior to ordering substitute seed.

If substitutions in a seed mix are made, maintain the forbs to graminoids ratios and numbers of species counts listed in Table 2. The weight of any item substituted cannot be more than twice or less than half by weight, in comparison to the item it is replacing. All substitutions are to be approved by the Corridor Vegetation Inspector.

Table 2 - Table of Minimum Requirements for Native Seed Mixtures

	% Forbs by Weight	% Graminoids by Weight	# of Forbs	# of Graminoids	# of Total Prairie Species per Mix
Mix N1 – Native Prairie Seed Mix – Dry Soils	50	50	28	7	35
Mix N2 - Native Prairie Seed Mix – Mesic Soils	50	50	27	7	34
Mix N3 - Wet Prairie Native Seed Mix	45	55	20	10	30
Mix N4 - Infiltration Area Native Seed Mix for Sandy Soils	45	55	24	11	35

C Construction

C.1 Seed Bed Inspection

Prior to seeding, obtain concurrence from the Corridor Vegetation Inspector that the existing topsoil is adequate in terms of quality, as further described in the Seed Bed Preparation article.

The Corridor Vegetation Inspector shall review the site by evaluating seed beds for proper weed control and soil condition prior to authorizing contractor to proceed with seeding. Additional seed bed preparation, as authorized by the Corridor Vegetation Inspector, will be paid for under the Seed Bed Preparation bid item.

C.2 Vegetation Eradication

Pre-planting herbicide treatment is described in the Pre-Planting Vegetation Treatment article.

If little or no perennial vegetation is present on the site, the Corridor Vegetation Inspector may approve a truncated site preparation process at his/her discretion.

The Corridor Vegetation Inspector shall have sole authority in determining when the seed bed has been properly prepared for seeding.

C.3 Seeding Methods and Timing

Three seeding methods are approved for sowing the Native Seed Mixtures:

1. No-till prairie seed drills.
2. Broadcast roller seeders.
3. Pull-behind broadcast seeders that can be calibrated to seed prairies at the appropriate low rates per acre.

No-till seed drills shall be set up to handle the flow characteristics and calibration requirements for the proper distribution of prairie flower and grass seeds. The seed bed must be graded to extremely smooth conditions for no-till drills to work properly, with the maximum variation in soil elevations of no more than 1/2 inch in height. The no-till seeder should be set so that the seed is placed only 1/4 inch deep in the soil. Any micro-variations in topography will result in the seed being planted either too deeply so that it will not germinate, or is dropped onto the surface of the soil rather than being deposited into the soil itself.

Broadcast roller seeders require a freshly worked up seed bed in order to be effective. The soil must be loose, with maximum variation in soil elevation of no more than 4 inches in height prior to using a broadcast roller seeder.

Pull-behind broadcast seeders also require a freshly prepared seed bed for success. The soil must be loose, with a maximum variation in soil elevation of no more than 1 inch. The site must be dragged smooth and rolled with a cultipacker immediately following seeding.

Hydro-seeding is not an approved method for seeding native prairies and shall not be used for this purpose.

All native seeding will be fall dormant seeding, unless otherwise approved by the Corridor Vegetation Inspector. Sow seed between November 1 to the time when the soil is frozen. Planting may occur on partially frozen soil if the seed makes good contact with the soil at time of planting. The Corridor Vegetation Inspector must approve seeding on partially frozen soil.

C.4 Seeding Rates

Use the following sowing rate for native seeding:

Native Seed Mixtures at 15.0 pounds/acre

The entire native seeding area shall be seeded with the equipment set at one-half the designated rate. Then the entire site shall be seeded again with the remaining seed and with the equipment traveling in a direction perpendicular to the first seeding. On small areas the entire amount of seed may be sown in one direction at the discretion of the Corridor Vegetation Inspector.

C.5 Erosion Control

Place Erosion Mat Class I Type B over Soil Stabilizer Type B on native seeding areas only where directed by the Corridor Vegetation Inspector.

Place Seeding Mixture No. 30 and Fertilizer, Type A on areas within the Invasive Species and Weed Management limits that are not seeded with a native seed mix.

C.6 Seed Establishment Period

The work necessary during the establishment period is described in the Native Seeding Surveillance and Care Cycles article.

D Measurement

The department will measure Seeding Native Mix (mixture) by the pound, 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.0085.509	Seeding Native Mix N1	LB
SPV.0085.510	Seeding Native Mix N2	LB
SPV.0085.511	Seeding Native Mix N3	LB
SPV.0085.512	Seeding Native Mix N4	LB

Payment is full compensation for providing, inspecting, handling, and storing seed; for providing the required culture and inoculating seed as specified; for removing foreign and deleterious objects, construction materials, and stones from the seed bed, and for sowing, covering and firming the seed.

Seed bed preparation that involves working up the topsoil will be paid for under the Seed Bed Preparation bid item.

Pre-planting herbicide treatment will be paid for under the Pre-Planting Vegetation Treatment bid item.

Erosion Control items shall be paid for, as necessary, under the respective standard bid items.

Seeding Mixture No. 30 and Fertilizer, Type A shall be paid for, as necessary, under the respective bid items.

Follow-up care during the establishment period will be paid for under the Native Seed Surveillance and Care Cycles bid item.

90. Concrete Pavement Joint Sealing, Item SPV.0090.001.

A Description

This special provision provides for the sealing of the longitudinal joint located a distance, as shown on the plans, from the base of S42 and S42A concrete barrier only when this joint is created by a full-depth sawcut. Joint sealing shall consist of cleaning the joint in preparation for sealing and sealing the joint in the concrete pavement with a hot applied joint sealing material.

B Materials

All designated joints shall be sealed with a hot applied joint sealant conforming to the Specification for Joint and Crack Sealants, Hot-Applied, for Concrete and Asphalt Pavements, ASTM Designation D6690, type II. A Certification of Compliance shall be furnished to the engineer prior to application.

Sawed joints designated to be sealed under this bid item will not require Concrete Protective Surface Treatment as described in a separate article of these special provisions.

C Construction

The operation of sealing shall be performed as soon as practicable upon elapse of the curing period and in any event prior to the time traffic of any kind uses the pavement.

Joints shall not be sealed until they have been inspected and approved by the engineer.

Application of the joint sealer shall be made when the joint surfaces are clean and dry.

Immediately before sealing the joint, thoroughly clean the joints of all laitance, curing compound and other foreign material. Exposed joint faces shall be cleaned by sandblasting, or by water blasting with sufficient pressure to thoroughly and completely clean the joint. A multiple-pass technique shall be used until the surfaces are free of material that might prevent bonding. For final cleaning immediately prior to installation of the sealer, the joints shall be blown clean with oil-free compressed air. The joint faces must be surface dry when sealant is applied.

The sealing compound shall be heated to the pouring temperature recommended by the manufacturer in an approved kettle or tank, constructed as a double boiler, with the space between the inner and outer shells filled with oil or other satisfactory heat transfer medium. The heating kettle shall be equipped with a mechanical agitator, positive temperature control and an approved dial thermometer for checking temperatures of the compound. The heating kettle, if and when operated on concrete, shall be properly insulated against the radiation of heat to the concrete surface.

The sealing compound shall not be heated above the maximum safe heating temperature. The maximum safe heating temperature shall be determined from tests made on samples from each lot or shipment of the material delivered to the project. When so approved by the engineer, the manufacturer's recommended maximum safe heating temperature may be used in lieu of test determinations where relatively small quantities of sealer are used. Any material heated above the maximum safe heating temperature shall be discarded.

Pouring of joints shall be made when the sealing material is at the required temperature and, insofar as practicable, the sealing compound shall be maintained at a uniform temperature during pouring operations. Pouring shall not be permitted when the temperature of the sealing compound in the applicator, as it is applied to the joint, is more than 10° F below the recommended pouring temperature. Pouring of the molten sealer in the joint opening shall be done with such equipment that the sealer completely fills the joint opening without overflowing on the adjoining surface and when finished, after shrinkage, the sealer is approximately flush with the adjoining surfaces. In the event satisfactory sealing of a joint is not accomplished in a single pouring, the sealing compound shall be placed in two pours. At least one-half of the required amount shall be placed in the first pouring, and the second pouring shall follow the first as soon as practicable after the first pouring has attained maximum shrinkage but not later than one hour after the first pouring.

D Measurement

The department will measure Concrete Pavement Joint Sealing by the linear foot in place along the joint, 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.0090.001	Concrete Pavement Joint Sealing	LF

Payment is full compensation for cleaning the joint, and for furnishing and applying the joint sealant.

(1/31/2017)

91. Concrete Curb 4-Inch Sloped Special, Item SPV.0090.002; Concrete Curb & Gutter 36-Inch Type A Special, Item SPV.0090.004.

A Description

This special provision describes furnishing and placing concrete curb and concrete curb & gutter at locations as detailed in the plans and as hereinafter provided.

B Materials

Furnish materials in conformance with standard spec 601.2.

C Construction

Perform work according to standard spec 601.3.

D Measurement

The department will not measure Concrete Curb 4-Inch Sloped Special and Concrete Curb & Gutter 36-Inch Type A Special. The department will use pay plan quantity conforming to standard spec 109.1.1.2.

E Payment

The department will pay for plan quantities conforming to standard spec 109.1.1.2 at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.002	Concrete Curb 4-Inch Sloped Special	LF
SPV.0090.004	Concrete Curb & Gutter 36-Inch Type A Special	LF

Payment is full compensation conforming to standard spec 601.5 (3).

92. Salvage and Reinstall Steel Thrie Beam, Item SPV.0090.005.

A Description

This special provision describes salvaging the existing steel thrie beam, including bullnose terminals, and reinstalling the steel thrie beam and terminals as shown on the plans or as directed by the engineer and as hereinafter provided.

B (Vacant)

C Construction

Dismantle and remove the rail, posts, blocks, steel thrie beam, bullnose terminals, or other component the salvaged bid item indicates from the locations the contract designates.

Minimize damage to reusable materials. Do not cut material that would be otherwise reusable. Replace contractor-damaged materials that are to remain in place or to be reinstalled at no cost to the department. Remove and dispose of all unwanted or damaged materials.

Sort by component part and load reusable materials onto separate pallets for each component part. The contractor may place hardware and smaller parts in clearly labeled crates or plastic buckets. Stockpile reusable material in engineer-approved locations on the project.

Reinstall the salvaged thrie beam, including bullnose terminals, at the locations the contract designates or as directed by the engineer.

Do not use salvaged materials for temporary installations or for any other work under this contract.

D Measurement

The department will measure Salvage and Reinstall Steel Thrie Beam by the linear foot, acceptably completed, measured along the face of the rail, including the length of the bullnose terminals.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.005	Salvage and Reinstall Steel Thrie Beam	LF

Payment is full compensation for dismantling and stockpiling reusable rail, posts, blocks, bullnose terminals, or system elements; for removing and disposing of unwanted or damaged materials; for setting and driving posts; for reinstalling steel thrie beam and bullnose terminals; for excavating, backfilling, and disposing of surplus material.

93. Compost Tube, Item SPV.0090.150.

A Description

This special provision describes furnishing and installing compost tubes or wattles as shown on the plans or as directed by the engineer and as hereinafter provided. Compost tube shall consist of cylinders of biodegradable compost encased within biodegradable netting.

B Materials

Provide compost that:

1. Is a well-decomposed, stable, weed-free, organic, commercially manufactured material resulting from the biological degradation and transformation of plant or animal-derived materials under controlled conditions designed to promote aerobic decomposition.
2. Is mature with regard to its suitability for serving as an erosion control Best Management Practice (BMP) as defined in the table below.
3. Is stable with regard to oxygen consumption and carbon dioxide generation.
4. Does not contain paint, petroleum products, pesticides or any other chemical residues harmful to animal life or plant growth.
5. Does not possess objectionable odors.
6. Has a moisture content with no visible free water or dust produced when handling the material.

Compost feedstock may include, but is not limited to, yard waste, clean chipped wood, farm crop residue, farm animal manure, or vegetable food waste. Do not use materials that have been treated with chemical preservatives as a compost feedstock or as wood chips.

Test according to the United States Composting Council's "Test Methods for Examining of Composting and Compost (TMECC)". Provide compost with the United States Composting Council's Seal of Testing Assurance Program (STA) certification and STA product label. The compost producer must be a participant in the United States Composting Council's Seal of Testing Assurance program.

Provide quality control documentation that includes the following:

1. The compost technical data sheet with the feedstock by percentage in the final compost product.
2. A certification that the compost meets federal and state health and safety regulations.
3. A copy of the producer's STA certification.
4. A certified report of tests performed by an STA-certified lab, verifying that the compost meets the requirements in the table below.

Compost must comply with the following:

PROPERTY	TEST METHOD	REQUIREMENT
Particle Size	*TMECC 02.02-B Sample Sieving for Aggregate Size Classification % Dry Weight Basis	100% Passing, 3 inch 90 – 100% Passing, 1 inch 70 – 100% Passing, ¾ in 30 – 75% Passing, ¼ inch Maximum length 6 inches
pH	TMECC 04.11-A Elastometric pH 1:5 Slurry Method pH Units	6.0-8.0
Soluble Salts	TMECC 04.10-A Electrical Conductivity 1:5 Slurry Method dS/m (mmhos/cm)	Below 5.0
Moisture Content	TMECC 03.09-A Total Solids and Moisture at 70+/- 5 deg C % Wet Weight Basis	35 – 50
Organic Matter Content	TMECC 05.07-A Loss-On-Ignition Organic Matter Method (LOI) % Dry Weight Basis	Minimum 40% Max 60% ash content
Maturity	TMECC 05.05-A Germination and Vigor "Germination and Root Elongation" Seed Emergence Seedling Vigor % Relative to Positive Control	80 or Above
Physical Contaminants	TMECC 02.02-C Man Made Inert Removal and Classification: Plastic, Glass and Metal %>4mm fraction, dry mass (weight) basis	Less than 1%
Pathogens	Shall meet Class A requirements for pathogens as specified in NR 204.07(6)(a)	Pass
Chemical Contaminants	Shall meet pollutant concentrations as specified in NR 204.07(5)(c)	Pass
Carbon to Nitrogen Ratio	C:N	10:1 – 20:1

*TMECC refers to "Test Methods for the Examination of Composting and Compost," published by the United States Department of Agriculture and the United States Compost Council (USCC).

Immediately remove from the project, compost not conforming to the above requirements or taken from a source other than those tested, and replace the compost at no cost to the department.

The engineer reserves the right to sample compost at the jobsite.

Compost tube shall be a minimum of 5 inches in diameter. Netting material shall be clean, evenly woven, and free of encrusted concrete or other contaminating materials such as preservatives. Netting material shall be free from cuts, tears, or weak places and shall have a minimum lifespan of 6 months and a maximum lifespan of not more than 24 months.

Wood stakes used in securing Compost Tube shall be made from untreated Douglas fir, hemlock, or pine species. Wood stakes shall be 2-inch by 2-inch nominal dimension and 36 inches in length. Install/locate wood stakes per manufacturer's recommendations.

C Construction

Compost tube shall be installed as soon as construction will allow or when designated by the engineer. Compost tube installation and trenching shall begin from the base of the slope and work uphill prior to any topsoil or compost placement. Trenches shall, at all times, be perpendicular to the direction of flow down the slope. Excavated material from trenching shall be spread evenly along the uphill slope and be compacted using hand tamping or other method approved by the engineer. On gradually sloped or clay-type soils trenches shall be 2 to 3 inches deep. On loose soils or on steep slopes, trenches shall be 3 to 5 inches deep, or half the thickness of the Compost tube, whichever is greater.

The contractor shall exercise care when installing wattles to ensure the method of installation minimizes the disturbance of waterways and prevents sediment or pollutant discharge into water bodies.

C.1 Maintenance

Maintain Compost tube until the project has been completed or directed otherwise. Routinely inspect Compost tube for any material dislodgement. Replace and redress any dislodged material.

D Measurement

The department will measure Compost Tube by the linear foot of tube, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.150	Compost Tube	LF

Payment is full compensation for furnishing and installing Compost Tube as shown in the plans or as directed by the engineer; including the required trenching and subsequent spreading of trenched material after the embankment is stabilized; and the furnishing and installing of wood stakes to secure Compost Tube.

(9/6/2016)

94. Traffic Control Gawk Screen Furnished, Item SPV.0090.200; and Traffic Control Gawk Screen Installed, Item SPV.0090.201.

A Description

This special provision describes furnishing and installing traffic control gawk screen on concrete barrier as a traffic control device and removal upon completion of the project.

B Materials

Furnish rectangular shaped screen for temporary mounting on top of concrete barrier.

Furnish a polymer, polyethylene, or UV protected thermoplastic, or similar lightweight product that will not shatter when impacted and is proven crashworthy.

Submit shop drawings a minimum of two weeks prior to the proposed use of Traffic Control GawK Screen.

Requirements:

- 24 inches in height.
- The same length as the concrete barrier on which it will be mounted, without splicing, except account for longitudinal overhang between the concrete barrier as shown in the plans.
- Mounted with two poles, at the spacing shown in the plan, attached to the mounting plate with the mounting plate drilled into the top of the concrete barrier.
- Secured with a chain and pin, or other approved method, to the mounting pole.
- Capable of being securely connected to the adjacent screen section using polyethylene brackets, or similar approved fasteners, made of non-metallic materials.
- Capable of expanding without buckling.
- Capable of contracting without creating gaps in the screening and while remaining securely fastened to the adjacent screen.
- Gray in color and opaque.
- Has finished faces on both sides of the screen.
- Capable of remaining in place from traffic gusts, wind gusts, and other outdoor elements that may move or displace the screen.

Furnish and install mounting pipe and hardware according to manufacturer/supplier directions.

Installations and removals of the gawk screen to/from its supports on the jobsite shall not require any tools.

C Construction

Furnish and deliver traffic control gawk screen to worksites within the project. Install the screen according to manufacturer's recommendations at contract-identified locations or as the engineer directs. Fasten screen sections together.

Provide surveillance and maintenance as specified in standard spec 643.3.2. Repair or replace any portion of the screen that is damaged as directed by the engineer at no additional cost. Replace any screen sections that buckle, deform, shrink, or have any other material or installation failure, as determined by the engineer, at no additional cost.

Remove screen when no longer needed at the installation site, during winter when directed by the engineer, and upon project completion. In permanent concrete barrier, concrete parapet, and department owned temporary concrete barrier, remove mounting hardware to below the concrete surface. Encapsulate all exposed metal and fill all holes left by anchorage methods with an epoxy from the department's approved products list. Fill holes as the screen is removed.

D Measurement

The department will measure Traffic Control GawK Screen Furnished by the linear foot, acceptably delivered to the project site.

The department will measure Traffic Control GawK Screen Installed by the linear foot, acceptably completed, measured along the base of the screen after installation for each contract-identified or engineer-directed initial installation. The department will also measure subsequent contract-identified or engineer-directed reinstallations. The department will not measure installations made solely to accommodate the contractor's means and methods.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.200	Traffic Control GawK Screen Furnished	LF
SPV.0090.201	Traffic Control GawK Screen Installed	LF

Payment for Traffic Control Gawk Screen Furnished is full compensation for furnishing traffic control screen, mounting posts, and mounting and fastening hardware; initial delivery; and storage until installation.

Payment for Traffic Control Gawk Screen Installed is full compensation for each installation; moving/trucking to another worksite within the project, unloading, and reinstalling; screen surveillance, maintenance, repair, and replacement; removing; disposal; and concrete barrier repair due to screen installation and after screen removal.

(5/31/2016)

95. Traffic Control Glare Screen Furnished, Item SPV.0090.202; and Traffic Control Glare Screen Installed, Item SPV.0090.203.

A Description

This special provision describes furnishing and installing traffic control glare screen on concrete barrier as a traffic control device and removal upon completion of the project.

B Materials

Furnish polymeric or fiberglass; green or black; lightweight; traffic control glare screen from one of the following suppliers or approved equal:

- Carsonite Composites – Modular Guidance System
- Safe-Hit, A Division of Energy Absorption Systems, Inc. – Safe-Hit Glarescreen
- Flexstake Inc. – GS Series Glare Screen
- Plasticade® – Modular Glare Screen

Each screen section shall include blade paddles 24 inches in height, mounted at minimum 2-foot intervals on a continuous rail bolted to the top of the concrete barrier. The minimum 2-foot interval shall be maintained between sections of concrete barrier. Each paddle shall be capable of being removed individually by hand.

Furnish and install mounting hardware and glare screen according to manufacturer/supplier directions.

C Construction

Furnish and deliver traffic control glare screen to worksites within the project. Install the glare screen according to manufacturer's recommendations at contract-identified locations or as the engineer directs.

Provide surveillance and maintenance as specified in standard spec 643.3.2. Repair or replace any portion of the screen that is damaged as directed by the engineer at no additional cost. Replace any screen sections that have any material or installation failure, as determined by the engineer, at no additional cost.

Remove screen when no longer needed at the installation site, during winter when directed by the engineer, and upon project completion. In permanent concrete barrier, concrete parapet, and department owned temporary concrete barrier, remove mounting hardware to below the concrete surface. Encapsulate all exposed metal and fill all holes left by anchorage methods with an epoxy from the department's approved products list. Fill holes as the screen is removed.

D Measurement

The department will measure Traffic Control Glare Screen Furnished by the linear foot, acceptably delivered to the project site.

The department will measure Traffic Control Glare Screen Installed by the linear foot, acceptably completed, measured along the base of the screen after installation for each contract-identified or engineer-directed initial installation. The department will also measure subsequent contract-identified or engineer-directed reinstallations. The department will not measure installations made solely to accommodate the contractor's means and methods.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.202	Traffic Control Glare Screen Furnished	LF
SPV.0090.203	Traffic Control Glare Screen Installed	LF

Payment for Traffic Control Glare Screen Furnished is full compensation for furnishing traffic control screen, mounting posts, and mounting and fastening hardware; initial delivery; and storage until installation.

Payment for Traffic Control Glare Screen Installed is full compensation for each installation; moving/trucking to another worksite within the project, unloading, and reinstalling; screen surveillance, maintenance, repair, and replacement; removing; disposal; and concrete barrier repair due to screen installation and after screen removal.

(5/31/2016)

96. Concrete Barrier Temporary Precast Left In Place, Item SPV.0090.204.

A Description

This special provision describes leaving in place temporary precast reinforced concrete barrier conforming to the shape, dimensions, and details the plans show and according to the pertinent provisions of standard spec 603, these special provisions, and as hereinafter provided.

Concrete Barrier Temporary Precast Left In Place becomes the property of the department after final acceptance by the engineer.

Concrete Barrier Temporary Precast Left In Place shall have been manufactured within six months of its proposed placement at its left-in-place location on the project. Ownership identification shall include the department (DOT).

B Materials

Conform to standard spec 603.

C Construction

Conform to standard spec 603.

D Measurement

The department will measure Concrete Barrier Temporary Precast Left In Place by the linear foot, acceptably completed, measured along the base of the barrier after final installation in its left-in-place location.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.204	Concrete Barrier Temporary Precast Left In Place	LF

Payment is full compensation for leaving Concrete Barrier Temporary Precast on the project site.

Furnishing concrete barrier temporary, initial delivery, installation, reinstallation, trucking between worksites, transitions between temporary and permanent barriers, and anchoring will be paid for separately under the bid items provided for in the contract.

(3/11/2016)

97. Maintenance and Removal of Concrete Barrier Temporary Precast Left In Place by Others, Item SPV.0090.205.

A Description

This special provision describes maintaining and removing concrete barrier temporary precast left in place by others according to standard spec 603. The concrete barrier temporary precast left in place by others becomes the property of the contractor upon notice to proceed.

B Materials

Furnish any replacement materials for the concrete barrier temporary precast left in place by others that is according to the pertinent requirements of standard spec 603.3.2.

C Construction

Maintain and remove the concrete barrier temporary precast according to the pertinent requirements of standard spec 603.3.

D Measurement

The department will measure Maintenance and Removal of Concrete Barrier Temporary Precast Left In Place by Others by the linear foot, acceptably completed, measured along the base of the barrier in its left-in-place location.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.205	Maintenance and Removal of Concrete Barrier Temporary Precast Left In Place by Others	LF

Payment is full compensation for maintaining and removing the concrete barrier temporary precast; and for removing and disposing of all materials.

Reinstallation, trucking between worksites, transitions between temporary and permanent barriers, and anchoring will be paid for separately under the bid items provided for in the contract.

(11/14/2013)

98. Repair State Owned Concrete Barrier Temporary Precast, Item SPV.0090.206.

A Description

This special provision describes providing emergency repair services to state owned concrete barrier temporary precast located on IH 39 or an IH 39 ramp that is knocked out of alignment or damaged due to a vehicular collision during the time this contract is in effect. Repair services may also include the replacement of unsuitable sections of concrete barrier due to extensive damage sustained during a collision. This work shall be according to standard spec 603, as directed by the engineer, and as hereinafter provided. Responding to the incident site with the appropriate staff, equipment and materials is covered under a separate bid item.

B (Vacant)

C Construction

Repairs shall be completed as quickly as possible once repair work is started. Repair work shall be completed off of the traveled way to the maximum extent possible.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the engineer.

D Measurement

The department will measure Repair State Owned Concrete Barrier Temporary Precast by the linear foot, acceptably repaired.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.206	Repair State Owned Concrete Barrier Temporary Precast	LF

Payment is full compensation for completing the necessary repair work to restore the state-owned barrier system to a safe and operational condition; including replacement of damaged, unusable units.

The department will pay for additional traffic control measures, if required, under the respective traffic control bid items in the contract.

(10/24/2017)

99. Fence Chain Link Polymer-Coated 4-Ft., Item SPV.0090.850.

A Description

This special provision describes furnishing and installing a new polymer-coated fence system on structures according to the pertinent plan details, as directed by the engineer and as hereinafter provided. The color of all components in this fence system shall be the same and shall be as specified on the plans.

B Materials

All materials for this fence system shall be new stock, free from defects impairing strength, durability, and appearance. Fabric shall be produced by methods recognized as good commercial practice. Wire used in the manufacture of the fabric shall be capable of being woven into fabric without the polymer-coating cracking or peeling. Pipes used in framework shall be straight, true to section and free of defects. All burrs at the ends of pipes shall be removed before galvanizing. The polymer-coating shall be a dense impervious covering, applied without voids, tears or cuts that reveal the substrate. Excessive roughness, bubbles, blisters and flaking in the polymer-coating will be a basis for rejection.

B.1 Fabric

Provide steel chain link fence fabric that conforms to the requirements of ASTM F668, Class 2b, a polymer-coating fused and adhered to wire that is zinc-coated. Provide fabric woven from 9-gage wire using plan specified mesh size, diamond pattern, with both the top and bottom selvages knuckled. The minimum breaking strength of the wire shall be 1290 lbs. The color of polymer-coating shall conform to the requirements of ASTM F934.

B.2 Framework

Provide steel rails, posts and post sleeves conforming to the requirements of ASTM F1083, Standard Weight Pipe (Schedule 40) of the size (O.D.) and weight as shown on the plans. The minimum yield strength shall be 30,000 psi and the minimum tensile strength shall be 48,000 psi. These components shall be zinc-coated inside and outside by the hot-dip process as stated in ASTM F1083. Provide polymer-coating over zinc-coating that conforms to ASTM F1043. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components. Weld base plate to posts or post sleeves and complete any additional welding of components before galvanizing.

B.3 Fittings

Provide end post caps, line post caps, top rail sleeves, rail ends, line rail clamps, brace bands, tension bands, tension bars, and tie wires that are steel and conform to the requirements of ASTM F626. Tie wires shall be round and 9-gage wire. These components (excluding tie wires) shall be zinc-coated by the hot-dip process as stated in ASTM F626. Provide polymer-coating over zinc-coating on components (excluding tie wires) that conforms to the requirements of ASTM F626. For tie wires, provide polymer-coating on wire that is zinc-coated using the same procedure as used for the wires in the fence fabric. End post caps and line post caps shall fit tightly over posts to prevent moisture intrusion. Supply dome style caps for end posts and loop type caps for line posts. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components.

B.4 Bolts

All bolts are to be supplied with lock washers and nuts. Use galvanized steel bolts, nuts and washers per plan details.

B.5 Tests

B.5.1 Fabric and Tie Wire

Breaking Strength: ASTM A370

Zinc-Coating Requirements

Weight of Zinc-Coating: ASTM A90

Polymer-Coating Requirements

Thickness of Polymer-Coating: ASTM F668

Adhesion: ASTM F668

Accelerated Aging Test: ASTM F668, D1499

Mandrel Bend Test: ASTM F668

B.5.2 Framework

Tensile and Yield Strength: ASTM E8

Zinc-Coating Requirements

Weight of Zinc-Coating: ASTM A90

Polymer-Coating Requirements

Thickness of Polymer-Coating: ASTM E376

Adhesion: ASTM F1043

Accelerated Aging Test: ASTM F1043, D1499

B.5.3 Fittings

Zinc-Coating Requirements

Weight of Zinc-Coating: ASTM A90

Polymer-Coating Requirements

Thickness of Polymer-Coating: ASTM F626

Adhesion: ASTM F1043 (same test as for framework)

Accelerated Aging Test: ASTM F1043, D1499 (same test as for framework)

B.6 Submittals

In addition to the engineer, send submittals listed in this section to the name below for informational purposes:

David Nelson
WisDOT (Bureau of Structures)
4822 Madison Yards Way (4th Floor South)
P.O. Box 7910
Madison, WI 53707-7910

B.6.1 Shop Drawings

Submit shop drawings showing the details of fence construction. Show the fence height, post spacing, rail location, and all dimensions necessary for the construction of the chain link fence. Label the end posts, line posts, rails, post sleeves, top rail sleeves, bolts and fittings. State the polymer-coating type used on the fabric, framework and fittings and the Class of coating used on the fabric. State the color of polymer-coating to be used on the fence components. For the fabric, state the wire gage, mesh size, and type of selvages used. For the framework, state the size (O.D.) and unit weight for the posts and rails. For the fittings, state the size for top rail sleeves, brace bands, tension bands, tension bars, line rail clamps, size and type of bolts, and the tie wire gage. State the material type used for fabric, framework, and fittings. Also give the breaking strength for the fabric wire and the tensile and yield strength properties for the framework.

B.6.2 Specification Compliance

Submit certification of compliance with material specifications. Provide material certification and test documentation for fabric, framework, fittings and hardware that shows that all materials meet or exceed the specifications of this contract and the tests in B5. This document shall provide the name, address and phone number of the manufacturer, and the name of a contact person.

C Construction

C.1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and condition of materials is in conformance with these specifications. If polymer-coating is damaged, contractor shall repair or replace components as necessary to the approval of the engineer at no additional cost to the Owner. Carefully store material off the ground to ensure proper ventilation and drainage and to provide protection against damage caused by ground moisture. Handle all polymer-coated material with care.

C.2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to polymer-coated surfaces, touch-up the finish in conformance with the manufacturer's recommendations. Provide touch-up coating such that repairs are not visible from a distance of 6-feet. If damage is beyond repair, the fencing component shall

be replaced at no additional cost to the Owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

C.3 General

Install the chain link fence according to ASTM F567 and the manufacturer's instructions. The contractor shall provide staff that is thoroughly familiar with the type of construction involved and materials and techniques specified. Chain link fabric shall be installed on the side of the posts indicated on the plans. Fabric shall be attached to the end posts with tension bars and tension bands. It shall be attached to rails, and posts without tension bands, with tie wires. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Install top rail to pass through line post caps and form a continuous brace between end posts. Minimum length of top rail between splices shall be 20-feet. Splice top rail at joints with sleeves for a rigid connection. Locate splices near $\frac{1}{4}$ point of post spacing. Heads of bolts shall be on the side of the fence adjacent to pedestrian traffic.

D Measurement

The department will measure Fence Chain Link Polymer-Coated 4-Ft. by the linear foot, satisfactorily furnished and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.850	Fence Chain Link Polymer-Coated 4-Ft.	LF

Payment is full compensation for fabricating, galvanizing and polymer-coating all fence components, and transporting to jobsite; for erecting components to create a polymer-coated fence system, including any touch-up and repairs.

100. Survey Project 1007-11-79 with Optional AMG for Concrete Pavement and Base Course, Item SPV.0105.001; Survey Project 1007-11-80 with Optional AMG for Concrete Pavement and Base Course, Item SPV.0105.002.

A Description

Standard spec 105.6 and 650 are modified to define the requirements for construction staking for this contract.

Add the following to standard spec 105.6.1:

Horizontal and vertical control points, provided by the department, are generally at 1 mile intervals for horizontal control and at $\frac{1}{2}$ mile intervals for vertical control. Control points will be provided in a hard copy and ASCII electronic format.

Replace standard spec 105.6.2 with the following:

The department will not perform any construction staking for this contract. The contractor shall perform all survey required to layout and construct the work under this contract, subject to engineer's approval.

The survey includes establishing horizontal and vertical position for all aspects of construction including but not limited to storm sewer, subgrade, base, curb, gutter, curb and gutter, pipe culverts, structure layout, pavement, barriers (temporary and permanent), electrical installations, supplemental control, slope stakes, ponds, ITS, FTMS, ramp gates, parking lots, utilities, landscaping elements, irrigation system layout, installation of community sensitive design elements, traffic control items, fencing, etc.

The department may choose to perform quality assurance survey during construction. This quality assurance survey does not relieve the contractor of the responsibility for furnishing all survey work required under this contract.

Delete standard spec 650.1.

B (Vacant)

C Construction

Survey required under this item shall be according to all pertinent requirements of standard spec 650 and shall include all other miscellaneous survey required to layout and construct all work under this contract.

Replace standard spec 650.3.8 with the following:

650.3.8 Concrete Pavement

650.3.8.1 General

- (1) Under the Construction Staking Concrete Pavement bid item the contractor may substitute automated machine guidance (AMG) for conventional staking on all or part of the concrete pavement and underlying base. The engineer may require the contractor to revert to conventional staking methods for all or part of the work at any point during construction if, in the engineer's opinion, AMG is producing unacceptable results.

650.3.8.2 Conventional Concrete Pavement Staking

- (1) Set construction stakes or marks at 25-foot intervals. Set and maintain additional stakes as necessary to establish location and grade along intersecting road radii; and for auxiliary lanes, vertical curves, horizontal curves, and curve transitions according to the plans. Locate stakes to within 0.02 feet horizontally and establish elevations to within 0.01 feet vertically. Set and maintain sufficient additional stakes at each cross-section to achieve the required accuracy and to support the method of operations.

650.3.8.3 Automated Machine Guidance for Concrete Pavement

650.3.8.3.1 General

- (1) No base or paving stakes or stringlines are required for AMG work.
- (2) Coordinate with the engineer throughout the course of construction to ensure that work performed using AMG conforms to the contract tolerances and that the methods employed conform to the contractor's AMG work plan and accepted industry standards. Address AMG issues at weekly progress meetings.
- (3) Use a total station to provide station, offset, and elevations at locations specified in standard spec 650.3.8.3.5 and at additional engineer-directed locations after fine grading the base and after placing the concrete pavement. Allow the engineer access to view current display data on the contractor's AMG equipment during paving and fine grading operations.
- (4) Provide the department field staff up to 8 hours of formal training on contractor's AMG systems.

650.3.8.3.2 AMG Work Plan

- (1) Submit a comprehensive written AMG work plan for department review at least five business days before beginning AMG work. The engineer will review the plan to determine if it conforms to the requirements of this special provision.
- (2) Construct the base and concrete pavement as the contractor's AMG work plan provides. Update the plan as necessary during construction.

- (3) The AMG work plan should discuss how AMG technology will be integrated into other technologies employed on the project. Include, but do not limit the contents to, the following:
1. Designate which portions of the contract will be done using AMG and which portions will be done using conventional staking.
 2. Describe the manufacturer, model, and software version of the AMG equipment including the angular accuracy and the measurement frequency of the guidance system.
 3. Provide information on the qualifications of contractor staff. Include formal training and field experience. Designate a single staff person as the primary contact for AMG technology issues. This person shall be on site during all AMG concrete placement.
 4. Describe how project control is to be established. Include a list and map or kml file showing 3D control points enveloping the site. Incorporate department-provided primary control and contractor-provided secondary control into a single site control network. At a minimum provide sufficient 3D control to utilize not less than three control points in each total station setup, be it within a resection or as a setup point, backsight, and third point for an independent check. Use engineer-approved survey markers and/or targets. Ensure that secondary control points are accurate to within 0.02 feet horizontally and to within 0.01 feet vertically.
 5. Describe total station setup procedures including methods used to set and relocate total stations for each day's paving. Record or note the residual error in any resection calculation. Take and record check shots on 3D control points at varying distances from the instrument that represent the varying distances used in guiding the paving machine. Submit notes or digital reports of setup data and control-point checks daily.
 6. Describe the contractor's quality control procedures. Describe procedures for checking, mechanical calibration, and maintenance of equipment. Include the frequency and type of checks performed to ensure that the trimmed base and concrete pavement conform to the contract plans.

650.3.8.3.3 Equipment

- (1) Use robotic total stations machine guidance or other engineer approved combination of methodologies to meet the contract requirements.
- (2) Perform periodic sensor and/or pan calibrations and other routine adjustments as required to ensure that the trimmed base and concrete pavement conform to the contract plans.

650.3.8.3.4 Geometric and Surface Information

650.3.8.3.4.1 Department Responsibilities

- (1) The department will provide electronic design data in the contractor data packet. See the Contractor Data Packet contract special provision for a list of design data content.

650.3.8.3.4.2 Contractor Responsibilities

- (1) Obtain elevations of adjacent pavement and bridges at centerline, edge of pavement, and other locations necessary to characterize existing profile and cross slope. Adjust design profile grade and cross slope to provide a smooth transition from the new pavement to the existing pavement or bridge. Notify the engineer when a smooth profile cannot be provided. Submit final adjusted plan elevations to the engineer.
- (2) Review department-provided design model data for areas of the project employing AMG. Report inconsistencies between that data and the contract plans to the engineer and work with the engineer to resolve those inconsistencies. Use the resulting revised design model data and matching as-built surface data from above item (1) to develop a contractor construction model.
- (3) Provide the resulting construction model data proposed for the paving operation to the department in LandXML v1.2 or AutoCAD DWG.

650.3.8.3.4.3 Managing and Updating Information

- (1) Notify the department of any errors or discrepancies in department-provided information. The department will determine what revisions may be required. The department will revise the contract plans, if necessary, to address errors or discrepancies that the contractor identifies. The department will provide the best available information related to those contract plan revisions.
- (2) Revise the construction model as required to support construction operations and to reflect any contract plan revisions the department makes. Perform checks to confirm that the revised construction model agrees with the contract plan revisions. Provide a copy of the resulting adjusted construction model data to the engineer in LandXML v1.2 or AutoCAD DWG. The department will pay for costs incurred to incorporate contract plan revisions as extra work.

650.3.8.3.5 Construction Checks

650.3.8.3.5.1 Final Base Checks

- (1) Check the trimmed base against the final adjusted plan elevation at randomly selected points on cross sections located at stations evenly divisible by 100. Conduct at least one random check per 250 lane-feet corresponding to the basic units used to assess pavement thickness under standard spec 415.3.16. Also, check the trimmed base at additional points as the engineer directs. Notify the engineer at least 2 business days before making final checks so the engineer can observe the process.
- (2) Ensure that no individual check is off by more than 0.02 foot vertically of the final adjusted plan elevation. Notify the engineer if this criterion is exceeded.
- (3) The department may conduct periodic independent base checks. The department will notify the contractor if any individual check differs by more than 0.02 foot vertically from the final adjusted plan elevation.

650.3.8.3.5.2 Final Pavement Checks

- (1) Check the finished concrete immediately after placement against the accepted plan elevation at randomly selected points on cross sections. Conduct at least one random check per 250 lane-feet corresponding to the basic units used to assess pavement thickness under standard spec 415.3.16. Also, check the pavement at drainage structures, bridges, driveways, intersections, ramp termini, and additional points as the engineer directs. Notify the engineer before making final checks so the engineer can observe the process.
- (2) Notify the engineer immediately if the final pavement surface does not match the final adjusted plan elevation within 0.02 foot vertically.
- (3) The department may conduct periodic independent pavement elevation checks. The department will notify the contractor if any individual check differs by more than 0.05 foot horizontally or 0.02 foot vertically from the final adjusted plan elevation.

D Measurement

The department will measure Survey Project 1007-11-79 with Optional AMG for Concrete Pavement and Base Course and Survey Project 1007-11-80 with Optional AMG for Concrete Pavement and Base Course each as a single lump sum unit of work, 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.0105.001	Survey Project 1007-11-79 with Optional AMG for Concrete Pavement and Base Course	LS
SPV.0105.002	Survey Project 1007-11-80 with Optional AMG for Concrete Pavement and Base Course	LS

Payment is full compensation for performing all survey work required to layout and construct all work under this contract.

(2/14/2018)

101. Concrete Pavement Joint Layout Project 1007-11-79, Item SPV.0105.003; Concrete Pavement Joint Layout Project 1007-11-80, Item SPV.0105.004.

A Description

This special provision describes designing the joint layout and staking the location of all joints on the project, including mainline, ramps and intersections (traditional and roundabouts) to accommodate the concrete paving operation.

B (Vacant)

C Construction

Design the joint layout and stake the location of all joints on the project, including mainline, ramps and intersections (traditional and roundabouts), to accommodate the concrete paving operation. Plan and set all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete pavement according to the plans, the American Concrete Pavement Association Intersection Joint Layout Guidelines, and as directed by the engineer. Establish the joint layout in a manner to best fit field conditions, construction staging, the plan, and as directed by the engineer.

D Measurement

The department will measure Concrete Pavement Joint Layout Project 1007-11-79 and Concrete Pavement Joint Layout Project 1007-11-80, each as a single lump sum unit of work, 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.0105.003	Concrete Pavement Joint Layout Project 1007-11-79	LS
SPV.0105.004	Concrete Pavement Joint Layout Project 1007-11-80	LS

Payment is full compensation for designing the joint layout on the mainline, ramps and all traditional and roundabout intersections; for completing all surveying work necessary to locate all transverse and longitudinal joints; and for making adjustments to match field conditions and construction staging.

102. Weigh-In-Motion System, Item SPV.0105.401.

A Description

This special provision describes removing the existing Weigh-In-Motion (WIM) System and installing a new system to be utilized at the Madison Safety and Weight Enforcement Facility (SWEF) to pre-weigh vehicles, sort, and provide direction to commercial vehicles in motion as they approach the Madison SWEF along mainline on southbound IH 39/90. A Changeable Message Sign (CMS) shall be utilized along the mainline to direct vehicles to report to or bypass the weigh station based on their perceived level of compliance as determined from the mainline sorting WIM system. The system also includes the associated open/closed signs, weigh station directional signals, upgraded static scale, and bypass/static lane Variable Message Signs (VMS).

A vehicle that enters the weigh station shall be screened/verified on the ramp. Based on the results of this screening/verification, automatic directional signals shall direct the vehicle to either bypass or report to the scale for further inspection.

The sorting decisions shall be based on compliance of speed, side to side balance, axle-to-axle balance within tandem, axle spacing, axle weights, axle group weights, bridge formula (front and rear), and gross vehicle weights with the pre-set tolerances.

The department has an existing Pre-Pass E-Screening System. In addition, the 360SmartView and Drivewyze screening systems will be added to this site by others. The WIM vendor must be able to coordinate with and successfully interface with all E-Screening Systems and provide consistent messages when notifying vehicles to provide a fully integrated system.

The WIM System shall include various components that interact together. The components shall include the following:

- WIM Quartz Sensors
- Axle and Loop Detection
- Overview Image Camera
- License Plate Reading (LPR) System with Optical Character Recognition
- Automatic USDOT Reading (AUR) System with Optical Character Recognition
- PrePass System Interface
- 360 SmartView System Interface
- Drivewyze System Interface
- Loop Detection
- Mainline CMS
- Open/Closed Signs
- Weigh Station Lane Control Directional Signals
- Weigh Station VMS
- Weigh Station Computer System
- Station PC
- Virtual Graphics Display
- Scale Manager
- Vehicle Display
- Override Console
- Data Collection System
- On-site Communication System
- Cellular Modem for Remote Communication
- Portable WIM System (two portable scales and trailer)

B WIM System Operational Overview

B.1 Mainline WIM System

Commercial vehicles approaching the weigh station shall be directed into the right lane by means of a CMS along with signing provided by the project. A vehicle approaching the weigh station will pass over the mainline WIM system, which is embedded in the highway prior to the weigh station exit ramp. The southbound lanes of IH 39/90 shall be equipped with WIM quartz sensors. The right lane shall be equipped with WIM quartz sensors that meet or exceed ASTM E1318 Type III accuracy standards. All other lanes shall be equipped with WIM sensors that meet or exceed ASTM E318 Type II accuracy standards. WIM electronics shall be located in the existing roadside cabinet adjacent to the WIM sensors and shall process the information collected by the in-road equipment.

The WIM system shall collect axle weight and spacing, vehicle speed, classification and other relevant data to create a vehicle record. An overview camera shall capture an image of the passing vehicle which shall be combined with the vehicle record. A USDOT and License Plate image of the passing vehicle shall also be combined with the vehicle record. Using optical character recognition, the USDOT and license plate read shall be included in the vehicle record. The license plate jurisdiction shall be a part of the license plate read. The combination of USDOT, license plate number, and license plate jurisdiction shall be checked against the 360SmartView system for non-weight violations. Based on a comparison of the vehicle record to the parameters set by the station system, the WIM system shall make a sort decision and advise the driver to either exit or bypass the weigh station via the CMS located on the side of the road. However, the actual sorting operation can be overridden by the operator using the virtual graphics display or override control in the weigh station. Non-violating vehicles may be randomly selected from the mainline for visual inspection at the scale house.

An existing Automatic Vehicle Identification (AVI) detection system shall be interfaced with to identify PrePass vehicles. This is provided separately by PrePass but shall be integrated into the WIM check system. The WIM system shall be such that a vehicle may be called in to report based on its PrePass or 360SmartView and Drivewyze credential check, as well as its WIM weight check.

WIM quartz sensors in the southbound center and left lane shall be installed to detect commercial vehicles bypassing the WIM quartz sensors in the right lane and not complying with fixed signage.

The automated Open/Closed signs shall also be controlled by a physical switch on the override console.

The system shall be able to collect continuous WIM data for statistical analysis. The data collection system shall save vehicle information in a compressed format complete with a date and time stamp. As a result, the information can be downloaded, and, with the aid of commercially available software, the user shall be able to generate reports based on user inputs. The stored data must be remotely accessible by cellular modem communications.

All vehicle information, including violation information, shall be determined in real time and shall be displayed on the scale house operator console in vehicle display windows.

B.2 Enforcement Camera Systems

The enforcement camera system shall consist of an overview image camera, license plate reader, and automated USDOT reader (AUR) mounted alongside the roadway on mainline IH 39/90. The overview camera system shall capture an image of passing commercial vehicles to be linked with the vehicle record as an identifier. The camera shall be capable of full color photos during daytime operation, and black-and-white images using infrared illumination during nighttime operation. The camera system electronics, which shall be located with the other system electronics, shall store the image and shall link it with the correct vehicle record.

The LPR system shall capture an image of the commercial vehicles license plate to be linked with the vehicle record. The camera shall be capable of black-and-white images during daytime and nighttime operation using near-infrared illumination. The camera system electronics, which shall be located with the other system electronics, shall store the image and shall link it with the correct vehicle record.

The AUR system shall capture an image of the commercial vehicles USDOT number to be linked with the vehicle record. The camera shall be capable of black-and-white images during daytime and nighttime operation using near-infrared illumination. The camera system electronics, which shall be located with the other system electronics, shall store the image and shall link it with the correct vehicle record.

B.3 Mainline Sort System

A CMS shall be used to communicate with the driver after a mainline vehicle analysis has been completed. The Mainline Sort System (MSS) shall consist of one or two changeable message sign and inductive loops (as determined by the vendor), which are installed along the side of the roadway downstream from the advance WIM system. The MSS system shall be controlled by electronics in an interface cabinet, which receives the sort decision from the Station Computer. The MSS system ensures that the sign ON/OFF switching is synchronized according to the detection and tracking of a vehicle passing over strategically placed loops. In this way, only the vehicle for which the message is intended shall see the illuminated sign.

The virtual graphics display shall provide manual control to the Weigh Station for the operation of the CMS.

The WIM Vendor shall coordinate efforts with PrePass, 360SmartView, and Drivewyze to ensure that no conflict occurs to drivers, i.e., there shall be no contradictions between the roadside signs and the in-cab transponder.

Typical roadside sign messages are as follows:

Message 1: TRUCK MUST EXIT
TO WEIGH STATION

Message 2: TRUCK BYPASS
WEIGH STATION

The components of the system shall provide heartbeat communications so the system's health can be monitored.

B.4 Mainline Compliance System

A compliance system shall be located on all southbound lanes of the mainline and the SWEF entrance ramp. The compliance system electronics shall be provided in the existing roadside cabinet at the SWEF exit ramp. The system shall consist of a set of four sets of staggered WIM quartz sensors. As commercial vehicles go over the compliance system, it shall continuously and automatically verify the trucks vehicle record from the roadway upstream. The verified vehicle shall be determined to be compliant or non-compliant. Vehicles that bypass the weigh station in any lane of IH 39/90 shall be detected.

All vehicle information, including violation information, shall be determined in real time and shall be displayed on the scale house vehicle display windows on the central station computer.

The accuracy of the compliance system ramp lane shall meet ASTM E1318 Type III "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems. Calibration and accuracy tests shall be performed as specified below. The contractor shall ensure the roadway meets the requirements of Section 6 of ASTM E1318.

The components of the system shall provide heartbeat communications, so the system's health can be monitored.

B.5 Ramp Lane Control System

The ramp lane control system shall consist of a new overhead LED sign system. New electronics shall be provided to interface with it and control it from the WIM system. This sign shall display a green down arrow to an oncoming truck if it is cleared to bypass the static scale; otherwise it shall display a red X as a signal to report. Conversely, an oncoming truck shall receive a red X to bypass and a green down arrow to report for the scale lane.

The system shall function under either manual or automatic control. Under automatic control, the ramp LCS shall automatically direct a suspected violator to the static weigh scales and compliant violators to exit the station. The virtual graphics display shall be used to control the system and shall allow the operator to direct all vehicles to either the scale or bypass lanes. The WIM system shall not be able to direct vehicles according to vehicle information collected in this mode but shall continue to display vehicle information to the operator.

The system shall have the ability to track vehicles using in-road inductive loops while on route to the static scales.

B.6 Mainline WIM Settings

Using the central weigh station computer, the operator may set the random sort percentage. Random sorting allows the operator to require a set percentage of compliant trucks to report. This allows the enforcement officials to perform random safety checks on otherwise compliant trucks.

The central weigh station computer system shall receive the WIM record from the roadside WIM electronics at the mainline location. The weigh station computer contains electronic records that shall be used to ascertain weight compliance. After the weigh station computer creates the WIM record, it shall immediately begin to analyze the data contained in the record in order to determine whether the vehicle weights and dimensions are within local compliance regulations. If the measured vehicle weight is within the allowable limits, the driver shall be given a bypass message through the Mainline Sort System. If the vehicle is not compliant or if it is randomly selected for inspection, the driver shall receive a message to report to the weigh station.

The central weigh station computer system shall provide safety features to detect and prevent backups and unsafe conditions. These shall include:

- An audible message to alert operators of a backup of the weigh station ramp
- Automatically close the station if a backup occurs on the exit ramp from IH 39/90. An audible message shall sound to alert operators. Once the backup has cleared the station shall automatically reopen in that direction.

Operators shall have the capability to override the automatic close on the override console.

B.7 Data Collection System

Vehicle information is to be collected continuously by the roadside mainline WIM electronics for all lanes. This information shall be made available to the user and a variety of reports summarizing the data can be generated. This data can be shared between departments if the agency responsible for weight enforcement is separate from the roadway maintenance, planning and/or design departments.

B.7.1 Capabilities

An operator at the site may download the vehicle data directly from the roadside WIM system electronics, or the data may be transferred to a remote location via access through a cell modem.

Manufacturer host software can be used to automatically call one or several WIM systems to obtain traffic data from the site. The user configures the frequency of the calls and the information to be obtained. Once the data has been obtained, office analysis software capable of computing various classification schemes shall be used to provide various report capabilities based on the data collected. This system shall store at least 60 days of vehicle records (over 2 million vehicle records) in a compressed format.

B.7.2 Information Available

The following information shall be made available from the data collection feature of the mainline WIM system:

- Reports over any selected time period in hourly increments, daily, weekly, or monthly.
- Summary of vehicle speeds.
- Summary of vehicle classification counts.
- Equivalent Single Axle Load (ESAL) count.
- Reports on the number of violating and non-violating axles, axle groups and gross vehicle weights.
- User selected reports based on adjustable parameters such as periods and vehicle types.
- Customization for generating reports for specific needs that are not available using basic parameters.

B.7.3 Communications

Data from the mainline WIM shall be made available via a high-speed Internet connection using a cellular modem. A new modem is to be provided as a part of this project. The monthly service and card for this is to be provided by the department.

C Removals

Remove the following:

- All electronics in the existing mainline WIM cabinet. Work to include disposal of removed electronics and wiring. Existing WIM cabinet to be salvaged and re-installed at new location as part of the project.
- Existing mainline and ramp WIM scales.
- Existing overview camera, illumination, and pole.
- Existing first CMS and structure. Existing CMS to be salvaged and re-installed or stored on-site as a spare (depending on number of CMS required by WIM vendor). Structure to be disposed.
- Existing second CMS and structure. Existing CMS to be salvaged and re-installed or stored on-site as a spare (depending on number of CMS required by WIM vendor). Structure to be disposed.
- All electronics in the existing ramp WIM cabinet. Work to include disposal of removed electronics and wiring. Existing ramp WIM cabinet to be salvaged and re-installed at new location as part of the project.
- Existing OPEN/CLOSED and ~~C~~CLOSED CMS. Dispose of these items.
- Existing over height detector and poles.

- Existing static scale and bypass lane Variable Message Signs. Signs to be salvaged and stored on-site as spares.
- Existing Variable Message Sign control cabinet on pole and electronics. Dispose of these items.
- Existing Variable Message Sign support structure.
- Existing WIM system electronics in the SWEF building utility room. Dispose of removed electronics and wiring.
- Existing WIM system electronics in the SWEF building scale area. Dispose of removed electronics and wiring.

Supply and install the following:

- WIM quartz sensors and loops per the plans.
- WIM electronics in existing mainline WIM cabinet.
- Overview image camera, License Plate Reading (LPR) system, and Automated USDOT Reading system including support structure.
- Tracking loops to activate signs/signals and monitor traffic flow.
- CMS/Loop interface cabinet to be mounted on new structure.
- New CMS structure. Existing CMS to be installed on new structure.
- New LED Open/Closed Signs along with the electronics to control the signs.
- Weigh station lane control signals.
- Weigh station bypass and static scale VMS to be mounted on new support structure.
- VMS cabinet and control electronics to be mounted on new support structure.
- New WIM electronics for the SWEF building utility room.
- New WIM electronics for the SWEF building operations area including printer.
- WIM system software.
- New power and communications conduit and wiring as required for an operational system.
- On-site communication system as required for an operational system.
- Cellular modem for remote access of system.

D Submittals

Prior to manufacturer approval and a subcontract being executed, the contractor and the engineer shall arrange the following:

1. The contractor shall furnish electronically collected accuracy performance data from the pre-existing system to the engineer. This data shall be in a common database and include WIM records (axle and gross) and static (platforms and gross) weights that have been electronically collected (manually entered data shall not be accepted). This report shall contain at least 20,000 vehicle records.
2. The contractor shall furnish 3rd party verification of the new static scale system components passing an 80,000 amperes lightning strike test.
3. The contractor shall arrange for the demonstration of a pre-existing system to the engineer at least two weeks prior to the pre-construction conference.
4. The engineer may, at its option and expense, make provision for selected persons to view the demonstration.

At the pre-construction conference, the contractor shall furnish:

1. Written documentation and information of the WIM and static scales:
 - a. Manufacturer's name
 - b. Model number, supported by descriptive material for, but not limited to, the standard package system
 - c. All accessories identified
2. Submittals with descriptive material such as
 - a. Catalogs
 - b. Cuts
 - c. Diagrams
 - d. Other data published by the manufacturer to demonstrate to the engineer the contractor's intent to comply with the requirements
3. A list of at least five weigh stations and the owner's name, address, persons to contact, and telephone numbers of similar enforcement installations in the United States.

The system manufacturer shall submit the following:

1. Equipment drawings
2. General arrangements
3. Foundation requirements including camera reader pole and CMS structure. All new foundations to be stamped by a PE licensed in Wisconsin.
4. Circuit diagrams
5. Field wiring diagrams
6. Instruction manuals
7. Bill of Materials
8. Manufacturer's product data
9. Certified test reports
10. Material certifications

The contractor shall submit the following equipment documentation for acceptance prior to fabrication:

1. Detailed description of how the requirements are met, including a step- by-step description of how the system would function in processing each of the following violations as well as the compliant scenario
 - a. Overweight
 - b. Manual override of the system for truck selection either programmed or random
 - c. Compliant
 - d. Over-length
 - e. King Pin Violator
 - f. Imbalance (side to side and axle to axle within a tandem)
2. Inductive loops

The contractor shall submit six complete sets of full size drawings. The contractor shall:

1. Design all overhead structures and foundation supports including camera reader pole and CMS structure. All foundations to be stamped by a PE licensed in Wisconsin.
2. Submit shop drawings along with the supporting calculations to the engineer for review and approval.
3. Obtain a professional engineer registered in the State to document, sign, and seal all structural drawings.

Two weeks prior to the Continuous Operating Test (COT), the contractor shall supply the following to the engineer for the maintenance of the System

1. Narrative description of system operation in detail.
2. Narrative technical description of the following:
 - a. Major system component interaction
 - b. Subsystem component interaction
3. Drawings of major system component operation/interconnection
4. Schematics with diagrams related to troubleshooting/maintenance including:
 - a. Jumper and switch settings on all PCB's for normal operation
5. As-built drawings with type and location of all conduits, pull boxes, junction boxes, loops, traffic signs, and directional signals
6. Technical documentation on all accessories used in the system (Open/Closed signs, directional signals, etc.)
7. Names and phone numbers of contacts that user may contact for technical help

Acceptance of bid or approval shop drawings by the engineer does not relieve the contractor of the responsibility or the necessity of furnishing material and/or performing work as required by the plans and these provisions, nor from the requirements of the Continuous Operating Test (COT) as contained within these provisions.

The equipment approved by the engineer shall be provided and installed according to the plans and these provisions. Should the equipment proposed by the contractor become unavailable, the engineer may approve in writing alternate equipment proposed by the contractor due to the unavailability of the originally specified equipment.

E WIM System Functional Requirements

E.1 Mainline

E.1.1 WIM Quartz Sensors

The accuracy of the WIM system in right lane shall meet ASTM E1318 "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems performance requirements for a Type III system on all vehicles loaded above 60,000 pounds and traveling between the speeds of 10 to 80 miles per hour shall be:

- Axle weights +/- 15% (95% of trucks)
- Tandem weights +/- 10% (95% of trucks)
- Gross weights +/- 6% (95% of trucks)
- Axle spacing +/- 6 inches or 5% (95% of axles), whichever is greater

WIM sensors in other lanes shall meet or exceed accuracy requirements for ASTM E1318 Type II "Standard Specifications for Highway Weigh-in-Motion (WIM) Systems".

A qualifying vehicle is one that has a non-variable load and passes over the WIM sensors in the lane.

Blanket grind the concrete pavement in the mainline drive lane beginning 200 feet prior to the WIM scale location and ending 100 feet after the WIM scale location, for a total of 300 feet, with a minimum 36-inch blanket grinder to ensure that the roadway meets the requirements of Section 6 of ASTM E1318 prior to installation of the WIM system.

The WIM quartz sensors shall have the following characteristics:

- Quartz sensors shall be capable of accurately measuring gross vehicle weight, wheel load, axle load, axle group load, speed, and axle spacing when traveling at speeds of 10 to 80 mph.
- The quartz sensors shall be capable of being reground up to 0.4 inch with no loss of functionality in the event of roadway deformations and move resulting in a quartz sensor unit protruding above the surrounding pavement surface.
- The quartz sensors shall have uniform and consistent sensitivity without experiencing any signal drift or phantom axles.
- Shall operate without degradation in ambient air temperature ranges of -20°F to +120°F and in relative humidity ranging from 10% to 95% non-condensing.
- Quartz sensor performance shall be insensitive to temperature changes (i.e., less than 1% for a temperature range of 90°F). Sensing element shall be encapsulated in an aluminum die cast housing providing a vibration proof, frost-resistant, and watertight carrier unit prior to shipment.
- Be capable of being installed directly into a cut out channel in the roadway pavement using a manufacturer recommended epoxy material that encapsulates each quartz sensor unit.
- The output signal of the quartz sensors shall be processed by an industrial grade charge amplifier made by the same manufacturer as the quartz sensors.
- Each channel of the charge amplifier shall convert the charge output corresponding to the sum of the forces acting simultaneously on a multi-unit quartz sensor to a proportional voltage. Adjusting potentiometers for the charge amplifier shall be designed as plug-in units that eliminate the need to recalibrate when replaced.
- A 15 to 20-volt DC power supply shall be provided to power the charge amplifier unit.
- The height of the quartz sensor shall not exceed 44mm to minimize pavement depth cut in roadway.
- Bending plate, load cells, or strain gauge systems are not allowed.

The WIM quartz sensors' placement is up to the vendor's preference. The system shall properly weigh any vehicle that is within their lane. In Wisconsin, this includes encroaching on and over the fog line by 4 inches. Any necessary modifications to jointing or pavement edges to ensure the sensors work properly shall be coordinated with the engineer and paving contractor(s).

E.1.2 Detector Loops

Each detector loop shall have a minimum loop area of 6-foot x 6-foot. Detector loops shall conform to standard specs.

Loop wire shall be 1 conductor, 14 AWG, IMSA 51-5. Loop leads shall be 2 conductor, 14 gauge, IMSA 50-2 cable.

Loops shall not be cut directly into the roadway and loop sawcuts shall not be exposed to the roadway surface. In situations where the roadway is concrete pavement and is not continuously reinforced, the appropriate concrete pavement section of roadway shall be removed, loops shall be installed, and the appropriate concrete pavement section shall be replaced.

Detector loops shall be provided in order to control the sign and for the system to operate as described in these special provisions. Loop detectors shall be installed for the WIM system electronics of the mainline WIM and compliance systems. The mainline WIM and compliance systems shall use the signals from these detector loops to switch the message sign and to track vehicles. The CMS sign shall be switched in a tracking sequence to direct a sorted vehicle to enter the weigh station.

E.1.3 Compliance System

The compliance system may consist of vehicle detection loops and WIM quartz sensors.

The compliance system shall monitor vehicles signaled to bypass or report the weigh station. It shall be interfaced to the station computer.

An audible alarm shall be sounded on the virtual graphics display if a commercial vehicle does not take the lane as directed by the Mainline Sort System.

E.1.4 WIM Electronics

The system electronics shall be capable of receiving and analyzing the data gathered from the Mainline WIM and compliance system locations. The electronics shall also be responsible for communicating and transmitting vehicle weight data from the WIM site to the station computer in the SWEF building.

The system electronics shall be capable of receiving inputs from the WIM quartz sensors and loops, as well as serial and digital devices. Output control options shall be included for a variety of serial, digital and AC power devices, such as CMS, and LCS.

The system shall be compatible with the existing automatic vehicle identification (AVI) equipment, as specified by PrePass. The system shall also interface with 360SmartView and Drivewyze. Ports and software are to be included for communication with both systems.

All quartz sensor modules shall be field replaceable, and every module shall feature self-testing and built-in fault diagnosis.

The mainline WIM system shall be all new components provided in the existing roadside cabinet to house the System Electronics and the overview image freeze frame camera equipment, the LPR equipment, the AUR equipment, and other system peripherals. The Ramp WIM cabinet shall have system electronics, as well as the other system peripherals for the location. The electronics for the AVI reader located on the mainline WIM section are existing and have been supplied by PrePass. The electronics and software for the 360SmartView system shall be provided outside of this project.

All wires from quartz sensors, loops, sign control lines, shall be terminated on terminal strips or screw terminal connectors. The terminal strips shall be identified by terminal strip number and screw connection number. These terminal strips shall be readily accessible. All cables shall be long enough to easily reach these terminal strips. Terminal strips, splices, or other type of connections prior to these standard terminal strips shall not be allowed except for splicing of a loop to a shielded twisted loop lead.

All AC power connections shall be shielded to prevent electrical shock.

The system electronics shall abide by the following communication requirements:

- On-board Ethernet interface (wireless or fiber)
- One RS-232 serial interface dedicated to external interface.
- Local user interface for system configuration and fault diagnosis.
- Remote administration via Telnet or Windows remote desktop.
- Remote file download via FTP.

The system electronics shall abide by the following peripheral requirements:

- Non-volatile storage for vehicle information to prevent data loss during power outages.
- Sensor inputs from WIM quartz sensors and loops
- Output control for CMS and LCS.

The system electronics shall abide by the following software requirements:

- Records data logs on operational status, condition and safety system activity.
- Weight compliance and classification with user-defined classification scheme.
- Serial output compatible with PrePass and others.
- Automated mainline and ramp weigh stations.
- Data analysis and reporting.

E.1.5 Overview Camera System

The Overview Camera System shall consist of the following system components:

- Color and black/white video camera
- Illuminator system
- Video capture system

The video system shall monitor traffic flow on the mainline. It shall capture still images of trucks having violations for identification and enforcement purposes. The images shall be displayed on an operator interface located in the scale house. Each vehicle record number shall be displayed with the vehicle image.

One camera shall be provided and installed on a pole located near the mainline WIM location. The camera shall provide overview images of the passing commercial vehicles, detailing their cab and side. Color images shall be provided for daylight use, and black/white images shall be provided for night use.

The overview capture system shall be located in one of the System Electronics. The overview capture system shall provide control and display facility to display image outputs from one source to one monitor.

E.1.6 LRP System

The LPR system shall be capable of collecting, storing, and transmitting all commercial vehicle license plate images and OCR data to the station computer for configurable periods. The OCR read accuracy on license plates shall meet 75% of readable plates including jurisdiction at night. The percent accuracy may be adjusted if a higher number of plates are unreadable with near-infrared illumination.

E.1.7 Automatic USDOT Reading System

The AUR system shall be capable of collecting, storing, and transmitting all commercial vehicle license plate images and OCR data to the Station computer for configurable periods. The OCR read accuracy shall meet 75% of readable numbers.

E.1.8 Changeable Message Signs (CMS)

The Mainline Sort System shall consist of the following CMS-related system components:

- One or two CMS (as determined by the vendor)
- Detector loops (as determined by vendor) to track vehicle compliance.

The CMS shall direct vehicles to enter the weigh station or bypass the station, based on the results of the mainline sort decision.

The CMS, under control of the mainline WIM system, shall synchronize the sign switching upon detection of the tracked vehicle passing over or through strategically located detector loops.

The CMS, under control of the mainline WIM system, shall also be consistent with the PrePass notification signal to the PrePass in-cab transponder. The WIM System, upon notification from PrePass, shall blank all CMS such that all messages regarding truck compliance and reporting instructions are decided by PrePass and communicated via transponder.

The CMS shall be mounted on a breakaway steel sign supports conforming to the requirements of standard spec 635 and standard spec 636. Concrete bases along the mainline shall be a minimum of 32 feet from the edge of travel lane and flush with the surrounding ground.

When not energized, the sign shall completely blank out without any ghost images.

E.2 Compliance/Ramp Area

E.2.1 WIM Quartz Sensors

The WIM quartz sensors in the compliance area shall meet the same requirements as mainline WIM quartz sensors.

E.2.2 Detector Loops in New Roadway

Loops in new roadway shall meet the same requirements as the mainline detector loops.

E.2.3 Detector Loops in Existing Station Roadway

Each detector loop shall have a minimum loop area of 6-foot x 6-foot.

Loop wire shall be 1-conductor, 14 AWG, IMSA 51-5. Loop leads must be 2-conductor, 14 gauge, IMSA 50-2 cable.

E.2.4 Electronics

The compliance system interface electronics shall be located in the existing roadside cabinet. The electronics shall be responsible for retrieving truck data and communicating it to the Weigh Station computer in the scale house.

The electronics shall include interfaces to the following components:

- WIM quartz sensors
- Loops
- Lane directional signals
- Weigh station computer system

The electronic system shall be of a modular design to aid in system maintenance, troubleshooting, and in-field servicing.

All components of the electronic system, including inductive loop detectors, shall contain necessary electrical protection to prevent damage from electrical surges, spikes, and the effects of lightning.

The system must be of a durable, industrial design and construction, and enable continuous operation, with automated startup in the event of a power outage.

All quartz sensor and ancillary equipment connections must be conveniently located on the system front panel. All connections shall be a plug-in, quick-connect style.

All printed circuit boards and components shall be of a commercially available design. This includes but is not limited to; the system central processing unit (motherboard), and CPU-related interfaces such as digital input/output interfaces.

The specifications for the compliance system electronics are to follow the minimum specifications as set out for the mainline WIM electronics.

All cutouts and openings in the electronics housing cabinet shall be vermin proofed.

All wires from WIM quartz sensors, loops, sign control lines, shall be terminated on terminal strips or screw terminal connections. The terminal strips shall be identified by terminal strip number and screw connection number. These terminal strips shall be readily accessible. All cables shall be long enough to easily reach these terminal strips. Terminal strips, splices, or other type of connections prior to these standard terminal strips shall not be allowed except for splicing of a loop to a shielded twisted loop lead. All AC power connections shall be shielded to prevent electrical shock.

E.2.5 Lane Control System (LCS)

Existing Lane Control System (LCS) signals shall be installed on a new structure to signal vehicles to the proper lane as determined by the WIM system. The system shall use signals from loops to switch the lane directional signals.

E.2.6 Variable Message Signs (VMSs)

Two new variable message signs shall be located downstream of the static scale and mounted on a new overhead structure. All VMSs shall be constructed using the same technology.

The VMS mounted over the right lane shall display a static “RIGHT LANE” sign above the VMS and shall have the following message options:

Message 1: PULL ONTO
 SCALE
 (in yellow with animation)

Message 2: PULL FORWARD
 SLOWLY
 (in yellow)

This message shall be displayed until the truck hits the point on the static scale where it needs to be stopped to be properly positioned.

Message 3: STOP
 (in red with animation)

This message shall be displayed to automatically stop the truck on the static scale for proper weighing.

Message 4: STOP
 (in red, static)

Message 5: BACK UP
 SLOWLY
 (in yellow)

Message 6: OK
 GO AHEAD
 (in green)

Message 7: PARK IN LOT
 (in red)

Message 8: REPORT FOR
 INSPECTION
 (in red)

Other messages as determined by the scale operator.

The VMS mounted over the left lane shall display a static “LEFT LANE” sign above the VMS and shall have the following message options:

- Message 1: STOP
(in red)
- Message 2: OK GO AHEAD
(in green)
- Message 3: SLOW DOWN
(in yellow with animation)
- Message 4: 25 MPH
(in yellow)

The system shall have the capability to create or edit messages. A message shall be displayed for every commercial vehicle.

Each message character shall be 6 inches high. The sign shall have a viewing angle of 90 degrees horizontally, and 40 degrees vertically. Messages shall be programmable via computer in the scale house and be:

- Password protected
- Not exceed two lines of 16 characters per line
- Able to store a minimum of 20 messages
- Allow for six active messages
- Controllable via static scale program, static scale mouse, keyboard, or graphics panel

VMS shall have color capacity of 256 or more colors. Each sign shall have 3 LEDs per pixel (1 red, 1 green, 1 blue). Each sign shall have an estimated life of 100,000 hours plus. Each sign shall have front access.

VMS shall be capable of displaying text, graphics, logos, basic animation, multiple font styles and sizes.

VMS signs shall be powered by 120/240 VAC single phase.

VMS signs shall be capable of communicating via RS232, RS422, modem, serial fiber, or Ethernet fiber.

VMS sign shall have 64 levels of display dimming (automatic or manual control).

VMS shall be mounted on a breakaway steel sign support which meets crash requirements as set forth by NCHRP 350 and approved by an engineer licensed in the state of Wisconsin. Concrete bases shall be flush with the surrounding ground.

The messages must be clear and legible under any lighting conditions. When not energized, the sign shall completely blank out without any ghost images.

For each VMS there shall be a detector loop. Loop detectors shall be provided for interface to these detector loops. The system shall use signals from the loops to change the VMS messages.

E.3 Scale House

E.3.1 Weight Station System Operational Overview

The Weigh Station system shall be all new and located in the scale house. It shall process data from the mainline and compliance WIM electronics and static scale, for central monitoring and control of the facility operation. The system shall provide two operator displays at the scale house. The operator can monitor vehicle movements, view and print reports and adjust system parameters, i.e., alter message signs, adjust random sorting %, etc.

The weigh station system shall be made up of the following components:

- Vehicle display window (displays shall vary by manufacturer)
- Virtual graphics display
- Override console
- Central station computer
- Static scale manager

E.3.2 Vehicle Display Windows

The vehicle display window shall display:

- sequence number
- time and date
- class
- speed
- gross vehicle weight
- lane-time and date
- direction of travel
- OCR read of the vehicles license plate and jurisdiction
- OCR read of the vehicles USDOT number
- violations highlighted in red
- right and left wheel weights per axle with violations highlighted in red
- individual axle weights with violations highlighted in red
- individual, front bridge, rear bridge, and full vehicle spacing
- tandem weights as measured by the WIM electronics with violations highlighted in red
- front and rear bridge weights as measured by the WIM electronics with violations highlighted in red
- thumbnail image of the vehicle from the overview camera.
- thumbnail image of the USDOT number
- thumbnail image of the vehicle license plate

A vehicle record shall be displayable in either graphic form or in text form. Another alternate shall be a tabular view of all records in the queue.

The length from axle to axle shall be shown on a linear scale with axle spacings plotted below the scale line. Red text for an axle shall indicate the location of an overweight axle or axle group.

The display of vehicle record must show the following violation information in addition to dimension and weight violations:

- Vehicle speeding
- Credential

The vehicle display windows shall allow the following options at any time without going to alternate screens or menus:

- Freeze vehicle record
- Print vehicle record
- Double click on the overview thumbnail image to see a larger view

Each vehicle record shall contain a digital image of all vehicles and shall be similar to the following examples:

747 15:21:51 Class:9 Speed:36 Gross:81400 Plate:2VG154 ST:OK USDOT:1202
 AxleOverWt BridgeOverWt TndmOverWt GrossOverWt Credential

```

1.....2...3.....4...5
|-----17.5-----|4.3|-----35.1-----|4.0|
|-----21.8-----|
|               |-----43.4-----|
|-----60.9-----|
  
```

Axle	1	2	3	4	5
RGHT	5700	8200	8400	7600	10100
LEFT	6100	7800	8300	9000	10200
TOTL	11800	16000	16700	16600	20300
Tndm:		32700		36900	

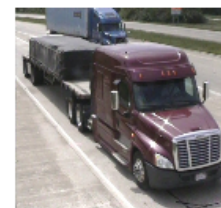
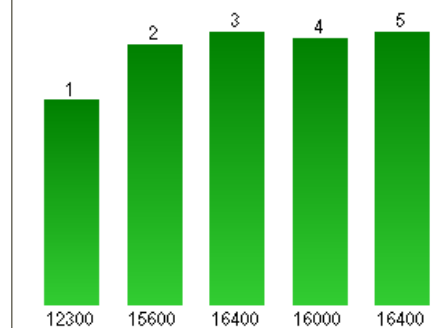
InBr: 1-3 44500 2-5 69600



740 15:16:56 Class:9 Speed:38 Gross:76700 Plate:A014978 ST:MS USDOT:237655
 Credential

```

1.....2...3.....4.....5
|-----19.0-----|4.3|-----29.8-----|10.0--|
|-----23.3-----|
|               |-----34.1-----|
|-----63.1-----|
  
```



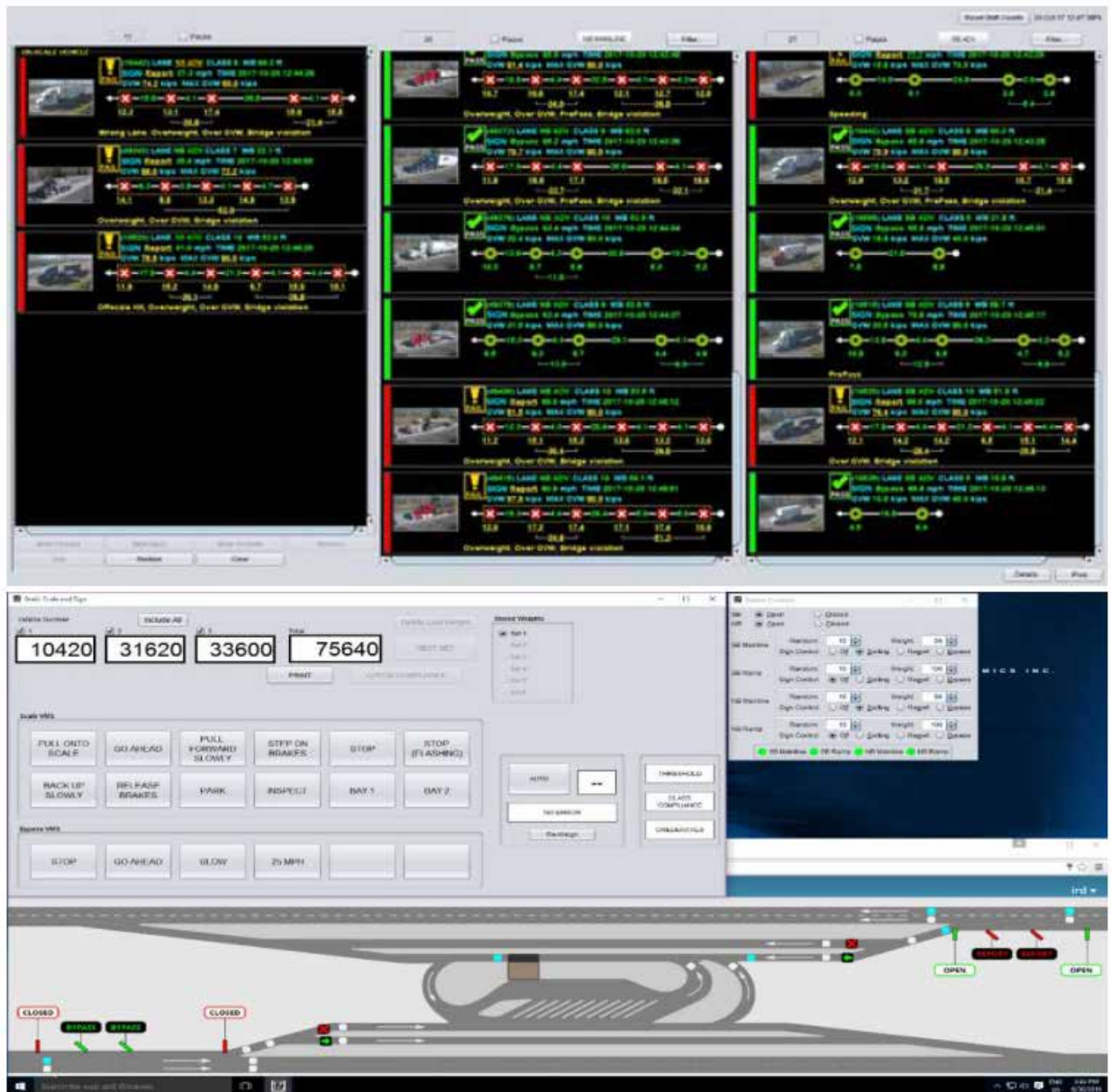


E.3.3 Virtual Graphics Display

The virtual graphics display shall provide software representing the overhead layout of the station on the central weigh station computer to provide control and monitoring of the station. The graphics display must be software based. The station console shall provide the ability for an operator in the weigh station to select the control operation of the mainline CMS and ramp LCS manually. The graphics display shall have visual indicators to identify the mode of control of system signs and signals. In addition, vehicle movement information shall be displayed using indicators on the graphical panel. It shall provide the following functions:

- Select automatic sort control of each system or the manual control by the operator.
- In manual control of the mainline CMS by an operator, it can be set for all vehicles to enter the weight station or to bypass.
- In manual control of the ramp LCS by an operator, it can be set for all vehicles to come the static scale or the bypass lane.
- Real-time monitoring of the station operation by showing indicators when the appropriate sensors are activated and deactivated including loops
- Graphics representing the color and status of the directional signals. The graphics shall continuously display the status of the mainline message signs, overhead signals, open/closed signs and static scale message sign.
- Select automatic sort control of the bypass and static scale lane VMSs or manual control by the operator.
- Manual selection of the bypass and static scale lane VMS messages.
- Include a 22-inch (minimum) widescreen flat panel monitor with speakers and shall interface with the weigh station computer. This monitor shall be one of the two monitors located at the weigh station compute.
- Provide a graphical representation of the weigh station layout with symbols to indicate the function of vehicle tracking devices.
- Allow for a true manual control of all signs.
- Shall be similar to the following examples:





The station system must provide an audible warning for the following conditions:

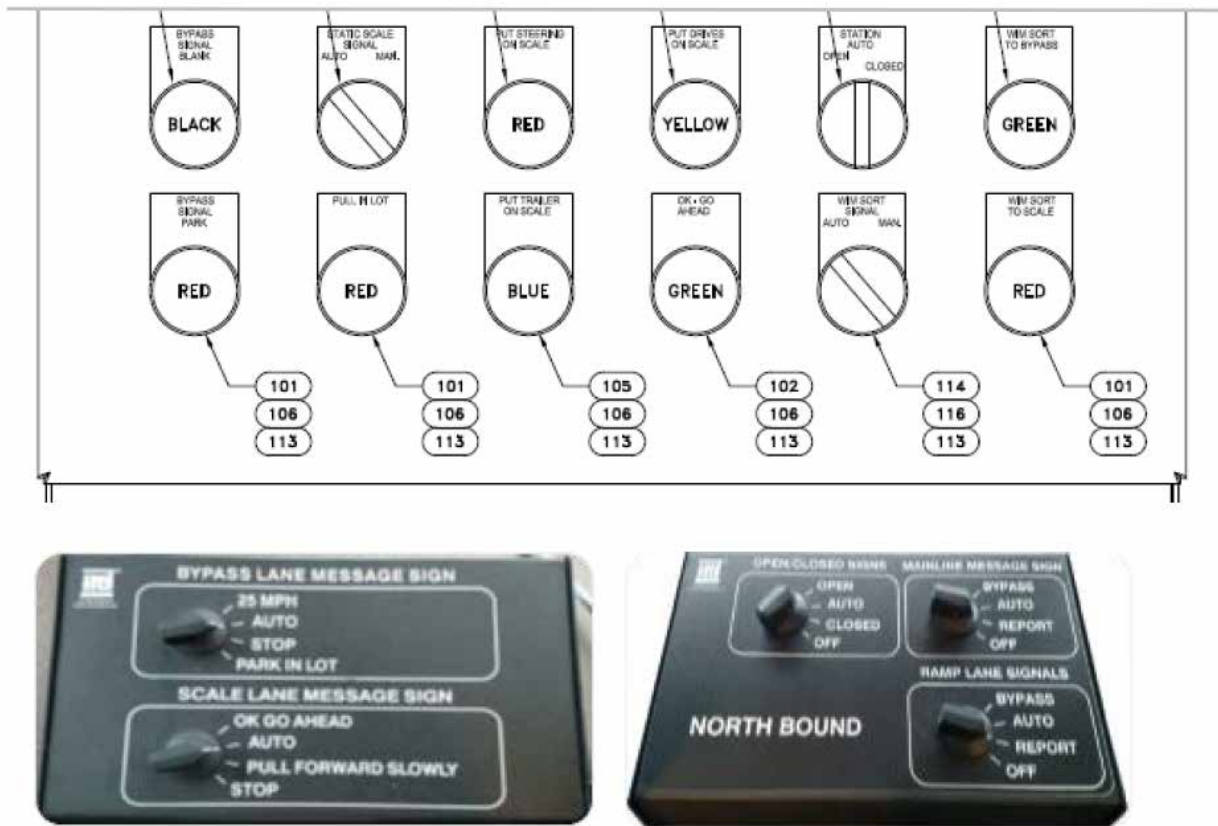
- WIM scale backup
- Weigh station violator
- Violator in the bypass lane
- Station automatically closing because ramp is backed up
- Station is automatically reopening because ramp has cleared
- Vehicle waiting on the static scale

E.3.4 Manual Override Console

A manual override console shall be provided as an interface that allows the operator to override the mainline WIM and compliance systems in order to gain control of various system components. The console shall include control of the Open/Closed signs. The console shall also include the ability to control the static scale message sign and turn the scoreboards on/off.

The override console shall provide the ability for the operator to manually override all signals and signs. It shall be a minimum of 24" long and 10" wide with large push buttons and switches to allow officers to quickly locate and change signal controls when override is required. The override console must be operationally independent of the WIM interface electronics, the virtual graphics panel, and the station

computer to control all signs and signals. The override console shall remain operational even if the station computer is not functioning.



E.4 Station Computer

The station computer shall be an Intel microprocessor-based computer with the Microsoft Windows 8.1 or 10 operating system and have the following minimum features and configuration:

- Current PC standards for memory, hard drive, and other hardware
- Two 22-inch (minimum) widescreen flat screen color monitors with non-glare screen
- Keyboard
- Mouse
- System utilities and diagnostic software
- Surge protection
- System password protected lock for user access restriction
- All access ports, cables and accessories to provide a working computer

The station computer shall provide the following functions:

- Perform mainline and ramp sort operation.
- Weigh all vehicles travelling in the right lane.
- Classify and weight all vehicles travelling on all instrumented lanes of the highway with WIM quartz sensors.
- Perform weight compliance analysis on vehicles according to department regulations.
- Monitor safety conditions of the facility that includes a WIM scale back up, ramp back up, and static scale lane backup.
- Perform sorter operation according to decisions based on weight compliance analysis, other violations (speeding, improper maneuver, sudden speed change, etc.), virtual graphics panel override console selection, safety conditions, and operator selected action.
- Insert sequence numbers for vehicle records for tracking purposes.
- Display vehicle record in multiple queue windows.
- Track vehicle movement in the execution of sorter operation.

- Control message display of the CMS/LCS to synchronize with the movement of a vehicle being tracked.
- Provide vehicle records for those that have been sorted to or come to the static scale.
- Provide real-time display and control of the static scale.
- Allow operators to automatically sequence vehicles across the static scale or manually weigh by accumulating axles.
- Automatically determine and provide operators feedback based on whether a vehicle is actually overweight based on axle spacing, axle, axle group, gross, and front/rear bridge weights based on Wisconsin regulations.
- Automatically or manually release vehicles that are not overweight based on Wisconsin regulations and do not have other violations.
- Allow operators to print weight tickets.
- Provide audible message alarms to alert operators of conditions that may require their attention.
- Provide reports on system operation.
- Perform data collection, data storage, file management and report generation functions for collected vehicle information.
- Allow adjustment of WIM and system settings.

The weigh station system shall have application programs to detect prolonged power failure conditions to initiate orderly shutdown operation.

E.5 Scale Manager

The scale manager shall be software located on the central weigh station computer and facilitate processing vehicles that are sorted or volunteer to come to the static scale. As officers primarily focus on vehicles that are potential violators this shall be the main screen that they work with. The screen shall also give the operator the ability to control system settings and view and run reports. It shall provide the following functions:

- Interface with the static scale indicator and WIM systems.
- Display and accumulate static scale weights and display WIM data for the vehicle that is positioned on the static scale.
- Provide adjustable thresholds to each steer axle, axle, tandem, front bridge, rear bridge and gross weight based on Wisconsin regulations for axle spacing and weight.
- Automatically check weights to thresholds and release vehicle if in auto mode or alert operator of violation with audio and visual alerts.
- Automatically or manually allow operators to control the static scale sign with buttons with matching messages.
- Provide the following features within the display: selectable auto release, display shift counts, violations displayed in red, zero scale, and reset scale.
- Print requirements include site identification, time and date, license plate, USDOT number, individual weights (axles and axle groups), gross weight, WIM axle spacing, and thumbnail image of vehicle.
- Continuously show updated static scale counts for each shift for the day.
- View individual live raw counts for static scale load cells.
- Allow remote diagnostics access.

If a vehicle is not positioned properly or is a weight violator the operator shall be notified by visual and audio alarms and the vehicle shall not be auto-released when in auto-sequencing mode.

To eliminate costly calibrations, the weigh station system shall electronically interface with the mainline WIM system for auto-calibration. On a continuous basis the weigh station system shall ensure WIM accuracy and calibration.

Calibration of the mainline WIM shall be automatic and performed by electronic recording of WIM and static weights on 50 vehicles from the vehicle stream which are loaded to within 75% of the legal allowable limit. Auto-calibration shall be done with different factors for speed range and vehicle class to provide more accurate results. The settings shall allow for a minimum of 10 different speed ranges and 13 different classes to be used.

Acceptance testing shall confirm the WIM accuracy performance which shall be verified in a report. This report shall be created by continuous (24/7) electronic recording of vehicles from the vehicle stream. The actual stable static weights and WIM weights shall be saved in a common database to determine WIM scale accuracy compliance, as opposed to the method described in ASTM E 1318-09. This information is to be easily accessible to state personnel in reports and shall be printed on a weekly basis throughout the continuous operating test and in everyday use of the weigh station afterwards.

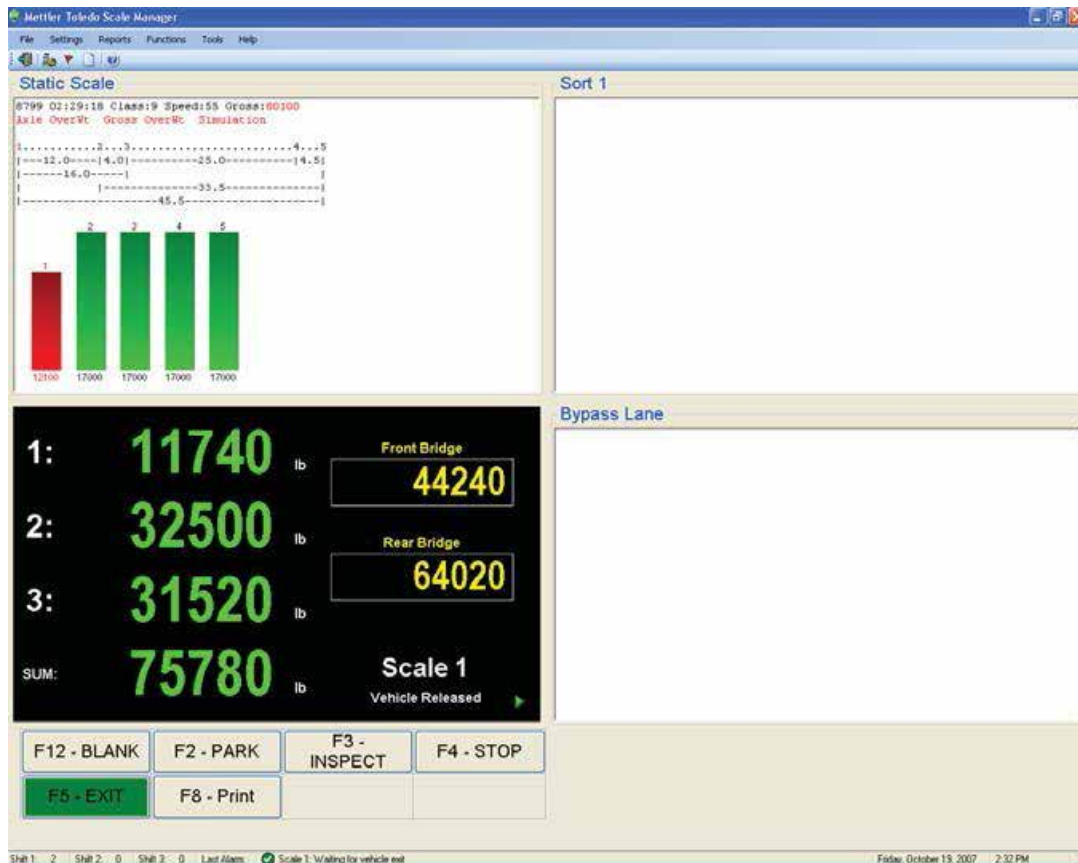
All reports shall be available from the scale manager for one central place to view reports. The following reports shall be available:

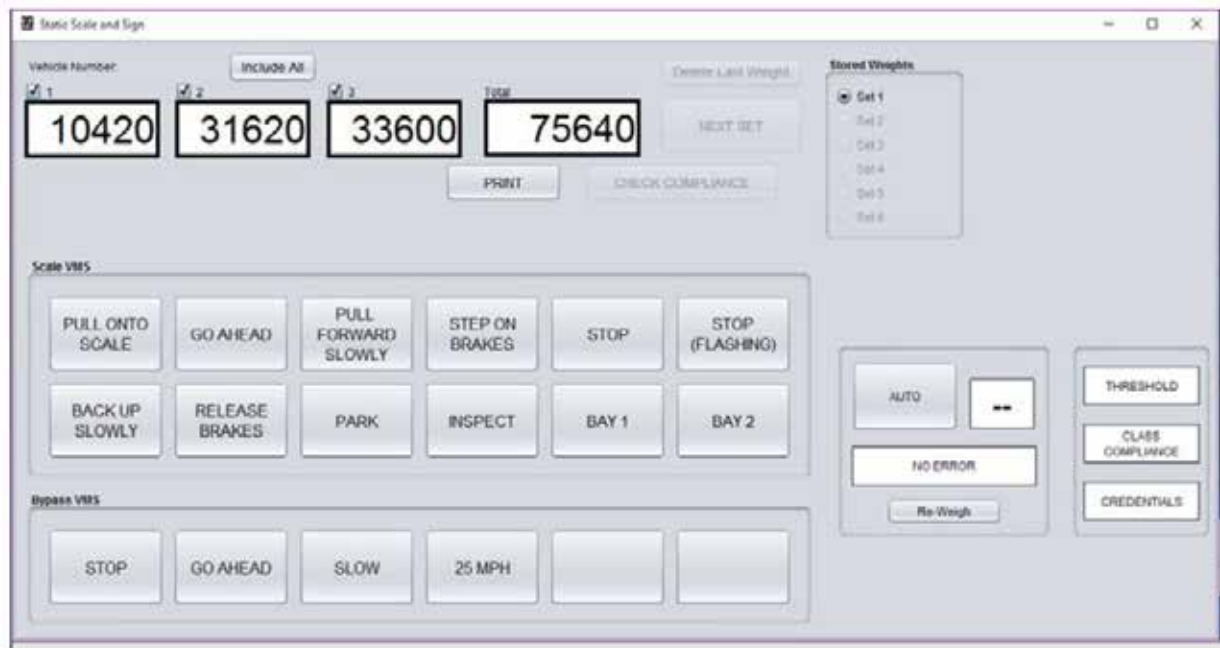
- Number of vehicles per lane across the WIM by class, hour, and shift for a selected period.
- Number of trucks per lane across the WIM by hour, and shift for a selected period.
- Axle and GVW weights by class for a selected period.
- Number of vehicles per lane by weights, by class and by hour for a selected period.
- Number of vehicles across the static scale by class, hour, and shift for a selected period.
- WIM accuracy performance by class for a selected period.

A selected period for report generation shall include starting date and ending date. Reports shall be generated manually by operator action. Reports shall have an option to display a chart view, and to be exported into Microsoft Office compatible formats.

The static scale manager shall have utility programs do the following:

- Set up and configure the operation of the mainline WIM system.
- Set up and configure the operation of the Mainline Sort System.
- Initiate and reset traffic counting operation of the WIM system.
- Perform maintenance functions of the weigh station systems.





F Conduit and Pull Boxes

All cables shall be in conduit unless specifically approved by the engineer. All conduit and pull boxes shall meet the requirements of standard spec 652 and 653. Pull boxes installed in the median shall be rated for heavy truck traffic.

All materials shall comply with the "National Electrical Code" and the current standard specifications, and special requirements by State weigh in motion and automatic vehicle identification system specifications. Duct seal shall be used to seal all conduits in the cabinets and in all junction boxes. All conduits shall have a polyethylene pull string with at least 210-pound break strength left in place at completion of construction.

Separate conduits shall be used for AC/DC power and low voltage signal cables. Low voltage signal cables shall include video, digital communication, sensor signal cable, and sensor excitation cables where voltage is under +/- 20 volts DC. Conduits for video and RF cables shall be of a large enough size to accommodate the maximum bend radius using factory 90-degree "bends".

All cables shall be in conduits unless specifically approved by the engineer.

G Open/Closed CMS

Furnish and install OPEN/CLOSED changeable message signs. Each unit to be 2-message, 1-way, LED blank out signs with white illumination. CMS shall meet the following requirements:

- Messages shall be formed by rows of white LED pixels.
- All letters shall be 18-inch series E formed by single rows of LED pixels.
- Dimming option with photocell shall be provided.
- 120 VAC shall be required for activation of messages.
- 2 ½-inch aluminum angle shall be provided top and bottom for mounting.
- Exterior of sign housings shall be wet painted, semi-gloss black enamel.
- Replace all wiring from scale building to the OPEN/CLOSED signs.
- CMS shall provide feedback to the scale house as to if the signs are functioning properly.

H Portable WIM System

Furnish two portable scales and trailer. The weighing system shall be sized to be transported inside of the trailer, easily set up by 1-2 people in less than fifteen minutes and capable of weighing commercial vehicles in static and dynamic modes of operation via battery power at remote locations. Each system shall consist of two scales, roll up ramps and levelers and a CPU capable collecting individual axle, group

and gross weight as well as other vehicle and site characteristics specified herein. The primary means of communication between the scales and a CPU shall be wireless (without cables) but cables must also be included for back up purposes. The CPU shall collect all weight related data and store records which can be easily downloaded/exported for analysis and reporting purposes. The accuracy and performance of the system shall comply with ASTM 1318-09 Type IV. The weighing system shall be approved for enforcement purposes in static mode by NTEP (National Type Evaluation Program) when used with the Type II CPU. Additional requirements and description for each of the primary components are listed below:

H.1 Platform Scales

Capacity	10,000 kg (22,000 lbs.) per platform 20,000 kgs (44,000 lbs.) per axle when used in pairs
Overload (maximum without damage to scale)	150% of capacity
Minimum dimensions (active weighing surface)	380mm X 780mm (15 in X 30.7 in)
Maximum dimensions (overall)	405mm X 1025mm (16 in X 40.3 in)
Maximum platform height	43mm (1.7 in)
Maximum scale weight	31 kg (69 lbs.)
Battery power	Batteries must be commercially available from traditional retail stores within the country.
Minimum battery life	100 hours from lithium (50 hours from alkaline or NiMH)
Required stand-by mode to conserve battery life	Low power stand-by mode automatically entered when host CPU is off. In this mode battery life is 120 days from lithium, 60 days from alkaline or NiMH.
Operating speed (dynamic mode):	0 – 10 kph
Dynamic accuracy	2-3% @ 6kph (95% CI)
Static accuracy	+/-0.5% of verified gross weight
Calibration interval	1 year
IP rating	IP67
Operating temperature range for static NTEP/OIML applications	Specified accuracy: -10°C to +40°C (+14°F to +104°F)
Operating temperature range	General: -30°C to + 60°C (-22°F to +140°F)

The scales shall communicate via wireless signal with the CPU at distances up to 60 meters (200 ft.) in a direct line of sight. This shall be accomplished without any protruding or external antennas. Wireless communication shall operate within Industrial, Scientific and Medical (ISM) radio bands (868MHz, 915MHz and 2.4GHz) for license free operation. The wireless communication shall comply with a security framework to IEEE standard 802.15.4 using a minimum of 128-bit keys for secure and encrypted communication which cannot be read, intercepted or be visible to devices other than those which are part of the WIM system and/or local authorized network.

Wired communication shall be of a digital signal so that any scale can be used with any CPU of the same make and model to allow for interchangeability of components.

Each scale shall contain a power on/off switch, communications/charging connector and shall be user programmable to a specific and unique designation so as to be recognized by the CPU upon power up. All calibration data shall be contained at the scale to allow for interchangeability with CPU's.

The scale load sensing measurement shall use fully electronic load cells which can be individually repaired and replaced apart from the platform to promote cost effective maintenance and facilitate local repair. The load cells shall be free of hydraulic operation. Designs where the entire weigh pad uses integrated strain gauges and or hydraulic modes of converting pressure to weight shall not be considered.

H.2 Ramps/Levelers

Four levelers, one end of each being beveled, shall be provided to aid the vehicle in driving on and off the scales. The levelers shall be the same height as the scale. At a minimum they should be the same width

as the active weighing surface of the scale and a length of no less than 280 cm (110 in) so as to ensure axle groups are on a level plane when traveling over the scale. Each leveler (maximum four) shall be of one-piece construction and capable of being rolled up to a compact diameter of no more than 500 mm (20 in). Material shall be composite to provide strength and safe overload equal to the rating of the scale (150%). Each leveler shall have a maximum weight of 34 kgs (75 lbs.) to be carried and set up by no more than two people.

H.3 Type II CPU

This CPU shall consist of a ruggedized and portable main control box housing the electronics, keypad, display and printer. The system shall communicate with 2 to 12 platforms (1 to 6 pairs) and be capable of communicating with the scales in both wired and wireless transmission. It shall display the weight of each axle or group and accumulate to display gross vehicle weight. This information, along with other criteria below, shall then be available via a self-contained print out.

- Serves to control each platform scale, as well as display the weight applied to it in either static or dynamic weighing mode.
- Controls output to both an internal printer and a choice of external outputs (USB, RS-232, and USB flash drive).
- Store, recall, and print up to 2000 separately stored weigh records.
- Software allows for four optional user selected "USER INFO" fields that shall display when printed. (Scales location, Scale User, Supervisor, and one user defined field). These settings shall be saved in the registers until the user changes them.
- Software also provides seven optional "VEHICLE INFO" fields. (License plate, Plate State, DOT#, Owner/Driver, FHWA Class, Notes, and a user defined field) These fields shall clear after next vehicle is pressed.
- Internal printer prints all weights including the total weight for up to 9 axles with User and Vehicle information as desired.
- Functionality to use a weighed or manual entered tare weight to automatically calculate total Net weight from a weighment
- Generates time and date stamp.
- No external or protruding antennas from the CPU.
- NTEP Approved by U.S. National Institute of Standards and Technology.

Dedicated keys	ON/OFF, RESET, KGS/LBS, ZERO, CLEAR, ENTER, 0-9 numeric key pad with alpha characters, ADJUST SCREEN, BACK LIGHT, TIME/DATE, EXIT, MENU, four arrow keys, AXLE ACCUM, NEXT GROUP, PRINT, SAVE, NEXT VEHICLE, USER INFO, VEHICLE INFO, SET TARE, SHOW WEIGHT, SHOW ARM/CG, SET ARM, RECALL SAVED DATA, CLEAR SAVED DATA, AND OUTPUT SAVED DATA.
Minimum display	144 mm (5.7 inch) graphic LCD with backlight and capable of being arranged into 5 rows of (15) 11 mm (0.43 in) characters
Battery power	6 'D' cell alkaline or NiMH rechargeable cells
Required battery life	40 to 200 hours: dependent on system detail, printer, and back light use.
Charging power	100 to 240 VAC, 50 to 60 Hz universal plug kit included
Minimum charging time	24 hours
Output	USB, RS485/ANALOG, and USB Flash Drive
Relay output	2 outputs, each with C/NO/NC contacts, 5A @ 250VAC or 30VDC
Analog output	(16-bit): 0-10V, 4-20mA, 0-5V, +/-5V, +/-10V, 0-20mA
Environmental	Rated IP67 when closed; IP52 when opened and operational
Operating temperature	-4 F to 140 F. (printer 32F to 122F / 0C to 50C) -20 C to 60 C.
Storage temperature	4F to 140 F. -20 C to 60 C.
Dynamic mode	Weigh at speeds and accuracy governed by scales
Static mode	Weigh at accuracy governed by scales

H.4 Trailer

Provide a trailer capable of transporting the portable WIM system. The trailer requirements are listed below:

- Color – White
- Size – 5'x9' Aluminum
- Tire Size – 15"
- Spare tire (steel rim)
- Aluminum spare tire mount (interior)
- Stainless steel hardware
- 24" stone guard front
- Front jack and wheel

I System Acceptance

The complete WIM System shall be accepted subject to fulfilling the following conditions:

- System review
- Acceptance tests (meeting WIM, LPR and AUR accuracy on a weekly basis).
- Training

I.1 System Review

The potential WIM vendor shall submit six copies of a system layout and cut sheets for each individual site prior to award of their subcontract. These layouts shall be submitted to the department for review. Approval shall be either an official from the department or designated representative. If the potential WIM vendor does not fully meet the specifications the department may instruct the prime contractor to select another vendor.

A preliminary on-site meeting shall be held after all of the old electronics have been removed to verify no equipment is being reused and to discuss contractors' plans for the routing of conduits, cables, and placement of equipment.

I.2 Acceptance Tests

The complete WIM system, all-inclusive as contracted, shall be designed, built and tested by the vendor, and as proof of operation, the systems, overall and singularly, shall be tested at various times according to the test specifications. All field tests shall be performed by the WIM vendor and observed by the department with all reports submitted to the department.

I.2.1 Factory Acceptance Tests

Prior to shipment of any equipment, Factory Acceptance Tests shall be performed for each system to verify the equipment operating as described in the contract documents and according to the test specifications approved by the State. The Factory Acceptance Tests shall include at minimum the following:

- A physical inspection to verify that the quality of material and workmanship satisfy specified requirements and standards and that the equipment and software under test are complete and ready for delivery.
- A functional test to verify that the equipment and software operate as described in the contract documents.
- A performance test to verify that the equipment satisfies performance and operation criteria.

For the purposes of these tests the equipment and software shall be configured as nearly as possible to the final configuration. Any field inputs not available at the factory test site shall be simulated to provide a close approximation to actual site conditions.

I.2.2 Site Acceptance Tests

After all the equipment and software have been installed at the site, there shall be a burn-in and calibration period where the vendor can run tests to ensure that all equipment shall operate as specified therein contract documents. These tests shall be witnessed or conducted by the department within one week of the manufacturer notifying the department that the system is ready for testing.

The camera systems shall be tested at the sites to verify that the images taken at daytime and night time are clear and integrated properly with the vehicle record from the systems. The vendor shall collect data observed by the engineer and provide the results of the images taken for the duration of the testing during day and night time operation. Success shall be determined by images that are non-blurred, crisp, properly integrated, and correctly read with the vehicle data received by the systems.

I.2.3 Continuous Operating Test (COT)

Following successful completion of the site acceptance tests, a Continuous Operating Test (COT) shall be conducted for a period of 180 calendar days. Within 5 days of receiving notice from the engineer verifying the site acceptance tests were successful and the COT may begin, the contractor must begin the COT. Once the COT is initiated, the WIM sorting system must pass the COT within 240 calendar days of the initiation date. In no case shall the COT be extended beyond 240 days. To successfully pass the COT, the weigh station and its weigh sorter system shall:

- Operate for a period of 180 total calendar days under normal traffic conditions and without being deemed "off-line" as described below;
- Perform a reasonable portion of the 180 total calendar days during adverse/cold weather months and;
- Accrue less than four strikes.

The system will be deemed "off-line" when:

- The system fails whereas the complete system does not operate fully with the static scale accuracy for a period of 60 consecutive minutes or more after the contractor has been notified and granted access to the system.
- The system does not provide accurate sorting of vehicles for a period of 60 consecutive minutes or more after the contractor has been notified and granted access to the system.
- The weekly WIM accuracy test fails to report WIM accuracy of 90% or greater within one calendar week. Note, the department will endeavor to maintain staffing at SWEF a minimum number of hours to ensure the 80 qualifying vehicles are compliance checked (static scale) per week. If 80 qualifying vehicles are not compliance checked in that week, then those results will roll over to the following week and the combined 2-week period will be evaluated for 90% accuracy per above.

System manufacturer shall perform the in-motion calibration tests of WIM subsystem after installation is completed and prior to beginning the burn-in period. Contractor shall provide the engineer one week's notice of the in-motion calibration tests.

- System manufacturer shall provide calibration weights
- COT period begins two weeks after the completion of installation and certification of the static scale
- COT cannot begin until the static scales have been certified
- Contractor shall submit a detailed test plan to the engineer for approval no later than 90 days after notice to proceed
- For the COT period, the system shall be fully operational under normal traffic conditions and operate trouble free (defined as any error that shall not reset by means of rebooting PC) for a period of 180 calendar days.
- Only one reboot per shift shall be allowed
- The engineer shall check the accuracy performance by printing an accuracy report from an electronic database which is created and stored on the Weigh Station Computer
- The report for WIM accuracy must be printed from the Weigh Station Computer by the engineer and met weekly during the APT period

- WIM accuracy on all vehicles loaded above 60,000 pounds and traveling between the speeds of 5 to 85 miles per hour shall be as follows:
 - o Axle weights +/- 15% (95% of trucks)
 - o Tandem weights +/- 10% (95% of trucks)
 - o Gross weights +/- 6% (95% of trucks)
 - o Axle spacing +/- 6 inches (95% of axles), whichever is greater

This database shall be created by continuous electronic recording of vehicles from the vehicle stream, which are loaded to within 75% (60,000 lbs.) of the legal allowable limit.

The actual stable static weights and WIM weights shall be stored in this common database to determine WIM scale accuracy compliance, as opposed to the method described in ASTM E1318.

The images and OCR reads from the LPR and DOT reader shall be captured over a week and a report generated showing how each image was read and total read rate percentages for readable plates including jurisdiction and numbers. The images shall be provided for engineer verification. The read rates must exceed meet or exceed these specifications.

The contractor shall not be allowed onsite nor have remote access during the COT, unless accompanied by a preapproved department representative and has preapproval from the engineer. Any system maintenance or evaluation of the WIM system during the COT must be requested in writing to the engineer a minimum of three calendar days prior to the requested access period. Access shall only be allowed by the engineer at their discretion.

If problems of any kind are encountered during the COT, the system manufacturer shall be informed, and problem(s) shall be simultaneously witnessed by the engineer and contractor. If problem is confirmed by all, a strike shall be assessed, and the problem shall be corrected.

The engineer shall notify (by phone and email) the contractor if the WIM system experiences an interruption in service and is off-line. The contractor shall immediately acknowledge this formal notification. Upon notification, the department and contractor shall follow the procedures outlined as follows:

- o Within 24 hours of notification by the engineer, the contractor shall be on-site to investigate and correct the situation.
- o Within 48 hours (excluding Saturdays, Sundays and Holidays) of notification by the engineer, the contractor and the engineer shall meet to discuss the failure and probable causes of the failure.

An additional strike shall be given for each consecutive 7-day period that the equipment is deemed "off line" due to WIM system failure.

If any strike falls within the final 28 days of the COT, the COT would be extended until one of the following has been met:

- o The COT successfully runs for a period of 28 calendar days under normal conditions and achieve a level of service without interruption; or
- o The COT fails and the system is rejected due to its failure and four strikes as defined in (C).
- o The COT extends beyond 240 days and the system is rejected.

The COT shall demonstrate to the satisfaction of the engineer that the weigh-in-motion/static enforcement system has been constructed and consistently meets the performance requirements of the plans and of these Special Provisions.

The COT be the basis for acceptance or rejection of the systems as a result of demonstrated performance. If the system is rejected and there have been more than four strikes and re-starts of the COT, the parties shall negotiate, in good faith, an acceptable resolution. Liquidated damages may be applied between strikes and restarts. Following such negotiations, if the same are unsuccessful, the engineer may execute the performance bond. Notwithstanding the foregoing, the contractor shall retain/be entitled to receive all amounts paid or payable to the contractor according to the payment schedule.

The COT shall be the basis for acceptance or rejection of the WIM system as a result of the demonstrated performance. If the system is rejected because the WIM system failed the COT, the department shall notify the contractor of such rejection. The department may then exercise its rights as provided in standard spec 108.

The engineer shall issue a Certificate of Final Acceptance upon successful completion of the Continuous Operating Test and training program.

The WIM acceptance procedure for the Weigh Station system shall be based off of officers printing the database comparison of mainline WIM and static scale weights and the WIM accuracy meeting project specifications.

J Training

The vendor shall set up and conduct formal training programs for personnel on the operation, maintenance and installation of the system components of the complete WIM system. The training shall include the following:

- Two half-day operator training sessions providing an introduction to the operation and installation of the complete weigh station system including the static scale and the functions to be performed. A class size of up to eight individuals per session can be expected.
- Two one-day "hands-on" guidance sessions for operators in the operation of the systems. A class size of up to four individuals per session can be expected. This training shall occur during the first two days of the Continuous Operating Test.

The training program shall be scheduled the week following the completion of the operations test.

The cost for the first training sessions shall be included in the contract price. The department will review any future training requirements. The WIM vendor shall agree to provide further and additional training sessions upon receipt of request from the department. The department will reimburse the WIM vendor the cost of providing additional training sessions on a per diem basis and at a rate agreed upon by the department at the time of the request. The department will provide classroom space for the training.\

The vendor shall provide six hard copies and an electronic file of the WIM System Operator's Manual. The manual shall contain detailed information and instructions covering all aspects of the WIM system.

K Warranty

The WIM vendor shall warrant all subsystems and system components as supplied and installed for five years from the date of issuance of the certificate of final acceptance of the WIM system by the engineer. This warranty and associated maintenance work are defined and covered under a separate bid item.

L Measurement

The department will measure Weigh-In-Motion System, completed according to the contract and accepted, as a single complete lump sum unit of work.

M Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.401	Weigh-In-Motion System	LS

Payment is full compensation for removal and disposal of old equipment along with furnishing and installing all material and for furnishing all labor, supervision, equipment, calibrating and testing, training, tools, and incidentals necessary to complete the contracted work. Payment will be made at the following schedule:

- Payment upon safe and secure delivery of all equipment at a storage location approved by the engineer: 20%
- Payment upon complete installation of the entire system: 35%
- Payment upon completion of calibration and burn-in: 35%
- Payment upon completion of the COT to the satisfaction of the engineer: 10%

103. Weigh-In-Motion System Warranty Maintenance, Item SPV.0105.402.

A Description

Provide warranty and maintenance service for the WIM system for a period of five years. This system includes WIM sensors, cameras, system components and ancillary equipment. Provide routine maintenance on all major systems, system components, and ancillary equipment at 12-month intervals. Provide emergency repair services on an as-required basis.

A.1 Warranty Bond

Provide a warranty bond for the Weigh-In-Motion System Warranty Maintenance. The bond shall be in effect for the entire five-year warranty period beginning when the Weigh-In-Motion system is completed, operational and accepted. The bonding company must have an AM Best rating of "A-" or better and the contractor shall provide proof of a five-year bond commitment before execution of the contract.

The warranty bond amount shall be for \$75,000. The bond shall ensure the proper and prompt completion of required warranty work following completion of the contract work, including payments for furnishing all labor, equipment, and materials used according to this specification.

The contract bond, which remains in effect for one year beyond the completion of the project, shall also include warranty work as described in this article. For the remaining four-year warranty period, provide documentation that the warranty bond shall be provided in a single term four-year warranty bond.

Failure of the contractor or its surety to issue the warranty bond shall be considered a default and shall result in forfeiture of the face amount of the bond to the department.

All warranty work shall be as prescribed in this article. At the end of the warranty period, the contractor shall be relieved of the responsibility to perform further warranty work, provided all previous warranty work has been completed.

Maintain insurance, in the course of performing warranty work, as specified in standard spec 107.26 throughout the five-year warranty period.

B (Vacant)

C Construction

The WIM vendor shall warrant all subsystems and system components as supplied for five years from the date of issuance of the certificate of final acceptance of WIM system by the engineer.

The warranty shall cover all WIM system components, hardware and software, included in the contract for any defects in material and workmanship. This shall include:

- All loops and WIM sensors on site
- Interface operations and system electronics
- WIM cables, connectors, terminal strips, and back-up batteries
- New notification signs and structures
- Communication systems
- All enforcement cameras and equipment
- New components of the compliance system
- Electrical power wiring and conduit
- Weigh Station computer system including scale manager, vehicle display, station PC, and override console

The warranty agreement shall include all:

- Emergency repair service
- Routine maintenance service at 12-month intervals
- Mobilization, parts, labor, and shipping
- Equipment updates, upgrades, modifications. and recalls
- System interface and electronics updates, upgrades, modifications, and recalls.
- Traffic control
- Training for major system updates or upgrades
- Operator refresher courses

The weigh-in-motion system shall be warranted by the WIM vendor, in writing, against defects in or from material, workmanship, lightning, and to perform as required by these technical special provisions, giving proper and continuous service under all conditions required and specified, or which may reasonably be inferred, for a period of five years from the date of acceptance. The written vendor's warranty shall be furnished to the engineer by the vendor at the time the equipment performance supporting data is submitted. The new components of the complete system shall be warranted by the manufacturer, in writing, against defects in or from material, workmanship, lightning, rodents and perform as required by these technical special provisions for the specified period or as described above from the date of final acceptance of the project.

The operation and maintenance of all Automatic Vehicle Identification (AVI) equipment, as well as all AVI-related subsystems, shall be warranted by Pre-Pass, 360SmartView, or Drivewyze. This equipment will not be included within the scope of the warranty as seen in this specification.

C.1 Scheduled Maintenance Services

The scheduled maintenance service shall include the following:

- Signal checks and testing measures on all loops.
- Verify proper operation of loops from virtual graphics interface in building.
- Visually inspect WIM sensors from shoulder for cracks and unusual damage.
- Visually inspect roadway around WIM sensors for deterioration or issues that could impact the sensors.
- Check and record WIM sensor reading on each sensor in roadside cabinet.
- Visual inspection and cleaning of system cabinets and electronics.
- Ensure each roadside cabinet has rodent protection in place and is pest free.
- Ensure wires are secure and conduit is in place.
- Ensure battery backups are operating.
- Cabinet mechanical condition inspection.
- Clean or replace each roadside cabinet air filter.
- Heating, ventilation and air conditioning check.
- Verify drawings are in cabinet.
- Verify proper power, ground, and lightning protection.
- Structural integrity check of all new poles and structures.
- Test all message signs and signals are operating.
- Inspection and verification of computer communication systems.
- Camera inspection, testing and maintenance, including cleaning of camera lenses.
- Parts, labor and shipping.
- Mobilization and traffic control necessary to perform the maintenance services.
- Perform WIM accuracy tests and adjust as required to comply with standard.
- Provide WIM accuracy test print outs to the department.

A report shall accompany the scheduled maintenance service and shall be submitted to the department. The report shall include:

- Pass/Fail grading of all loops and sensors.
- A checklist of all components checked as listed above, as well as the location of the components and comments on their general state.
- A checklist and commentary detailing whether each component (as listed above) met standards or required repairs.

C.2 Emergency Repair Services

Emergency repair services shall be completed on an as-required basis. The maximum response time for emergency repair services shall not exceed 48 hours after written receipt of notice by fax, phone, or email. The vendor shall initiate on-site repairs within three business days of notification. Some components of the systems are not readily available and require lead time for delivery before being installed. These will be handled on a case by case basis. Emergency repair services shall include all parts, labor, shipping, mobilization and traffic control necessary to perform the work.

C.3 Operator Refresher Courses

In conjunction with the scheduled maintenance services, the vendor shall provide operator refresher courses on the operation of the entire mainline WIM system upon request. The courses shall have a maximum duration of four hours and shall be scheduled before or after the annual maintenance service. The course attendees shall be determined by the department.

D Measurement

The department will measure Weigh-In-Motion System Warranty Maintenance, 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.0105.402	Weigh-In-Motion System Warranty Maintenance	LS

Payment is full compensation for providing the warranty bond, all warranty maintenance service and emergency repair service for a period of five years and shall include all labor, tools, parts, shipping, mobilization, traffic control and incidentals necessary to perform the maintenance service.

104. Static Scale System, Item SPV.0105.403.

A Description

Furnish and install one motor vehicle scale with a dual tandem axle capacity of 70,000 lbs., a gross capacity of 100 tons, and three weighing platforms to be placed in the existing scale pit. Equipment to consist of parts designed to act as a unit by a manufacturer experienced in design, construction, and operation of equipment for the purpose required.

Data acquired from the static scale system described in this specification must be such that it may be readily associated with other data for the same vehicle into a record that coherently represents data acquired from weigh-in-motion, static scale, and enforcement camera systems.

B Materials

B.1 Static Scale

Furnish and install one motor vehicle scale with a dual tandem axle capacity of 70,000 lbs., a gross capacity of 100 tons, and three weighing platforms to be placed in the existing scale pit. Equipment to consist of parts designed to act as a unit by a manufacturer experienced in design, construction, and operation of equipment for the purpose required.

The static scale shall meet the following requirements:

- The truck scale shall have a reinforced concrete deck.
- The concrete deck shall have a dual tandem axle capacity of 70,000 lbs. on 4-foot centers.
- Each platform shall consist of a weighbridge assembly.

The weighbridge shall meet the following requirements:

- Factory welded I-beam design
- Steel surfaces shall be hot-dip galvanized according to ASTM A123
- The weighbridge main girders shall be ASTM A572 steel, minimum of W24 x 68 lbs.
- The weighbridge cross girders shall be ASTM A572 steel, minimum of W12 x 35 lbs.
- All-in house welding on the structure shall be either gas to metal, submerged or shielded arc process. All welding procedures to be in compliance with the American Welding Society D1.1-88 Structural Welding Code.
- All bolts used shall be hot-dip galvanized according to ASTM A153.
- Each platform shall consist of a weighbridge assembly.

The deck surface shall meet the following requirements:

- 8-inch minimum thickness, colored concrete, having a minimum compressive strength of 4,000 psi.
- Reinforcing steel shall be epoxy coated, conforming to the requirements of standard spec 505.
- The deck shall be lined along the bottom with 3/16 STM-A36 steel plate or 18-gauge minimum galvanized deck sheeting. A reinforcing mat shall be set into place the length and width of the scale deck. The deck channel shall have studs welded to the steel to form a composite structure when the concrete is added. The reinforcing mat and deck channel studs are to relieve surface tension in the concrete caused by expansion and contraction.
- Concrete to be A-FA or A-S, conforming to standard spec 501. The color admixture shall be reddish-brown (Federal Standard Color No. 31136) or similar color approved by the engineer. Add colored admixture to the mix per manufacturer's written instruction in a pre-measured bag and not added by weight of cement content. Admixture shall be a colored, water-reducing admixture containing no calcium chloride, with coloring agents that are lime proof and UV resistant.

The scale checking shall be done with a bumping system. The scale shall not use the load cells as a checking device.

No manholes are allowed in the scale deck. One 8-inch diameter access hole with secured cover shall be provided in each scale platform. Galvanized steel sleeves shall be cast in the concrete deck. Scale pit access will be from an underground pit tunnel entrance from the building basement.

Provision can be made for lifting the platform and weighbridge by casting 3-inch sleeves through the concrete deck. If used, sleeves shall be Type 304 stainless steel.

The scale platform and scale pit wall exposed surfaces shall be treated with a protective treatment conforming to standard spec 502.

B.2 Load Cells

The load cells shall meet the following:

- The weighing elements shall be stainless steel hermetically sealed load cells to guard against moisture ingress and barometric effects.
- The cells shall have moisture protection to IP 68 standards.
- Load shall be applied to the cells without the use of links, bolts, pins cables or flexure.
- All load cells shall be self-centering.
- Load cells shall provide a digital signal output.
- The load cells shall be a minimum of 50 tons capacity each, and each cell must have stainless steel, braided covering on the load cell cable.
- All load cells must be manufactured of stainless steel.
- The scale shall have self-diagnostic capabilities able to identify load cell problems and failure.
- The scale shall be able to identify each load cell individually.
- The scale shall have the ability to view all of the load cells in the scale system simultaneously.
- Diagnostics to have the capability to predict the failure of a cell before it actually happens to prevent down time. The diagnostics are to measure load cell counts (not weight) to determine reliability of the load cells. The following diagnostics shall be available at a minimum:
 - o Individual cell not responding
 - o Individual cell negative out of range
 - o Individual cell command failed
 - o Individual cell enclosure breach
 - o Power up Zero
 - o Major and minor overvoltage or overcurrent
 - o Major and minor under voltage
 - o Individual cell not found
 - o All errors shall be logged in the static scale electronics with the capability to be emailed when an error occurs
- The design shall permit the individual load cells to be matched and the scale sections to be electronically calibrated.
- Load cell shall have been tested by a 3rd party lab and have passed a simulated lightning strike up to 80,000 amperes. Documentation verifying this 3rd party testing shall be provided.

B.3 Technical Requirements

After upgrades, scale shall meet the following:

- Maximum Capacity: 100 tons
- Dual Tandem Axle Capacity: 70,000 lbs.

(concentrated load capacity is not the same as dual tandem axle capacity)

- Scale Accuracy: 0.1%

Load cells shall meet the following requirements:

- Load Cell Type: Rocker column
- Rated Capacity: 50 tons (100,000 lbs.)
- Safe Overload: 200%
- Ultimate Overload: 300%
- Safe Sideload: 100%
- Material: Stainless steel
- Load Cell Cable: 4 conductor 22 AWG shielded
- Load Cell Cable Protection: Stainless steel outer jacket
- NEMA Rating: 6P
- Rated Excitation: 5 to 15 volts
- Temperature Compensation Range: -10 to +40 C

B.4 Electronics

The existing scale instrument shall be removed and returned to the department. Furnish and install one new electronic instrument to drive the upgraded scale. Equipment to consist of parts desired to act as a unit by a manufacturer experienced in design construction, and manufacture of electronic components, and operation of equipment for the purpose required.

The scale instrument and all peripheral devices shall be designed to function as a unit. The equipment shall have the following specifications:

- Static scale indicator
- Microprocessor based item(s) for scale read out and control and data handling functions
- The scale instrumentation shall be compact and approved by the engineer. Manufacturer shall provide proof that the instruments have been in use successfully for at least two years.
- Provide microprocessor-based digital instrument with Ethernet weight output to the static scale PC and the monitor for totalizing and printer controls.
- This connection shall provide diagnostics of static scale load cells (load cell raw counts) to the static scale PC.
- Provide with software diagnostics to facilitate fault finding.
- Provide a certificate of conformance from the NIST Handbook 44, latest adopted edition.

The static scale instruments shall include:

- Must be able to power up to 4 scale platforms.
- All instrument setup functions and calibration sequences are programmable through the keyboard/display. No at-scale adjustments required for these functions.
- Minimum of 15 updates per second.
- One display showing individual axle weights and the summation of the individual weights.
- Shall be suitable for desktop or set-in mounting, level or at angle.
- Display the raw counts of each individual load cell without disconnecting any of the load cells from the system.
- Perform all static scale instrument set-up functions via static scale internet explorer web pages. Download to instrument via Ethernet connection.
- Selectable increments size from 20 to 50,000.
- Display up to 1 part in 10,000.
- Internal resolution 1 part in 1,000,000.
- Setup functions stored in nonvolatile RAM memory.
- Adjustable digital filtering.

- Adjustable automatic zero maintenance.
- Serial ASCII output port configuration for connection to computer. Baud rate to be selectable from 300 to 9600.
- Motion detection shall be selectable from ± 0.5 , ± 1.0 , ± 2.0 , ± 3.0 increments.
- Display verification test.
- Display height at .5 inches with wide angle view.
- Static scale instruments shall meet the current specifications of the NIST Handbook 44, current adopted edition.
- The instrument shall be UL/CSA listed.
- Provide one button printing of weight ticket or axle accumulation.

B.5 Static Scale Operation

The completed static scale will work with the WIM system to provide all the functionality described in the WIM system special provisions.

The scale instrument shall be capable of assigning each digital load cell with its own unique identification number and shall be capable of displaying the weight reading of each individual load cell through the instrument without disconnecting any of the load cells from the system.

The scale instrument shall communicate with each individual digital load cell.

The scale instrument shall be capable of being programmed and calibrated in pounds or kilograms.

The display shall be a full color graphic, alphanumeric LED back-lit display with the capability to prompt the operator through all operations with true alpha characters. Segmented LED alphanumeric displays are not acceptable.

The scale instrument shall communicate static scale weights to the scale manager on the central weigh station computer to display weights on the computer system screen, and to allow the accurate weighing of the truck on the static scale.

The scale instrument shall have a program to accumulate up to 19 axle and axle groups and print 8.5 x 11 weight tickets that is independent of the WIM system. This program shall work as a backup in case the station system is not working.

The instrument shall have the capability to run multiple scales as a standard unit. Adding extra boards at a later date does not meet specifications. The instrument shall have self-diagnostics built in that allow the technician to view all load cell outputs simultaneously.

Simultaneous viewing of digital load cell output allows for fast easy analysis of the scale operating system. Viewing cell outputs one at a time is not acceptable.

The system shall have the ability to be 100% calibrated from within the scale house. Corrections or calibration adjustments at the scale through summing boxes are not acceptable.

Surge voltage protection on the system shall be optically isolated at each digital load cell, and transformer coupled from the instrument.

Scale shall have the ability to be analyzed via remote software.

The scale instrument shall have the ability to be programmed via remote software.

Remote software diagnostics shall allow simultaneous viewing of all digital load cells in counts, and actual weight that each individual load cell is sensing. Viewing of cells one at a time is not acceptable.

Remote software service shall be capable of displaying load cell zero calibration counts, current zero counts and actual mV/V output of each cell simultaneously. A printed report of this information is possible from the remote software.

Remote software service shall be capable of performing a self-test on all communications ports and report the current setup.

Original calibration values shall have the capability to be retrieved and stored via remote software.

Original configuration values shall have the capability to be retrieved and stored via remote software.

For non-commercial applications, scales shall have the capability to be set up and calibrated via remote software.

B.6 Ticket Printer

The existing ticket printer shall be removed and disposed of. Provide the following:

- One laser-type printer
- Minimum print speed of 12 pages per minute
- Minimum print quality of 600 dpi
- Minimum 8 Mb of memory

B.5 Scoreboard Sign

The existing scoreboards shall be removed and disposed of.

Four new displays shall be supplied. One to display the axle weights on each of the three weigh pads and one to display the GVW. Scoreboards shall be able to be turned off and on from the manual override console. Each display shall meet the following specifications:

- Display: Six digits at least 120 mm high
- Viewing Distance: Up to 150 feet
- Power: AC 100~240 VAC 50/60 Hz
- Enclosure: IP56 Rated
- Input: RS232/485/20mA CL
- Digital Color: Fluorescent red
- Lighting: LED
- Operating Temperature: -20 to +70 C
- Humidity: 0% to 99%, non-condensing

C Construction

The existing scale pit shall be utilized. Perform the following on the existing scale pit:

- Remove everything from the scale pit piers and up.
- Power wash the existing scale pit. Remove all loose debris from the pit.
- Remove the existing sump pump and control system. Furnish and install a new sump pump and control system.
- Remove the existing door and door frame to the scale pit. Furnish and install a new door and door frame.
- Any other modification required (as approved by the engineer) to furnish and install a new static scale.

The static scale structure shall be removed from the pit, sandblasted, painted, and reset.

D Measurement

The department will measure Static Scale System, 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.0105.403	Static Scale System	LS

Payment is full compensation for removal and disposal of old equipment along with furnishing and installing all material and for furnishing all labor, supervision, equipment, calibrating and testing, training, tools, and incidentals necessary to complete the contracted work.

105. Static Scale System Warranty Maintenance, Item SPV.0105.404.

A Description

Provide warranty and maintenance service for the static scale system for a period of five years. Provide routine maintenance on all major systems, system components and ancillary equipment at annual intervals. Provide emergency repair services on an as-required basis.

The static scale equipment shall be warranted by the manufacturer, in writing, against defects in or from material, workmanship, lightning, and to perform as required by these technical special provisions, giving proper and continuous service under all conditions required and specified, or which may reasonably be inferred, for a period of five years from the date of acceptance. The manufacturer's routine maintenance schedule shall be stated. The written manufacturer's warranty shall be furnished to the department by the contractor at the time the equipment performance supporting data is submitted. The warranties shall also state they are subject to transfer to the department.

The static scale equipment weighing instruments, load cells, and hardware shall be warranted by the manufacturer, in writing, against defects in or from material, workmanship, lightning, and to perform as required by these technical special provisions, given proper and continuous service under all conditions required and specific, or which may reasonably be inferred, for a period of five years from the date of final acceptance

The manufacturer shall also provide an extended five-year warranty on static scale load cells. This warranty shall take effect at the conclusion of the initial five-year warranty. This extended five-year warranty shall exclude labor, freight, and travel. Alternatively, at completion of the five-year warranty the manufacturer may furnish four space load cells to be used for scale repairs in lieu of the extended five-year warranty.

A.1 Warranty Bond

The contractor shall provide a warranty bond for the Static Scale System Warranty Maintenance. The bond shall be in effect for the entire five-year warranty period beginning when the Static Scale System Electronics are completed, operational and accepted. The bonding company must have an AM Best rating of "A-" or better and the contractor shall provide proof of a five-year bond commitment before execution of the contract.

The warranty bond amount shall be for \$25,000. The bond shall ensure the proper and prompt completion of required warranty work following completion of the contract work, including payments for furnishing all labor, equipment, and materials used according to this specification.

The contract bond, which remains in effect for one year beyond the completion of the project, shall also include warranty work as described in this article. For the remaining four-year warranty period, provide documentation that the warranty bond shall be provided in a single term four-year warranty bond.

Failure of the contractor or its surety to issue the warranty bond shall be considered a default and shall result in forfeiture of the face amount of the bond to the department.

All warranty work shall be as prescribed in this article. At the end of the warranty period, the contractor will be relieved of the responsibility to perform further warranty work, provided all previous warranty work has been completed.

Maintain insurance, in the course of performing warranty work, as specified in standard spec 107.26 throughout the five-year warranty period.

B (Vacant)

C Construction

C.1 Maintenance Services

Scheduled maintenance services shall be performed annually in the spring. The scheduled maintenance service shall include the following:

- Visual inspection of the static scale system.
- Calibration of the scale.
- Lubrication of load cells and bumpers.

- Power washing of the scale deck and pit with 2500 psi minimum pressure washer and disposal of debris.
- Parts, labor and shipping.
- Mobilization and traffic control necessary to perform the maintenance services.

A report shall accompany the scheduled maintenance service and shall be submitted to the department. The report shall include:

- Calibration process and results.
- Work completed.
- Evaluation of the static scale system.
- Other comments.

C.2 Emergency Repair Services

Emergency repair services shall be completed on an as-required basis. The maximum response time for emergency repair services shall not exceed 48 hours after written receipt of notice by email or fax. The vendor shall initiate on-site repairs within three calendar days of notification. Emergency repair services shall include all parts, labor, shipping, mobilization and traffic control necessary to perform the work.

D Measurement

The department will measure Static Scale System Warranty Maintenance, 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.0105.404	Static Scale System Warranty Maintenance	LS

Payment is full compensation for providing the warranty bond, all warranty maintenance service and emergency repair service for a period of five years and shall include all labor, tools, parts, shipping, mobilization, traffic control and incidentals necessary to perform the maintenance service.

106. Longitudinal Grooving Bridge Deck, Item SPV.0165.700.

A Description

This special provision describes providing longitudinal deck grooves parallel to the centerline of the roadway prior to opening the bridge to traffic as directed by the engineer.

B Materials

Use a grooving machine containing blades mounted on a multi-blade arbor on a self-propelled machine built for grooving hardened concrete surfaces.

Use a grooving machine with a depth control device that detects variations in the deck surface and adjusts the cutting head height to maintain a specified depth of groove.

Equip the grooving machine with a guide device to control multi-pass alignment.

C Construction

Groove the pavement longitudinally without damaging the concrete deck surface.

Complete a longitudinal grooving operation that results in a uniformly grooved deck surface.

Cut grooves continuously across the deck width to within 18 inches of the barrier rail, curb line, or median divider. If metal floor drains extend more than 18 inches from the barrier rail, curb line, or median divider, all grooves on the bridge deck surface are to end within 6 inches of the floor drain perimeter.

At skewed metal edged expansion joints in the bridge deck surface, end all grooves on the bridge deck surface within 6 inches of the joint leaving no ungrooved surface adjacent to each side of the joint greater than 6 inches in width on the deck side of the expansion joints.

Produce grooves that are continuous across construction joints or other joints in the concrete deck surface less than ½-inch wide.

Construct longitudinal grooves with the following criteria:

Width (In)	Depth (In)	Spacing C-C (In)	Width Tolerance (In)	Depth Tolerance (In)	Spacing Tolerance (In)
1/8	3/16	3/4	0 to 1/16	± 1/16	± 1/16

Collect, remove and dispose of solid material residue and liquid waste resulting from grooving operations by vacuuming in a manner satisfactory to the engineer.

D Measurement

The department will not measure Longitudinal Grooving Bridge Deck. The department will use pay plan quantity according to standard spec 109.1.1.2.

E Payment

The department will pay for plan quantities according to standard spec 109.1.1.2 at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.700	Longitudinal Grooving Bridge Deck	SF

Payment is full compensation for providing the required machinery and operators; for grooving, for collecting, removing and properly disposing of all waste materials.

(1/5/2017)

107. Wall Concrete Panel Mechanically Stabilized Earth R-13-260, Item SPV.0165.850; Wall Concrete Panel Mechanically Stabilized Earth R-13-261, Item SPV.0165.851.

A Description

This special provision describes designing, furnishing materials and erecting a permanent earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years minimum.

This special provision describes the quality management program (QMP) for Mechanically Stabilized Earth (MSE) walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

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

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

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Concrete Panel Mechanically Stabilized Earth Wall systems. Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The department maintains a list of pre-approved proprietary wall systems. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract.

To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid opening date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared according to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section at the following email address: DOTDLStructuresFabrication@dot.wi.gov.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit shop drawings to the engineer conforming to standard spec 105.2 with electronic submittal to the fabrication library under standard spec 105.2.2. Certify that shop drawings conform to quality control standards by submitting department form [DT2329](#) with each set of shop drawings. Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the WisDOT project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the wall shall be in compliance with the current American Association of State Highway and Transportation Officials LRFD (AASHTO LRFD) Bridge Design Specifications with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current Standard Specifications for Highway and Structure Construction (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined according to Table 11.5.7-1 in AASHTO LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf according to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans.

The design of the wall by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

The wall facing shall be designed according to AASHTO LRFD 11.10.2.3. The facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height, or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. All soil reinforcement layers shall be connected to facings. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. The uppermost layer of the reinforcement shall be located between 6 inches and 18 inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads according to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Unless approved by the Bureau of Structures cutting or altering of the basic structural section of either the strip or grid at the site is prohibited, a minimum clearance of 3" shall be maintained between any obstruction and reinforcement, and splicing reinforcement is not allowed.

The minimum embedment of the wall shall be 1 foot 6 inches below finished grade, or as given on the plans. All walls shall be provided with a concrete leveling pad. Minimum wall embedment does not include the leveling pad depth. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad.

Wall facing units shall be installed on a concrete leveling pad. The bottom units shall be horizontal and centered on the leveling pad. The minimum thickness of the leveling pad shall be 6-inches. The minimum width of the leveling pad shall be 12-inches.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All documentation related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing

Wall facing shall consist of modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The concrete for the panels shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of standard spec 501. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

For cast in place concrete cap or coping, use poured concrete Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

For concrete leveling pad, use Grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be preformed EPDM rubber conforming to ASTM D2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80, or high- density polyethylene pads with a minimum density of 0.034 lb/in³ according to ASTM D1505.

An 18-inch wide geotextile shall be used on the backface of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

B.3.2 Backfill

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

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

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

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

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

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

In addition, backfill material shall meet the following requirements.

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

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

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

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

B.3.3 Soil Reinforcement

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability. Soil reinforcement shall be galvanized or aluminized Type 2. Galvanized soil reinforcement shall be according to AASHTO M 111 or ASTM A641. Aluminized soil reinforcement shall be according to ASTM A463 Aluminized Type 2-100, SS, Grade 50, Class 2. Design of galvanized soil reinforcement shall be according to Section 11.10.6.4.2 of the current AASHTO LRFD Specifications. The design life of steel soil reinforcements shall comply with AASHTO LRFD. Aluminized soil reinforcement shall be limited 16 years of steel protection. Aluminized steel shall only be used on soil reinforcement elements and shall not be used on facing connections or any other steel portion of the wall system. Steel soil reinforcement shall be prefabricated into single or multiple elements before galvanizing.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the MSE wall and the leveling pad shall be according to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth, after compaction.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall panels, soil reinforcement, or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. Place and compact material beyond the reinforced soil zone to allow for proper compaction of material within the reinforced zone. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back panels. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the panels.

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf).

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels. Do not use sheepsfoot or padfoot rollers within the reinforced soil zone.

A minimum of 3 inches of backfill shall be placed over the MSE reinforcement prior to working above the reinforcement.

C.3 Wall Components

C.3.1 General

Erect panel facing and other associated elements according to the wall manufacturer's construction guide. Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing.

The MSE reinforcement shall lay horizontally on the top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstructions in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.3.2 Steel Layers

Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C3.3 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed $\frac{3}{4}$ -inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be $\frac{3}{4}$ -inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed $\frac{1}{2}$ -inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a $\frac{3}{4}$ -inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance shall cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C.4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A proposed sequencing plan of wall construction operations and random test locations.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Grading Technician I (GRADINGTEC-I); or Assistant Certified Technician, Grading (ACT-GRADING); or Aggregate Technician I (AGGTEC-I); or Assistant Certified Technician, Aggregate (ACT-AGG) present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Nuclear Density Technician I (NUCDENSITYTEC-I) or Assistant Certified Technician, Nuclear Density Gauge Operator (ACT-NUC) perform field density and field moisture content testing.

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

C.4.3 Equipment

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

Furnish nuclear gauges from the department's approved product list at <http://www.atwoodsystems.com/>. Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.

Conform to ASTM D6938 and CMM 8-15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Perform each test for 4 minutes of nuclear gauge count time.

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department.

C.4.4 Documentation

- (1) Document all observations, inspection records, and process adjustments daily. Submit test results to the department's project materials coordinator on the same day they become available.
- (2) Use forms provided in CMM Chapter 8. Note other information in a permanent field record and as a part of process control documentation enumerated in the contractor's quality control plan. Enter QC data and backfill material certified report results into the applicable materials reporting system (MRS) software within 5 business days after results are available.
- (3) Submit final testing records and other documentation to the engineer electronically within 10 business days after all contract-required information becomes available. The engineer may allow submission of scanned copies of hand-written documentation.

C.4.5 Quality Control (QC) Testing

Perform compaction testing on the backfill. Conform to CMM 8-15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 150 cubic yards of backfill, or major portion thereof in each lift. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform 1 gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.2) every 2,250 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.4.6 Department Testing

C.4.6.1 General

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

C.4.6.2 Quality Verification (QV) Testing

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.4.2 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 at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.
- (3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for 10 business days.

- (4) The department will conduct QV Proctor and gradation 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 this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.4.6.3 Independent Assurance (IA)

- (1) Independent assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 1. Split sample testing.
 2. Proficiency sample testing.
 3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. 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 C.4.6.4.

C.4.6.4 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor 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 or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will not measure Wall Concrete Panel Mechanically Stabilized Earth. The department will use pay plan quantity conforming to standard spec 109.1.1.2. Plan quantities were computed from the theoretical pay limits the contract plans show. The department will make no allowance for wall area constructed above or below the theoretical pay limits. All work beyond the theoretical pay limits is incidental to the cost of work. The department will make no allowance for as-built quantities.

E Payment

The department will pay for accepted plan quantities conforming to standard spec 109.1.1.2 at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.850	Wall Concrete Panel Mechanically Stabilized Earth R-13-260	SF
SPV.0165.851	Wall Concrete Panel Mechanically Stabilized Earth R-13-261	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings, leveling pad, and leveling pad steps; constructing the retaining system and providing temporary drainage; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, and performing compaction testing.

The department will pay separately for parapets, traffic barriers, railings, and other items above the wall cap or coping.

(20180523)

**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 15 (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 6 (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 underrepresentation 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 [DBE] PROGRAM IMPLEMENTATION

1. Description

- a. The federal DBE program requirements outlined in the Code of Federal Regulations at 49 CFR Part 26 apply to this Wisconsin Department of Transportation contract. WisDOT is a recipient of federal funds and this contract includes federal funds. United States Department of Transportation Federal DBE Program requires the following provisions:
 - (1) Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE regulations will be considered a material breach of contract. This is non-negotiable. If a contractor fails to carry out the DBE program and Title VI nondiscrimination requirements of its contracts, the following sanctions will be assessed depending upon the facts, reasoning, severity and remedial efforts of the contractor: termination of contract, withholding payment, assessment of monetary sanctions, assessment of liquidated damages and/or suspension/debarment proceedings that may result in the disqualification of the contractor from bidding for a designated period of time.
 - (2) The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the federal fund recipient's [DOT] written consent. Unless [WisDOT] consent is provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.
- b. The Wisconsin Department of Transportation [WisDOT] is committed to the compliant administration of the DBE Program. Each WisDOT Secretary affirms this commitment with his/her signed assurance.
<https://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/policy-statement.pdf>
 - (1) The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts. 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.
 - (2) Wisconsin DOT identifies the assigned DBE goal in its contract advertisements and posts the contract DBE goal on the cover of the bidding proposal. The contractor can meet the assigned, specified contract DBE goal by subcontracting work to a DBE or by procuring services or materials from 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.
 - (3) For more comprehensive information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:
<https://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx>

2. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

- a. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
- b. **DBE:** A small business certified as disadvantaged business enterprise (DBE) under the federal DBE program and included on the Wisconsin UCP DBE Directory deemed ready, willing and able.
- c. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
- d. **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.
- e. **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.
- f. **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. 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. The bid percentage should demonstrate the efforts of the prime contractor prior to bid. 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. WisDOT Interpretation of Federal DBE Program Provision

Prime contractors must utilize the specific DBEs listed to perform the work and/or supply the materials for which each is listed on the Commitment to Subcontract to DBE Form [DT1506] and approved by WisDOT's DBE office to execute its contract. The approved Commitment to Subcontract to DBE Form [DT1506] becomes a contract document/record.

a. Department's DBE Evaluation Process

WisDOT evaluates DBE using the Commitment to Subcontract to DBE, payments to subcontractors and contract documentation. The prime contractor shall list the specific DBE certified firms and items of work s/he intends to use toward the fulfillment of the assigned DBE contract goal. The prime contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved Form DT1506.

b. Documentation Submittal

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]. Effective January 1, 2017, the contractor will be required to submit the documentation within 5 business days after bid opening. All necessary supporting documentation including Attachment 'A' forms and/or Good Faith Efforts Form

[DT1202] must be submitted no later than 2 business days from contractor's initial submission of the DT 1506. The contractor must provide a signed Attachment 'A' form to the DBE office within the time limit in order to receive authorization for contract execution; the DBE office reserves the right accept alternate documentation in lieu of the signed form in extenuating circumstances. Documentation must be submitted to the DBE Office by email at DBE_Alert@dot.wi.gov (DBE_Alert@dot.wi.gov) or by postal mail ATTN: DBE Office, PO Box 7965, Madison, WI 53707-7965.

(1) **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 calculation. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

(2) **Bidder Does Not Meet DBE Goal**

- i. 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 Efforts 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 efforts submission.
- ii. The department will evaluate the bidder's good faith effort request and notify the bidder of one of the following:
 - (a) If the department grants a good faith efforts, the bid is eligible for contract execution with respect to DBE commitment.
 - (b) If the department rejects the good faith efforts request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith efforts request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

c. **Bidder Fails to Submit Documentation**

If the contractor fails to furnish the Commitment to Subcontract to DBE Form [DT1506] 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.

5. Department's Criteria for Good Faith Effort

Appendix A of 49 CFR Part 26, is the guiding regulation concerning good faith efforts. However, the federal regulations do not explicitly 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 practices to create a process for making a determination of adequate good faith. WisDOT evaluates good faith on a contract basis just as each contract award is evaluated individually.

The department will only approve a contractor's good faith efforts 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 efforts 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.

- a. 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.

b. Prime Contractors should:

- (1) 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.
- (2) Prime contractors may request assistance with DBE outreach and follow-up by contacting the department's DBE Support Services Office by phone or email request at least 14 days prior to the bid letting date. Requesting assistance with outreach is not a decisive factor in the review Good faith effort evaluation. Phone numbers are 414-438-4584 and/or 414-659-0487; Fax: 414-438-5392; E-mail: DOTDBESupportServices@dot.wi.gov.
- (3) 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.
 - i. Solicit quotes from certified DBE firms who match 'possible items to subcontract' using all reasonable and available means. Additionally, forward copies of solicitations highlighting the work areas for which you are seeking quotes to DOTDBESupportServices@dot.wi.gov.
 - ii. 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, at least two Fridays before the letting, to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking if they need help organizing their quote, assistance confirming equipment needs, or other assistance supporting their submission of a competitive quote for their services.
 - (c) Second solicitation should take place within 5 calendar days. Email and SBN are the preferred delivery of the follow-up solicitation.
 - iii. 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.
 - iv. When potential exists, the contractor should advise interested DBE firms on how to obtain bonding, line of credit or insurance if requested.
 - v. 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) Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

c. Evaluate DBE quotes Documentation is critical if a prime does not utilize the DBE firm's quote for any reason.

- (1) 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 by phone and email regarding their ability to perform the work indicated in the UCP directory listed as their work area by NAICS code. Only the work area and/or NAICS code listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.
- (2) In striving to meet an assigned DBE 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.

- (3) **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.
- i. Compare bid items common to both quotes, noting the reasonableness in the price comparison.
 - ii. 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.
- d. Immediately after notification of contract award, the prime submits all '**Commitment to Subcontract**' forms to the DBE Office. Prime contractor has 5 days to submit the completed form for the DBE firms it intends to use on the contract for DBE credit. If the goal is not met in full, the prime contractor must provide the following information along with WisDOT form DT1202: Certificate of Good Faith Efforts.
- (1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact.
 - (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. A printed copy of SBN solicitation is acceptable.
 - (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.

The prime contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved Commitment to Subcontract to DBE Form [DT1506]. If the prime contractor utilizes another contractor, including the use of its own workforce, to perform the work assigned to a DBE on the approved DT1506, the prime contractor will not be entitled to payment for that work. Any changes to DBE after the approval of the DT1506 must be reviewed and approved by the DBE office prior to the change.

6. Use of Joint Checks

The use of joint checks is allowable if it is a commonly recognized business practice in the material industry. A joint check is defined as a two-party check between a DBE, a prime contractor and the regular dealer of materials supplier who is neither the prime nor an affiliate of the prime. Typically, the prime contractor issues one check as payor to the DBE subcontractor and to the supplier jointly (to guarantee payment to the supplier) as payment for the material/supplies used by the DBE in cases where the prime has submitted the DBE and material for DBE credit. The DBE subcontractor gains the opportunity to establish a direct contracting relationship with the supplier to potentially facilitate a business rapport that results in a line of credit or increased partnering opportunities.

The cost of material and supplies purchased by the DBE is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE must be responsible for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and "paying for the material itself." See 49 CFR 26.55(c)(1).

The approval to use joint checks constitutes a commitment to provide further information to WisDOT, upon request by staff. WisDOT will allow the use of joint checks when the following conditions are met:

- a. The Prime must request permission to use joint checks from the DBE Office by submitting the Application to Use Joint Checks.
 - (1) Request should be made when the DBE Commitment form or Request to Sublet is submitted; the request will not be considered if submitted after the DBE Subcontractor starts its work.
 - (2) Approval/Permission must be granted prior to the issuance of any joint checks.
 - (3) The payment schedule for the supplier must be presented to the DBE office before the first check is issued.
 - (4) The joint check for supplies must be strictly for the cost of supplies.
- b. DBE subcontractor is responsible to furnish and/or install the material/work item. The DBE subcontractor shall not be an 'extra participant' in the transaction; the DBE's role in the transaction cannot be limited solely to signing the check(s) to release payment to the material supplier. At a minimum, the DBE subcontractor's tasks should include the following.
 - (1) The DBE subcontractor (not the prime/payor) negotiates the quantities, price and delivery of materials;
 - (2) The DBE subcontractor consents to sign/release the check to the supplier by signing the Application to Use Joint Checks after establishing the conditions and documentation of payment within the subcontract terms or in a separate written document.
- c. The Prime contractor/payor acts solely as a guarantor,
 - (1) The prime agrees to furnish the check used for the payment of materials/supplies under the contract.
 - (2) The prime contractor/payor cannot require the subcontractor to use a specific supplier or the prime contractors negotiated unit price.

7. Bidder's Appeal Process

- a. A bidder can appeal the department's decision to deny the bidder's good faith effort submission. 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 denial notice of a good faith effort evaluation constitutes a forfeiture of the bidder's right of appeal. A contract cannot be executed without documentation that the DBE provisions have been fulfilled.
- 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 5 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.

8. Department's Criteria for DBE Participation

Directory of DBE firms

- a. The only resource for DBE certified firms certified in the state of Wisconsin is the Wisconsin Unified Certification Program [UCP] DBE List. Wisconsin Department of Transportation maintains a current list of certified DBE firms titled Wisconsin UCP DBE Directory on the website at:
<https://wisconsin.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx>
- b. The DBE office is also available to assist at 414-438-4583 or 608-267-3849.

9. 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 whether the work that is committed and/or contracted to a DBE certified firm can be counted for DBE credit by referencing the work type and NAICS code listed for the DBE firm on the Wisconsin UCP DBE Directory.
- g. It is the prime contractor's responsibility to assess the DBE firm's ability to perform the work for which s/he is committing/contracting the DBE to do. Note that the department encourages the prime contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

10. Commercially Useful Function

- a. Commercially useful function is evaluated after the contract has been executed, while the DBE certified firm is performing its work items. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved.
- b. The department uses Form DT1011: DBE Commercially Useful Function Review and Certification to evaluate whether the DBE is performing a commercially useful function. WisDOT counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.
- c. A DBE is performing a commercially useful function if the following conditions are met:
 - (1) 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.
 - (2) For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

11. Credit Evaluation for Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at <https://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf>

12. Credit Evaluation for Manufacturers, Suppliers, Brokers

The department will calculate the amount of DBE credit awarded to a prime using a DBE firm for the provisions of materials and supplies on a contract-by-contract basis. The department will count the material and supplies that a DBE provides under the contract for DBE credit based on whether the DBE is a manufacturer, supplier or broker. Generally, DBE crediting measures and evaluates the DBE owner's role, responsibility and contribution to the transaction: maximum DBE credit when the DBE manufactures materials or supplies; DBE credit decreases when the DBE solely supplies material and minimal credit is allotted when the DBE's role is administrative or transactional.

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.

a. Manufacturers

- (1) A manufacturer is 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 and of the general character described by the specifications.
- (2) If the materials or supplies are obtained from a DBE manufacturer, count **100%** percent of the cost of the materials or supplies toward DBE goals.

b. Regular Dealers of Material and/or Supplies

- (1) A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.
- (2) If the materials or supplies are purchased from a DBE regular dealer, count **60%** percent of the cost of the materials or supplies toward DBE goals.
- (3) At a minimum, a regular dealer must meet the following criteria to be counted for DBE credit:
 - i. The DBE firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
 - ii. The DBE firm must both own and operate distribution equipment for the product--bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt. If some of the distribution equipment is leased, the lease agreement must accompany the DBE Commitment form for evaluation of the dealer's control before the DBE office approves the DBE credit.

c. Brokers, Transaction Expeditors, Packagers, Manufacturers Representatives

- (1) No portion of the cost of the materials, supplies, services themselves will count for DBE credit; however, WisDOT will evaluate the fees or commissions charged when a prime purchases materials, supplies or services from a DBE certified firm which is neither a manufacturer nor a regular dealer, namely: brokers, packagers, manufacturers' representatives or other persons who arrange or expedite transactions.
- (2) Brokerage fees have historically been calculated as **10%** of the purchase amount.
- (3) WisDOT may count the amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site.
- (4) The evaluation will review the contract need for the item/service, review the sub-contract or invoice for the item/service, compare the fees customarily allowed for similar services to determine whether they are reasonable.

When DBE suppliers are contracted, additional documentation must accompany the DT1506 and Attachment 'A' forms. An invoice or bill-of-sale that includes the company names of the bidder and the DBE supplier and documentation of the calculations used as the basis for the purchase agreement, subcontract or invoice.

WisDOT recognizes that the amount on the Attachment 'A' form may be more or less than the amount on the invoice. Please respond to the following questions and submit with your DBE Commitment Form.

1. What is the product or material?
2. Is this item in the prime's inventory or was the item purchased when contract was awarded?
3. Which contract line items were referenced to develop this quote?
4. What is the amount of material or product used on the project?

13. Credit Evaluation for DBE Primes

Wisconsin DOT calculates DBE credit based on the amount and type of work performed by DBE certified firms. If the prime contractor is a DBE certified firm, the department will only count the work that DBE prime contractor performs with its own forces for DBE credit. We will also calculate DBE credit for the work performed by any other DBE certified subcontractor, DBE certified supplier, DBE certified manufacturer on that contract in that DBE's approved work areas/NAICS code. Crediting for manufacturers and suppliers is calculated consistent with paragraph 12 of this document and 49 CFR Part 26.

14. 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 for DBE credit.

15. Mentor Protégé

- a. If a DBE performs as a participant in a mentor protégé agreement, the department will count for credit the portion of the work performed by the DBE protégé firm.
- b. DBE credit will be evaluated and confirmed by the DBE Office for any contracts on which the mentor protégé team identifies itself to the DBE Office as a current participant of the Mentor Protégé Program.
- c. Refer to WisDOT's Mentor Protégé guidelines for guidance on the number of contracts and amount of DBE credit that can be counted on any WisDOT project.

16. DBE Replacement or Termination

Contractual Requirement

The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent from the Department's DBE Office. If the Department does not provide consent to replace or terminate a DBE firm, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

Contractor Considerations

- a. A prime contractor cannot terminate and/or replace a DBE subcontractor listed on the approved Commitment to Subcontract to DBE Form [DT1506] without prior written consent from the DBE Office. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

- b. If a prime contractor feels it is necessary to replace or terminate a DBE firm that has been approved for DBE credit toward its contract, s/he will be required to provide reasons and documentation to support why the prime cannot fulfill the contractual commitment that it made to the Department regarding the DBE utilization.
- c. Prime contractor is required to make affirmative efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the assigned DBE contract goal.
- d. In circumstances when a DBE subcontractor fails to complete its work on the contract for any reason or is terminated from a contract, the prime contractor is expected to make affirmative efforts to maintain its commitment to the assigned DBE goal.
- e. The DBE firm should communicate with the prime contractor regarding its schedule and capacity in the context of the contract. If the DBE anticipates that it cannot fulfill its subcontract, s/he shall advise the prime contractor and suggest a DBE that may replace their services or provide written consent to be released from its subcontract.
 - (1) Before the prime contractor can request to terminate or substitute a DBE firm; s/he must:
 - i. Make every effort to fulfill the DBE commitment by working with the listed DBE to ensure that they are fully knowledgeable of your expectations for successful performance on the contract. Document these efforts in writing.
 - ii. If those efforts fail, provide written notice to the DBE subcontractor of your *intent* to request to terminate and/or replace the firm including the reason(s) you want to pursue this action.
 - iii. Copy the DBE Office on all correspondence related to changing a DBE firm who has been approved for DBE credit on a contract including the preparation and coordination efforts with the DBE on the contract.
 - iv. Clearly state the amount of time the DBE firm has to remedy and/or respond to your notice of intent to replace/terminate their firm from the contract. The DBE shall be allowed five days to respond, in writing. **EXCEPTION:** The prime contractor must provide a verifiable reason for a response period shorter than five days. For example a WisDOT project manager must verify that waiting 5 days for a DBE performing traffic control work to respond would affect the public safety.
 - v. The DBE subcontractor must forward a written response to the prime contractor and copy the DBE Office. The written response must outline why it objects to the proposed termination of its subcontract and list the reasons that WisDOT should not approve the request for their firm to be replaced or removed from the contract.

The Request to Replace or Terminate a DBE

The prime contractor must provide a written request to replace or terminate a DBE firm that has been approved for DBE credit on a WisDOT contract. The written request can be an email or printed document delivered by email or fax; at minimum, the request must contain the following:

1. Contract ID number.
2. Wisconsin DOT Contract Project Manager name and contact information.
3. DBE name and work type and/or NAICS code.
4. Contract's progress schedule.
5. Reason(s) for requesting that the DBE be replaced or terminated.
6. Attach/include all communication with the DBE to deploy/address/resolve work completion,

WisDOT will review your request and any supporting documentation that you submit to evaluate whether the circumstance and the reasons constitute a good cause for replacing or terminating the DBE that was approved for DBE credit on that contract.

Examples of Good Causes to Replace a DBE according to the federal DBE program guidelines {49 CFR part 26.53}

- The listed DBE subcontractor fails or refuses to execute a written contract.
- The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor.
- The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements.
- The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness.
- The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- You have determined that the listed DBE subcontractor is not a responsible contractor.
- The listed DBE subcontractor voluntarily withdraws from the project and provides to you written notice of its withdrawal.
- The listed DBE is ineligible to receive DBE credit for the type of work required.
- A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract.

Evaluation and Response to the Request

If WisDOT determines that your reasons comply with the good cause standards; the DBE office will send the prime contractor and the WisDOT project manager an email stating that we concur with the reasons and approve the replacement or termination.

If WisDOT determines that your reasons do not comply with the good cause standards of the federal DBE program, the DBE Office will send the prime contractor an email that includes *the requirement* to utilize the committed DBE, *remedial actions* to support the completion of the contractual commitment, a list of available WisDOT support services *and administrative remedies that may be invoked* for failure to comply with federal DBE guidelines for DBE replacement.

The Wisconsin Department of transportation contact for all actions related to replacing a DBE is the DBE Program Chief and/or the DBE Program Engineer which can be reached at DBE_Alert@dot.wi.gov or by calling 608-267-3849.

17. DBE Utilization beyond the approved DBE Commitment Form DT1506

If the Prime/subcontractor increases the scope of work for a participating DBE or adds a DBE subcontractor that was not on the approved Form DT1506 at any time after contract award, s/he should follow these steps so that the participation can be accurately credited toward the DBE goal.

- a. Send an email to the DBE Engineer at DBE_Alert@dot.wi.gov describing the work to be performed by the new DBE including the proposed schedule or duration, DBE name and contact information. You may also call the DBE Engineer at 414-659-0487 to notify him of the change verbally.

If the scope change added work for a participating DBE; list the date and reason for the scope change.

- b. Forward a complete, signed Attachment 'A' form to the DBE Office at DBE_Alert@dot.wi.gov. A complete Attachment A includes DBE contact information, signature, subcontract value and proper description of the work areas to be performed by the DBE.

The DBE office will confirm the DBE participation and revise the DT1506 based on the email/discussion and attach the new/revised Attachment A to the Contract record/documentation.

18. 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.

19. 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 <https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/default.aspx>

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 alternatives 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 <https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/default.aspx>

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 someone contact me at this number

Prime Contractor 's Contact Person

 Phone: _____
 Fax: _____
 Email: _____

DBE Contractor Contact Person

 Phone _____
 Fax _____
 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 alternatives 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

- Ø Prime contractor open houses inviting DBE firms to see the bid “war room” or providing technical assistance.
- Ø Participate in speed networking and mosaic exercises as arranged by DBE office.
- Ø Host information sessions not directly associated with a bid letting.
- Ø Participate in a formal mentor protégé or joint venture with a DBE firm.
- Ø Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings.
- Ø Facilitate a small group DBE ‘training session’ Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods.
- Ø Encourage subcontractors to solicit and highlight DBE participation in their quotes to you.
- Ø 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

- Ø DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Ø Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Ø Review the status of contracts on the HCCI website reviewing the ‘apparent low bidder’ list, and bid tabs at a minimum.
- Ø 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.
- Ø Participate in DBE office assessment programs.
- Ø Participate on advisory and mega-project committees.
- Ø Sign up to receive the DBE Contracting Update.
- Ø Consider membership in relevant industry or contractor organizations.
- Ø 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 a 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 PROVISIONS 5**Fuel Cost Adjustment****A Description**

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

B Categories of Work Items

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

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

C Fuel Index

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

The base Fuel Index (BFI) for this contract is \$2.15 per gallon.

D Computing the Fuel Cost Adjustment

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

- (1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.
- (2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.
- (3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.
- (4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \frac{CFI}{BFI} - 1 \times Q \times BFI$$

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

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

E Payment

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

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

ADDITIONAL SPECIAL PROVISION 6**ASP 6 - Modifications to the standard specifications**

Make the following revisions to the standard specifications:

104.10.1 General

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Subsection 104.10 specifies a 2-step process for contractors to follow in submitting a cost reduction incentive (CRI) for modifying the contract in order to reduce direct construction costs computed at contract bid prices. The initial submittal is referred to as a CRI concept and the second submittal is a CRI proposal. The contractor and the department will equally share all savings generated to the contract due to a CRI as specified in 104.10.4.2(1). The department encourages the contractor to submit CRI concepts.

104.10.4.2 Payment for the CRI Work

Replace paragraph one with the following effective with the December 2017 letting:

- (1) The department will pay for completed CRI work as specified for progress payments under 109.6. The department will pay for CRI's under the Cost Reduction Incentive administrative item. When all CRI costs are determined, the department will execute a contract change order that does the following:
1. Adjusts the contract time, interim completion dates, or both.
 2. Pays the contractor for the unpaid balance of the CRI work.
 3. Pays the contractor 50 percent of the net savings resulting from the CRI, calculated as follows:

$$NS = CW - CRW - CC - DC$$

Where:

NS = Net Savings

CW = The cost of the work required by the original contract that is revised by the CRI. CW is computed at contract bid prices if applicable.^[1]

CRW = The cost of the revised work, computed at contract bid prices if applicable.^[1]

CC = The contractor's cost of developing the CRI proposal.

DC = The department's cost for investigating, evaluating, and implementing the CRI proposal.

^[1] The department may adjust contract bid prices that, in the engineer's judgement, do not represent the fair value of the work deleted or proposed.

108.11 Liquidated Damages

Replace paragraphs two and three with the following effective with the December 2017 letting:

- (2) This deducted sum is not a penalty but is a fixed, agreed, liquidated damage due the department from the contractor for the added cost of engineering and supervision resulting from the contractor's failure to complete the work within the contract time.
- (3) Unless enhanced in the special provisions, the department will assess the following daily liquidated damages

LIQUIDATED DAMAGES

ORIGINAL CONTRACT AMOUNT		DAILY CHARGE	
FROM MORE THAN	TO AND INCLUDING	CALENDAR DAY	WORKING DAY
\$0	\$250,000	\$850	\$1700
\$250,000	\$500,000	\$815	\$1630
\$500,000	\$1,000,000	\$1250	\$2500
\$1,000,000	\$2,000,000	\$1540	\$3080
\$2,000,000	—	\$2070	\$4140

203.3.2.2 Removal Operations

Replace the entire text with the following effective with the December 2017 letting:

203.3.2.2.1 General

- (1) Except as specified below for closing culverts, remove the entire top slab of box culverts and the entire superstructure of other culverts and bridges designated for removal. Completely remove existing piles, cribs, or other timber construction within the limits of new embankments, or remove these structures to an elevation at least 2 feet below finished ground line. Remove sidewalls or substructure units in water to an elevation no higher than the elevation of the natural stream or lake bed, or, if grading the channel is required under the contract or the plans, to the proposed finished grade of the stream or lake bed. Remove sidewalls or substructure units not in water down to at least 2 feet below natural or finished ground line.
- (2) If extending or incorporating existing culverts and bridges in the new work, remove only those parts of the existing structure as necessary to provide a proper connection to the new work. Saw, chip, or trim the connecting edges to the required lines and grades without weakening or damaging the remaining part of the structure. During concrete removal, do not damage reinforcing bars left in place as dowels or ties incorporated into the new work.
- (3) Remove pipe culverts designated for salvage in a way that prevents damage to the culverts.
- (4) Dismantle steel structures or parts of steel structures designated for salvage in a way that avoids damage to the members. If the contract specifies removing the structure in a way that leaves it in a condition suitable for re-erection, matchmark members with durable white paint before dismantling. Mark pins, bolts, nuts, loose plates, etc., similarly to indicate their proper location. Paint pins, bolts, pinholes, and machined surfaces with a department-approved rust preventative. Securely wire loose parts to adjacent members, or label and pack them in boxes.
- (5) Remove timber structures or parts of timber structures designated for salvage in a way that prevents damage to the members.
- (6) If the engineer approves, the contractor may temporarily use materials designated for salvage in falsework used to construct new work. Do not damage or reduce the value of those materials through temporary use.

203.3.2.2.2 Deck Removal

- (1) Protect the work as specified in 107.14 during deck removal. Minimize debris falling onto water surfaces and wetlands as the contract specifies in 107.18 or in the special provisions. Also, minimize debris falling on the ground and roadway.
- (2) Do not damage existing bar steel reinforcement, girders, or other components that will be incorporated in new work. Remove decks on prestressed concrete girders using a hydraulic shear or other engineer-approved equipment. Thoroughly clean, realign, and retie reinforcement as necessary.
- (3) After deck removal is complete, notify the engineer to request a damage survey. Point out damage to the engineer. Allow one business day for the engineer to complete the damage survey. If damage is identified, the department will determine if repairs or girder restoration will be allowed.
- (4) If the department allows girder restoration, have a professional engineer registered in the State of Wisconsin analyze the effect of the damage to the bridge, make recommendations, and prepare signed and sealed computations and structural details required to restore girders to their previous structural capacity. Submit the restoration proposal, including analysis and structural details, to the department and design engineer of record. The department will accept or reject the restoration proposal within 3 business days. Do not begin restoration work until the department allows in writing.
- (5) The engineer will not extend contract time to assess or remediate contractor caused damage.

203.5.1 General

Replace paragraph two with the following effective with the December 2017 letting:

- (2) Payment is full compensation for breaking down and removing; costs associated with contractor-caused damage; required salvaging, storing, and disposing of materials; and, unless the contract specifies granular backfill, for backfilling.

415.2.3 Expansion Joint Filler

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Furnish expansion joint filler conforming to AASHTO M153, AASHTO M213, or ASTM D8139 in lengths equal to the pavement lane width and of the thickness and height the plans show. Where dowel bars are required, use filler with factory-punched holes at the dowel bar locations and with a diameter not greater than 1/8 inch larger than the nominal dowel bar diameter.
-

415.3.20 Filling Joints

Replace paragraph two with the following effective with the December 2017 letting:

- (2) Clean joints of laitance, curing compound, and other contaminants before filling. Saw construction joints at least 3/4 inches deep before filling. Sawing is not required for tooled joints in curb and gutter. Sandblast or waterblast exposed joint faces using multiple passes as required to clean joint surfaces of material that might prevent bonding. Blow clean and dry with oil-free compressed air immediately before filling.
-

415.5.1 General

Replace paragraph six with the following effective with the December 2017 letting:

- (6) Payment for Concrete Pavement Joint Filling is full compensation for filling concrete pavement joints; filling adjacent curb and gutter joints; and for sawing.
-

440.3.4.2 Contractor Testing

Replace paragraph two with the following effective with the December 2017 letting:

- (2) Coordinate with the engineer at least 24 hours before making profile runs for acceptance unless the engineer approves otherwise. The department may require testing to accommodate staged construction or if corrective action is required.
-

455.5.3 Tack Coat

Replace paragraph two with the following effective with the December 2017 letting:

- (2) The department will adjust pay for Tack Coat, under the Nonconforming Tack Coat administrative item, for nonconforming material the engineer allows to remain in place at a maximum of 75 percent of the contract unit price.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the December 2017 letting:

- (1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to CMM 8-66.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	LT	MT	HT	SMA
ESALs x 10 ⁶ (20 yr design life)	<2.0	2 - <8	>8	—
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
Fractured Faces (ASTM D5821) (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 N _{ini}	6	7	8	8
Gyrations for N _{des}	40	75	100	65
Gyrations for N _{max}	60	115	160	160
Air Voids, %V _a (%G _{mm} N _{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G _{mm} N _{ini}	<= 91.5 ^[1]	<= 89.0 ^[1]	<= 89.0	—
% G _{mm} N _{max}	<= 98.0	<= 98.0	<= 98.0	—
Dust to Binder Ratio ^[2] (% passing 0.075/P _{be})	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] [5]	65 - 75 ^[3] [5]	70 - 80
Tensile Strength Ratio (TSR) (AASHTO T283) ^[6] [7]				
no antistripping additive	0.75 min	0.75 min	0.75 min	0.75 min
with antistripping additive	0.80 min	0.80 min	0.80 min	0.80 min
Draindown (AASHTO T305) (%)	—	—	—	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 M323), the dust to binder ratio limits are 0.6 - 1.6.

^[3] For No. 5 (9.5mm) and No. 4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 70 - 76 percent.

^[4] For No. 2 (25.0mm) nominal maximum size mixes, the specified VFB lower limit is 67 percent.

^[5] For No. 1 (37.5mm) nominal maximum size mixes, the specified VFB lower limit is 67 percent.

^[6] WisDOT eliminates freeze-thaw conditioning cycles from the TSR test procedure.

^[7] Run TSR at asphalt content corresponding to 3.0% air void regressed design using distilled water for testing.

460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater

Replace paragraph six with the following:

- (6) Conduct TSR tests during mixture production according to CMM 8-36.6.14. 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 production TSR values are below the limit specified in CMM 8-36.6.14, notify the engineer. The engineer and contractor will jointly determine a corrective action.
-

502.2.7 Preformed Joint Filler

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Use preformed joint filler conforming to AASHTO M153, AASHTO M213, or ASTM D8139.
-

502.3.7.8 Floors

Replace paragraph fourteen with the following effective with the December 2017 letting:

- (14) Unless specified otherwise, transversely tine finish the floors of structures with approach pavements designed for speeds of 40 mph or greater as specified in 415.3.8.3, except make the tining 1/8 inch in depth and do not perform tining within 12 inches of gutters. The contractor may apply a broom finish, described below, instead of the artificial turf drag finish required before tining. The contractor may perform tining manually, if it obtains a finish satisfactory to the engineer. Perform tining within 20 degrees of the centerline of bearing of the substructure units on bridge decks having skew angles of 20 degrees or greater.
-

505.2.6 Dowel Bars and Tie Bars

Replace the entire text with the following effective with the March 2018 letting:

505.2.6.1 General

- (1) Furnish bars coated in a plant certified by the Concrete Reinforcing Steel Institute. For dowel bars and straight tie bars, there is no requirement for bend tests. Ensure that the bars are the specified diameter and length the plans show.
- (2) The contractor need not coat or patch sawed ends, sheared ends, cut ends, ends left bare during the coating process, or ends with damaged coating.
- (3) The contractor need not repair circumferential coating damage from shipping, handling, or installation, if the following conditions are met:
 1. The damaged area is 1/4 inch square or smaller.
 2. The total damaged area in any one-foot length does not exceed 2 percent of the circumferential area in that length.
- (4) Repair areas of damaged circumferential coating larger than 1/4 inch square. Reject bars with total damage greater than 2 percent of the bar's circumferential area.

505.2.6.2 Dowel Bars**505.2.6.2.1 General**

- (1) Ensure that the bars are straight, round, smooth, and free from burrs or other deformations detrimental to the free movement of the bar in the concrete.
- (2) Saw bars to the required length. For solid bars, the department will allow shearing if no damage occurs to the coating and shearing distortions do not exceed the following:
 1. No distorted diameter is more than 0.04 inches greater than the true diameter.
 2. No distortion extends more than 0.40 inches from the sheared end.
- (3) Apply a surface treatment to loose dowels, or furnish manufacturer-treated bars in dowel bar baskets, capable of preventing bond between the epoxy-coated bars and the concrete. Apply field surface treatments when loading bars in the dowel bar magazine.

505.2.6.2.2 Solid Dowel Bars

- (1) Furnish coated bars conforming to AASHTO M31 grade 40 or 60. Alternatively the contractor may furnish dowel bars conforming to AASHTO M227 grade 70-80. Coat with a thermosetting epoxy conforming to AASHTO M254, type B.

505.2.6.2.3 Tubular Dowel Bars

- (1) Furnish welded steel tubular bars conforming to ASTM A513 fabricated from plain carbon steel with a minimum tensile yield strength of 60 ksi and sized as follows:

SOLID BAR SPECIFIED DIAMETER	MINIMUM REQUIRED OUTSIDE DIAMETER	MINIMUM BASE METAL WALL THICKNESS
1 1/4-inch	1 5/16 inches	0.120 inch
1 1/2-inch	1 5/8 inches	0.120 inch

- (2) Cap bar ends to prevent intrusion of concrete or other materials. Ensure that tubing is galvanized on the exterior and interior according to ASTM A653 with a G40 zinc coating and apply 7-13 mils of epoxy to the galvanized exterior according to AASHTO M254, Type B.

505.2.6.2.4 High Performance Dowel Bars

- (1) As an alternate the contractor may furnish high performance dowel bars from the department's APL.

505.2.6.3 Tie Bars

- (1) Furnish coated bars conforming to AASHTO M31 grade 40 or 60. Coat tie bars as specified in 505.2.4 for coated high-strength steel reinforcement. Ensure that the tie bars are the shape the plans show.
- (2) Repair, with compatible coating material, the bend location of field-straightened coated tie bars.

614.2.1 General

Add the following as paragraph ten effective with the December 2017 letting:

- (10) Furnish guardrail reflectors from the department's APL.

614.3.2.1 Installing Posts

Add the following as paragraph five effective with the December 2017 letting:

- (5) Provide post-mounted reflectors every 100 feet with one at the beginning and end of each run and a minimum of three reflectors per run.

614.5 Payment

Replace paragraph four with the following effective with the December 2017 letting:

- (4) Payment for the Steel Thrie Beam, Steel Plate Beam Guard, Guardrail Stiffened, MGS Guardrail, Short Radius, and various transition bid items is full compensation for providing guardrail and transitions including post-mounted reflectors; for repairing damaged zinc coatings; and for excavating, backfilling, and disposing of surplus material.

641.2.9 Overhead Sign Supports

Replace paragraph three with the following effective with the December 2017 letting:

- (3) Provide steel pole shafts, mast arms or trusses, and luminaire arms zinc coated according to ASTM A123. The contractor may provide either straight or tapered pole and arm shafts unless the plans specify otherwise. Provide bolts and other hardware conforming to 641.2.2.

642.2.2.1 General

Replace the entire text with the following effective with the December 2017 letting:

- (1) Provide each field office with two rooms, separated by an interior door with a padlock. Ensure that each room has a separate exterior door and its own air conditioner. Locate the office where a quality internet connection can be achieved.
- (2) Provide long distance telephone service via a land line for exclusive department use that has the following:
 - Two programmable touch-tone phones, one of which is cordless. Ensure that phone operations will not interfere with other telecommunications equipment.
 - Voice mail service or an answering machine.
- (3) Provide high-speed internet service for exclusive department use via cable or DSL connection with a modem/router and capable of supporting cloud enabled file sharing, voice over internet protocol (VoIP), video conferencing, and web based applications. Ensure that system meets the following:
 - Includes a wireless network for the field office.
 - Can accommodate IPSec based VPN products.
 - Has a bandwidth range as follows:
 - Field office with 1-5 staff: A minimum connection speed of 5 Mbps download and 1 Mbps upload. If a cable or DSL option is not available the contractor may provide a personal hotspot using cell phone tethering or other device able to achieve the specified minimum speeds inside the field office.
 - Field office with 6 or more staff: A minimum connection speed of 10 Mbps + 1/2 Mbps per user download and 5 Mbps upload.
 - Projects over 500 million dollars: A minimum connection speed of 20 Mbps + 1/2 Mbps per user download and 10 Mbps upload. Coordinate network setup at the leased office with the WisDOT network team.
- (4) Provide and maintain a Windows 7 and Windows 10 compliant multi-function device with copy, print, and scan capabilities that can accommodate both 8 1/2" x 11" and 11" x 17" paper. Replenish paper, toner cartridges, and other supplies before fully expended. Ensure that department staff can connect to the device either directly or through the field office wireless network.
- (5) Equip with a drafting table with a drafter's stool. Except as specified in 642.2.2.4, provide 2 ergonomically correct office chairs in working condition with, at a minimum, the following:
 1. Five-legged base with casters.
 2. Seat adjustable from 15 to 22 inches from the floor with a seamless waterfall, rounded, front edge.
 3. High backrest with no arms or adjustable arms.

643.3.1 General

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Provide and maintain traffic control devices located where the plans show or engineer directs to maintain a safe work zone throughout the contract duration. Relocate as required to accommodate changing work operations. When not in use, place devices away from traffic outside of paved and gravel shoulder surfaces. Where there is barrier on the shoulder, the contractor may place devices not in use on the shoulder as close as possible to the barrier and delineated with drums. Lay signs and supports flat on the grade with uprights oriented parallel to and downstream from traffic. Do not stack devices or equipment. Promptly remove temporary devices from within the project limits as follows:
 - That will not be used within 14 consecutive calendar days.
 - Within 5 business days of substantial completion unless the engineer allows otherwise.

645.2.2.2 Geotextile, Type SAS (Subgrade Aggregate Separation)

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Furnish fabric conforming to the following physical properties:

TEST	METHOD	VALUE ^[1]
Minimum grab tensile strength	ASTM D4632	170 lb
Minimum puncture strength	ASTM D6241	350 lb
Maximum apparent opening size	ASTM D4751	No. 70
Minimum permittivity	ASTM D4491	0.35 s ⁻¹

^[1] All numerical values represent minimum/maximum average roll values. Average test results from all rolls in a lot must conform to the tabulated values.

645.2.2.4 Geotextile, Type DF (Drainage Filtration)

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Furnish fabric conforming with the physical requirements of either schedule A, schedule B, or schedule C as the contract specifies.

SCHEDULE A TEST	METHOD	VALUE ^[1]
Minimum grab tensile strength	ASTM D4632	110 lb
Minimum puncture strength	ASTM D6241	200 lb
Minimum apparent breaking elongation	ASTM D4632	30%
Maximum apparent opening size	ASTM D4751	300 µm
Minimum permittivity	ASTM D4491	0.70 s ⁻¹
SCHEDULE B TEST	METHOD	VALUE ^[1]
Minimum grab tensile strength	ASTM D4632	180 lb
Minimum puncture strength	ASTM D6241	350 lb
Minimum apparent breaking elongation	ASTM D4632	30%
Maximum apparent opening size	ASTM D4751	300 µm
Minimum permittivity	ASTM D4491	1.35 s ⁻¹
SCHEDULE C TEST	METHOD	VALUE ^[1]
Minimum grab tensile strength	ASTM D4632	180 lb
Minimum puncture strength	ASTM D6241	350 lb
Minimum apparent breaking elongation	ASTM D4632	15%
Maximum apparent opening size	ASTM D4751	600 µm
Minimum permittivity	ASTM D4491	1.00 s ⁻¹

^[1] All numerical values represent minimum/maximum average roll values. Average test results from all rolls in a lot must conform to the tabulated values.

645.2.2.6 Geotextile, Type R (Riprap)

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Use fabric conforming to the following physical properties:

TEST	METHOD	VALUE ^[1]
Minimum grab tensile strength	ASTM D4632	205 lb
Minimum puncture strength	ASTM D6241	400 lb
Minimum apparent breaking elongation	ASTM D4632	15%
Maximum apparent opening size	ASTM D4751	No. 30
Minimum permittivity	ASTM D4491	0.12 s ⁻¹

^[1] All numerical values represent minimum/maximum average roll values. Average test results from all rolls in a lot must conform to the tabulated values.

645.2.2.7 Geotextile, Type HR (Heavy Riprap)

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Use fabric conforming to the following physical properties:

TEST	METHOD	VALUE ^[1]
Minimum grab tensile strength, lb	ASTM D4632	305 lb
Minimum puncture strength, lb	ASTM D6241	500 lb
Minimum apparent breaking elongation, %	ASTM D4632	15%
Maximum apparent opening size	ASTM D4751	No. 30
Minimum permittivity	ASTM D4491	0.40, s ⁻¹

^[1] All numerical values represent minimum/maximum average roll values. Average test results from all rolls in a lot must conform to the tabulated values.

645.2.2.8 Geotextile, Type C (Modified SAS)

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Use fabric conforming to the following physical properties:

TEST	METHOD	VALUE ^[1]
Grab tensile strength, lb	ASTM D4632	205 lb
Puncture strength, lb	ASTM D6241	350 lb
Maximum apparent opening size	ASTM D4751	No. 50
Minimum permittivity	ASTM D4491	0.12 s ⁻¹

^[1] All numerical values represent minimum/maximum average roll values. Average test results from all rolls in a lot must conform to the tabulated values.

646.3.1.1 General Marking

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Prepare the surface and apply marking as the manufacturer specifies. Provide manufacturer specifications as the engineer requests. Do not mark over a marking product with less adherence or over chipped or peeled marking. Do not remove polymer overlay materials in areas receiving pavement marking. Use only epoxy pavement marking where the contract requires marking placed on polymer overlays.

Replace paragraph five with the following effective with the December 2017 letting:

- (5) After the marking can sustain exposure to traffic, re-apply clear protective surface treatment conforming to 502.2.11 where removed from structures during marking surface preparation. Seal exposed concrete including grooves for tape. Cover marking during resealing with a system that will not degrade the marking's retroreflectivity when removed. Uncover marking before opening to traffic.

701.3 Contractor Testing

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Perform contract required QC tests for samples randomly located according to CMM 8-30. Also perform other tests as necessary to control production and construction processes, and additional testing enumerated in the contractor's quality control plan or that the engineer directs. Use test methods as follows:

TABLE 701-2 TESTING STANDARDS

TEST	TEST STANDARD
Washed P 200 analysis	AASHTO T11 ^[1]
Sieve analysis of fine and coarse aggregate	AASHTO T27 ^[1]
Aggregate moisture	AASHTO T255 ^[1]
Sampling freshly mixed concrete	AASHTO R60
Air content of fresh concrete	AASHTO T152 ^[2]
Air void system of fresh concrete	AASHTO Provisional Standard TP118
Concrete slump	AASHTO T119 ^[2]
Concrete temperature	ASTM C1064
Concrete compressive strength	AASHTO T22
Making and curing concrete cylinders	AASHTO T23
Standard moist curing for concrete cylinders	AASHTO M201

^[1] As modified in CMM 8-60.

^[2] As modified in CMM 8-70.

715.2.3.1 Pavements

Add the following as paragraph six effective with the December 2017 letting:

- (6) For new lab-qualified mixes, test the air void system of the proposed concrete mix conforming to AASHTO provisional standard TP 118. Include the SAM number as a part of the mix design submittal.

715.3.1.1 General

Replace paragraph one with the following effective with the December 2017 letting:

- (1) Provide slump, air content, concrete temperature and compressive strength test results as specified in 710.5. Provide a battery of QC tests, consisting of results for each specified property, using a single sample randomly located within each subplot. Cast three cylinders for strength evaluation. For pavement concrete, also test the air void system conforming to AASHTO provisional standard TP118 at least once per lot and enter the SAM number in the MRS for information only.

715.3.1.3 Department Verification Testing

Replace paragraph one with the following effective with the December 2017 letting:

- (1) The department will perform verification testing as specified in 701.4.2 with additional testing as required to obtain at least 1 verification test per lot for air content, slump, temperature, and compressive strength.

Errata

Make the following corrections to the standard specifications:

106.3.3.1 General

Correct errata by changing "acceptance" to "approval".

- (1) For manufactured products or assemblies, the department may base approval on a product certification or require both a product certification and production plant certification.
-

205.3.1 General

Correct errata by replacing paragraphs three and four with the following to reflect current practice to incorporate suitable materials.

- (3) Replace unsuitable material with satisfactory material. Trim and finish the roadway. Maintain the work done under 205 in a finished condition until acceptance.
-

305.1 Description

Correct errata to clarify that the contractor may use more than one material under a single contract.

- (1) This section describes constructing a dense graded base using one or more of the following aggregates at the contractor's option:

Crushed stone	Reclaimed asphalt
Crushed gravel	Reprocessed material
Crushed concrete	Blended material

521.2 Materials

Correct errata by deleting bullet three and including aluminum coated pipe in bullet one.

- (1) Furnish corrugated steel pipe and steel apron end walls as follows:
- Corrugated steel culvert pipe, steel apron endwalls, aluminum coated corrugated steel culvert pipe, and other components conforming to AASHTO M36.
 - Polymer coated corrugated steel culvert pipe and pipe arch fabricated from zinc coated sheet steel conforming to AASHTO M218. Before fabrication, coat the sheets on both sides with polymer protective coating grade 250/250 according to AASHTO M246. Fabricate the pipe according to AASHTO M245.
-

614.3.2.2 Installing Rail

Correct errata for splice location and allow punching or drilling holes and slots.

- (1) Install rail with lap splices in the direction of traffic. Ensure that the number and dimensions of holes and bolts conforms to the plan details for new splices. Place the round head of bolts on the traffic side.
- (2) Cut rails to length by shearing or sawing; do not use cutting torches. Drill or punch bolt holes and slots; ensure that they are burr free. After installation, cut anchor bolts that project more than one inch from the nut to 1/2 inch from the nut; deburr the threaded end of cut bolts.
-

618.1 Description

Correct errata by deleting designated detours from the scope of Maintenance and Repair of Haul Roads.

- (1) This section describes maintaining, repairing, and restoring all public roads, streets, drainage facilities, and other components used for hauling by contractor, subcontractor, or supplier to support work for a department contract to its pre-haul condition. Public roads and streets shall be limited to those not a part of the State Trunk Highway System and from now on called haul roads.

643.3.5.2 Cellular Communication

Correct errata by changing State Traffic Operations Center to Traffic Management Center.

- (2) A minimum of 14 days before deployment, demonstrate to the department that the cellular modem is capable of communications with the Traffic Management Center. If remote communications are interrupted or temporarily unavailable, the department will notify the contractor to change messages manually. Update messages within 2 hours of receiving notification.

646.3.1.2 Liquid Marking

Correct errata by changing "epoxy overlays" to "polymer overlays".

- (5) Apply liquid marking and glass beads across the line at or exceeding the following:

LIQUID MARKING	PAVEMENT TYPE	THICKNESS (mils)	BEAD APPLICATION (pounds per gallon)
Paint	all	16	8-10
Epoxy	SMA, seal coats, and polymer overlays	25	25
Epoxy	all other	20	22.5

654.5 Payment

Correct errata to clarify that contractor-provided anchor rods and associated hardware are incidental.

- (2) Payment for the Bases bid items is full compensation for providing concrete bases; for embedded conduit and electrical components; for anchor rods, nuts, and washers; for bar steel reinforcement; and for excavating, backfilling, and disposing of surplus materials.

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.

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

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

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

ADDITIONAL SPECIAL PROVISION 9 Electronic Certified Payroll 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:

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

(2) Ensure that all tiers of subcontractors, including 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 Paul Ndon at (414) 438-4584 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 contact Paul Ndon at paul.ndon@dot.wi.gov. Not every contractor's payroll system is capable of producing export files. For details, see Section 4.8 CPR Auto Submit (Data Mapping) on pages 49-50; 66-71 of the CRCS Payroll Manual at:

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

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

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 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 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:

<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>
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.

<https://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:

<https://wisconsindot.gov/hcciDocs/contracting-info/ws4567.doc>

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.

**WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT**

**SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS
FOR PROJECTS WITH FEDERAL AID**

I. PREVAILING WAGE RATES

The attached U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) furnishes the minimum prevailing wage rates pursuant to the Davis-Bacon and Related Acts. The wage rates shown are the minimum rates required by the contract to be paid during its life, however this is 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 will be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

II. COVERAGE OF TRUCK DRIVERS

Truck drivers are covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Drivers of a contractor or subcontractor for time spent working on the site of the work.
- Drivers of a contractor or subcontractor for time spent loading and/or unloading materials and supplies on the site of the work, if such time is not de minimis. https://www.dol.gov/whd/FOH/FOH_Ch15.pdf
- Truck drivers transporting materials or supplies between a facility that is deemed part of the site of the work and the actual construction site.
- Truck drivers transporting portions of the building or work between a site established specifically for the performance of the contract where a significant portion of such building or work is constructed and the physical place where the building or work called for in the contract will remain.

Truck drivers are not covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Material delivery truck drivers while off the site of the work.
- Drivers of a contractor or subcontractor traveling between a Davis-Bacon job and a commercial supply facility while they are off the site of the work."
- Truck drivers whose time spent on the site of the work is de minimis, such as only a few minutes at a time merely to pick up or drop off materials or supplies.

Details are available online at:

<https://www.dol.gov/whd/recovery/pwrb/Tab9.pdf>

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

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 and accessible place at the site of work:

- a. A copy of the contractor's Equal Employment Opportunity Policy.

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. RESOURCES

Required information regarding compliance with federal provisions is found in the following resources:

- FHWA-1273 included in this contract
- U.S. Department of Labor Prevailing Wage Resource Book
- U.S. Department of Labor Field Operations Handbook
- U.S. Code of Federal Regulations
- Any applicable law, Act, or Executive Order enacted by the federal government at the time of the letting of this contract

General Decision Number: WI180010 09/28/2018 WI10

Superseded General Decision Number: WI20170010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018
1	05/18/2018
2	05/25/2018
3	06/15/2018
4	06/22/2018
5	07/20/2018
6	08/03/2018
7	08/31/2018
8	09/28/2018

BRWI0001-002 06/01/2017

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPLEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 32.03	22.40

BRWI0002-002 06/01/2017

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 38.07	20.67

BRWI0002-005 06/01/2017

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 34.87	21.46

BRWI0003-002 06/01/2017

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 32.41	22.02

BRWI0004-002 06/01/2017

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 36.79	22.99

BRWI0006-002 06/01/2017

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE,
ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 33.25	21.18

BRWI0007-002 06/01/2017

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 33.77	22.37

BRWI0008-002 06/01/2017

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 37.25	22.10

BRWI0011-002 06/01/2016

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 32.22	20.57

BRWI0019-002 06/01/2017

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN,
PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 32.17	22.26

BRWI0034-002 06/01/2017

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 33.74	22.40

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys
35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen.....	\$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO,
BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA,
CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except
area bordering Michigan State Line), FOND DU LAC, FOREST,

GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPLEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER.....	\$ 33.56	18.00
MILLWRIGHT.....	\$ 35.08	18.35
PILEDRIIVER.....	\$ 34.12	18.00

CARP0252-010 06/01/2016		

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter.....	\$ 33.56	18.00
Millwright.....	\$ 35.08	18.35
Pile Driver.....	\$ 34.12	18.00

CARP0264-003 06/01/2016		

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 35.78	22.11

* CARP0361-004 05/01/2018		

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 36.15	20.43

CARP2337-001 06/01/2016		

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIIVERMAN		
Zone A.....	\$ 31.03	22.69
Zone B.....	\$ 31.03	22.69

ELEC0014-002 06/04/2018		

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPLEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:.....	\$ 34.21	20.46

ELEC0014-007 06/05/2018		

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		

Installer/Technician.....\$ 26.25 13.92

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2017

KENOSHA COUNTY

	Rates	Fringes
Electricians:.....	\$ 38.50	30%+10.57

* ELEC0158-002 06/04/2018

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausaukee 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

	Rates	Fringes
Electricians:.....	\$ 32.50	19.68

ELEC0159-003 06/01/2018

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and 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

	Rates	Fringes
Electricians:.....	\$ 39.04	21.56

ELEC0219-004 06/01/2016

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over \$180,000.....	\$ 32.38	18.63
Electrical contracts under \$180,000.....	\$ 30.18	18.42

ELEC0242-005 05/16/2018

DOUGLAS COUNTY

	Rates	Fringes
Electricians:.....	\$ 36.85	26.17

ELEC0388-002 05/30/2016

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:.....	\$ 30.69	26.00% +10.05

ELEC0430-002 06/01/2017

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:.....	\$ 37.32	21.07

ELEC0494-005 06/01/2018

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:.....	\$ 39.31	24.69

ELEC0494-006 06/01/2018

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:.....	\$ 33.40	22.08

ELEC0494-013 06/01/2018

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer.....	\$ 19.56	17.74
Technician.....	\$ 28.99	19.15

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillon, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

ELEC0577-003 06/01/2018

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, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:.....	\$ 32.18	18.59

ELEC0890-003 06/01/2018

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes

Electricians:.....\$ 34.15 19.63

ELEC0953-001 07/01/2015

	Rates	Fringes
Line Construction:		
(1) Lineman.....	\$ 42.14	32% + 5.00
(2) Heavy Equipment Operator.....	\$ 40.03	32% + 5.00
(3) Equipment Operator.....	\$ 33.71	32% + 5.00
(4) Heavy Groundman Driver..	\$ 26.78	14.11
(5) Light Groundman Driver..	\$ 24.86	13.45
(6) Groundsman.....	\$ 23.18	32% + 5.00

ENGI0139-005 06/04/2018

	Rates	Fringes
Power Equipment Operator		
Group 1.....	\$ 40.72	22.10
Group 2.....	\$ 40.22	22.10
Group 3.....	\$ 39.72	22.10
Group 4.....	\$ 39.46	22.10
Group 5.....	\$ 39.17	22.10
Group 6.....	\$ 33.27	22.10

HAZARDOUS WASTE PREMIUMS:

EPA Level "A" protection - \$3.00 per hour
EPA Level "B" protection - \$2.00 per hour
EPA Level "C" protection - \$1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

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.

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 jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; 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 & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning 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 Tender.

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2017

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER.....	\$ 31.24	26.97
Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.		

IRON0008-003 06/01/2017

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 33.19	26.97
Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.		

IRON0383-001 06/01/2017

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 34.50	23.82

IRON0498-005 06/01/2016

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER.....	\$ 36.29	30.77

IRON0512-008 05/01/2017

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPLEAU COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 36.50	26.45

IRON0512-021 05/01/2017

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 32.04	26.45

LAB00113-002 06/04/2018

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 27.88	21.76
Group 2.....	\$ 28.03	21.76
Group 3.....	\$ 28.23	21.76
Group 4.....	\$ 28.38	21.76
Group 5.....	\$ 28.53	21.76
Group 6.....	\$ 24.37	21.76

LABORERS CLASSIFICATIONS

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, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LAB00113-003 06/04/2018

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 27.13	21.76
Group 2.....	\$ 27.23	21.76
Group 3.....	\$ 27.28	21.76
Group 4.....	\$ 27.48	21.76
Group 5.....	\$ 27.33	21.76
Group 6.....	\$ 24.22	21.76

LABORERS CLASSIFICATIONS

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, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LAB00113-011 06/04/2018

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 26.94	21.76
Group 2.....	\$ 27.09	21.76
Group 3.....	\$ 27.29	21.76
Group 4.....	\$ 27.26	21.76
Group 5.....	\$ 27.59	21.76
Group 6.....	\$ 24.08	21.76

LABORERS CLASSIFICATIONS:

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, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LAB00140-002 06/04/2018

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPLEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 31.80	17.20
Group 2.....	\$ 31.90	17.20
Group 3.....	\$ 31.95	17.20
Group 4.....	\$ 32.15	17.20
Group 5.....	\$ 32.00	17.20
Group 6.....	\$ 28.43	17.20

LABORER CLASSIFICATIONS

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, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist
 GROUP 5: Blaster; powderman
 GROUP 6: Flagperson; Traffic Control

 LAB00464-003 06/04/2018

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1.....	\$ 32.08	17..20
Group 2.....	\$ 32.18	17..20
Group 3.....	\$ 32.23	17..20
Group 4.....	\$ 32.43	17..20
Group 5.....	\$ 32.28	17..20
Group 6.....	\$ 28.43	17..20

LABORERS CLASSIFICATIONS:

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, and
 Utility Man); Batch Truck Dumper or Cement Handler;
 Bituminous Worker (Dumper, Ironer, Smoother, and Tamper);
 Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawyer and Filler
 (Pavement); Vibrator or Tamper Operator (Mechanical Hand
 Operated); Chain Saw Operator; Demolition Burning Torch
 Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter
 (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

 PAIN0106-008 05/01/2017

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller.....	\$ 30.33	17.27
Spray, Sandblast, Steel....	\$ 30.93	17.27
Repaint:		
Brush, Roller.....	\$ 28.83	17.27
Spray, Sandblast, Steel....	\$ 29.43	17.27

 PAIN0108-002 06/01/2017

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller.....	\$ 33.74	18.95
Spray & Sandblast.....	\$ 34.74	18.95

 PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK,
 SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER.....	\$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPLEAU, AND
VERNON COUNTIES

	Rates	Fringes
PAINTER.....	\$ 22.03	12.45

PAIN0781-002 06/01/2017

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge.....	\$ 30.60	22.80
Brush.....	\$ 30.25	22.80
Spray & Sandblast.....	\$ 31.00	22.80

PAIN0802-002 06/01/2017

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND,
ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush.....	\$ 28.25	17.72

PREMIUM PAY:
 Structural Steel, Spray, Bridges = \$1.00 additional per
 hour.

PAIN0802-003 06/01/2017

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN
LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC,
MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA,
OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS,
WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER.....	\$ 24.89	12.05

PAIN0934-001 06/01/2017

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush.....	\$ 33.74	18.95
Spray.....	\$ 34.74	18.95
Structural Steel.....	\$ 33.89	18.95

PAIN1011-002 06/01/2017

FLORENCE COUNTY

	Rates	Fringes
Painters:.....	\$ 24.86	12.23

PLAS0599-010 06/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1.....	\$ 39.46	17.17
Area 2 (BAC).....	\$ 35.07	19.75
Area 3.....	\$ 35.61	19.40
Area 4.....	\$ 34.70	20.51
Area 5.....	\$ 36.27	18.73
Area 6.....	\$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE, MONROE, PEPIN, PIERCE, RICHLAND, TREMPEREAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2018

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles.....	\$ 28.12	21.20
3 or more Axles; Euclids Dumptor & Articulated, Truck Mechanic.....	\$ 28.27	21.20

WELL DRILLER.....	\$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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 (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal

process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

August 2018

**NOTICE TO BIDDERS
WAGE RATE DECISION**

The wage rate decision of the Department of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Department 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 omission 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.

If a project includes multiple types of construction (highway, bridge over navigable water, sanitary sewer and water main, building) and there is not a separate wage determination for this type of work included in the proposal, use the wage determination that is in the proposal.

If a project includes multiple types of construction, different wage rate determinations may be inserted into the contract (WI10/Highway = in all WisDOT highway contracts, WI15/Heavy = bridge over navigable water per USDOL and US Coast Guard designation, WI8/Heavy (Sewer & Water Line & Tunnel) = sanitary sewer and water main if the cost is more than 20% of the contract and/or at least \$1,000,000, and Building). If multiple wage rate determinations are inserted into the contract, use the classification in the wage determination for the work being done. Use WI15 wage rates when working on the bridge and/or structure from bank to bank. Use WI8 wage rates when working on any sanitary sewer or water main work. Use Building wage rates for all work done within the footprint of the building. Use WI10 wage rates for all other highway work in the contract and approaches to structures. For example, if a laborer is working within the footprint of a building, use the Laborer rate in the Building wage determination inserted in the contract. If a laborer is working on a bridge/structure within the banks, use the Laborer rate in the WI15/Heavy wage determination if inserted in the contract. If the laborer is working on the highway, use the Laborer rate in the WI10/Highway wage determination.



Proposal Schedule of Items

Page 1 of 29

Proposal ID: 20181113001 Project(s): 1007-11-79, 1007-11-80

Federal ID(s): WISC 2018433, WISC 2018434

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	201.0105 Clearing	128.000 STA	_____.	_____.
0004	201.0205 Grubbing	128.000 STA	_____.	_____.
0006	203.0100 Removing Small Pipe Culverts	39.000 EACH	_____.	_____.
0008	203.0200 Removing Old Structure (station) 700. 1991'SB'+07.50	LS	LUMP SUM	_____.
0010	203.0200 Removing Old Structure (station) 701. 2051'SB'+94.17	LS	LUMP SUM	_____.
0012	203.0200 Removing Old Structure (station) 702. 2118'SB'92	LS	LUMP SUM	_____.
0014	203.0200 Removing Old Structure (station) 703. 2389'SB'+00	LS	LUMP SUM	_____.
0016	203.0200 Removing Old Structure (station) 800. 2123+80	LS	LUMP SUM	_____.
0018	203.0200 Removing Old Structure (station) 801. 2189+50	LS	LUMP SUM	_____.
0020	203.0200 Removing Old Structure (station) 802. 2330+00	LS	LUMP SUM	_____.
0022	203.0600.S Removing Old Structure Over Waterway With Minimal Debris (station) 704. 2400'SB'+48.95	LS	LUMP SUM	_____.
0024	204.0100 Removing Pavement	123,149.000 SY	_____.	_____.
0026	204.0110 Removing Asphaltic Surface	9,076.000 SY	_____.	_____.
0028	204.0150 Removing Curb & Gutter	250.000 LF	_____.	_____.



Proposal Schedule of Items

Page 2 of 29

Proposal ID: 20181113001 Project(s): 1007-11-79, 1007-11-80

Federal ID(s): WISC 2018433, WISC 2018434

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0030	204.0157 Removing Concrete Barrier	538.000 LF	_____.	_____.
0032	204.0165 Removing Guardrail	4,803.000 LF	_____.	_____.
0034	204.0170 Removing Fence	1,435.000 LF	_____.	_____.
0036	204.0195 Removing Concrete Bases	16.000 EACH	_____.	_____.
0038	204.0210 Removing Manholes	4.000 EACH	_____.	_____.
0040	204.0220 Removing Inlets	16.000 EACH	_____.	_____.
0042	204.0245 Removing Storm Sewer (size) 001. 12-Inch	91.000 LF	_____.	_____.
0044	204.0245 Removing Storm Sewer (size) 002. 15-Inch	80.000 LF	_____.	_____.
0046	204.0245 Removing Storm Sewer (size) 003. 18-Inch	1,504.000 LF	_____.	_____.
0048	204.0245 Removing Storm Sewer (size) 004. 30-Inch	349.000 LF	_____.	_____.
0050	204.0245 Removing Storm Sewer (size) 005. 36-Inch	155.000 LF	_____.	_____.
0052	204.0245 Removing Storm Sewer (size) 006. 48-Inch	106.000 LF	_____.	_____.
0054	204.0270 Abandoning Culvert Pipes	1.000 EACH	_____.	_____.
0056	204.9060.S Removing (item description) 001. Crash Cushions	34.000 EACH	_____.	_____.
0058	204.9060.S Removing (item description) 002. Gate	3.000 EACH	_____.	_____.



Proposal Schedule of Items

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Proposal ID: 20181113001 Project(s): 1007-11-79, 1007-11-80

Federal ID(s): WISC 2018433, WISC 2018434

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0060	204.9090.S Removing (item description) 001. Cables	2,387.000 LF	_____.	_____.
0062	204.9165.S Removing (item description) 001. Temporary Shoring Left In Place By Others	12,010.000 SF	_____.	_____.
0064	205.0100 Excavation Common	526,978.000 CY	_____.	_____.
0066	205.0200 Excavation Rock	109,340.000 CY	_____.	_____.
0068	205.0400 Excavation Marsh	3,238.000 CY	_____.	_____.
0070	206.1000 Excavation for Structures Bridges (structure) 700. B-13-712	LS	LUMP SUM	_____.
0072	206.1000 Excavation for Structures Bridges (structure) 701. B-13-714	LS	LUMP SUM	_____.
0074	206.1000 Excavation for Structures Bridges (structure) 702. B-13-716	LS	LUMP SUM	_____.
0076	206.1000 Excavation for Structures Bridges (structure) 703. B-13-722	LS	LUMP SUM	_____.
0078	206.1000 Excavation for Structures Bridges (structure) 704. B-13-724	LS	LUMP SUM	_____.
0080	206.2000 Excavation for Structures Culverts (structure) 800. C-13-3083	LS	LUMP SUM	_____.
0082	206.2000 Excavation for Structures Culverts (structure) 801. C-13-3084	LS	LUMP SUM	_____.
0084	206.2000 Excavation for Structures Culverts (structure) 802. C-13-3089	LS	LUMP SUM	_____.
0086	206.5000 Cofferdams (structure) 800. C-13-3083	LS	LUMP SUM	_____.



Proposal Schedule of Items

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Proposal ID: 20181113001 Project(s): 1007-11-79, 1007-11-80

Federal ID(s): WISC 2018433, WISC 2018434

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0088	206.5000 Cofferdams (structure) 801. C-13-3084	LS	LUMP SUM	_____.
0090	206.5000 Cofferdams (structure) 802. C-13-3089	LS	LUMP SUM	_____.
0092	208.1100 Select Borrow	20,036.000 CY	_____.	_____.
0094	210.1500 Backfill Structure Type A	5,177.000 TON	_____.	_____.
0096	210.2500 Backfill Structure Type B	2,365.000 TON	_____.	_____.
0098	213.0100 Finishing Roadway (project) 001. 1007-11-79	1.000 EACH	_____.	_____.
0100	213.0100 Finishing Roadway (project) 002. 1007-11-80	1.000 EACH	_____.	_____.
0102	305.0110 Base Aggregate Dense 3/4-Inch	12,143.000 TON	_____.	_____.
0104	305.0120 Base Aggregate Dense 1 1/4-Inch	221,124.000 TON	_____.	_____.
0106	305.0130 Base Aggregate Dense 3-Inch	4,190.000 TON	_____.	_____.
0108	310.0110 Base Aggregate Open-Graded	107.000 TON	_____.	_____.
0110	311.0115 Breaker Run	298.000 CY	_____.	_____.
0112	312.0110 Select Crushed Material	289,791.000 TON	_____.	_____.
0114	405.0100 Coloring Concrete WisDOT Red **P**	218.000 CY	_____.	_____.
0116	415.0100 Concrete Pavement 10-Inch **P**	444.000 SY	_____.	_____.
0118	415.0110 Concrete Pavement 11-Inch **P**	5,363.000 SY	_____.	_____.



Proposal Schedule of Items

Page 5 of 29

Proposal ID: 20181113001 Project(s): 1007-11-79, 1007-11-80

Federal ID(s): WISC 2018433, WISC 2018434

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0120	415.0120 Concrete Pavement 12-Inch **P**	244,285.000 SY	_____.	_____.
0122	415.0125 Concrete Pavement 12 1/2-Inch **P**	27,729.000 SY	_____.	_____.
0124	415.0410 Concrete Pavement Approach Slab **P**	1,448.000 SY	_____.	_____.
0126	415.6000.S Rout and Seal	6,384.000 LF	_____.	_____.
0128	416.0610 Drilled Tie Bars	556.000 EACH	_____.	_____.
0130	416.0620 Drilled Dowel Bars	136.000 EACH	_____.	_____.
0132	416.1010 Concrete Surface Drains **P**	9.400 CY	_____.	_____.
0134	416.1110 Concrete Shoulder Rumble Strips **P**	171,295.000 LF	_____.	_____.
0136	440.4410 Incentive IRI Ride	15,657.000 DOL	1.00000	15,657.00
0138	450.4000 HMA Cold Weather Paving	135.000 TON	_____.	_____.
0140	455.0605 Tack Coat	821.000 GAL	_____.	_____.
0142	460.2000 Incentive Density HMA Pavement	2,350.000 DOL	1.00000	2,350.00
0144	460.5223 HMA Pavement 3 LT 58-28 S	282.000 TON	_____.	_____.
0146	460.5224 HMA Pavement 4 LT 58-28 S	2,928.000 TON	_____.	_____.
0148	460.7222 HMA Pavement 2 HT 58-28 S	321.000 TON	_____.	_____.
0150	460.7424 HMA Pavement 4 HT 58-28 H	128.000 TON	_____.	_____.
0152	465.0315 Asphaltic Flumes	90.000 SY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0154	465.0400 Asphaltic Shoulder Rumble Strips	840.000 LF	_____.	_____.
0156	501.1000.S Ice Hot Weather Concreting	32,595.000 LB	_____.	_____.
0158	502.0100 Concrete Masonry Bridges **P**	1,603.000 CY	_____.	_____.
0160	502.3100 Expansion Device (structure) 702. B-13-716	LS	LUMP SUM	_____.
0162	502.3200 Protective Surface Treatment **P**	6,046.000 SY	_____.	_____.
0164	502.3210 Pigmented Surface Sealer	801.000 SY	_____.	_____.
0166	502.4205 Adhesive Anchors No. 5 Bar	220.000 EACH	_____.	_____.
0168	503.0137 Prestressed Girder Type I 36W-Inch **P**	819.000 LF	_____.	_____.
0170	503.0155 Prestressed Girder Type I 54W-Inch **P**	777.000 LF	_____.	_____.
0172	503.0172 Prestressed Girder Type I 72W-Inch **P**	4,641.000 LF	_____.	_____.
0174	504.0100 Concrete Masonry Culverts **P**	666.000 CY	_____.	_____.
0176	504.0900 Concrete Masonry Endwalls **P**	20.000 CY	_____.	_____.
0178	505.0400 Bar Steel Reinforcement HS Structures **P**	143,650.000 LB	_____.	_____.
0180	505.0600 Bar Steel Reinforcement HS Coated Structures **P**	485,170.000 LB	_____.	_____.
0182	505.0800.S Bar Steel Reinforcement HS Stainless Structures **P**	10,630.000 LB	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0184	506.2605 Bearing Pads Elastomeric Non-Laminated	72.000 EACH	_____.	_____.
0186	506.2610 Bearing Pads Elastomeric Laminated	10.000 EACH	_____.	_____.
0188	506.4000 Steel Diaphragms (structure) 700. B-13-712 **P**	18.000 EACH	_____.	_____.
0190	506.4000 Steel Diaphragms (structure) 701. B-13-714 **P**	18.000 EACH	_____.	_____.
0192	506.4000 Steel Diaphragms (structure) 702. B-13-716 **P**	18.000 EACH	_____.	_____.
0194	506.4000 Steel Diaphragms (structure) 703. B-13-722 **P**	12.000 EACH	_____.	_____.
0196	506.4000 Steel Diaphragms (structure) 704. B-13-724 **P**	16.000 EACH	_____.	_____.
0198	506.5000 Bearing Assemblies Fixed (structure) 702. B-13-716 **P**	10.000 EACH	_____.	_____.
0200	511.1100 Temporary Shoring	4,070.000 SF	_____.	_____.
0202	511.1200 Temporary Shoring (structure) 704. B-13-724	530.000 SF	_____.	_____.
0204	511.1200 Temporary Shoring (structure) 800. C-13-3083	3,145.000 SF	_____.	_____.
0206	511.1200 Temporary Shoring (structure) 801. C-13-3084	610.000 SF	_____.	_____.
0208	511.1200 Temporary Shoring (structure) 802. C-13-3089	560.000 SF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0210	511.1200 Temporary Shoring (structure) 850. R-13-260	960.000 SF	_____.	_____.
0212	511.1200 Temporary Shoring (structure) 851. R-13-261	740.000 SF	_____.	_____.
0214	513.2001 Railing Pipe 850. R-13-260	104.000 LF	_____.	_____.
0216	513.2001 Railing Pipe 851. R-13-261	111.000 LF	_____.	_____.
0218	516.0500 Rubberized Membrane Waterproofing	324.000 SY	_____.	_____.
0220	520.1024 Apron Endwalls for Culvert Pipe 24-Inch	6.000 EACH	_____.	_____.
0222	520.2024 Culvert Pipe Temporary 24-Inch	60.000 LF	_____.	_____.
0224	520.8000 Concrete Collars for Pipe	24.000 EACH	_____.	_____.
0226	521.1012 Apron Endwalls for Culvert Pipe Steel 12-Inch	6.000 EACH	_____.	_____.
0228	521.1618 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 10 to 1	2.000 EACH	_____.	_____.
0230	522.0118 Culvert Pipe Reinforced Concrete Class III 18-Inch	166.000 LF	_____.	_____.
0232	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	258.000 LF	_____.	_____.
0234	522.0130 Culvert Pipe Reinforced Concrete Class III 30-Inch	280.000 LF	_____.	_____.
0236	522.0136 Culvert Pipe Reinforced Concrete Class III 36-Inch	430.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0238	522.0142 Culvert Pipe Reinforced Concrete Class III 42-Inch	844.000 LF	_____.	_____.
0240	522.0148 Culvert Pipe Reinforced Concrete Class III 48-Inch	242.000 LF	_____.	_____.
0242	522.0418 Culvert Pipe Reinforced Concrete Class IV 18-Inch	1,570.000 LF	_____.	_____.
0244	522.0424 Culvert Pipe Reinforced Concrete Class IV 24-Inch	784.000 LF	_____.	_____.
0246	522.0430 Culvert Pipe Reinforced Concrete Class IV 30-Inch	360.000 LF	_____.	_____.
0248	522.0436 Culvert Pipe Reinforced Concrete Class IV 36-Inch	292.000 LF	_____.	_____.
0250	522.0472 Culvert Pipe Reinforced Concrete Class IV 72-Inch	540.000 LF	_____.	_____.
0252	522.0554 Culvert Pipe Reinforced Concrete Class V 54-Inch	146.000 LF	_____.	_____.
0254	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	45.000 EACH	_____.	_____.
0256	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	19.000 EACH	_____.	_____.
0258	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	8.000 EACH	_____.	_____.
0260	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	9.000 EACH	_____.	_____.
0262	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	6.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0264	522.1048 Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	2.000 EACH	_____.	_____.
0266	522.1054 Apron Endwalls for Culvert Pipe Reinforced Concrete 54-Inch	1.000 EACH	_____.	_____.
0268	522.1072 Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	2.000 EACH	_____.	_____.
0270	522.2319 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	4.000 LF	_____.	_____.
0272	522.2324 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 24x38-Inch	134.000 LF	_____.	_____.
0274	522.2329 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	84.000 LF	_____.	_____.
0276	522.2334 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	216.000 LF	_____.	_____.
0278	522.2624 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	1.000 EACH	_____.	_____.
0280	522.2629 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	2.000 EACH	_____.	_____.
0282	524.0118 Culvert Pipe Salvaged 18-Inch	6.000 LF	_____.	_____.
0284	524.0612 Apron Endwalls for Culvert Pipe Salvaged 12-Inch	1.000 EACH	_____.	_____.
0286	524.0618 Apron Endwalls for Culvert Pipe Salvaged 18-Inch	1.000 EACH	_____.	_____.



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0288	524.0624 Apron Endwalls for Culvert Pipe Salvaged 24-Inch	2.000 EACH	_____.	_____.
0290	550.1100 Piling Steel HP 10-Inch X 42 Lb	6,350.000 LF	_____.	_____.
0292	550.1120 Piling Steel HP 12-Inch X 53 Lb	3,800.000 LF	_____.	_____.
0294	601.0551 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A **P**	473.000 LF	_____.	_____.
0296	601.0553 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D **P**	2,866.000 LF	_____.	_____.
0298	602.0410 Concrete Sidewalk 5-Inch **P**	545.000 SF	_____.	_____.
0300	603.1142 Concrete Barrier Type S42 **P**	1,978.000 LF	_____.	_____.
0302	603.8000 Concrete Barrier Temporary Precast Delivered	74,338.000 LF	_____.	_____.
0304	603.8125 Concrete Barrier Temporary Precast Installed	74,338.000 LF	_____.	_____.
0306	604.0400 Slope Paving Concrete	64.000 SY	_____.	_____.
0308	604.0500 Slope Paving Crushed Aggregate	2,477.000 SY	_____.	_____.
0310	606.0200 Riprap Medium	1,596.000 CY	_____.	_____.
0312	606.0300 Riprap Heavy	1,115.000 CY	_____.	_____.
0314	608.0118 Relaid Storm Sewer 18-Inch	128.000 LF	_____.	_____.
0316	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	10.000 LF	_____.	_____.



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0318	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	66.000 LF	_____.	_____.
0320	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	185.000 LF	_____.	_____.
0322	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	8.000 LF	_____.	_____.
0324	611.0430 Reconstructing Inlets	6.000 EACH	_____.	_____.
0326	611.0606 Inlet Covers Type B	4.000 EACH	_____.	_____.
0328	611.0610 Inlet Covers Type BW	9.000 EACH	_____.	_____.
0330	611.0642 Inlet Covers Type MS	10.000 EACH	_____.	_____.
0332	611.0654 Inlet Covers Type V	6.000 EACH	_____.	_____.
0334	611.3220 Inlets 2x2-FT	10.000 EACH	_____.	_____.
0336	611.3225 Inlets 2x2.5-FT	9.000 EACH	_____.	_____.
0338	611.3901 Inlets Median 1 Grate	2.000 EACH	_____.	_____.
0340	611.3902 Inlets Median 2 Grate	4.000 EACH	_____.	_____.
0342	612.0106 Pipe Underdrain 6-Inch	1,897.000 LF	_____.	_____.
0344	612.0212 Pipe Underdrain Unperforated 12-Inch	335.000 LF	_____.	_____.
0346	612.0406 Pipe Underdrain Wrapped 6-Inch	1,665.000 LF	_____.	_____.
0348	612.0806 Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	1.000 EACH	_____.	_____.



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0350	614.0150 Anchor Assemblies for Steel Plate Beam Guard	16.000 EACH	_____.	_____.
0352	614.0905 Crash Cushions Temporary	7.000 EACH	_____.	_____.
0354	614.2300 MGS Guardrail 3	3,984.000 LF	_____.	_____.
0356	614.2500 MGS Thrie Beam Transition	1,103.200 LF	_____.	_____.
0358	614.2610 MGS Guardrail Terminal EAT	20.000 EACH	_____.	_____.
0360	614.2620 MGS Guardrail Terminal Type 2	9.000 EACH	_____.	_____.
0362	616.0100 Fence Woven Wire (height) 001. 4-ft **P**	1,797.000 LF	_____.	_____.
0364	616.0360.S Gates Pipe Single Leaf (length) 001. 16-ft	3.000 EACH	_____.	_____.
0366	616.0700.S Fence Safety	1,000.000 LF	_____.	_____.
0368	618.0100 Maintenance And Repair of Haul Roads (project) 001. 1007-11-79	1.000 EACH	_____.	_____.
0370	618.0100 Maintenance And Repair of Haul Roads (project) 002. 1007-11-80	1.000 EACH	_____.	_____.
0372	619.1000 Mobilization	1.000 EACH	_____.	_____.
0374	624.0100 Water	2,765.000 MGAL	_____.	_____.
0376	625.0500 Salvaged Topsoil	703,900.000 SY	_____.	_____.
0378	627.0200 Mulching	530,235.000 SY	_____.	_____.



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0380	628.1104 Erosion Bales	6,760.000 EACH	_____.	_____.
0382	628.1504 Silt Fence	20,160.000 LF	_____.	_____.
0384	628.1520 Silt Fence Maintenance	135,570.000 LF	_____.	_____.
0386	628.1905 Mobilizations Erosion Control	26.000 EACH	_____.	_____.
0388	628.1910 Mobilizations Emergency Erosion Control	9.000 EACH	_____.	_____.
0390	628.2004 Erosion Mat Class I Type B	117,065.000 SY	_____.	_____.
0392	628.2008 Erosion Mat Urban Class I Type B	30,400.000 SY	_____.	_____.
0394	628.6005 Turbidity Barriers	580.000 SY	_____.	_____.
0396	628.6505 Soil Stabilizer Type A	7.100 ACRE	_____.	_____.
0398	628.6510 Soil Stabilizer Type B	4.000 ACRE	_____.	_____.
0400	628.7005 Inlet Protection Type A	55.000 EACH	_____.	_____.
0402	628.7010 Inlet Protection Type B	50.000 EACH	_____.	_____.
0404	628.7015 Inlet Protection Type C	10.000 EACH	_____.	_____.
0406	628.7504 Temporary Ditch Checks	1,920.000 LF	_____.	_____.
0408	628.7515.S Stone or Rock Ditch Checks	150.000 CY	_____.	_____.
0410	628.7555 Culvert Pipe Checks	295.000 EACH	_____.	_____.
0412	628.7560 Tracking Pads	20.000 EACH	_____.	_____.



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0414	628.7570 Rock Bags	730.000 EACH	_____.	_____.
0416	629.0205 Fertilizer Type A	445.000 CWT	_____.	_____.
0418	630.0110 Seeding Mixture No. 10	6,744.000 LB	_____.	_____.
0420	630.0130 Seeding Mixture No. 30	9,757.000 LB	_____.	_____.
0422	632.0101 Trees (species) (size) (root) 01. Hackberry, Common, B&B, 2-1/2-Inch Cal.	32.000 EACH	_____.	_____.
0424	632.0101 Trees (species) (size) (root) 02. Hickory, Shagbark, B&B, 2-1/2-Inch Cal.	20.000 EACH	_____.	_____.
0426	632.0101 Trees (species) (size) (root) 05. Willow, Black, B&B, 2-1/2-Inch Cal.	17.000 EACH	_____.	_____.
0428	632.0101 Trees (species) (size) (root) 07. Sycamore, American, B&B, 2-Inch Cal.	43.000 EACH	_____.	_____.
0430	632.0101 Trees (species) (size) (root) 08. Elm, Princeton American, B&B, 2-1/2-Inch Cal.	11.000 EACH	_____.	_____.
0432	632.0101 Trees (species) (size) (root) 09. Linden, American, B&B, 2-Inch Cal.	8.000 EACH	_____.	_____.
0434	632.0101 Trees (species) (size) (root) 10. Oak, Red, B&B, 2-Inch Cal.	29.000 EACH	_____.	_____.
0436	632.0101 Trees (species) (size) (root) 11. Maple, Sugar, B&B, 2 1/2-Inch Cal.	11.000 EACH	_____.	_____.
0438	632.0101 Trees (species) (size) (root) 12. Coffeetree, Kentucky Espresso, B&B, 2- Inch Cal.	10.000 EACH	_____.	_____.



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0440	632.0101 Trees (species) (size) (root) 14. Oak, Swamp White, B&B, 2-1/2-Inch Cal.	7.000 EACH	_____.	_____.
0442	632.0101 Trees (species) (size) (root) 15. Yellowwood, American, B&B, 2-Inch Cal.	12.000 EACH	_____.	_____.
0444	632.0101 Trees (species) (size) (root) 17. Buckeye, Sunset, B&B, 2-Inch Cal.	3.000 EACH	_____.	_____.
0446	632.0101 Trees (species) (size) (root) 19. Cedar, Eastern Red, B&B, 8-Foot Ht.	14.000 EACH	_____.	_____.
0448	632.0101 Trees (species) (size) (root) 20. Dogwood, Pagoda, B&B, 6-Foot Ht.	25.000 EACH	_____.	_____.
0450	632.0101 Trees (species) (size) (root) 22. Birch, Yellow, B&B, 7-Foot Ht.	18.000 EACH	_____.	_____.
0452	632.0101 Trees (species) (size) (root) 27. Muscledwood, B&B, 2-Inch Cal.	19.000 EACH	_____.	_____.
0454	632.0101 Trees (species) (size) (root) 30. Hawthorn, Winter King, B&B, 8-Foot Ht.	20.000 EACH	_____.	_____.
0456	632.0101 Trees (species) (size) (root) 03. Maple, Autumn Blaze, B&B, 2-1/2-Inch Cal.	44.000 EACH	_____.	_____.
0458	632.0101 Trees (species) (size) (root) 04. Oak, Swamp x Bur, B&B, 2-Inch Cal.	34.000 EACH	_____.	_____.
0460	632.0101 Trees (species) (size) (root) 06. Oak, Northern Pin, B&B, 2-Inch Cal.	42.000 EACH	_____.	_____.
0462	632.0101 Trees (species) (size) (root) 13. Oak, Bur, B&B, 2-Inch Cal.	22.000 EACH	_____.	_____.
0464	632.0101 Trees (species) (size) (root) 16. Ginkgo, Magyar, B&B, 2-1/2-Inch Cal.	10.000 EACH	_____.	_____.



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0466	632.0101 Trees (species) (size) (root) 18. Pine, Austrian, B&B, 8-Foot Ht.	11.000 EACH	_____.	_____.
0468	632.0101 Trees (species) (size) (root) 21. Hawthorn, Thornless Cockspur, B&B, 6-Foot Ht.	37.000 EACH	_____.	_____.
0470	632.0101 Trees (species) (size) (root) 23. Crabapple, Prairie, B&B, 6-Foot Ht.	24.000 EACH	_____.	_____.
0472	632.0101 Trees (species) (size) (root) 24. Redbud, Eastern, B&B, 7-Foot Ht.	25.000 EACH	_____.	_____.
0474	632.0101 Trees (species) (size) (root) 25. Crabapple, Redbud, B&B, 6-Foot Ht.	30.000 EACH	_____.	_____.
0476	632.0101 Trees (species) (size) (root) 26. Chokecherry, B&B, 6-Foot Ht.	19.000 EACH	_____.	_____.
0478	632.0101 Trees (species) (size) (root) 28. Ash, Snowy Mountain, B&B, 6-Foot Ht.	8.000 EACH	_____.	_____.
0480	632.0101 Trees (species) (size) (root) 29. Lilac, Japanese Tree, B&B, 8-Foot Ht.	8.000 EACH	_____.	_____.
0482	632.0101 Trees (species) (size) (root) 31. Serviceberry, Apple, B&B, 6-Foot Ht.	8.000 EACH	_____.	_____.
0484	632.0101 Trees (species) (size) (root) 32. Lilac, Chinese Tree, B&B, 8-Foot Ht.	40.000 EACH	_____.	_____.
0486	632.0201 Shrubs (species) (size) (root) 01. Chokeberry, Glossy Black, Container, 3-Foot Ht. #5	96.000 EACH	_____.	_____.
0488	632.0201 Shrubs (species) (size) (root) 02. Sumac, Staghorn, Container, 3-Foot Ht. #5	195.000 EACH	_____.	_____.



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0490	632.0201 Shrubs (species) (size) (root) 04. Winterberry, Common, Container, 3-Foot Ht. #5	115.000 EACH	_____.	_____.
0492	632.0201 Shrubs (species) (size) (root) 05. Dogwood, Redtwig, Container, 3-Foot Ht. #5	130.000 EACH	_____.	_____.
0494	632.0201 Shrubs (species) (size) (root) 06. Snowberry, White, Container, 3-Foot Ht. #5	233.000 EACH	_____.	_____.
0496	632.0201 Shrubs (species) (size) (root) 07. Viburnum, Blue Muffin Arrowwood, Container, 3-Foot Ht. #5	192.000 EACH	_____.	_____.
0498	632.0201 Shrubs (species) (size) (root) 08. Ninebark, Common, Container, 3-Foot Ht. #5	96.000 EACH	_____.	_____.
0500	632.0201 Shrubs (species) (size) (root) 09. Bayberry, Northern, Container, 3-Foot Ht. #5	41.000 EACH	_____.	_____.
0502	632.0201 Shrubs (species) (size) (root) 10. Chokeberry, Brilliant Red, Container, 3- Foot Ht. #5	69.000 EACH	_____.	_____.
0504	632.0201 Shrubs (species) (size) (root) 11. Currant, American Black, Container, 3- Foot Ht. #5	59.000 EACH	_____.	_____.
0506	632.0201 Shrubs (species) (size) (root) 12. Dogwood, Silky, Container, 3-Foot Ht. #5	51.000 EACH	_____.	_____.
0508	632.0201 Shrubs (species) (size) (root) 14. Sumac, Gro-Low, Container, 24" Ht. #3	88.000 EACH	_____.	_____.
0510	632.0201 Shrubs (species) (size) (root) 15. Sumac, Smooth, Container, 3-Foot Ht. #5	91.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0512	632.0201 Shrubs (species) (size) (root) 16. Juniper, Sea Green, Container, 3-Foot Ht. #5	136.000 EACH	_____.	_____.
0514	632.0201 Shrubs (species) (size) (root) 03. Buckeye, Bottlebrush, Container, 3-Foot Ht. #5	104.000 EACH	_____.	_____.
0516	632.0201 Shrubs (species) (size) (root) 13. Honeysuckle, Dwarf Bush, Container, 3- Foot Ht. #5	70.000 EACH	_____.	_____.
0518	632.9101 Landscape Planting Surveillance and Care Cycles	13.000 EACH	_____.	_____.
0520	633.0100 Delineator Posts Steel	167.000 EACH	_____.	_____.
0522	633.0500 Delineator Reflectors	217.000 EACH	_____.	_____.
0524	633.1000 Delineator Brackets	36.000 EACH	_____.	_____.
0526	633.5200 Markers Culvert End	108.000 EACH	_____.	_____.
0528	634.0614 Posts Wood 4x6-Inch X 14-FT	25.000 EACH	_____.	_____.
0530	634.0616 Posts Wood 4x6-Inch X 16-FT	114.000 EACH	_____.	_____.
0532	634.0618 Posts Wood 4x6-Inch X 18-FT	14.000 EACH	_____.	_____.
0534	635.0200 Sign Supports Structural Steel HS	8,584.000 LB	_____.	_____.
0536	636.0100 Sign Supports Concrete Masonry **P**	14.600 CY	_____.	_____.
0538	636.0500 Sign Supports Steel Reinforcement	884.000 LB	_____.	_____.
0540	637.1220 Signs Type I Reflective SH	1,019.500 SF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0542	637.2210 Signs Type II Reflective H	2,190.000 SF	_____.	_____.
0544	637.2230 Signs Type II Reflective F	142.250 SF	_____.	_____.
0546	638.2101 Moving Signs Type I	2.000 EACH	_____.	_____.
0548	638.2102 Moving Signs Type II	56.000 EACH	_____.	_____.
0550	638.2601 Removing Signs Type I	11.000 EACH	_____.	_____.
0552	638.2602 Removing Signs Type II	129.000 EACH	_____.	_____.
0554	638.3000 Removing Small Sign Supports	136.000 EACH	_____.	_____.
0556	638.3100 Removing Structural Steel Sign Supports	20.000 EACH	_____.	_____.
0558	638.3150 Removing Overhead Sign Supports Cantilever (structure) 951. S-13-252	1.000 EACH	_____.	_____.
0560	638.3155 Removing Overhead Sign Supports Full Span (structure) 950. S-13-289	1.000 EACH	_____.	_____.
0562	638.4100 Moving Structural Steel Sign Supports	4.000 EACH	_____.	_____.
0564	641.8100 Overhead Sign Support (structure) 950. S-13-502	LS	LUMP SUM	_____.
0566	641.8100 Overhead Sign Support (structure) 951. S-13-501	LS	LUMP SUM	_____.
0568	643.0300 Traffic Control Drums	112,387.000 DAY	_____.	_____.
0570	643.0420 Traffic Control Barricades Type III	18,000.000 DAY	_____.	_____.
0572	643.0705 Traffic Control Warning Lights Type A	22,000.000 DAY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0574	643.0715 Traffic Control Warning Lights Type C	10,350.000 DAY	_____.	_____.
0576	643.0800 Traffic Control Arrow Boards	157.000 DAY	_____.	_____.
0578	643.0900 Traffic Control Signs	76,782.000 DAY	_____.	_____.
0580	643.0920 Traffic Control Covering Signs Type II	16.000 EACH	_____.	_____.
0582	643.1000 Traffic Control Signs Fixed Message	350.250 SF	_____.	_____.
0584	643.1050 Traffic Control Signs PCMS	800.000 DAY	_____.	_____.
0586	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0588	645.0105 Geotextile Type C	981.000 SY	_____.	_____.
0590	645.0111 Geotextile Type DF Schedule A	1,416.000 SY	_____.	_____.
0592	645.0120 Geotextile Type HR	5,002.000 SY	_____.	_____.
0594	645.0130 Geotextile Type R	9.000 SY	_____.	_____.
0596	645.0140 Geotextile Type SAS	31.000 SY	_____.	_____.
0598	645.0220 Geogrid Type SR	18,000.000 SY	_____.	_____.
0600	646.1020 Marking Line Epoxy 4-Inch	32,654.000 LF	_____.	_____.
0602	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	276,264.000 LF	_____.	_____.
0604	646.1555 Marking Line Grooved Contrast Permanent Tape 4-Inch	69,119.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0606	646.3020 Marking Line Epoxy 8-Inch	549.000 LF	_____.	_____.
0608	646.3555 Marking Line Grooved Contrast Permanent Tape 8-Inch	6,373.000 LF	_____.	_____.
0610	646.5020 Marking Arrow Epoxy	6.000 EACH	_____.	_____.
0612	646.5120 Marking Word Epoxy	17.000 EACH	_____.	_____.
0614	646.6120 Marking Stop Line Epoxy 18-Inch	25.000 LF	_____.	_____.
0616	646.6464.S Cold Weather Marking Epoxy 4-Inch	7,404.000 LF	_____.	_____.
0618	646.7120 Marking Diagonal Epoxy 12-Inch	106.000 LF	_____.	_____.
0620	646.8320 Marking Parking Stall Epoxy	1,633.000 LF	_____.	_____.
0622	646.9010 Marking Removal Line Water Blasting 4-Inch	398,136.000 LF	_____.	_____.
0624	646.9110 Marking Removal Line Water Blasting 8-Inch	5,206.000 LF	_____.	_____.
0626	646.9310 Marking Removal Special Marking Water Blasting	2.000 EACH	_____.	_____.
0628	649.0120 Temporary Marking Line Epoxy 4-Inch	201,717.000 LF	_____.	_____.
0630	649.0155 Temporary Marking Line Removable Contrast Tape 4-Inch	23,156.000 LF	_____.	_____.
0632	649.0220 Temporary Marking Line Epoxy 8-Inch	3,123.000 LF	_____.	_____.
0634	649.0770 Temporary Marking Raised Pavement Marker Type II	1,945.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0636	652.0125 Conduit Rigid Metallic 2-Inch **P**	213.000 LF	_____.	_____.
0638	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch **P**	1,790.000 LF	_____.	_____.
0640	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch **P**	2,678.000 LF	_____.	_____.
0642	652.0615 Conduit Special 3-Inch **P**	250.000 LF	_____.	_____.
0644	653.0140 Pull Boxes Steel 24x42-Inch	5.000 EACH	_____.	_____.
0646	653.0164 Pull Boxes Non-Conductive 24x42-Inch **P**	3.000 EACH	_____.	_____.
0648	653.0222 Junction Boxes 18x12x6-Inch	10.000 EACH	_____.	_____.
0650	653.0905 Removing Pull Boxes	6.000 EACH	_____.	_____.
0652	654.0105 Concrete Bases Type 5	18.000 EACH	_____.	_____.
0654	654.1150 Concrete Bases Camera Pole 50-FT	1.000 EACH	_____.	_____.
0656	655.0610 Electrical Wire Lighting 12 AWG	17,169.000 LF	_____.	_____.
0658	655.0620 Electrical Wire Lighting 8 AWG	14,769.000 LF	_____.	_____.
0660	655.0625 Electrical Wire Lighting 6 AWG	228.000 LF	_____.	_____.
0662	656.0200 Electrical Service Meter Breaker Pedestal (location) 401. (CCTV-13-0113)	LS	LUMP SUM	_____.
0664	656.0500 Electrical Service Breaker Disconnect Box (location) 401. (CCTV-13-0113)	LS	LUMP SUM	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0666	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	2.000 EACH	_____.	_____.
0668	657.0322 Poles Type 5-Aluminum	2.000 EACH	_____.	_____.
0670	657.0705 Luminaire Arms Truss Type 4 1/2-Inch Clamp 10-FT	1.000 EACH	_____.	_____.
0672	659.1120 Luminaires Utility LED B	28.000 EACH	_____.	_____.
0674	670.0100 Field System Integrator	LS	LUMP SUM	_____.
0676	670.0200 ITS Documentation	LS	LUMP SUM	_____.
0678	671.0132 Conduit HDPE 3-Duct 2-Inch **P**	13,790.000 LF	_____.	_____.
0680	671.0232 Conduit HDPE Directional Bore 3-Duct 2-Inch **P**	1,225.000 LF	_____.	_____.
0682	673.0110 Communication Vault Type Round	10.000 EACH	_____.	_____.
0684	673.0200 Tracer Wire Marker Posts	10.000 EACH	_____.	_____.
0686	673.0225.S Install Pole Mounted Cabinet	1.000 EACH	_____.	_____.
0688	675.0300 Install Mounted Controller Microwave Detector Assembly	4.000 EACH	_____.	_____.
0690	677.0150 Install Camera Pole 50-FT	1.000 EACH	_____.	_____.
0692	677.0200 Install Camera Assembly	1.000 EACH	_____.	_____.
0694	678.0600 Install Ethernet Switches	1.000 EACH	_____.	_____.
0696	678.0800 Install Cellular Modems	2.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0698	690.0150 Sawing Asphalt	2,267.000 LF	_____.	_____.
0700	690.0250 Sawing Concrete	2,406.000 LF	_____.	_____.
0702	715.0415 Incentive Strength Concrete Pavement	166,692.600 DOL	1.00000	166,692.60
0704	715.0502 Incentive Strength Concrete Structures	30,054.000 DOL	1.00000	30,054.00
0706	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	3,200.000 HRS	5.00000	16,000.00
0708	ASP.1T0G On-the-Job Training Graduate at \$5.00/HR	6,000.000 HRS	5.00000	30,000.00
0710	SPV.0005 Special 500. Subsoiling	10.000 ACRE	_____.	_____.
0712	SPV.0005 Special 501. Pre-Planting Vegetation Treatment	221.500 ACRE	_____.	_____.
0714	SPV.0005 Special 502. Seed Bed Preparation	140.000 ACRE	_____.	_____.
0716	SPV.0035 Special 001. Roadway Embankment	290,089.000 CY	_____.	_____.
0718	SPV.0035 Special 501. Topsoil Special	2,227.000 CY	_____.	_____.
0720	SPV.0035 Special 700. High Performance Concrete (HPC) Masonry Structures **P**	2,740.000 CY	_____.	_____.
0722	SPV.0060 Special 001. Baseline CPM Progress Schedule	1.000 EACH	_____.	_____.
0724	SPV.0060 Special 002. CPM Progress Schedule Updates and Accepted Revisions	20.000 EACH	_____.	_____.
0726	SPV.0060 Special 003. Removing Billboards	1.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0728	SPV.0060 Special 004. Test Pits	32.000 EACH	_____.	_____.
0730	SPV.0060 Special 005. Department Owned Field Office Equipment and Maintenance	1.000 EACH	_____.	_____.
0732	SPV.0060 Special 006. Salvage and Reinstall Lighting Unit	16.000 EACH	_____.	_____.
0734	SPV.0060 Special 007. Roadway Cleanup	16.000 EACH	_____.	_____.
0736	SPV.0060 Special 008. Repair State Owned Energy Absorbing Terminal (EAT)	12.000 EACH	_____.	_____.
0738	SPV.0060 Special 009. Salvage and Reinstall Crash Cushion	1.000 EACH	_____.	_____.
0740	SPV.0060 Special 200. Temporary Concrete Barrier Gate	3.000 EACH	_____.	_____.
0742	SPV.0060 Special 201. Install Department Furnished Crash Cushion Low Maintenance	2.000 EACH	_____.	_____.
0744	SPV.0060 Special 202. Repair State Owned Crash Cushion Low Maintenance	2.000 EACH	_____.	_____.
0746	SPV.0060 Special 203. Repair State Owned Crash Cushion	12.000 EACH	_____.	_____.
0748	SPV.0060 Special 204. Emergency Response to Traffic Incident Involving Conc Barrier Temp Precast	10.000 EACH	_____.	_____.
0750	SPV.0060 Special 205. Emergency Response to Traffic Incident Involving Crash Cushion	6.000 EACH	_____.	_____.
0752	SPV.0060 Special 206. Emergency Response to Traffic Incident Involving Guard Rail or EAT	6.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0754	SPV.0060 Special 401. Install Solar Powered System - Microwave Detector	1.000 EACH	_____.	_____.
0756	SPV.0060 Special 506. Native Seed Surveillance and Care Cycles	8.000 EACH	_____.	_____.
0758	SPV.0060 Special 507. Delineator Post Steel Modified	563.000 EACH	_____.	_____.
0760	SPV.0060 Special 508. Planting Living Snow Fence	17,702.000 EACH	_____.	_____.
0762	SPV.0085 Special 509. Seeding Native Mix N1	100.000 LB	_____.	_____.
0764	SPV.0085 Special 510. Seeding Native Mix N2	2,298.000 LB	_____.	_____.
0766	SPV.0085 Special 511. Seeding Native Mix N3	100.000 LB	_____.	_____.
0768	SPV.0085 Special 512. Seeding Native Mix N4	122.000 LB	_____.	_____.
0770	SPV.0090 Special 001. Concrete Pavement Joint Sealing	1,978.000 LF	_____.	_____.
0772	SPV.0090 Special 002. Concrete Curb 4-Inch Sloped Special **P**	107.000 LF	_____.	_____.
0774	SPV.0090 Special 003. Repair State Owned Guardrail	3,600.000 LF	_____.	_____.
0776	SPV.0090 Special 004. Concrete Curb & Gutter 36-Inch Type A Special **P**	249.000 LF	_____.	_____.
0778	SPV.0090 Special 005. Salvage and Reinstall Steel Thrie Beam	730.000 LF	_____.	_____.
0780	SPV.0090 Special 150. Compost Tube	9,320.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0782	SPV.0090 Special 200. Traffic Control Gawk Screen Furnished	1,325.000 LF	_____.	_____.
0784	SPV.0090 Special 201. Traffic Control Gawk Screen Installed	1,325.000 LF	_____.	_____.
0786	SPV.0090 Special 202. Traffic Control Glare Screen Furnished	1,225.000 LF	_____.	_____.
0788	SPV.0090 Special 203. Traffic Control Glare Screen Installed	1,225.000 LF	_____.	_____.
0790	SPV.0090 Special 204. Concrete Barrier Temporary Precast Left In Place	1,380.000 LF	_____.	_____.
0792	SPV.0090 Special 205. Maintenance and Removal of Conc Barrier Temporary Precast L.I.P. by Others	16,924.000 LF	_____.	_____.
0794	SPV.0090 Special 206. Repair State Owned Concrete Barrier Temporary Precast	1,400.000 LF	_____.	_____.
0796	SPV.0090 Special 850. Fence Chain Link Polymer- Coated 4-FT	133.000 LF	_____.	_____.
0798	SPV.0105 Special 001. Survey Project 1007-11-79 with Optional AMG For Conc Pavement & Base Course	LS	LUMP SUM	_____.
0800	SPV.0105 Special 002. Survey Project 1007-11-80 with Optional AMG for Conc Pavement & Base Course	LS	LUMP SUM	_____.
0802	SPV.0105 Special 003. Concrete Pavement Joint Layout Project 1007-11-79	LS	LUMP SUM	_____.
0804	SPV.0105 Special 004. Concrete Pavement Joint Layout Project 1007-11-80	LS	LUMP SUM	_____.
0806	SPV.0105 Special 401. Weigh-In-Motion System	LS	LUMP SUM	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0808	SPV.0105 Special 402. Weigh-In-Motion System Warranty Maintenance	LS	LUMP SUM	_____.
0810	SPV.0105 Special 403. Static Scale System	LS	LUMP SUM	_____.
0812	SPV.0105 Special 404. Static Scale System Warranty Maintenance	LS	LUMP SUM	_____.
0814	SPV.0165 Special 700. Longitudinal Grooving Bridge Deck **P**	53,240.000 SF	_____.	_____.
0816	SPV.0165 Special 850. Wall Concrete Panel Mechanically Stabilized Earth R-13-260 **P**	2,535.000 SF	_____.	_____.
0818	SPV.0165 Special 851. Wall Concrete Panel Mechanically Stabilized Earth R-13-261 **P**	3,385.000 SF	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.

PLEASE ATTACH SCHEDULE OF ITEMS HERE