**HIGHWAY WORK PROPOSAL**

Proposal Number: 1 4

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

| COUNTY | STATE PROJECT ID | FEDERAL PROJECT ID | PROJECT DESCRIPTION | HIGHWAY |
|---|---|---|---|---|
| Milwaukee | 1090-07-73 | | Zoo Freeway - West Allis<br>Cleveland Avenue,<br>B-40-0122<br>Bridge Replacement | IH 894/US 45 |

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

| | |
|---|---|
| Proposal Guaranty Required, $ 75,000.00<br>Payable to: Wisconsin Department of Transportation | Attach Proposal Guaranty on back of this PAGE. |
| Bid Submittal Due<br>Date:April 9, 2013<br>Time (Local Time):9:00 AM | Firm Name, Address, City, State, Zip Code<br>**SAMPLE**<br>**NOT FOR BIDDING PURPOSES** |
| Contract Completion Time<br>One Hundred Four (104) Working Days | |
| Assigned Disadvantaged Business Enterprise Goal<br>0 % | This contract is exempt from federal oversight. |

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

**Notary Seal**

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

**For Department Use Only**

Type of Work

Structures B-40-884,R-40-580, R-40-581, removing pavement, excavation common, excavation for structures, concrete pavement, concrete masonry bridges, prestressed girders, bar steel reinforcement hs coated, concrete curb and gutter, steel diaphragms, piling steel hp.

| 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 2007 Letting**

# BID PREPARATION

## Preparing the Proposal Schedule of Items

### A General

(1) Obtain bidding proposals as specified in section 102 of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:

1. Electronic bid on the internet.
2. Electronic bid on a printout with accompanying diskette or CD ROM.
3. Paper bid under a waiver of the electronic submittal requirements.

(2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.

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

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

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

**(5)** The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.

**(6)** Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

### B Submitting Electronic Bids

#### B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at **http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm**. Use Expedite ™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.

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

**Bidder Name**

**BN00**

**Proposals: 1, 12, 14, & 22**

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

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

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

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.

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

**C Waiver of Electronic Submittal**

(1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.

(2) Submit a schedule of items on paper conforming to section 102 of the standard specifications. The department charges the bidder a $75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."

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

1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
2. The bidder fails to pay the $75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the $75.
3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.

(4) In addition to the reasons specified in section 102 of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

# PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

**PRINCIPAL**

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

**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

Wisconsin Department of Transportation

DT1305 8/2003

| |
|---|
| Time Period Valid (From/To) |
| Name of Surety |
| Name of Contractor |
| Certificate Holder<br>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)

**FEBRUARY 1999**

## LIST OF SUBCONTRACTORS

Section 66.29(7), Wisconsin Statutes, provides that a bidder, as a part of his proposal, shall submit a list of the subcontractors he proposes to contract with and the class of work to be performed by each, provided that to qualify for such listing each subcontractor must first submit his bid in writing to the general contractor at least 48 hours prior to the time of bid closing. It further provides that a proposal of a bidder shall not be invalid if any subcontractor, and the class of work to be performed by such subcontractor, has been omitted from a proposal.

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

| Name of Subcontractor | Class of Work | Estimated Value |
|---|---|---|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

**DECEMBER 2000**

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Special Provisions

## Table of Contents

**SPECIAL PROVISIONS**

## 1. General.

Perform the work under this construction contract for Project 1090-07-73, Zoo Freeway – West Allis, Cleveland Avenue, B-40-0122, Bridge Replacement, Milwaukee 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, 2013 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 (20120615)

## 2. Scope of Work.

The work under this contract shall consist of removing old structure, removing pavement, excavation common, backfill structure, excavation for structures bridges and retaining walls, concrete pavement, concrete masonry bridges, prestressed girders, bar steel reinforcement hs coated bridges and retaining walls, concrete curb and gutter, steel diaphragms, piling steel hp, 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.

**CPM Program Schedule**
Submit a CPM Progress Schedule and updates in accordance to standard spec 108.4.4.

To ensure compatibility with the Master Program Schedule, use the latest version of Primavera Project Planner (P6), by Primavera Systems, Inc., Bala Cynwyd, PA to prepare the Initial CPM Progress Schedule, Monthly CPM Progress Updates and other CPM Progress Revisions requested by the engineer.

Within five business days after award, the department will provide its current standard Work Breakdown Structure and activity codes for the contractor to use to develop the Initial CPM Progress Schedule.

Designate a project scheduler who will be responsible for scheduling the work and submit for approval a professional resume describing a minimum of three years of scheduling experience on interstate-highway reconstruction work of similar size and complexity, including recent experience with P6.

Perform the work for Project 1090-07-73 in accordance to the following stages as shown in the plans:

**Stage 1**
Prior to stage 1 perform Inlet Cover Replacements in accordance to the plan details. Install traffic control devices. Remove existing structure except for the center pier. Construct retaining walls and abutments.

**Stage 2**
Install traffic control devices. Remove the existing center pier and construct the proposed center pier. Erect girders. Construct superstructure.

**Stage 1 or Stage 2**
Work on Cleveland Avenue may be performed in either stage 1 or stage 2 at the contractor's discretion, except for the area at the east end that overlaps with We Energies gas main construction. The contractor shall wait until after the gas main is installed to construct the roadway and sidewalk in this area.

**Contractor Coordination**
Attend weekly scheduling meetings to discuss the near term schedule activities, address any long-term schedule issues, and discuss any relevant technical issues. Develop a rolling three-week schedule identifying the previous week worked and a two week "look ahead". Provide sufficient detail to include actual and planned activities and all the subcontractors for offsite and construction activities, addressing all activities including ramp and lane closure schedules to be performed and identifying issues requiring engineering action or input. Submit plans for all traffic control for review by the engineer and approval a minimum of one week prior to implementation.

**Advance Notification**
Notify the engineer and WisDOT Statewide Traffic Operations Center, (414) 227-2142, if there are any changes in the schedule, early completions, or cancellations of scheduled work. Coordinate the locations of messages of portable changeable message sign with the engineer and WisDOT STOC. Notify WisDOT Signal Operations, (414) 750-2605, and WisDOT Electrical Field Unit, (414) 266-1170, regarding changes for alternate routes and detours.

Provide the engineer with a schedule of lane and ramp closures for the following week by noon on Thursday of the previous week. In addition, provide the following minimum advance notification to the engineer for incorporation into the Wisconsin Lane Closure System.

| | |
|---|---|
| Beginning of Project | 14 calendar days |
| Ramp Closures | 3 business days |
| System Ramp Closures | 7 calendar days |
| Lane Closures | 3 business days |
| Full Freeway Closures | 14 calendar days |
| Construction Stage Changes | 14 calendar days |
| Detours | 14 calendar days |

**Definitions**

The following definitions apply to this contract for freeway work restrictions:

**Weekday Peak Hours**

| | |
|---|---|
| 5:30 AM – 8:00 PM | Monday, Tuesday, Wednesday, Thursday |
| 5:30 AM – 11:00 PM | Friday |

**Weekend Peak Hours**

| | |
|---|---|
| 7:30 AM – 7:00 PM | Saturday, Sunday |

**Weekday Off-Peak Hours**

| | |
|---|---|
| 8:00 PM – 9:30 PM | Monday, Tuesday, Wednesday, Thursday |

**Weekend Off-Peak Hours**

| | |
|---|---|
| 7:00 PM – 11:00 PM | Saturday |
| 7:00 PM – 9:30 PM | Sunday |

**Night Time Hours**

9:30 PM – 5:30 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)

11:00 PM – 7:30 AM (Friday PM to Saturday AM, Saturday PM to Sunday AM)

**Full Freeway Closure/Hours**

11:00 PM – 4:30 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)

**Freeway Work Restrictions**

All lanes of the freeway shall be entirely clear and open to traffic at all times except for approved Night Time Hour or Off-Peak Hour closures as approved by the engineer. Dual lane operation is permitted during Night Time Hours and Off-Peak Hours pending the approval of the engineer. Lane closures shall be in accordance to the standard detail drawings (SDD) and have the approval of the engineer and the Statewide Traffic Operations Center, (414) 227-2142.

Full closure and detouring of freeway roads will be restricted to Full Freeway Closure Hours. The freeway may be closed to facilitate the removal of structures and erection of girders, deck pours and to perform work related to major traffic shifts. Provide signed detour routes, as shown in the plans that are fully open and free of construction during all full freeway and system ramp closures.

If the contractor fails to open all lanes of traffic and ramps by the specified times, then a reduction of $8,000 per hour per traffic lane or ramp for each hour of lane or ramp closure violations will be made from monies due to him. This reduction will be applied in a quarterly fraction of the $8000 hourly reduction rate for each 15-minute increment during which the lane or ramp closure violation occurs. The total reduction from monies due to the contractor is the summation of the separate reductions for each lane and each ramp closure violation. The department will assess hourly liquidated damages for the roadway lanes and ramps not being open to traffic under the Failing to Open Road to Traffic administrative item.

**Local Street Work Restrictions**
Comply with all local ordinances that apply to local street work operations, including those pertaining to working during night time hours. Furnish any ordinance variance issued by the municipality or required permits to the engineer in writing three days prior to performing such work.

Existing trees, street light poles, hydrants and other utility poles are to remain in place during construction unless otherwise noted in the plan. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between the trees, hydrants and poles and the paving equipment.

**Traffic Control Deficiency Response Time Penalty**

*Supplement standard spec 643.3.2(8) with the following*

Upon receiving written notification from the engineer, clean, repair or replace traffic control devices not performing as intended to the satisfaction of the engineer within 12 hours. Failure to clean, repair or replace required traffic control within the time limits specified above will result in daily monetary deductions of $500 for each 24-hour period (or portion thereof starting 12 hours after time of notification) in which the traffic control deficiency exists.

## 4. Traffic.

Cleveland Avenue and 101st Street will be closed to through traffic. Maintain access for local residents, emergency vehicles and utility maintenance vehicles at all times.

## 5. Traffic Meetings and Traffic Control Scheduling.

Every Wednesday by 10:00 AM, submit a detailed proposed 2-week look-ahead traffic closure schedule to the engineer. Type the detailed proposed 2-week look-ahead closure schedule into an excel spreadsheet provided by the engineer. Enter information such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general 2-month look-ahead closure information into the excel spreadsheet.

Meet with the engineer at 11:00 AM on Wednesdays at the Zoo Interchange project office located at 2424 S. 102nd Street, West Allis, WI 53227 to discuss and answer questions on the proposed schedule. Edit, delete and add closures to the detailed proposed 2-week look-ahead schedule, as directed by the engineer, so that proposed closures meet specification requirements. Other edits, deletions or additions unrelated to meeting specification requirements may also be agreed upon between the contractor and engineer during the 11:00 AM meeting. The 11:00 AM meeting is mandatory for the prime contractor and the traffic control subcontractor.

Every Wednesday at 2:00 PM attend a weekly traffic meeting. The meeting is mandatory for the prime contractor. The meeting will bring local agencies, project stakeholders, owner managers, owner engineers, contractors, document control and construction engineering personnel together to discuss traffic staging, closures and general impacts. Upon obtaining feedback from the meeting attendees, edit, delete and add information to the detailed 2-week look-ahead closure schedule, as needed. Submit the revised 2-week look-ahead to the engineer.

Obtain approval from the engineer for any mid-week changes to the closure schedule. Revise the 2-week look-ahead as required and obtain engineer approval.

## 6. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying I-894/US45, Cleveland Avenue, 99th Street, 101st Street traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, May 24, 2013 to 6:00 AM Tuesday, May 28, 2013 for Memorial Day;
- From noon Wednesday, July 3, 2013 to 6:00 AM Monday July 8, 2013 for Independence Day;
- From noon Thursday, August 29, 2013 to 6:00 AM Tuesday, September 3, 2013 for Labor Day.

Lane closures are not allowed during Summer Fest, two hours prior and two hours after a Milwaukee Brewers home game, the Wisconsin State Fair and the Harley-Davidson's 110th Anniversary Celebration.
107-005 (20050502)

## 7. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.
107-065 (20080501)

Additional information regarding recently relocated utility facilities may be available on permits issued to the utility facility owners. These permits can be viewed at the Region Office during normal working hours. Contact WisDOT SE Freeways Utility Coordinator Maria Rojas at (414) 750-4362 for further information.

Underground and overhead utility facilities are located within the project limits. Utility adjustments are required for this construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per state statute. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Some utility work, as described below, is dependent on prior work being performed by the contractor at a specific site. Provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Notice shall be given 14 to 16 calendar days in advance of when the site will be available to the utility. Follow up with a confirmation notice to the engineer and the utility not less than 3 working days before the site will be ready for the utility to begin its work.

Contact utility companies listed in the plans prior to preparing bids to obtain current information on existing utility locations and the status of any new utility relocation work.

Utility companies will be performing utility work and adjustments within the limits and during the life of the project. The contractor shall cooperate and coordinate construction activities with these companies.

There may be abandoned utility facilities within the project limits. If a conflict with an abandoned utility facility is encountered, contact the appropriate utility owner/representative to coordinate construction activities and proper removal and disposal of said facility as necessary.

Utility working days shown herein are as defined in Wisconsin Administrative Code Chapter Trans 220.

All contractors' equipment must maintain the minimum OSHA clearance from WE Energies (Electric) and American Transmission Company (ATC Management, Inc.) overhead facilities as described in OSHA's guidelines for clearances. All contractors should incorporate any additional costs associated with working around existing WE Energies (Electric) and American Transmission Company (ATC Management, Inc.) facilities into their bid, as WE Energies (Electric) and American Transmission Company (ATC Management, Inc.) believes they do not impose any direct conflicts with the scope of this project.

Known utilities in the projects are as follows:

**West Allis, City of (Storm Sewer)** has storm sewer facilities running along and in Cleveland Avenue and 101st Street.
These facilities will be relocated, adjusted or reconstructed as part of this project, the work includes:

- Reconstruction of manhole at Station 46+41.16 LT.
- Removal and replacement of catch basins at Station 46+73.26 LT, Station 46+78.11 RT and piping to connect to reconstructed manhole.
- Adjustment of inlets at Station 49+25.11 LT and Station 49+25.12 RT.
- Adjustment of manhole at Station 49+24.28 RT.
- Installation of a manhole at Station 50+42.67 RT.
- Installation of catch basins at Station 50+42.67 LT, Station 50+42.67 RT and piping to connect to manhole.
- Replacement of covers at Station 50+42.67 RT, Station 51+14.94 LT and Station 51+15.60 RT.

Contact Joseph Burtch, (414) 302-8379, of City of West Allis –Sewer 14 days in advance to coordinate locations and any excavation near their facilities.

**West Allis, City of (Sanitary Sewer)** has sanitary sewer facilities running along and in Cleveland Avenue and 101st Street.

Work to adjust sanitary sewer manhole covers and install internal manhole seals is part of this project and will occur at the following manhole locations:

- Station 45+55 LT.
- Station 51+26.3 LT.
- Station 5+83.65 RT.

Contact Joseph Burtch, (414) 302-8379, of City of West Allis –Sewer 14 days in advance to coordinate locations and any excavation near their facilities.

**West Allis, City of (Watermain)** has a watermain running along and in Cleveland Avenue.

The water main attached to the existing bridge will be relocated prior to construction and the remaining un-used portions will be abandoned in-place under Project 1090-03-74 from Station 46+32 LT to Station 49+37 LT. The contractor shall remove the abandoned in-place portions of the water main during bridge demolition and structure and roadway construction as shown on the plans and as necessary to complete their work.

Work to adjust water valves is part of this project and will occur at the following valve locations:

- Station 46+31.8 LT.
- Station 46+31.9 LT.
- Station 46+34.7 LT.
- Station 46+35.6 RT.
- Station 49+39.6 LT.

Contact Peter Daniels, (414) 302-8374, of City of West Allis 14 days in advance to coordinate locations and any excavation near their facilities.

**West Allis, City of (Lighting)** has two circuits of series lighting within the project limits. One circuit running along and in Cleveland Avenue and one circuit running along and in 101st Street.

Prior to construction the circuit in Cleveland Avenue will be severed and a temporary overhead line will be installed from the existing poles at Station 44+25 RT to Station 44+79 LT on the west side and Station 51+76 RT to Station 52+40 LT on the east side of the bridge. During construction conduits will be installed across Cleveland Avenue at approximate Station 46+00 and Station 49+75 for reconnection and separation of the circuits on the west and east sides of the bridge.

Prior to construction the light pole at Station 4+52 RT will be disconnected from the circuit in 101st Street. The remaining portions of this circuit will remain live.

Work to remove and reinstall light poles that are directly impacted by the project, provide electrical service, wire and install a control cabinet is part of this project and will occur at the following locations:

- Remove and salvage pole, fixture and lamp at Station 4+02 RT, install new base, pole, fixture and lamp at Station 3+98 RT.
- Remove and salvage poles, fixtures and lamps and install new poles, fixtures and lamps at Station 47+70.48 LT, Station 47+70.48 RT, Station 48+52.48 LT and Station 48+52.48 RT on the structure.
- Install control cabinet and base at 46+24 LT.
- Install conduit, wiring and electrical service for new system.

Contact Peter Daniels, (414) 302-8374, of City of West Allis – Lighting 14 days in advance to coordinate work and any excavation near their facilities.

**We Energies (Electric)** has overhead facilities running north and south, crossing Cleveland Avenue from station 49+25 to 50+80, underground facilities running east and west approximately 17 feet north of the centerline starting at Station 50+00 to the end of the project.

- A manhole at Station 50+07 – 17' LT will be adjusted by WE Energies forces during construction. This work will require a notification fourteen business days in advance of the work, contact Curt Dawkins at (414) 540-5782.
- A transite conduit package hanging from the Cleveland Avenue Bridge will be removed by We Energies during construction. We Energies environmental contractor will have complete access to the project site for a minimum of 6 days, starting from the time the traffic control is set up, to remove the facilities from the bridge. The We Energies environmental contractor will coordinate with the road contractor in cases where road contractor work can be done in conjunction with We Energies environmental work during the 6 day window.
- It is imperative that the highway contractor contact We Energies before removing any electrical underground cables, to verify that they have been abandoned and carry no electrical current. The contractor must not assume that unmarked facilities have been abandoned. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour Dispatch lines to arrange for this verification.

  We Energies Electric Dispatch, (800) 662-4797.

**We Energies (Gas Operations)** has a 3-inch gas main running along the south side of Cleveland Avenue and hanging from the Cleveland Avenue Bridge and also plans to construct a 24-inch gas main in Cleveland Avenue and in the WE Energies right-of-way along I-894/US45.

- The 3" steel gas main hanging from the bridge will be cut off, purged of any gas and abandoned in place prior to construction. The cuts will be made at Station 46+25 – 36' RT and Station 50+75 – 39' RT. Testing of the coating revealed no asbestos present. It is the responsibility of the contractor to remove and dispose of any abandoned gas facilities that conflict with the work during construction. It is imperative that the highway contractor contact We Energies before removing any gas facilities, to verify that they have been abandoned and carry no natural gas. The contractor must not assume that unmarked facilities have been abandoned. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour Dispatch lines to arrange for this verification.

- We Energies Gas Dispatch, (800) 261-5325.

- The construction of the 24-inch gas main from approximate Station 50+75 to the north and to the east will occur during the summer of 2013. It is anticipated that construction will start on or about March 11, 2013 and last 35 days. The contractor shall coordinate concrete paving operations to occur after this gas main is installed with We Energies staff, contact Matthew Fehler at (414) 944-5765.

**AT&T Wisconsin** has a buried fiber optic communication line running east and west approximately 9.5' north of the centerline of Cleveland Avenue and a transite conduit package hanging from the Cleveland Avenue Bridge.

- The relocation of the communications line will occur prior to construction. An existing 8'x4'x6'h, AT&T manhole at Station 46+14.5, 8.6' LT, is to be replaced with a 12'x6'x7'h, manhole. From this manhole, 6 new 4" plastic ducts will be trenched 180' north in 101st Street, 4' off the westerly curb line to a new 12'x6'x7'h manhole in the alleyway at Station 46+07, 171.5' LT.

  From this manhole, 6-4" HDPE ducts will be bored easterly beneath I-894, to a new 12'x6'x7'h, manhole at Station 50+06, 174' LT.

  From this manhole, 6 ducts will be trenched south to a new 12'x6'x7'h, manhole, to be placed at Station 50+16.5, 11' LT which will be set over an existing 6 duct telephone package in Cleveland Ave.

  AT&T will remove the existing 6-3.5" transite ducts suspended from the existing bridge structure after all ducts have been relocated and recabling has been completed. Duct removal will take place immediately prior to the bridge removal, taking approximately one week to complete. Coordination with the bridge contractor will be necessary as the intent is to work under their traffic control setup.

  From the manhole at Station 46+14.5, 8.6' LT, 6 existing concrete encased tile duct go east for 8', switching to transite duct and continue across the bridge. These ducts and any cables within will be abandoned in place, except for those ducts suspended from the bridge, which will be removed by AT&T. Also from this manhole, 6 concrete and one tile duct going west to beyond the project limits, will remain active and in place. At approximately Station 45+07, 9' LT, the 4" tile duct curves northwesterly to the right-of-way. Records indicate these ducts to have 36"+ of cover. One 4" plastic duct going northeasterly from the manhole will also remain active and in place. This duct has 36" of cover at the manhole.

  From the new manhole at Station 50+16.5, 11' LT, an existing 6 concrete duct package goes west for approximately 10', switching to transite duct and continuing across the bridge. Records indicate these ducts to have 3" of surrounding concrete encasement. These ducts and any cables within will be abandoned in place, except for those ducts suspended from the bridge, which

will be removed by AT&T. Also from this manhole, the existing 6 concrete encased concrete duct package going east to beyond the project limits will remain active and in place. Records indicate these ducts to have approximately 36" of cover.

For all new AT&T duct placement, typical cover will be 36" and for all new manhole placement/rebuilds, cover will be 30". Construction and cure time for the concrete poured in place manholes will be approximately 14 working days each.

AT&T intends to have all new facilities and cable placement completed prior to the mid-May start of the bridge replacement project.

Duct work not removed will be abandoned in place. It is the responsibility of the contractor to remove and dispose of any abandoned facilities that conflict with the work during construction, contact Mr. Dean Hero, (414) 678-2644, of AT&T Wisconsin seven business days in advance to verify that the duct packages have been abandoned.

**AT&T Corporation** has a buried fiber optic line running north and south at approximate Station 49+24. This facility is not anticipated to be in conflict with construction of R-40-580, review of existing plans and field measurements has the line at approximately 6.5' above the top of the leveling pad. Temporary shoring is included in the project to protect this line and the water main installed under Project 1090-07-74. Before work is performed around this facility contact Carl Donahue (847) 420-9115 of AT&T Corporation and Bill Koenig of JMC Engineers, (608) 628-0575, 7 business days in advance to coordinate locations and any excavations near their facilities.

**WisDOT STOC** has fiber optic communication lines running east and west attached to the outside of the south parapet of the existing bridge, fiber optic communication lines running north south along I-894/US45 outside of the NB roadway and a control cabinet located at the SE corner of Cleveland Avenue and 101st Street. Portions of these facilities will remain in place without adjustment and portions will be relocated as part of this project. Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 business days in advance to coordinate locations and any excavation near their facilities.

**WisDOT Traffic Lighting** has an electrical line running north south along the median of I-894/US45. These facilities will remain in place without adjustment. Contact Matt Pfeifer, (414) 266-1154, of WisDOT - Lighting 7 business days in advance to coordinate locations and any excavation near their facilities.

**West Allis West Milwaukee School District** has a buried fiber optic communication line running east and west approximately 35'-45' south of the centerline of Cleveland Avenue which is in conflict with construction of R-40-580 and R-40-581. This facility will be relocated to 99th Street, West Wildwood Court, We Energies right-of-way, I-894 and 101st Street. All existing vaults and fiber optic cable will be removed within the project

limits, a 2 inch SDR11 orange plow duct will be abandoned in place and it is the responsibility of the contractor to remove and dispose of any portions of the abandoned facility that conflict with the work.

The following utility companies have facilities within the project area; however, adjustments are not anticipated:

**American Transmission Company** has 138kV overhead electric facilities within/along USH 45 including the ramps. These overhead facilities will remain in place without adjustment and are anticipated to remain energized during construction. If construction requires the use of a crane that is in conflict with the transmission wires, an outage must be scheduled 90 days in advance. The availability of an outage is determined by system conditions at the time and cannot be guaranteed. All outages are controlled by the ATC System Operations Department. All load redispatch costs and utility switching costs shall be the responsibility of the contractor.

Stockpiling or staging of equipment/materials under or near the ATC transmission lines and towers shall not be allowed. Unobstructed access to the transmission lines and towers shall be maintained at all times.

Contact Mike Olsen, (920) 338-6582, of American Transmission Company 7 business days in advance to coordinate locations and any excavation near American Transmission Company facilities.

**MMSD**
**Time Warner Cable**

## 8. Pay Plan Quantity.

### A Bid Items Designated as Pay Plan Quantity

*Replace standard spec 109.1.1.2 with the following:*

If the schedule of items designates a bid item with a **P** in the title, the department will not measure that bid item. The department will use the plan quantity, the approximate quantity shown on the schedule of items, for payment unless a contract revision affects a designated bid item.

If the engineer revises the contract under standard spec 104.2, the department will adjust the quantity of designated items that are affected by the revised work. The engineer will adjust the affected quantity, with a contract modification as defined in standard spec 101.3, regardless of the magnitude of the revised work, which may result in either an increase or a decrease from the quantity shown on the schedule of items. The department will measure revised work as specified in standard spec 109.1.1.1. If the engineer revises the contract to eliminate a designated item, the engineer will not pay for the designated item, except as specified in standard spec 109.5.

The approximate quantity shown on the schedule of items for a designated item is for information only and only an estimate. The engineer makes no guarantee that the quantity, which can be determined by computations based on contract information, will equal the approximate quantity shown on the schedule of items. The engineer will not make a quantity adjustment for discrepancies.

## 9. Payment Tracking.

**A Reporting Payments During Construction**
Comply with reporting requirements specified in the department's civil rights and labor compliance management system manual.

Report payments to all first tier relationships including subcontractors, suppliers, and trucking 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 subcontractors, suppliers, and trucking firms. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.

Require all first tier relationships including subcontractors, suppliers, and trucking firms in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1) and (2).

Include the provisions in A(1) and (3) in all agreements . Agreements will be binding on all first tier relationships including subcontractors, suppliers, and trucking firms on the project.

**B (Vacant)**

**C (Vacant)**

**D (Vacant)**

**E Payment**
Costs for conforming to this special provision are incidental to the contract.

## 10. Public Information Meetings.

Participate in department-sponsored public information meetings as the engineer requests. Ensure that representatives of subcontractors also participate in those meetings if the engineer requests.

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

John Roelke, License Number AII-119523, inspected Structure B-40-0122 for asbestos on November 16, 2011. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: James Keegan, WisDOT SE Region, (414) 750-3311.

In accordance 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. Also, provide a copy of the completed 4500-113 form to Michael Cape, WisDOT SE Region, 141 NW Barstow Street, Waukesha, WI 53187-0798 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-40-0122, West Cleveland Avenue over IH 894 – USH 45.
- Site Address: Section 8, Town 6 North, Range 21 East, City of West Allis.
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow Street, Waukesha, WI. 53187-0798
- Contact: James Keegan
- Phone: 414-750-3311
- Age: 52 years old. This structure was constructed in 1961.
- Area: 13,200 SF of deck.

Insert the following paragraph in Section 6.g.:

- If asbestos not previously identified is found or previously nonfriable 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 in accordance 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)

## 12. Notice to Contractor, Notification of Presumed Lead Based Paint.

Steel components of the bridge structures may be covered with paint containing lead. Any work which may disturb the paint must follow all applicable state and federal regulations regulating lead and paint waste.

## 13. Other Contracts.

The contractor shall be responsible for coordinating his work in accordance to standard spec 105.5.

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 city and county personnel may be required at certain times concurrently with the work being done under this contract.

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

Contract ID 1060-33-70, Zoo IC – Mayfair Road, from IH 94 to Watertown Plank Road. The WisDOT contact is Joshua LeVeque at (262) 548-8797; joshua.leveque@dot.wi.gov.

Contract ID 1060-33-71, Glenview Avenue reconstruction from W. Bluemound Road to W. Wisconsin Avenue. The WisDOT contact is Joshua LeVeque at (262) 548-8797; joshua.leveque@dot.wi.gov.

Contract ID 1060-33-73, Swan Boulevard construction from W. Watertown Plank Road to USH 45. The WisDOT contact is Jeff Bohen at (414) 750-2928; jeff.bohen@dot.wi.gov.

Contract ID 1060-33-77, ZOO IC – Greenfield Avenue Bridge, 101st Street to 97th Street, STH 59. The WisDOT contact is James Keegan at (414) 750-3311; james.keegan@dot.wi.gov.

Contract I.D. 1090-07-74, Zoo Freeway – West Allis, Cleveland Avenue Water Main, B-40-0122, The WisDOT contact is James Keegan at (414) 750-3311; james.keegan@dot.wi.gov.

Cleveland Avenue Resurfacing Project – National Avenue to 101st Street, The City of West Allis contact is Peter Daniels at (414) 302-8374; pdaniels@westalliswi.gov. This project is expected to run from July 19, 2013 to October 15, 2013.

## 14. Erosion Control.

*Supplement standard spec 107.20 with the following:*

Provide the Erosion Control Implementation Plan (ECIP) 14 days prior to the pre-construction conference. Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-topsoiling to minimize the period of exposure to possible erosion.

Topsoil graded areas, as designated by the engineer, immediately after grading has been completed within those areas. Seed and mulch/erosion mat, or sod, and fertilize all topsoiled areas within 3 calendar days after placement of topsoil.

Furnish and apply water to sodded areas. After staking and cleanup, moisten the sod thoroughly by sprinkling with water. Keep all sodded areas thoroughly moist by watering or sprinkling if rainfall is not sufficient to achieve sod rooting to the earth bed. Water for 30 days after placement, or as the engineer directs. Apply water in a manner to preclude washing or erosion.

Do not pump water from the construction site to a storm water conveyance without the water first passing through a sediment trap.

Construct temporary sediment traps at locations that do not interfere with construction operations.

*Replace standard spec 107.20(3) with the following:*

Prepare and submit an Erosion Control Implementation Plan (ECIP) for the project, including borrow sites and material disposal sites, in accordance to Chapter TRANS 401 requirements. The ECIP shall supplement information shown on the plans and shall not reproduce it. The erosion control implementation plan shall identify how the contractor intends to implement the project's erosion control plan. The erosion control plan shall include details for the methods of debris containment devices required, particularly during the removal of the old bridges and construction of the new structures.

## 15. Dust Control Implementation Plan.

**A Description**

Develop, update, and implement a detailed Dust Control Implementation Plan (DCIP) for all land-disturbing construction activities and associated impacts both within the project site boundaries and outside the project site boundaries. This article also specifies contract bid items the contractor shall incorporate into their DCIP.

**B (Vacant)**

**C Construction**

**C.1 General**

The contractor is responsible for dust control on the project as specified in standard spec 107.18. Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter (PM) or nuisance dust conditions. The contractor has direct responsibility for controlling dust at all times throughout the duration of the contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays.

Submit a DCIP to the engineer for review at least 14 calendar days before the preconstruction conference. Coordinate with the department, if requested, to resolve DCIP related issues before the preconstruction conference. The department will either approve the DCIP or request revisions. Do not initiate any land-disturbing activities without the department's approval of the DCIP.

## C.2 Dust Control Implementation Plan Contents

Develop a DCIP tailored to the specific needs of the project. Consider potential impacts to businesses and residences adjacent to the job site. Describe in detail all land disturbing, dust generating activities. Identify strategies to prevent, mitigate, and collect excess dust. Establish clear lines of communication with the engineer to ensure that all dust control issues can be dealt with promptly.

The DCIP shall include, but not be limited to, all of the following:

1. A single contact person with overall responsibility for the DCIP development as well as surveillance and remediation of job related dust. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
2. Individual contact persons and their respective areas of responsibility. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
3. A site map locating project features, the job site boundaries, all ingress and egress points, air intakes and other dust-sensitive areas, and all public and private paved surfaces within and immediately adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where the contractor plans to employ various dust control or prevention strategies.
4. A matrix showing, for each anticipated land disturbing, dust generating activity, the following:
    - Preventive measures that will be employed.
    - The applicable contact person.
    - The contractor's timetable and/or surveillance measures used to determine when remediation is required.
    - The specific dust control and remediation measures that will be employed. List the specific contract bid items that will be used for payment. Also indicate costs that are incidental to the contract.
    - Both maintenance and cleanup schedules and procedures.
    - How excess and waste materials will be disposed of.
5. A description of how off-site impacts will be monitored and dealt with.

## C.3 Updating the Dust Control Implementation Plan

Update the DCIP throughout the term of the contract as the engineer directs. Obtain the engineer's approval for all DCIP alterations. Also obtain the engineer's approval for DCIP routine adjustments for weather, job conditions, or emergencies that will have an impact on payment under the bid items listed in the approved DCIP.

**C.4 Dust Control Deficiencies**
Correct engineer identified dust control deficiencies within the time the engineer specifies. The engineer will allow from 30 minutes to 24 hours from the time the engineer notifies the contractor in writing of the deficiency. Deficiencies include, but are not limited to, actions or lack of actions resulting in excessive dust, failing to comply with the contractor's dust control implementation plan or associated special provisions, and failing to properly maintain equipment.

**D Measurement**
The department will measure the various bid items associated with dust control as specified in the applicable measurement subsections of either the standard specifications or other contract special provisions. The department will not measure work performed under a DCIP alteration unless the engineer specifically approves that alteration.

Measurement under the DCIP shall include, but is not limited to, the contract bid items listed below:

| | |
|---|---|
| 624.0100 | Water |
| 628.7560 | Tracking Pads |
| SPV.0105.03 | Pavement Cleanup 1090-07-73 |

The department will measure work completed under other existing contract bid items if approved as a part of the DCIP. The department will consider new bid items to the contract if proposed under the DCIP. The department will not measure work required under the DCIP that is not included in contract bid items.

**E Payment**
All costs associated with the development and updating of the DCIP are incidental to the contract. The department will pay separately for the work required to implement the actions approved in the DCIP under the contract bid items approved as a part of the DCIP. All other costs associated with work approved under the DCIP are incidental to the contract.

## 16. 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. Do not operate motorized construction equipment from 7:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.
107-001 (20060512)

## 17. Geotechnical Investigation Information.

*Replace standard spec 102.5(3) 2 with the following:*

Available information relative to subsurface exploration, borings, soundings, water levels, elevations or profiles are available for review at the department's Regions office. Contact James Keegan, 141 NW Barstow Street, Waukesha, WI 53187, (414) 750-3311.

Available geotechnical reports include:

Geotechnical Engineering Service Report
WisDOT Project 1090-07-03
Bridge Replacement on Cleveland Avenue over I-894
Milwaukee County, Wisconsin
August 1, 2012

The contractor is responsible to review the available information to determine if it is of use to the contractor. The use or not of the geotechnical information does not relieve the contractor from performing the work in accordance to the plans and specifications.

## 18. Contractor Notification.

*Replace standard spec 104.2.2.2(2) with the following:*

If the contractor discovers the differing condition, provide a written notice, as specified in 104.3.3, of the specific differing condition before further disturbing the site and before further performing the affected work.

*Replace standard spec 104.3.2 and 104.3.3 with the following:*

**104.3.2 (Vacant)**

**104.3.3 Contractor Initial Written Notice**
If required by standard spec 104.2, or if the contractor believes that the department's action, the department's lack of action, or some other situation results in or necessitates a contract revision, promptly provide a written notice to the engineer. At a minimum, provide the following:

- A written description of the nature of the issue.
- The time and date of discovering the problem or issue.
- If appropriate, the location of the issue.

Provide the additional information specified in standard spec 104.3.5 as early as possible to assist the engineer in the timely resolution of an identified issue. The engineer will not require, in subsequent submissions, duplication of information already provided.

## 19. Contractor Document Submittals.

**A Description**
This special provision describes minimum requirements for submitting project documents to the department. This special provision does not apply to shop drawing submittals.

**B Contractor Submittals**
Provide two paper originals and one electronic copy of all documents requiring department review, acceptance, or approval. Attach a completed engineer-provided transmittal sheet to each paper original and email submittal. The department will reject submittals with incomplete transmittal sheets and require re-submittal.

The department will return one reviewed, accepted, or approved paper original to the contractor. Additional return originals can be requested. Submit an additional original for each additional return original requested.

Submit electronic copies in Adobe Acrobat (.pdf) format via email to an account the engineer determines. If possible, translate original documents from their native format (e.g. Word, Excel, AutoCAD, etc.) using an Adobe Acrobat translation routine. Scan other documents to Adobe Acrobat format with a minimum resolution of 600 dpi.

All costs for contractor document submittals are incidental to the contract.
SEF Rev. 12_0920

## 20. Claims Process for Unresolved Changes.

*Replace standard spec 105.13.5, 105.13.6, and 105.13.7 with the following:*

**105.13.5 Review by the Department**
The department will conduct an initial review phase and a decision phase to resolve the claim. At any point in these two phases, the department may waive its review and request a dispute review board (DRB).

In the initial review phase the contractor and the department will have up to 30 calendar days from the contractor's submission of the claim for the contractor to submit all additional information required and for the department to review the claim and conduct all meetings. The department may request, in writing, that the contractor submit additional information related to the claim. Submit that additional information or notify the department, in writing, to base its decision on the information previously submitted. Either party may request a meeting to present its views. Before the meeting the department will distribute written ground rules for the meeting to both parties.

The contractor and the department can mutually agree to extend the 30-day review period. Upon completion of the review phase the department will notify the contractor, in writing, that it has begun the decision phase.

In the decision phase the department will have up to 30 calendar days to issue a written decision. The department will consider both parties' written and oral submissions and may consider other relevant information in the project records. The department and contractor can mutually agree to extend the 30-day decision period. The department will provide the following in its decision:

1. A concise description of the claim.
2. A clear contractual basis for its decision that includes a reference to 104.2 on revisions to the contract and as appropriate, specific reference to language regarding the bid items in question.
3. Other facts the department relies on to support its decision.
4. A concise statement of the circumstances surrounding the claim and reasons for its decision. If the department rejects the claim in whole or in part the department will explain why the claimed work is not a change to the contract work.

5. The amount of money or other relief, if any, the department will grant the contractor.

In the appeal phase the contractor shall have up to 21 calendar days from the date of the department's decision to request a dispute review board hearing. If a written request is not filed as specified in standard spec 105.13.6.1.2 within the 21 calendar days, the department's decision is final. If the department does not render a decision within the period allowed by standard spec 105.13.5, a dispute review board hearing may be requested.

**105.13.6 Dispute Resolution**

**105.13.6.1 Dispute Review Board (DRB)**

The purpose of a DRB is to resolve claims in a manner that complies with the contract, is impartial, and expedites the standard claims process. The DRB will do so by issuing recommendations that may be binding or non-binding depending on the claim amount.

**105.13.6.1.1 Selection of Members and Agreement for Services**

The department and the contractor will cooperatively establish the DRB promptly after contract execution. Each DRB will consist of one member appointed by the department and approved by the contractor, one member appointed by the contractor and approved by the department, and a third member appointed by the first two members and approved by both. The third member will act as DRB chairperson.

If a DRB member is unable to perform the duties of the office, the department may declare the office vacant. The new DRB member will be selected in the same manner as the original member. If the vacancy occurs after the hearings begin the remaining DRB members may continue with the hearing and determination of that claim, unless the department and contractor agree otherwise.

After approval of the DRB members, the department, contractor, and the DRB members will enter into a three-party agreement that sets forth the terms and conditions that apply to services provided by the DRB including procedures for standard operation of the DRB, use of the DRB in an advisory role, periodic site visits, and any other pertinent terms. The department, contractor, and all three DRB members will execute the DRB agreement within 14 calendar days after the selection of the chairperson. Payment for the DRB shall be in accordance to standard spec 105.13.7.

**105.13.6.1.2 Pre-Hearing Submissions**

If the contractor intends to appeal the department's decision, the contractor shall prepare a written statement of position setting forth in detail the nature of, and factual and legal basis for the claim and all remedies sought from the DRB. The statement shall also include and identify all claims on behalf of subcontractors. Submit the statement of position with the request for a DRB hearing within the 21 calendar day appeal phase as specified in standard spec 105.13.5.

Within 14 calendar days (or a period mutually agreed by the department and contractor) of receipt of the contractor's written statement of position, the department will provide the DRB and the contractor its response to the contractor's written statement. The response will set forth the position of the department and any counterclaims the department has relating to the claim, including a detailed statement setting forth each factual and legal defense to the claim and all documentation that establishes each defense.

**105.13.6.1.3 Preparation of Claim File**

The department will prepare a claim file within 14 calendar days of either the contractor or the department requesting a DRB hearing. The department will include all previous documents and evidence submitted during the department review and decision phases. The department may add additional documents but not additional analysis or conclusions. The claim file may contain, but is not limited to the following:

1. Contractor's notices and statements.
2. Engineer's written statements.
3. Engineer's decisions.
4. Supplemental information from the contractor during the department claim review.
5. Project photos.
6. Meeting minutes, correspondence, and other documents related to the claim.
7. Complete set of plans and specifications.
8. Applicable shop drawings and submittals.
9. The department's decision.
10. Contractor request for a DRB hearing.

After the department has assembled the claim file it will provide a copy to the contractor. Provide additional documentation as specified above, to the claim file, within seven calendar days. Return complete copy of the claim file, including any additional documentation added to the department.

**105.13.6.1.4 DRB Claim Review**
The department will provide a copy of the completed claim file to each board member for review. If the DRB requests additional information the appropriate party will provide the information to the DRB. The DRB may also visit the site to become familiar with the project and claim.

**105.13.6.1.5 Scheduling and Conduct of Hearing**
The DRB will set a date and location for a hearing no earlier than 30 calendar days but no later than 60 calendar days after the receipt of a written request for a DRB hearing.

The department and the contractor will have representatives at all hearings. Present your position first, followed by the department. Each party will be allowed one rebuttal. The DRB members, department, and the contractor may ask questions, request clarification, or ask for additional data. Unless extended by agreement between the department and the contractor, the DRB will limit a hearing to two eight-hour days. Each party will have eight hours to present both its position and rebuttal.

Normally, the DRB will not prepare a formal transcript of the presentations. When requested be either party, the DRB may allow recordation and transcription by a court reporter with the cost allocated as agreed by both parties. This transcript will not constitute the official record of the DRB review. The record prepared by the DRB is the official record of the hearings.

**105.13.6.1.6 Claims by the Subcontractor**
If the contractor's claim includes one or more subcontractor claims, the contractor shall ensure that an authorized representative with actual knowledge of the facts underlying the subcontractor claim assists in presenting the subcontractor's claim and answering questions raised by the DRB members or the department's representatives.

**105.13.6.1.7 Findings and Recommendations**
After all DRB hearings are concluded the DRB will formulate findings and recommendations. The DRB will conduct private and confidential deliberations and attempt to reach a unanimous decision. The DRB will base its findings and recommendations on the terms of the contract documents, established principles of law, statutes and regulations, the facts and circumstances of the claim, and the information provided by the parties.

Within 30 calendar days of the hearings the DRB will issue its final findings and recommendations. Claims resulting in a decision involving $250,000 or less will be binding on the parties to the extent permitted by Wisconsin law. For claims resulting in a decision involving more than $250,000, if accepted by the parties, the department will process the DRB decision for approval and will promptly process any required contract changes.

If the DRB is unable to reach unanimity in its findings and recommendations, both parties will be advised by the DRB report. At their discretion, a dissenting member may prepare a minority report to be included in the DRB.

**105.13.6.1.8 Further Action on Decisions Exceeding $250,000**
Each party will have 45 calendar days from receipt of a final decision of the DRB exceeding $250,000 to accept or reject, in writing, the decision. If either party fails to accept or reject, in writing, that final decision of the DRB within 45 calendar days of receipt of such decision, the DRB will notify the parties that non-response is considered to be acceptance of that decision and further administrative or judicial review will be barred. Provide notice of acceptance or rejection of the final decision to the DRB in a manner and form prescribed by the DRB. The DRB will reject any notice on a final decision not filed by either party in a timely manner. This 45-day appeal period may be extended if agreed to in writing prior to the 45-day expiration period.

**105.13.6.1.9 Advisory Dispute Review Board**
As an alternative to the standard DRB process, the department may elect to use the DRB in an advisory role to expedite the resolution of a dispute or claim. The DRB may review and hear disputes or claim issues during a regularly scheduled site visit. The DRB will offer its advice either during or promptly after the site visit.

**105.13.7 Payment for DRB**
Pay all labor and expenses for the DRB member appointed by the contractor.

The department will be responsible for paying all labor and expenses for the DRB member appointed by the department.

The department and contractor shall share equally in the labor and expenses for the DRB chairperson. The chairperson will submit all costs for his/her labor and expenses to the contractor for payment. Invoice the department for 50 percent of those costs.

## 21. Field Facilities.

*Replace standard spec 642 with the following:*

The department has procured its own Field Facilities located at 2424 S. 102nd Street; West Allis, WI 53227.

## 22. OCIP Information.

**The Owner Controlled Insurance Program (OCIP)**

The Cleveland Avenue Bridge Replacement project will be constructed under the umbrella of an Owner Controlled Insurance Program (OCIP). Contractor/Consultant participation in this Corridor Project is mandatory and requires enrollment into the OCIP. The OCIP requires submitted bids to exclude the cost of the OCIP provided coverage.

Additional information regarding OCIP can be found at http://roadwaystandards.dot.wi.gov/hcci/index.shtm.

If you have any questions regarding the OCIP, including questions on if your company needs to be enrolled into the OCIP, please contact Chris Luttrell at 608-267-7722.

## 23. Owner Controlled Insurance Program.

Section 107.26, "Standard Insurance Requirements" of the standard specifications is deleted in its entirety and the following section 107.26 is substituted thereof:

**107.26 Standard Insurance Requirements**

**107.26(1)(a) Owner Controlled Insurance Program**

1. **Overview**. The State of Wisconsin, Department of Transportation ("the WisDOT") has arranged with Aon Risk Solutions, (the "OCIP administrator") for this Project to be insured under its Owner Controlled Insurance Program ("OCIP"). The OCIP is more fully described in the Zoo Interchange manual for the Owner Controlled Insurance Program (the "Insurance Manual") and the Safety and Health Plan Manual that are incorporated in this Special Provision and the Contract by this reference. Parties performing labor or services at the Project Site (as defined by the OCIP Policies) are eligible to enroll in the OCIP unless the party is an excluded party (as defined below). The OCIP will provide to enrolled parties(as defined below) workers' compensation and employer's liability insurance, commercial general liability insurance, Builders Risk and Excess Liability insurance as summarily described below in connection with the performance of the Work ("OCIP coverage's").

2. **Enrolled Parties and Their Insurance Obligations.** OCIP coverage applies only to Enrolled Parties. Enrolled Parties include the WisDOT and its employees, non-excluded Contractors and Subcontractors of all tiers who enroll in the OCIP, all employees of Enrolled Contractor's and Subcontractor's who perform Work at the Project Site, and such other persons or entities that the WisDOT, in its sole discretion, may designate (each such party who is insured under the OCIP is collectively referred to as an "Enrolled Party").

   Enrolled Parties shall obtain and maintain, and shall require each of its Subcontractors to obtain and maintain, the insurance coverage specified in 107.26(1)(a) 8 below.

3. **Excluded Parties and Their Insurance Obligations.** OCIP coverage's do not apply to the following "Excluded Parties":

a. Hazardous materials remediation, removal and/or transport companies;

b. Vendors *, suppliers, fabricators, material dealers, truckers**, haulers, drivers and others who merely transport, pickup, deliver, or carry materials, personnel, parts or equipment or any other items or persons to or from the Project;

* WisDOT is requiring all vendors who perform maintenance on an enrolled contractor's equipment to be enrolled in the OCIP. Please see "WisDOT OCIP Enrollment Guidance Relating to Service Vendors" to determine whether they will be enrolled per project id number or on a Miscellaneous blanket basis.

** Truckers that come on site must remain in the cab of the vehicle.

Refer to the "Enrollment Matrix" which clearly outlines the requirements contingent upon the category that the entity falls under, such as: Contractor; Subcontractor; Consultant; Visitor; etc.

c. Sanitary disposal facility providers, if the only function is to drop off the units and pick them up later, they are material suppliers and are excluded. If the company also services/cleans the units on site, that is no longer being a material supplier. (Refer to "Enrollment Matrix", Vendors Providing Maintenance On Site).

d. Contractors and Subcontractors of any tier that do not perform any actual labor on the Project site;

e. Any party or entity not specifically identified in this special provision or excluded by the WisDOT as permitted by law, even if otherwise eligible.

f. If you are not employed by an Enrolled Party, but performing services of an Excluded Party, you are not covered by the OCIP.

Excluded Parties and parties not enrolled in the OCIP shall obtain and maintain, and shall require each of its excluded Subcontractors to obtain and maintain, the insurance coverage specified in Section 107.26(1)(a) 8 below and in the Insurance Manual. Excluded Parties shall comply with all of the safety requirements pursuant to 107.26(1)(a) 16.

4. **OCIP Insurance Policies Establish OCIP coverage's**. The OCIP coverage's and exclusions summarized in this special provision and the other contract documents are set forth in full in their respective insurance policy forms. The summary descriptions of the OCIP coverage's in this special provision or the Insurance Manual are not intended to be complete or to alter or amend any provision of the actual OCIP coverage's. In the event any provision of this special provision, the Insurance Manual, or the contract documents, conflicts with the OCIP insurance policies, the provisions of the actual OCIP insurance policies shall govern.

5. **Summary of OCIP Coverage's**. OCIP coverage's will apply only to those operations of each Enrolled Party performed at the Project Site (as defined in the OCIP insurance Policies) in connection with the Work and only to Enrolled Parties that are eligible for the OCIP.

The OCIP coverage's are primary insurance for all Enrolled Parties for occurrences during the policy period at the Project Site (as defined in the OCIP Policies). The OCIP will provide at least the following insurance to Enrolled Parties:

**Summary of OCIP Coverages**

*This is a brief description of OCIP Insurance Coverage. Enrolled Parties should refer to the actual policies for details concerning coverage, exclusions and limitations.*

a. Workers' Compensation Insurance - Statutory Limit including Jones Act and USL&H coverage, as applicable.

b. Employer's Liability Insurance

   $1,000,000 Bodily Injury by Accident, each accident

   $1,000,000 Bodily Injury by Disease, each employee

   $1,000,000 Bodily Injury by Disease, policy limits

c. Commercial General Liability (ISO Occurrence Form – Limits Shared By All Insureds)

   $2,000,000 Each Occurrence Limit (Annual Limit)

   $2,000,000 Personal/Advertising Injury Aggregate

   $4,000,000 General Aggregate Limit for all Enrolled Parties (Annual Limit)

   $4,000,000 Products and Completed Operations Aggregate for all Enrolled Parties (Single Limit Applies to Entire Products and Completed Operations Extension) 10 yr. Products and Completed Operations Extension

d. The OCIP Commercial General Liability policy will not provide coverage for any claim that could be covered under a property policy or Builder's Risk policy.

e. Excess Liability insurance (over Employer's Liability and General Liability – Limits Shared by All Insureds)

   $100,000,000 Each Occurrence Limit

   $100,000,000 Aggregate (Annual Limit)

   $100,000,000 Products and Completed Operations Aggregate Limit (Single Limit Applies to Entire Products and Completed Operations Extension).

f. Builder's Risk Insurance Coverage:

   *This is a brief description of Builder's Risk Insurance Coverage. Contractor should refer to the actual policies for details concerning coverage, exclusions and limitations.*

The Builder's Risk insurance covers insures property, including materials, supplies, machinery, fixtures and equipment which will become a permanent part of the Work (excluding road work at grade level) in the course of construction.

***The Builder's Risk coverage insures WisDOT and Enrolled Parties.***

*Builders Risk:*

| | Limit |
|---|---|
| Each Occurrence Limit | $100,000,000 |

*Builder's Risk Obligation:*

Contractor or Subcontractor shall pay to the WisDOT's designee within five (5) days written notice a maximum of up to **twenty-five thousand dollars ($25,000.00)** for each loss payable under the Builder's Risk Policy attributable to Contractor's Work, acts or omissions, or the Work, acts or omissions of any of Contractor's Subcontractors, or any other entity or party for whom Contractor may be responsible ("builder's risk obligation").

**6. The WisDOT's Insurance Obligations.**

a. The WisDOT will pay the costs of premiums for the OCIP coverage's and WisDOT will receive or pay, as the case may be, all adjustments to such costs, whether by way of dividends, retroactive adjustments, return premiums, other moneys due, audits or otherwise.

b. The WisDOT assumes no obligation to provide insurance other than that specified in this special provision and the OCIP insurance policies.

c. Except as provided by applicable law. the WisDOT's furnishing of OCIP coverage's will in no way relieve or limit, or be construed to relieve or limit, Contractor or any of its Subcontractors of any responsibility, liability, or obligation imposed by the contract documents, the OCIP insurance policies, or by law, including without limitation any indemnification obligations which Contractor or any of its Subcontractors has to the WisDOT there under. The WisDOT reserves the right at its option, to furnish other insurance coverage of various types and limits provided that such coverage is not less than that specified in the contract documents.

**7. Contractor's OCIP Obligations.** Contractor shall:

a. Assign to WisDOT the right to receive all such adjustments, and shall require that each of its Subcontractors of every tier assigns to WisDOT the right to receive all such adjustments.

b. Incorporate the terms of this special provision in all subcontract agreements.

c. Enroll and maintain enrollment in the OCIP, and shall ensure that each non-Excluded subcontractor, enrolls and maintains enrollment in the OCIP. Enrollment shall take place within five (5) days of a receipt of a Notice to Proceed, and prior to commencement of work. d. Comply with all of the administrative, safety, insurance, and other requirements outlined in this special provision, the Insurance Manual, the OCIP insurance policies, the Safety and Health Plan Manual, or elsewhere in the contract documents.

d. Provide each of its Subcontractors with a copy of the Insurance Manual and ensure Subcontractor compliance with the provisions of the OCIP insurance policies, the Insurance Manual, this special provision, and the contract documents. The failure of (a) the WisDOT to include the Insurance Manual in the bid documents or (b) Contractor to provide each of its eligible Subcontractors with a copy of same shall not relieve Contractor or any of its Subcontractors from any of the obligations contained therein.

e. Acknowledge, and require all of its Subcontractors to acknowledge in writing, that the WisDOT and the OCIP administrator are not agents, partners or guarantors of the insurance companies providing coverage under the OCIP (each such insurer, an "OCIP insurer") and that the WisDOT is not responsible for any claims or disputes between or among Contractor, its Subcontractors, and any OCIP insurer(s). Any type of insurance coverage or limits of liability in addition to the OCIP coverage's that Contractor or any Subcontractor requires for its or their own protection, or that is required by applicable laws or regulations, shall be Contractor's or its Subcontractor's sole responsibility and expense and shall not be billed to the WisDOT.

f. Cooperate fully with the OCIP administrator and the OCIP insurers, as applicable, in its or their administration of the OCIP.

g. Provide, within five (5) business days of the WisDOT's or the OCIP administrator's request, all documents or information as requested of Contractor or its Subcontractors. Such information may include but not be limited to, payroll records, certified copies of insurance coverage's, declaration pages of coverage's, certificates of insurance, underwriting data, prior loss history information, insurance audits, safety records or history, OSHA citations, or such other data or information as the WisDOT, the OCIP administrator, or OCIP insurers may request in the administration of the OCIP, or as required by the Insurance Manual.

h. Pay to the WisDOT's designee within five (5) days of written notification, a sum of up to **$10,000** of each claim, including court costs, attorneys fees and costs of defense for property damage to the extent losses are insured under the OCIP Commercial General Liability policy for those losses that are attributable to Contractor's Work, acts or omissions, or the Work, acts or omissions of any of its Subcontractors, or any other entity or party for whom Contractor may be responsible ("contractor General Liability obligation"). The contractor General Liability obligation will not be insured by the OCIP Coverage's.

**8. Additional Insurance Required From Enrolled Parties and Excluded Parties.** Contractor shall obtain and maintain, and shall require each of its Subcontractors of every tier to obtain and maintain, the insurance coverage specified in this Section in a form and from insurance companies reasonably acceptable to the WisDOT. The insurance limits may be provided through a combination of primary and excess policies, including the umbrella form of policy. The insurance required by this Section shall conform to the WisDOT's requirements outlined in the Insurance Manual and be written by companies authorized to do business in the state of Wisconsin with an **AM Best rating of A- or better**. Contractor shall provide certificates of insurance coverage to the WisDOT as required below and by the Insurance Manual.

As to Enrolled Parties, the Workers' Compensation, Employer's Liability, and Commercial General Liability insurance required by this section shall only be for operations away from the Project Site (as defined by OCIP Policies) . The cost of providing the required insurance coverage and limits is incidental to the contract. The department will make no additional or special payment for providing insurance.

**TYPE OF INSURANCE MINIMUM LIMITS REQUIRED**

1. Commercial General Liability insurance shall be endorsed to include Blanket Contractual Liability coverage.
    a. $2,000,000 Combined Single Limits per occurrence with an annual aggregate limit of not less than $4,000,000.
    b. The OCIP Coverage's shall exclude blasting or explosion operations. If blasting or explosion operations are used in connection with the Work, Commercial General Liability insurance shall not contain an exclusion for blasting or explosion and shall be provided in limits established by the WisDOT at the time such blasting or explosion methods are elected. Such coverage shall apply to operations whether the operations occur on the Project site or away from the Project site.
    c. Wisconsin Department of Transportation, their respective officers, agents and employees, and any additional entities as the WisDOT may request as additional insureds must be named as an Additional Insured which shall include: i) liability arising out of the Work performed by the named insured; ii) liability arising out of the supervision of the Work performed by or operations of the named insured; and iii) liability of the acts or omissions of the Additional Insureds relating to Work performed by the named insured for the Project, except for sole negligence of the Additional Insureds iv) will state that coverage is afforded on a primary and non-contributory basis.

- Ongoing Construction Operation(s) in effect at all times while work is being performed by Contractor;
- Subcontractors and Independent Contractors (if any);

- Products and Completed Operations, including coverage applicable to additional insureds (as required by this agreement) with Completed Operations coverage to remain in force, whether by endorsement or renewal of coverage, including the Contractor, any party required to be indemnified by this Contract and any other party required by this Contract to be named as an additional insured, for at least two (2) years from the date of final completion of the Project and WisDOT's acceptance of the work; and
- Explosion, collapse, and underground hazards.
- Contractual Liability (insured contract) coverage sufficient to meet the requirements of this Contract (including defense costs and attorney's fees assumed under contract);
- Personal and Advertising Injury Liability coverage (with the standard contractual and employee exclusions deleted);
- Notice and Knowledge of Occurrence conditions limited to the knowledge of relevant corporate officers or risk managers with an Unintentional Errors and Omissions provision (providing that the insurer may not deny coverage unless it can show that it has been prejudiced by a failure of the insured to comply with a condition of the policy); and
- CG 22 79 07 98 (or equivalent) is the only acceptable Professional Liability Exclusion.
- Operations performed within 50' of railroad

2. Workers' Compensation and Employer's Liability insurance.
   a. Workers' Compensation Limits: Statutory Limits
   b. Employer's Liability limits:

      $1,000,000 Bodily Injury by Accident, each accident
      $1,000,000 Bodily Injury by Disease, each employee
      $1,000,000 Bodily Injury by Disease, policy limits

      Terms and conditions shall include:
      - USL&H – where applicable.
      - Jones Act – where applicable.
      - All states endorsement - where applicable.

3. Commercial Automobile Liability insurance as specified by Insurance Services Office (ISO), form CA 00 01, symbol 1 (any auto) with the following limits and endorsements:
   a. No Trucking or Hauling: $1,000,000 Each Accident
   b. Trucking or Hauling (Non Hazardous Materials): $2,000,000 Each Accident
   c. Trucking or Hauling Hazardous Materials: $5,000,000 Each Accident with an MCS 90 Endorsement and ISO Endorsement CA 99 48.

4. For any work over water, whether deemed navigable or otherwise, Contractors Pollution Liability insurance with $2,000,000 per occurrence and $2,000,000 aggregate policy limits.

5. Aviation and/or Watercraft Liability insurance, as appropriate, including hull and protection and indemnity for watercraft, or other insurance, in form and with limits of liability and from an insuring entity reasonably satisfactory to the WisDOT.

Contractor's failure to procure or maintain the insurance required by this Section and to assure all its Subcontractors of every tier maintain the required insurance during the entire term of the contract shall constitute a material breach of this contract under which the WisDOT may immediately suspend or terminate this contract or, at its discretion, procure or renew such insurance to protect the WisDOT's interests and pay any and all premiums in connection therewith, and withhold or recover all monies so paid from the Contractor.

Contractor shall provide the WisDOT with certificates of insurance as evidence that required coverage's for insurance detailed in this section are in force. The bidder shall provide certificates of insurance in their pre-qualification statement as specified in 102.1.

Contractor shall notify the WisDOT at least 60 calendar days before a cancellation or material change in coverage and only obtain coverage from insurance companies licensed to do business in the state that have an AM Best rating of A- or better. The cost of providing the required insurance coverage and limits is incidental to the contract. The WisDOT will make no additional or special payment for providing insurance.

The above insurance requirements shall apply with equal force whether the Contractor or a Subcontractor, or anyone directly or indirectly employed by either, performs the work under the Project.

**9. Additional Insureds:**

All insurance required by this agreement (excluding only workers compensation insurance) shall name WisDOT, all parties required to be indemnified by this Contract and all other parties as reasonably requested by the WisDOT, as additional insureds. All policies (including primary, excess and/or umbrella) must provide that coverage shall be primary and non-contributory to any insurance maintained by the Contractor or the additional insured, all of which shall be stated on the Certificate of Insurance provided by the Contractor. The Additional Insured Endorsement shall be on Form CG 20 10 11/85, or CG 20 33 10/01 plus CG 20 37 10/01, or equivalent, and shall include ongoing and completed operations coverage, which shall not contain any restrictions**.**

IN THE EVENT THAT THE LAW OF THE STATE IN WHICH THE PROJECT IS LOCATED (OR APPLICABLE LAW) LIMITS THE ADDITIONAL INSURED COVERAGE THAT WISDOT MAY REQUIRE FROM THE CONTRACTOR, THEN THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ADDITIONAL INSURED COVERAGE TO THE FULLEST EXTENT OF COVERAGE AND LIMITS ALLOWED BY APPLICABLE LAW AND THIS CONTRACT SHALL BE READ TO CONFORM TO SUCH LAW.

**10. Contractor Representations and Warranties to the WisDOT.** Contractor represents and warrants to the WisDOT or behalf of itself and its Subcontractors:

a. That all information it submits to the WisDOT or the OCIP administrator shall be accurate and complete.

b. That Contractor, on behalf of itself and its Subcontractors, has had the opportunity to read and analyze copies of the OCIP binders and specimen policies that are on file in the WisDOT's office. Any reference or summary in the contract, this special provision, the Insurance Manual, or elsewhere in any other contract document as to amount, nature, type or extent of OCIP coverage's and/or potential applicability to any potential claim or loss is for reference only. Contractor and its Subcontractors have not relied upon said reference but solely upon their own independent review and analysis of the OCIP coverage's in formulating any understanding and/or belief as to amount, nature, type or extent of any OCIP coverage's and/or its potential applicability to any potential claim or loss.

c. That the costs of OCIP coverage's were not included in Contractor's bid or proposal for the Work, the contract price, and will not be included in any change order, change modification, or any request for payment for the Work or extra work. The "costs of OCIP coverage's" is defined as the dollar amount of premiums, costs and fees the Contractor and its Subcontractors would have paid its insurance carrier to insure the operations and exposures which are being insured under the OCIP.

d. That Contractor acknowledges that the WisDOT will not pay or compensate Contractor or any Subcontractor, in any manner, for costs of OCIP coverage's or for "insurance costs" except as specifically required to be maintained by Contractor by the terms of this special provision.

**11. Severability of Interests (Cross Liability):**

All insurance required by this agreement (excluding only workers compensation insurance) shall include a provision or be endorsed to provide that, inasmuch as the policy is written to cover more than one insured, all terms, conditions, insuring agreements and endorsements, with the exception of limits of liability, shall operate in the same manner as if there were a separate policy covering each insured. No cross liability exclusions are permitted and there may not be any restrictions in any policies that limit coverage for a claim brought by an additional insured against a named insured. Also, there shall not be any provision in any insurance policy which

excludes or conditions coverage on the existence of a contract or other agreement requiring insurance.

**12. Breach of Insurance Requirements:**

The Contractor's failure to obtain and maintain insurance coverages as required by this agreement shall constitute a material breach of the Contract. In such event WisDOT may at its option: (i) terminate the Contractor for default; or (ii) purchase such coverage and backcharge the premium and associated costs to the Contractor; or (iii) at their respective option, WisDOT and/or an additional insured can require the Contractor and/or its Subcontractors to pay for attorney's fees, expenses, damages and liability as a result of any claim or lawsuit to the extent coverage would have been provided to them under the Contractor's insurance but for the Contractor's breach WisDOT has the right to backcharge the Contractor for such sums. Furthermore, to the extent of their respective interest, the Insurers of those entities that were to be included as additional insureds are deemed to be third-party beneficiaries of the insurance procurement obligation.

**13. Subcontractor:**

Before permitting any Subcontractor to perform work under a subcontract, the Contractor shall require by written contract that the Subcontractor maintain insurance in like form and amounts to that required herein. The Contractor shall be responsible to ensure that each Subcontractor maintains insurance in like form and amounts and shall provide evidence of same if requested. Contractor shall provide copies of its Subcontractor's certificates of insurance coverage to WisDOT or the OCIP Administrator upon request.

**13. Notice of Cancellation:**

All insurance coverages required by this agreement shall contain a provision that the coverage afforded thereunder cannot be cancelled, non-renewed, allowed to lapse, or have any restricted modifications added unless at least thirty (30) days prior written notice has been given to WisDOT. The Contractor is responsible to provide replacement coverage conforming with the requirements of this agreement in the event of any cancellation, non-renewal or modification of any insurance coverages required by this agreement.

**13. Limits of Insurance:**

The Contractor's insurance coverage and any additional insured coverage provided to WisDOT and any additional insured shall be for the full amount of any loss up to the policy(s) limits of liability and shall not be limited to the minimum insurance requirements of this Contract. The Contractor is responsible for notifying its insurance carriers in the event of a loss or potential loss involving coverage for the

additional insureds. However, this does not prohibit any additional insureds from reporting a claim directly to the Contractor's insurance carriers.

**14. Deductibles/Denial of Claims:**

The Contractor shall be responsible, at no additional cost to WisDOT, for the payment of any deductibles or self-insured retention in connection with the insurance coverages required by this agreement, both for itself and all additional insureds. Any self-insured retention or deductible must be declared in writing at the time the Contractor submits its bid and must be specifically approved by WisDOT prior to execution of the Contract. The Contractor shall be responsible for any loss arising out of coverage denial by its insurance carrier. The Contractor may not procure policies that limit who may pay the SIR or deductible; rather, any SIR shall be payable by either the Contractor or the Subcontractor and the Contractor may not have a policy that prevents WisDOT from accessing or triggering coverage unless the SIR is paid by the Contractor. Contractor shall also ensure that similar conditions are incorporated into all subcontracts. In the event that WisDOT is required to pay any deductible and/or SIR to access any insurance policy, Subcontractor shall promptly reimburse the Contractor for such payment.

**17. No Waiver of Insurance Requirements:**

IT IS EXPRESSLY AGREED BETWEEN WISDOT AND THE CONTRACTOR THAT THE FAILURE OF WISDOT TO REQUIRE OR VERIFY COMPLETE AND TIMELY PERFORMANCE OF THE CONTRACTOR'S OBLIGATIONS UNDER THIS CONTRACT SHALL NOT BE A WAIVER BY WISDOT OF ANY RIGHT OF WISDOT TO REQUIRE THE CONTRACTOR TO COMPLY WITH THESE INSURANCE REQUIREMENTS AND/OR TO SEEK DAMAGES BECAUSE OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE INSURANCE REQUIREMENTS IN THIS CONTRACT.

**18. Audits.** Contractor agrees that the WisDOT, the OCIP administrator, and/or any OCIP insurer may audit Contractor's or any of its Subcontractor's Project payroll records, books and records, insurance coverage's, insurance cost information, or any other information that Contractor provides to the WisDOT, the OCIP administrator, or the OCIP insurers to confirm their accuracy and to assure that costs of OCIP coverage's are not included in any payment for the work.

**19. The WisDOT's Election to Modify or Discontinue OCIP.** The WisDOT may, for any reason, modify the OCIP coverage's, discontinue the OCIP, or request that Contractor or any of its Subcontractors withdraw from the OCIP upon thirty (30) days written notice. Upon such notice Contractor and/or one or more of its Subcontractors, as specified by the WisDOT in such notice, shall obtain and thereafter maintain at the WisDOT's expense, Contractor Maintained Coverages (or a portion thereof as specified by the WisDOT) of the OCIP coverage's. The form, content, limits of liability, cost, and the insurer issuing such replacement insurance shall be subject to the WisDOT's approval.

20. **Withhold of Payments.** The WisDOT may withhold from any payment owing to Contractor the costs of OCIP coverage's if included in a request for payment. In the event the WisDOT audit of Contractor's records and information as permitted in the Contract, this special provision, or other contract documents reveals a discrepancy in the insurance, payroll, safety, or any other information required by the contract documents to be provided by Contractor to the WisDOT, or to the OCIP administrator, or reveals the inclusion of costs of OCIP coverage's in any payment for the work, the WisDOT will have the right to full deduction from the Contract Price of all such costs of OCIP coverage's and all audit costs. Audit costs will include but not be limited to the fees of the OCIP administrator, and the fees of attorneys and accountants conducting the audit and review. If the Contractor or its Subcontractors fail to timely comply with the provisions of this special provision or the requirements of the Insurance Manual, the WisDOT may withhold any payments due Contractor and its Subcontractors until such time as they have performed the requirements of this special provision. Such withholding by the WisDOT will not be deemed to be a default hereunder.

21. **Waiver of Claim and Waiver of Subrogation:**

    Where permitted by law, Contractor hereby waives all rights of recovery under subrogation because of deductible clauses, inadequacy of limits of any insurance policy, limitations or exclusions of coverage, or any other reason against the WisDOT, the State of Wisconsin and any of its Agencies or Officer's, Agents or employees including without limitation, the OCIP administrator, its or their officers, agents, shareholders or employees of each, if any, and any other Contractor or Subcontractor performing work or rendering services on behalf of the WisDOT in connection with the planning, development and construction of the Project, and Contractor shall require that all Contractor maintained insurance coverage related to the work include clauses providing that each insurer shall waive all of its rights of recovery by subrogation for claims described above.

22. **Waiver of Subrogation.** Where permitted by law, Contractor shall also require that all Contractor maintained insurance coverage related to the work include clauses providing that each insurer shall waive all of its rights of recovery by subrogation against the WisDOT, the State of Wisconsin and any of its Agencies or Officer's, Agents or employees including without limitation, the OCIP administrator, its or their officers, agents, shareholders or employees of each, if any . Contractor shall require similar written express waivers and insurance clauses from each of its Subcontractors. A waiver of subrogation shall be effective as to any individual or entity even if such individual or entity (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium directly or indirectly, and (c) whether or not such individual or entity has an insurable interest in the property damaged.

24. **Conflicts**. In the event of a conflict, the provisions of this special provision shall govern, then the provisions of the contract and its other related contact documents, then the provisions of the Insurance Manual.

25. **Safety.** Contractor shall be solely responsible for safety on the Project and safety relating to the Work. Contractor shall establish a safety program that, at a minimum, complies with all local, state and federal safety standards, and any safety standards established by the WisDOT for the Project, including the Project Safety and Health Plan Manual.

## 24. Nighttime Work Lighting-Stationary.

**A Description**

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

**B (Vacant)**

**C Construction**

**C.1 General**

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

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

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

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

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

4. Electrical power source information.

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

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

7. Detail information on any other auxiliary equipment.

**C.2 Portable Lighting**

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and

trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

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

**C.3 Light Level and Uniformity**

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

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

**C.4 Glare Control**

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

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

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

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

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

**C.5 Continuous Operation**

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

**D (Vacant)**

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

## 25. Clearing and Grubbing, Emerald Ash Borer.

This applies to projects in the emerald ash borer (EAB) quarantined zones to include Fond du Lac, Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha counties.

*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:

(a) 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.
(b) 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.
(c) 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.
(d) White ash (F. americana) tends to occur primarily in upland forests, often with Acer saccharum.

The quarantine of ash trees includes all horticultural cultivars of the species listed above.

Note that blue ash twigs are 4-sided. All other Wisconsin ash trees have round stems. Also, 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 florescent lime flagging tied around the trunk perimeter.

Follow and obey the following Wisconsin Department of Agriculture, Trade, and Consumer Protection order:

**ATCP 21.17 Emerald ash borer; import controls and quarantine.**

**Importing or Moving Regulated Items from Infested Areas; Prohibition**.
Except as provided in subparagraph (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.

**Regulated Items**. The following are regulated items for purposes of subparagraph (1):

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

Ash trees.

Ash limbs, branches, and roots.

Ash logs, slabs or untreated lumber with bark attached.

Cut firewood of all non-coniferous species.

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

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 the disposal:

**Chipped Ash Trees**
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.

May be buried on site within the right-of-way in accordance to standard spec 201.3 (14).

May be buried on adjacent properties to projects within the quarantined zone with prior approval of the engineer in accordance to standard spec 201.3 (15).

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval in accordance to standard spec 201.3 (15).

Burning chips is optional if in compliance with standard spec 201.3.

Chips must be disposed of immediately if not used for project mulching and may not be stockpiled and left on site for potential transport by others. Chips may be stockpiled temporarily if they will be used for project mulching and are not readily accessible to the public.

Chipper equipment must be cleaned following post-chipping activities to ensure no spread of wood chip debris into non-quarantined counties.

**Ash logs, Branches, and Roots**
May be buried without chipping within the existing right-of-way or on adjacent properties in accordance to standard spec 201.3 (14)(15).

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval in accordance to standard spec 201.3 (15).

Burning is optional if in compliance with standard spec 201.3.

Ash logs, branches, and roots must be disposed of immediately and may not be stockpiled.

All additional costs will be incidental to clearing and grubbing items.

Do not bury or use mulch in an area that will be disturbed again during later phases of the project.

Anyone moving firewood or ash products from the state or these counties is subject to state and federal fines up to $1,000.00. All fines are the responsibility of the contractor. Obtain updated quarantine information at the DNR Firewood Information Line at (800) 303-WOOD.

**Furnishing and Planting Plant Materials**
*Supplement standard spec 632.2.2 with the following:*

Ash trees may be obtained from inside or outside the quarantine area and planted within the quarantined area. Ash trees from within the quarantine area may not be transported and planted into the non-quarantined area.

**Updates for Compliance**
Each year, as a service, the Wisconsin Department of Agriculture, Trade and Consumer Protection distributes an updated federal CFR listing to nursery license holders and other affected persons in this state. More frequent updates, if any, are available on the Department of Agriculture, Trade, and Consumer Protection (DATCP) website at www.datcp.state.wi.us . Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from the DATCP. Persons may request update notices by calling (608) 224−4573, by visiting the DATCP website, or by writing to the following address:

Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Resource Management
P.O. Box 8911
Madison WI 53708−8911

**Regulated Items**
More frequent updates, if any, are available on the DATCP website at www.datcp.state.wi.us . Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from DATCP. Persons may request update notices by calling (608) 224−4573, by visiting the DATCP website, or by writing to the above address.

## 26. Intelligent Transportation Systems (ITS) – Control of Materials.

**Standard spec 106.2 – Supply Source and Quality**
*Supplement standard spec 106.2 with the following:*

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

| Department-Furnished Items |
|---|
| Microwave Detector Assembly |
| 50-Foot Camera Pole w/Lowering System |
| Dome Camera |
| Video Encoder |
| Pole Mounted Cabinet |
| Ethernet Switch |
| Fiber Optic Cable Outdoor Plant 6-CT |
| Fiber Optic Termination Panel 12-Count |

Pick-up small department-furnished equipment, such as communications devices, cameras, and controllers, 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 Milwaukee County. Delivery will not necessarily be in a "just in time" manner. Store the equipment until field installation. Provide location details and a contact for delivery coordination upon receiving the contract's Notice to Proceed.

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

**Standard spec 106.3 – Approval of Materials**
*Supplement standard spec 106.3 with the following:*

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

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

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

1. Mounting assemblies for the vehicle speed and classification sensors, including their attachment to the structure.
2. Mounting LED warning signs to the sign structure.
3. Mounting detail for dynamic message signs.
4. 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.

## 27. Intelligent Transportation Systems – General Requirements.

### A Description

### A.1 General

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

Unusual aspects of this project include:

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

### A.2 Surge Protection

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

### B Materials

### B.1 General

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

All electrical equipment shall conform to the standards and requirements of the Wisconsin Electrical Code, the National Electrical Manufacturers Association (NEMA), National Electric Safety Council (NESC), Underwriter's Laboratory Inc. (UL) or the Electronic Industries Association (EIA), when applicable. All materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rural Electrification Administration (REA), Standards of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), requirements of the plans these special provisions, the standard

specifications, and to any other codes, standards, or ordinances that may apply. All system wiring, conduit, grounding hardware and circuit breakers shall be in conformance with the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference shall be considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

**B.2 Outdoor Equipment**

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

To prevent galvanic corrosion, all connections between dissimilar metals shall incorporate a means of keeping moisture out of the connection. Where the connection need not conduct electricity, interpose a non-absorbing, inert material or washer between the dissimilar metals. Use nonconductive liners and washers to insulate fasteners from dissimilar metals. Where the connection must conduct electricity, use a conductive sealant between the dissimilar metals. Alternatively, use an insulating gasket and a bond wire connecting the two metal parts.

**B.3 Custom Equipment**

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

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

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

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

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

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

**B.3 Environmental Conditions**

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

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
    a. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.
    b. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.
    c. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.
5. **Temperature and Humidity:**
    a. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
    b. **Equipment in Controlled Environments** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

**B.4 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.5 Surge Protection

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

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

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

## C Construction

### C.1 Thread Protection

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

### C.2 Cable Installation

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

### C.3 Wiring

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

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

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

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

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

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

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

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

**C.4 System Operations**

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

**C.5 Surge Protection**

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

**D Measurement**

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

**E Payment**

No separate payment will be made for the work described in this article. All work described in this article shall be included under the ITS items in the contract.

670-010 (20100709)

## 28. Intelligent Transportation Systems – Conduit.

*Supplement standard spec 671.2 with the following:*

**671.2.4 Locate Wire**
Furnish and install a No. 14 AWG stranded copper wire for future locate purposes through each conduit run. Connect the locate wire by using a wire nut at each pull box, manhole, or other access point. Alternatively, use a single wire through the access points. All material furnished under this item shall meet the requirements of standard spec 655.
671-005 (20100630)

## 29. QMP Base Aggregate.

**A Description**

**A.1 General**

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

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

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

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

(5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:
http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

**A.2 Contractor Testing for Small Quantities**

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

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

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

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

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

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

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

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

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

## B Materials

### B.1 Quality Control Plan

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

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.

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

## B.2 Personnel

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

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

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

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

## B.3 Laboratory

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

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: (608) 246-5388
http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm

## B.4 Quality Control Documentation

### B.4.1 General

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

### B.4.2 Records

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

### B.4.3 Control Charts

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

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

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

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

## B.5 Contractor Testing

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

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

(3) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

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

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

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

## B.6 Test Methods

### B.6.1 Gradation

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

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

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

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

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

### B.6.2 Fracture

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

(2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec

301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

### B.6.3 Liquid Limit and Plasticity

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

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

## B.7 Corrective Action

### B.7.1 General

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

### B.7.2 Placement Corrective Action

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

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

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

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

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

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

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

## B.8 Department Testing

### B.8.1 General

(1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

### B.8.2 Verification Testing

#### B.8.2.1 General

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
1. One non-random test on the first day of placement.
2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.

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

(4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.

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

### B.8.3 Independent Assurance

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review

according to the department's independent assurance program. That review may include one or more of the following:

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

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

**B.9 Dispute Resolution**

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

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

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

**C (Vacant)**

**D (Vacant)**

**E Payment**

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

(2) For material represented by a running average exceeding a control limit, the department will reduce pay by 10 percent of the contract price for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

301-010 (20100709)

## 30. Debris Containment Structure B-40-884, Item 203.0225.S.01.

**A Description**

This special provision describes providing a containment system to prevent debris from structure removal, reconstruction, or other construction operations from falling onto facilities located under the structure. Using this containment system does not relieve the contractor of requirements under standard spec 107.17 and standard spec 107.19 or requirements under a US Army Corps of Engineers Section 404 Permit.

**B (Vacant)**

**C Construction**

Prior to starting work, submit a debris containment plan to the engineer for review. Incorporate engineer-requested modifications. Do not start work over IH-894/USH 45 until the engineer approves the debris containment plan.

Maintain adequate protection throughout construction for people and property within the potential fall zone. Ensure that a containment system capable of protecting underlying facilities from falling construction debris is in place before beginning deck repair, parapet removal, or other operations that may generate debris.

**D Measurement**

The department will measure Debris Containment Structure B-40-884 as a single lump sum unit of work for each structure, acceptably completed.

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| 203.0225.S.01 | Debris Containment Structure B-40-884 | LS |

Payment is full compensation for furnishing, installing, maintaining, and removing a debris containment system.

203-010 (20080902)

## 31. Temporary Shoring, Item 206.6000.S.

### A Description

This special provision describes designing and providing temporary shoring at locations the plans show.

### B Materials

#### B.1 Shoring Design

Provide a shoring design for each location where the plan requires temporary shoring. 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 shoring design, signed and sealed by the same professional engineer verifying the design, to the engineer for incorporation into the permanent project record.

### C Construction

Provide temporary shoring at each required location conforming to the design developed for that location.

Remove the shoring when it is no longer needed unless the engineer allows it to remain in place. Backfill the space that is excavated but not occupied by the new permanent construction conforming to standard spec 206.3.13.

### D Measurement

The department will measure Temporary Shoring by the square foot, acceptably completed at locations the plans show, measured as the area of exposed face in the plane of the shoring from the ground line in front of the shoring to a maximum of one foot above the retained grade. Shoring used for staged construction in multiple configurations without removal and reinstallation will be measured once based on the configuration with the largest area of exposed face.

### E Payment

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| 206.6000.S | Temporary Shoring | SF |

Payment is full compensation for designing and providing shoring; for providing a signed and sealed copy of the design; and for backfilling and removing the shoring.

The department will not pay for temporary shoring, installed for contractor convenience, that is not required in the plans.

206-005 (20110615)

## 32. Noise Barriers Single-Sided Sound Absorptive Structure SN-40-005-95, Item 531.0200.S.01.

### A Description

This special provision describes designing, fabricating, transporting, and erecting single-sided sound absorptive noise barriers in accordance to the plans, applicable portions of the standard specifications, the department-approved installation specifications, and as hereinafter provided.

### B Materials

All materials used in the work shall conform to the pertinent requirements of the standard specifications and as hereinafter specified.

Provide grade A, A-2, A-FA, A-S, A-T, A-IS, or A-IP concrete conforming to standard spec 501 for concrete posts and the core component of composite concrete sound absorbing panels.

### B.1 System Pre-Qualification

The noise wall system supplied must be pre-qualified by the department. The department maintains a list of pre-qualified systems which can be viewed at: http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm. Systems eligible for use on this project shall be pre-qualified prior to the award of this contract.

### B.2 Design

The department specifies pre-qualified single-sided sound absorptive noise barrier products on the department's approved product lists available at:
http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm

Provide the name of the selected system to the engineer within 25 days after award of the contract. Schedule a pre-design meeting with the engineer subsequent to award of the contract and prior to beginning design of the noise barrier. The suppliers of the noise barrier components shall attend this meeting.

### B.2.1 Structural and Foundation Design

The structural and foundation design of the noise barrier system shall be in accordance to the current edition of "Guide Specifications for Structural Design of Sound Barriers published by the American Association of State Highway and Transportation Officials (AASHTO), 444 North Capitol Street, NW, Suite 225, Washington, DC 20001.

Design the noise barrier to withstand wind pressure, applied perpendicular to the barrier, in each direction, of 28.5 pounds per square foot for ground mounted barriers, and 37.5 pounds per square foot for structure mounted barriers.

The top 3-feet of supporting soil shall be ignored in the design of ground-mounted barrier foundations.

### B.2.2 Fire Hose Access Openings

Design fire hose access openings, at locations shown on the plans, with additional reinforcement and protective coating around the opening as necessary to maintain structural integrity. Detail drawings shall show the additional reinforcement and method for attaching the Fire Hydrant Location Signs to the barrier panel.

### B.2.3 Barrier Profile

Unless otherwise shown on the plan or approved by the engineer, design the top of the noise barrier to be horizontal and at or above the acoustic elevation line shown on the plans. The bottom elevation of the noise barrier shall be as shown on the plans. Changes in elevation shall be accomplished by stepping sections at posts. Steps shall not exceed 3-feet in height. All joints shall be horizontal or vertical and shall be aligned with the adjacent panels.

### B.2.4 Panel Orientation

Design the panels to prevent entrapment and ponding of water. Avoid inadvertently providing areas for perching, nesting of birds or collecting of dirt and debris in the design of the noise barrier system.

### B.2.5 Color and Surface Texture

Unless otherwise shown and provided for in the plans, wall pattern shall closely match the existing and shall contain textures with relief features of sufficient depth and quantity to be distinguishable at an observation distance of 500-feet. The color(s) and texture(s) chosen will be within the following parameters; however, at the discretion of the engineer, a single color and/or a single texture may be selected for either side of the noise barrier.

| | **Freeway Side** | **Residential Side** |
|---|---|---|
| Number of colors | 2 | 2 |
| In the proportion of | 75:25 (±5%) | 75:25 (±5%) |
| Number of textures | 2 | 2 |
| In the proportion of | 75:25 (±5%) | 75:25 (±5%) |

Panels shall match the existing panels in the vertical dimension.

The final color of the panels and posts shall be earth tone browns and tans and shall match the existing panels as shown on the plans and match the standard color system list. Coating and coloring of the post and panels shall be shop applied.

All individual noise barrier panels shall not be more than one color, except as noted in the following paragraph below, and shall be the same color on both sides, unless otherwise approved by the engineer. Noise barrier posts shall be manufactured of the same materials throughout the project.

Supply and deliver to the engineer a 3-foot x 5-foot minimum test panel for each panel type with the specified pattern and colors. Obtain the engineer's acceptance of the panel's

pattern and color prior to production of the panels required for the contract. The accepted pattern and color test panels shall remain on the project site in a readily accessible location for the duration of the project. The accepted pattern and color sample panels will be the standard for all noise barriers on the project.

The engineer will visually inspect panels for color consistency upon arrival at the project. The panels shall have no substantial variation in color from the accepted sample panel submitted for the project. All panels with substantial color variation will be rejected and shall be removed from the project.

**B.2.6 Sound Transmission Loss (TL)**
Design the noise barrier panel material to achieve a transmission loss equal to or greater than 20 decibels in all test frequency bands.

**B.2.7 Noise Reduction Coefficient (NRC)**
Design the noise barrier so that at least 70 percent of the highway side of the noise barrier panels that are 2-feet above the ground shall have a minimum NRC of 0.80. The remaining noise barrier panels on the highway side that are 2-feet or more above the ground shall have a minimum NRC of 0.70.

**B.2.8 Structural Steel**
Galvanize all structural steel after fabrication by the hot dip process in accordance to ASTM A123. Galvanize steel hardware and threaded fasteners, bolts, nuts, and washers in accordance to ASTM A153.

Shop coat all steel galvanized surfaces exposed to view with an approved paint system as hereinafter specified. Clean galvanizing surfaces to be painted per SSPC-SP1 to remove, chlorides, sulfates zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface should then be Brush Blast Cleaned per SSPC-SP7 to create a slight angular surface profile (1.0 – 1.5 mils suggested) for adhesion. Blasting should not fracture the galvanized finish or remove any dry film thickness.

After cleaning, provide a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface. The tie coat shall etch the galvanized surface and prepare the surface for the top coat. Apply a top coat matching the finished color specified in B.2.5. Use a pre-approved top coat that is resistant to the effects of the sun, and is suitable for use in a marine environment. Exercise care so as not to damage the painted surfaces during shipment and erection of the noise barriers.

Use one of the qualified paint sources and products given below. An equivalent system may be used with the written approval of the engineer. Supply the engineer with the product data sheets before applying any coating. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, the minimum drying time for shop applied coats, and the recommended procedures for coating galvanized bolts, nuts, and washers.

| Producer | Coat | Products | Dry Film Minimum Thickness (mils) | Minimum Time Between Coats (hours) |
|---|---|---|---|---|
| Sherwin Williams<br>1051 Permeter Drive, Suite 710<br>Schaumburg, IL 60173<br>(847) 330-1562 | Tie | Recoatable Epoxy Primer B67-5 Series/B67V5 | 2.0 to 4.0 | 6 |
| | Top | Acrolon 218 HS Polyurethane, B65-650 | 2.0 to 4.0 | NA |
| Carbolin<br>350 Hanley Industrial<br>St Louis, MO 63144<br>(314) 644-1000 | Tie | Rustbond Penetrating Sealer FC | 1 | 36 |
| | Top | Carboline 133 LH | 4 | NA |
| Wasser Corporation<br>4118 B Place NW<br>Suite B<br>Auburn, WA 98001 | Tie | MC-Ferrox B 100 | 3.0 to 5.0 | 8 |
| | Top | MC-Luster 100 | 2.0 to 4.0 | NA |

**B.2.9 Design Coordination**

**B.2.9.1 Underground Utility and Drainage Crossings**

Design the noise barrier post spacing so as not to interfere with the existing utility and drainage facilities.

Design the noise barrier post spacing so as not to interfere with proposed utility and drainage facilities shown in the plans. This includes proposed roadway lighting and ITS facilities.

**B.2.9.2 Proposed Structures**

For noise barriers mounted behind or near proposed retaining walls, coordinate and design the noise barrier post spacing so as to not interfere with embedded portion of the proposed retaining walls, including MSE wall soil reinforcement and tieback anchors on soldier pile and timber lagging retaining walls.

For noise barriers mounted on proposed bridges and retaining walls, coordinate and design the noise barrier post spacing to coincide with noise barrier post and embedded noise barrier anchor assembly spacing shown on the bridge and retaining wall plans. Coordinate any required changes to the noise barrier post spacing and embedded noise barrier anchor assembly locations shown on the bridge and retaining wall plans, if required for the design of the noise barrier.

**B.2.10 Project Submittal Requirements**

Submit three copies of the following documents to the engineer for review:

1. All structural and foundation design calculations.
2. Detailed design/shop drawings.
3. Certifications for all materials, including trade name of the products along with the name and address of the manufacturers.
4. Specifications regarding installation requirements and sequence of construction, including a detailed bill of materials.
5. Detailed colored plan of the aesthetic treatment for the entire noise barrier.

Submit the following documents to the Bureau of Structures Design Section:

1. Three sets of design/shop drawings and one set of design calculations for review and acceptance. Any necessary revisions and/or corrections required for acceptance will be noted and returned to the contractor.

Design calculations shall be on 8½ x 11-inch sheets, neatly bound with a title sheet listing the complete project identification number and sound barrier designation. Design/shop drawings shall conform to the contract plans and the requirements of these special provisions. The design/shop drawings shall consist of plan and profile sheets, details, explanatory notes, erection diagrams, aesthetic treatments, and other working plans. All dimensions, sizes of material, material information and other information necessary for the complete fabrication and construction of the noise barrier should be designated on the appropriate sheets. The design/shop drawings shall be drawn to an appropriate scale on reproducible sheets 11 x 17-inches including borders. Each sheet shall carry the complete project identification number and noise barrier designation. Design/shop drawings and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

**B.2.10 Review Process**

All documents, including drawings, calculations and related material submitted for review will be given final acceptance by the engineer.

It is expressly understood that the engineer's review and acceptance of the drawings, calculations, and related material, submitted by the contractor, means only an acceptance of the character and sufficiency of the details, and does not relieve the contractor from responsibility in regard to errors or omissions on said submittals.

The final accepted design documents and/or shop drawings shall become a part of the contract. Any substitution of materials or dimensions contemplated by the contractor's submitted documents, different from materials or dimensions shown on the contract plans, shall be made only when approved by the engineer, and in such case, additional costs resulting from such substitution shall be borne by the contractor.

Ordering of materials by the contractor prior to acceptance of the submittal requirements shall be at the contractor's own risk.

### B.3 Wall System Testing Requirements

All test reports required in section B.3 shall reference the specific facility which will be producing material for this contract. Test reports shall be representative of differing production lots on materials manufactured for this specific contract which is representative of the manufacturer's continuous production for wall systems. Panels tested or from which samples will be taken from shall be selected and appropriately marked by the engineer either at the manufactures' plant or from panels delivered to the project at the engineer's option. Test reports will be required for each lot of material not to exceed 100,000 SF of noise barrier produced. Testing shall be conducted on panels within the first 30,000 SF of production of each lot not exceeding 100,000 SF. For projects that do not exceed 100,000 SF, a minimum of two lots of material will represent the project, each lot representing equivalent square footage. The first set of tests conducted for projects that do not exceed 100,000 SF shall be within the first third of the total square footage of the project.

Products tested should be tested as a system under the requirements in B.3.1 and B.3.2; this includes stain intended for the supplied concrete and composite concrete components wall panels.

#### B.3.1 Noise Reduction Coefficient (NRC)

The noise barrier panel shall be tested in accordance to ASTM C423, and placed in accordance to ASTM E795, mounting type A, to determine the noise reduction coefficient (NRC) of the material. Submit to the engineer an independent testing laboratory test report that shows that the noise barrier panels achieve an NRC as specified for the highway side of the barrier.

#### B.3.2 Salt Scaling Resistance

All sound absorbing composite concrete and composite concrete components shall be tested for salt scaling resistance in accordance to ASTM C672 and the following modifications and/or requirements:

##### B.3.2.1 Test Specimens

For the purposes of the test, three specimens of a full cross section of the composite panel at least 12 inches x 12-inches shall be selected at random from the provided composite panel as defined in B.3. Sample specimens shall be from production panels as selected and marked by the engineer, representative of the manufacturer's continuous production operation.

The surfaces of the sample specimen(s) shall be prepared for testing as follows. Brush the surfaces of the sample to remove any loose particles. The test specimens shall then be submerged in water for a period of 24 hours prior to testing. Immediately following this, the specimens shall be covered with the sodium chloride solution as stated below.

### B.3.2.2 Test Procedure

Place samples in a 5 sided water tight container in which a solution of sodium chloride (concentration 3% by mass) fully submerges the specimen. A ¼- inch of sodium chloride solution shall be maintained above the top surface of the fully submerged specimen within the container.

The specimens shall then be subjected to continuous freeze-thaw cycles as follows:

After each five cycles, the salt solution and particles of deteriorated concrete shall be removed from the slab and collected in a watertight container. The operation is best accomplished by tilting the slab in a funnel approximately 20-inches in diameter and washing the surface of the slab with a 3% sodium chloride solution. This washing should continue until all loose particles are removed from the concrete. The solution shall then be strained through a filter and the residue dried out at 221 degrees Fahrenheit to a constant mass condition. The residue shall be cumulatively weighed after each five cycles. This residue shall be defined as the loss of mass and expressed in pounds per square foot of exposed slab area. This is to exclude the concrete core for composite concrete panels in the calculation of the area used to express the mass loss per square foot. The loss of mass shall be calculated to the nearest 0.01 pounds per square foot. The surfaces should be rated in accordance to 10.1.5 of ASTM C672 including any delamination of the sound absorbing material from the concrete core for composite concrete materials. After the washing of each slab, a new solution of sodium chloride (concentration 3% by mass) shall be placed in the 5 sided water tight container to fully submerge the specimen to a depth of ¼-inch above the top surface of the fully submerged test specimen.

The test shall continue until 50 freeze-thaw cycles have been completed.

During the test each specimen shall be positioned and supported to allow free circulation of the test solution under, around, and over test pieces. The bottom of the specimens shall be supported on blocks in a manner to assure movement of moisture through and around the test specimen(s).

### B.3.2.3 Test Report

Submit to the engineer an independent testing laboratory test report which shows that all solid and composite concrete products meet or exceed the following criteria:

a. After 50 freeze-thaw cycles the test specimens shall not exhibit excessive deterioration in the form of cracks, spalls, aggregate disintegration, delamentation or other objectionable features.
b. Compliance with the test requirements is based upon a loss of mass of not more than 0.2 pounds per square foot from the surface after 50 cycles of freezing and thawing. The measured surfaces are not to include the exposed surface of any core material of a composite concrete component.
c. The report shall include the following:
    1. Name of manufacturer.
    2. Location of production.

3. Production description.
4. Date product sample was cast.
5. Commencement date of testing.
6. Specimen identification.
7. 5x7-inch color photographs of the test specimens before and after the 50 cycles of freeze-thaw test.
8. A graph of the cumulative mass loss of each specimen plotted against the number of freeze-thaw cycles for 5, 10, 15, 20, 25, 30, 40, and 50 freeze-thaw cycles.
9. Visual rating in accordance to 10.1.5 ASTM C672 including report of any delamination of the sound absorbing material from the concrete core for composite concrete components.

**B.4 Wall Systems Material Requirement**

Provide certification of compliance to all applicable requirements in B.4. All material certifications shall reference the specific facility manufacturing the material and this contract. Certifications will be required for each lot of material not to exceed 100,000 SF of noise barrier produced. For projects that do not exceed 100,000 SF, a minimum of two lots of material will represent the project, each lot representing equivalent square footage.

**B.4.1 Sound Transmission Loss (TL)**

Submit to the engineer certification of compliance that the sound transmission loss of the panel material, when tested in accordance to ASTM Standard E90, achieves a transmission loss as specified in B.2.6.

**B.4.2 Structural Steel**

Submit to the engineer certification of compliance that structural steel galvanized after fabrication is in accordance to ASTM A123. Steel posts of post and panel walls shall be galvanized. Any galvanized surfaces exposed to view shall be coated with an approved paint system as referenced in B.2.8.

**B.4.3 Accelerated Weathering**

Submit to the engineer certification of compliance that all coatings on barrier components, with the exception of structural steel and wood components comply with the following requirements when tested by ASTM Standard G155, G153, or G152 after 2400 hours of exposure on a cement based test specimen(s).

1. No checking when rated in accordance to ASTM D660.
2. No cracking when rated in accordance to ASTM D661.
3. No blistering when rated in accordance to ASTM D714.
4. No difference in adhesion between the unexposed control sample and an exposed sample when tested in accordance to ASTM D3359, Method A.
5. No chalking less than #7 rating when rated in accordance to ASTM D4214.
6. No color change greater than 5 NBS units when measured in accordance to ASTM D2244, using illuminant D65 and the 1964 10-degree standard observer.

### B.4.4 Corrosion Resistance (Salt Fog Exposure)

Submit to the engineer certification of compliance that all coated steel components, with the exception of structural steel, has a coating system that has been tested for corrosion resistance in accordance to ASTM B117 and comply with the following requirements:

1. No checking when rated in accordance to ASTM D660.
2. No blistering when rated in accordance to ASTM D714.
3. No loss of adhesion when tested in accordance to ASTM D3359 with no evidence of corrosion along the edges of the samples or along the score lines, or both, or other defects.

### B.4.5 Steel Panels

All steel panels shall be minimum nominal 20 gauge galvanized steel. The steel panels shall be free from laminations, blisters, slivers, open seams, pits from heavy rolled-in scale, ragged edges or other defects that may affect their appearance or use for the intended purpose. All shearing, cutting, and punching shall be done prior to preparation of the panels for application of coatings.

### B.4.6 Aluminum Panels

All aluminum panels shall be minimum 0.063 inch nominal thickness or greater. The aluminum panels shall be free from laminations, blisters, slivers, open seams, pits from heavy rolled-in scale, ragged edges or other defects that may affect their appearance or use for the intended purpose. All aluminum panels shall conform to the thickness tolerances of the Aluminum Association, Inc. All shearing, cutting, and punching shall be done prior to preparation of the panels for application of coatings.

### B.4.7 Timber Components

All lumber and timber furnished for the work shall be in accordance to the requirements of standard spec 507 and as hereinafter specified.

#### B.4.7.1 Species of Wood

All lumber and timber, with the exception of Glue Laminated Timber, shall be from one of the following species: Douglas Fir-Larch, Southern Pine, and Hem-Fir.

Glue laminated timber shall be Southern Pine.

#### B.4.7.2 Preservative Treatment

All timber components shall receive a chemical preservative treatment. The wood shall be dried to 19% or less prior to treatment. The wood shall be treated using a chromated-copper arsenate solution in accordance to standard spec 507.2.2.6. After treatment, all wood having nominal dimensions less than 3-inches by 3-inches shall be air or kiln dried to a maximum moisture content of 15%. Wood in greater dimensions shall be dried to maximum moisture content of 19%. The required Certificate of Preservative Treatment shall indicate compliance with the maximum moisture content requirement(s), in addition to requirements of the preservative treatment specifications herewith set forth. Wood shall be protected from increases in moisture content until incorporated into the work.

### B.4.7.3 Glue Laminated Timber

Glue laminated timber shall contain the mark of a recognized inspection agency as being in conformance with ANSI/AITC A190.1. A wet-use adhesive suitable for use with treated wood as shown in ANSI/AITC A190.1 shall be used. Members shall be of Industrial appearance grade per AITC 110.

Lumber to be glue laminated shall be pressure preservative treated prior to gluing to a retention of 0.4 pounds per cubic foot.

### B.4.7.4 Lumber

Non-laminated timber shall not exceed the proportion of six (nominal width) to one (nominal thickness) and shall be No. 1 grade or better. Sound knots shall extend through members no farther than 50 percent of the cross-section width. Unsound knots are not permitted. Knots are not permitted in the fastening area of any member.

### B.4.7.5 Plywood

Plywood shall be exterior type conforming to the provisions of the US Product Standards PS-1 and shall bear the mark of a qualified and approved inspection and testing agency.

### B.4.7.6 Sealant/Stain

All wood components of the barrier system shall be coated with a wood sealer/stain as hereinafter provided.

The manufacturer shall select a sealer/stain from one of the sources on the department's approved product list. Product data sheets shall be provided which indicate the mixing directions and recommended method(s) of application. The method and rate of application shall be as recommended by the producer.

### B.4.7.7 Hardware and Fasteners

All hardware and fastening devices shall be either hot dipped galvanized steel or made of nonferrous or stainless steel. Fastening devices shall be screws; no nails or staples shall be allowed.

### B.4.7.8 Mineral Fiber Material

Mineral fiber material used to increase sound absorption shall be manufactured in accordance to Federal Specification HH-1-558B and ASTM C612. Mineral fiber material shall have a minimum density of 6 pounds per cubic foot, shall absorb less than 1 percent of water when tested in accordance to ASTM C553, be non-corrosive, and nonhygroscopic. The mineral fiber material shall be fastened to the noise barrier system in a manner to prevent sagging when in a saturated condition.

## C Construction

### C.1 General

Construct the noise barriers at the locations shown on the plans, in accordance to the contract specifications and design drawings and/or as directed by the engineer. All sound

absorbing composite concrete components shall be delivered to the project site(s) as a finished component. A sound absorbing composite concrete system, which has the sound absorbing material glue-laminated or alternately affixed by a secondary adhesion method on the project site, will not be allowed.

Provide a minimum ten day notice to the engineer of the date that the fabrication of the noise barrier material will commence. Certifications and test reports will be required for each lot of material not to exceed 100,000 SF of noise barrier produced. For projects that do not exceed 100,000 SF a minimum of 2 lots of material will represent the project, each lot representing equivalent square footage.

Panels from which samples will be taken from for testing required in B.3 shall be selected and appropriately marked by the engineer either at the manufactures' plant or from panels delivered to the project at the engineer's option. Test reports will be required for each lot of material not to exceed 100,000 SF of noise barrier produced. Testing shall be conducted on panels within the first 30,000 SF of production of each lot not exceeding 100,000 SF. For projects that do not exceed 100,000 SF, a minimum of two lots of material will represent the project, each lot representing equivalent square footage. The first set of tests conducted for projects that do not exceed 100,000 SF shall be within the first third of the total square footage of the project.

Inspect all materials delivered to the construction site for proper dimensions, honeycombing, cracks, voids, surface defects, consistency in color and texture, and any other damage or imperfections, prior to installation.

If any part of the noise barrier material fails to comply with any requirements of the contract specification, the component shall either be corrected, permanently marked as unacceptable and be disposed of by the contractor or accepted at a reduced price. The decision will be made by the engineer and is dependent on the severity of the specification deviation.

**C.2 Fire Hydrant Location Signs**

Furnish and install fire hydrant location sign(s). These shall be attached to the noise barrier at each location shown on the plans by a method as shown on the department's approved drawings. The signs shall conform and be of the type specified in the department's sign plate book, plate D9-54 and/or D9-54A.

Compensation for furnishing and placing the fire hydrant location signs shall be included in the contract price for Noise Barriers Single-Sided Sound Absorptive and no additional compensation therefore will be allowed.

**C.3 Name Plates**

Furnish and install name plates conforming to the requirements of standard spec 506.2.4.

Furnish and place one name plate on each noise barrier at the location indicated on the plans.

Rigidly attach each plate to the barrier by a means approved by the engineer.

Compensation for furnishing and placing of name plates shall be included in the contract price for Noise Barriers, Single-Sided Sound Absorptive Structure and no additional compensation therefore will be allowed.

**C.4 Structure Mounted Noise Barriers**
Do not erect noise barriers mounted to bridge or retaining wall structures until after the concrete masonry for bridge decks and parapets or retaining wall moment slabs and parapets have attained their specified 28-day strength.

For noise barriers mounted to moment slabs and parapets on top of MSE retaining walls, erection of the noise barrier is limited to two-thirds the height of the noise barrier acoustical line shown in the plans prior to placement of earth fill or pavement over the top of the moment slab as shown in the plans. Erection of the noise barrier in excess of two-thirds its height to the full height of the noise barrier acoustical line shown on the plans may not occur until after the earth fill or pavement structure over the top of the moment slab shown in the plans is complete.

**C.5 Tolerances** The posts and panels comprising the noise barrier shall be installed plumb within ½-inch of vertical in 15-feet. The posts shall be located to the line and grades as shown in the plans to within +/- ¾-inch. Horizontal joints of adjacent panels shall be lined up to a vertical tolerance of ¼-inch. Where vertical adjustments are required for alignment, a mortar base or steel shims shall be used. Galvanize and prime coat steel shims in accordance to B.2.8.

**D Measurement**
The department will not measure Noise Barriers Single-Sided Sound Absorptive (Structure). The department will use pay plan quantity according to the Pay Plan Quantity article. Any modifications to the contract quantity caused by corrections or revisions of the original contract plan, which have been approved by the engineer, will be measured by the square foot. This area in square feet will be determined by measuring the length in linear feet along the faces of the noise barrier, and height in linear feet from bottom to top of the noise barrier, then multiplying the measured length by the measured height, and the contract quantity will be adjusted accordingly to determine the final pay quantity.

**E Payment**
The department will pay for plan quantities according to the Pay Plan Quantity article.

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| 531.0200.S.01 | Noise Barriers Single-Sided Sound Absorptive Structure SN-40-005-95 | SF |

Payment is full compensation for geotechnical investigations; preparing the design drawings and calculations; supplying and delivering samples and test barrier panels as required in B.2.5 and B.3; furnishing all labor, equipment, and materials required for the

manufacture, testing, supply, and delivery of the noise barrier material including aesthetic patterns on panel and coloring; furnishing all labor, tools, equipment, and materials required to construct the noise barriers, including site preparation, all necessary excavation, disposing of materials, constructing foundations, and erecting posts and panels.

## 33. Install Conduit Into Existing Item, Item 652.0700.S.

### A Description

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

### B Materials

Use nonmetallic conduit, 2-inch, three in number, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the requirements of pertinent provisions of the standard specifications.

### C Construction

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

### D Measurement

The department will measure Install Conduit Into Existing System by the unit, acceptably installed. Up to five conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of five, or conduits entering at significantly different entry points into the existing pull box, manhole, or junction box will constitute multiple units of payment.

### E Payment

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

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

Payment is full compensation for excavating, drilling holes; furnishing and installing all materials, including bricks, coarse aggregate, sand, bedding, and backfill; for excavating and backfilling; and for furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; and for making inspections.
652-070 (20100709)

## 34. Anchor Assemblies Light Poles on Structures, Item 657.6005.S.

### A Description

This special provision describes furnishing and installing anchor bolt assemblies for light poles as shown on the plans, and as hereinafter provided.

### B Materials

Furnish anchors of the size and spacing as given on the plans, and that conform to ASTM A449 or AASHTO M314 GR 55. The upper 8 inches of the bolts, nuts, and washers shall be hot-dipped galvanized in accordance to ASTM A153, Class C. Provide enlarged threads on nuts for proper fit after galvanizing.

### C Construction

Provide two nuts and two washers per anchor bolt, and install per light standard manufacturer's recommendations.

### D Measurement

The department will measure Anchor Assemblies Light Poles on Structures as a unit for each individual anchor bolt 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 |
|---|---|---|
| 657.6005.S | Anchor Assemblies Light Poles on Structures | Each |

Payment is full compensation for furnishing and installing the anchorages.
657-060 (20100709)

## 35. Install Pole Mounted Cabinet, Item 673.0225.S.

### A Description

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

### B Materials

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

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

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

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

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

**C Construction**

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

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

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

**D Measurement**

The department will measure Install Pole Mounted Cabinet as each individual assembly, acceptably completed.

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| 673.0225.S | Install Pole Mounted Cabinet | Each |

Payment is full compensation for installing the pole mounted cabinet; for making all connections and conduit/wire entrances; and for furnishing all testing.

673-010 (20100630)

## 36. Install Ethernet Switch, Item 675.0400.S.

**A Description**

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

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

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

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

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| 675.0400.S | Install Ethernet Switch | Each |

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

## 37. Install Video Encoder, Item 677.0300.S.

**A Description**
This special provision describes installing a state-furnished video encoder in a pole mounted cabinet or field cabinet as shown on the plans and as hereinafter provided.

**B Materials**
Provide Category 5 or better Ethernet cable to connect the Ethernet video encoder to the Ethernet switch. The department will furnish the video encoder or it will be an existing and salvaged encoder.

**C Construction**
Make the necessary electrical and communication network connections to the video encoder. Mount the video encoder in the pole mounted cabinet or field cabinet. Program the video encoder according to the manufacturer's instructions.

**D Measurement**
The department will measure Install Video Encoder by 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 |
|---|---|---|
| 677.0300.S | Install Video Encoder | Each |

Payment is full compensation for installing the video encoder in a pole mounted cabinet or field cabinet; for making all connections; and for furnishing all programming.
677-030 (20100630)

## 38. Concrete Barrier Transition Type NJ32SF to S56, Item SPV.0060.01.

### A Description

This special provision describes constructing the concrete barrier transition from the existing NJ32SF barrier to the proposed S56 barrier in accordance to standard spec 603 and in accordance to the plan details.

### B Materials

Materials shall be in accordance with standard spec 603.

### C Construction

Construction shall be in accordance with standard spec 603.

### D Measurement

The department will measure Concrete Barrier Transition Type NJ32SF to S56 as each individual transition, acceptably completed.

### E Payment

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.01 | Concrete Barrier Transition Type NJ32SF to S56 | Each |

Payment is full compensation for providing the barrier transition; for excavation and backfilling; for preparing the foundation; for properly disposing of all excess materials; for providing and installing new concrete; and for providing and installing epoxy-coated reinforcing steel.

## 39. Inlet Cover Replacement, Item SPV.0060.02.

### A Description

This special provision describes removing and replacing inlet covers in accordance to standard spec 611 and in accordance to the plan details.

### B Materials

Furnish inlet covers Type BW that are according to the pertinent requirements of standard spec 611.

Furnish concrete in accordance to standard spec 416.2.4.

**C Construction**
Remove materials to the limits shown on the plans and properly dispose of the materials and inlet covers.

Install the inlet covers Type BW in accordance to the pertinent requirements of standard spec 611.

Place new concrete in accordance to the pertinent requirements of standard spec 416.

**D Measurement**
The department will measure Inlet Cover Replacement as each individual inlet cover replacement, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.02 | Inlet Cover Replacement | Each |

Payment is full compensation for sawing, removing the existing asphalt overlay, existing concrete shoulder and existing inlet cover; for properly disposing of all removed materials; providing and installing inlet covers type BW, and for providing and installing new concrete.

## 40. Removing Controller Cabinet, Item SPV.0060.03.

**A Description**
This special provision describes removing an existing controller cabinet.

**B (Vacant)**

**C Construction**
Remove controller cabinets at the locations shown on the plans, or as directed by the engineer. Salvage and store the cabinets and all contents for pick up by the department.

Do not remove the existing ITS control cabinets, or any other associated equipment until necessary, or as directed by the engineer. Carefully remove the existing cabinets from the concrete bases, together with all components in such a manner as to safeguard all parts and wiring from damage or loss. Salvage and store the cabinet and contents for pick up by the department.

Prior to removing the existing ITS control cabinets, remove all cables being terminated in the cabinet. Cut existing cables flush with cabinet base and cap existing conduits. Dispose of the cables properly away from the project area.

**D Measurement**
The department will measure Removing Controller Cabinet by each individual removed unit, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.03 | Removing Controller Cabinet | Each |

Payment is full compensation for removal and storage of the controller cabinet; disconnecting all associated wires and cables; for capping existing conduits, and for transportation.

## 41. Removing Controller Cabinet Base, Item SPV.0060.04.

**A Description**
This special provision describes removing an existing controller cabinet concrete base.

**B Materials**
Existing controller cabinet base, including concrete masonry, ground rods, masonry anchors, and restoration materials such as topsoil, seeding, mulch, and fertilizer in accordance to the pertinent provisions of standard spec 201, 625, 627, 629, 630, 636, and 640.

**C Construction**
Remove and dispose of the concrete foundation and all other pertinent materials, and restore the disturbed area by placing 4-inches of topsoil, and fertilize, seed, and mulch all disturbed areas in accordance to the pertinent requirements of the standard specifications.

**D Measurement**
The department will measure Removing Controller Cabinet Base by each individual removed unit, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.04 | Removing Controller Cabinet Base | Each |

Payment is full compensation for removing and disposing of a concrete controller cabinet base, including masonry anchors, ground rods, and concrete masonry; and for topsoil, fertilizer, seed and mulch.

## 42. Removing Electrical Service Meter Breaker Pedestal, Item SPV.0060.05.

**A Description**
This special provision describes removing an existing electrical service meter breaker pedestal, disconnecting all connected power wires, and disposing of the equipment appropriately.

**B Materials**
Existing electrical service meter breaker pedestal.

**C Construction**
Coordinate for removal of the existing electrical service meter breaker pedestal with WE Energies.

Disconnect all connected power wires, remove the pedestal and dispose of all materials properly away from the project area.

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

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.05 | Removing Electrical Service Meter Breaker Pedestal | Each |

Payment is full compensation for coordination with WE Energies; for disconnection of wires; for removal and disposal of the pedestal; and for transportation.

## 43. Salvage Microwave Detector Station, Item SPV.0060.06.

**A Description**
This special provision describes removing and salvaging a microwave detector station consisting of a transformer base, Type 5 pole, and side-fire microwave detector.

**B Materials**
Materials will be existing and will consist of:

- 11-1/2 inch transformer base;
- Type 5 pole;
- EIS, Inc. RTMS microwave vehicle detector.

**C Construction**
Prior to beginning work on this item the contractor may inspect the site with the engineer and verify the system is functioning properly. Once work has begun, the contractor will be responsible for any damage done to any of the components in the system and will be

required to remedy the damage by replacing the damaged component(s) with new component(s) of the same make and model.

The contractor may choose how much of the assembly to disassemble prior to removing the system.

Inspect the assembly for any wiring or cabling connected between the assembly and the area outside of it, such as a conductor connecting the assembly to a buried ground rod. If such wiring is found, disconnect prior to beginning work.

Remove the assembly from the existing base and deliver the pole to a department owned facility within the Southeast Region.

**D Measurement**
The department will measure Salvage Microwave Detector Station as each individual salvaged unit, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.06 | Salvage Microwave Detector Station | Each |

Payment is full compensation for disassembly of the detector station system as deemed appropriate by the contractor; and for delivering.

## 44. Ground Rod, Item SPV.0060.07.

**A Description**
This special provision describes installing a ground rod and ground wire.

**B Materials**
Ground rod shall be copper clad steel with cladding 13 mils thick. The minimum diameter is 5/8-inch and the minimum length is eight feet. Ground wire shall be AWG # 6 bare, solid copper.

**C Construction**
Use exothermic welding to connect the ground wire to the rod. Install the rod vertically, or as close to vertical as conditions permit. Select locations with moist soil, if available. Place the rod at least six feet from all other ground rods.

**D Measurement**
The department will measure Ground Rod by each individual unit, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.07 | Ground Rod | Each |

Payment is full compensation for furnishing, and installation of the ground rod and ground wire; welding and connections at both ends of the ground wire.

## 45. Traffic Control Close-Open Freeway Entrance Ramp, Item SPV.0060.08.

**A Description**

This special provision describes closing and subsequently opening a freeway entrance ramp within the allowable time periods as detailed in Article 3 of these special provisions. All work shall be in accordance to standard spec 643, the plans, and as directed by the engineer.

**B (Vacant)**

**C Construction**

Drums, barricades and signs will be paid for separately under the contract traffic control items and may remain along the roadway when not in use. Signs shall not be visible to traffic when not in use.

**D Measurement**

The department will measure Traffic Control Close-Open Freeway Entrance Ramp as each entrance ramp is closed and subsequently opened to traffic within the allowable time periods as detailed in the Prosecution and Progress article, acceptably completed.

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.08 | Traffic Control Close-Open Freeway Entrance Ramp | Each |

Payment is full compensation for setup and subsequent removal of all traffic control devices within the allowable time periods as detailed in the Prosecution and Progress article.

## 46. Traffic Control Close-Open Freeway to Freeway System Ramp, Item SPV.0060.09.

**A Description**

This special provision describes closing and subsequently opening a freeway to freeway system ramp within the allowable time periods as detailed in Article 3 of these special provisions. All work shall be in accordance to standard spec 643, the plans, and as directed by the engineer.

**B (Vacant)**

**C Construction**
Drums, barricades, signs, lights and arrow boards will be paid for separately under the contract traffic control items and may remain along the roadway when not in use. Signs shall not be visible to traffic when not in use.

**D Measurement**
The department will measure Traffic Control Close-Open Freeway to Freeway System Ramp as each system ramp is closed and subsequently opened to traffic within the allowable time periods as detailed in the Prosecution and Progress article, 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.0060.09 | Traffic Control Close-Open Freeway to Freeway System Ramp | Each |

Payment is full compensation for setup and subsequent removal of all traffic control devices within the allowable time periods as detailed in the Prosecution and Progress article.

## 47. Adjust Water Valve, Item SPV.0060.10.

**A Description**
This special provision describes the adjustment of existing water valve boxes to match the proposed finish grade.

**B (Vacant)**

**C Construction**
**C.1 Water Valve Boxes**
Adjust water valve boxes up and down as required by contractor operations. Set the finished valve box in a plumb, vertical position flush with the pavement or terrace, whichever applies.

Protect the top section of the box. If the section is accidentally broken, a new top section can be obtained from the West Allis City Yard, 6300 West McGeoch Avenue.

After the pavement is installed, if the City of West Allis Water Department determines the valve is inoperable due to displacement or faulty adjusting or lack of protection, the contractor shall be required to perform all work necessary to correct the condition and make the valve operational at his own expense and with five days of notification by the city.

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

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.10 | Adjust Water Valve | Each |

Payment is full compensation for furnishing and installing all materials for the number and amount of adjustments made to the valve box.

## 48. Adjust Cover and Install Internal Sanitary Manhole Seal, Item SPV.0060.11.

**A Description**

This special provision describes sanitary manhole cover adjustments and the installation of an internal sanitary manhole seal.

**B Materials**

All work to adjust the existing manhole cover shall be in accordance to standard spec 611.

Furnish an internal manhole seal, such as supplied by Cretex Specialty Products of Waukesha, or Milwaukee Metropolitan Sewerage District approved equal.

**C Construction**

Adjustment of the cover shall be in accordance to standard spec 611.

The inside diameter of the manhole frame and the manhole chimney shall be field measured, and a determination as to whether the inside face of the frame is vertical or tapered shall be made in order to obtain the proper size and shape rubber seal.

The surface against which the sleeve is to be compressed shall be circular, clean, reasonably smooth and free of any loose material and excessive voids. Any flaws in these surfaces shall be repaired with the approved low-shrink mortar and ground smooth. A bead of butyl rubber caulk conforming to AASHTO M-198 Type B shall be applied to the lower sealing surface of the sleeve.

The seal shall be installed in accordance to the manufacturer's instructions upon completion of the pavement.

**D Measurement**

The department will measure Adjust Cover and Install Internal Sanitary Manhole Seal by each individual unit, acceptably completed.

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.11 | Adjust Cover and Install Internal Sanitary Manhole Seal | Each |

Payment is full compensation for adjusting the manhole cover, furnishing and installing seal to manufacturer's specifications.

## 49. Traffic Control Interim Freeway Lane(s) Closure, Item SPV.0060.12.

**A Description**

This special provision describes closing and subsequently opening, per direction of travel, a lane or two lanes on the freeway within the allowable time periods as detailed in the Prosecution and Progress article of these special provisions. All work shall be in accordance to standard spec 643, the plans, and as directed by the engineer.

**B (Vacant)**

**C Construction**

Drums, barricades, signs, lights and arrow boards will be paid for separately under the contract traffic control items and may remain along the roadway when not in use. Signs shall not be visible to traffic when not in use.

**D Measurement**

The department will measure Traffic Control Interim Freeway Lane(s) Closure by the unit each per direction of travel, 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.0060.12 | Traffic Control Interim Freeway Lane(s) Closure | Each |

Payment is full compensation for setup and subsequent removal of all traffic control devices, per direction of travel, within the allowable time periods as detailed in the Prosecution and Progress article.

## 50. Salvaging Light Poles, Arms, Luminaire and Lamps, Item SPV.0060.13.

**A Description**

This special provision describes removing a light pole, arm, luminaire and lamp from the locations shown in the plans, and delivering the pole, arm, luminaire and lamp to the City of West Allis.

**B (Vacant)**

**C Construction**
Inspect the pole prior to removing from the structure. Inform the engineer of any items of concern or potential problems that may interfere with the potential reuse of the pole, arm, luminaire or lamp. Coordinate the delivery of the material to the City of West Allis with Mr. Peter Daniels at (414) 302-8374. Coordinate with the city at least 2-weeks in advance of the intended delivery. Delivery will be within the City of West Allis. Delivery of salvaged material to be to the City of West Allis Department of Public Works yard at 6300 West McGeogh Avenue.

**D Measurement**
The department will measure Salvaging Light Poles, Arms, Luminaire and Lamps by each individual light pole, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.13 | Salvaging Light Poles, Arms, Luminaire and Lamp | Each |

Payment is full compensation for furnishing all the work required under this bid item.

## 51. Poles Type 5 – Aluminum Bronze, Item SPV.0060.14.

**A Description**
This special provision describes furnishing and installing Poles Type 5 – Aluminum anodized dark bronze.

**B Materials**
Conform to all the requirements of standard bid item 657.0322, with the exception that poles shall be anodized dark bronze. Coordinate and confirm color with the City of West Allis with Mr. Peter Daniels at (414) 302-8374.

**C Construction**
Conform to all the requirements of standard bid item 657.0322.

**D Measurement**
The department will measure Poles Type 5 – Aluminum Bronze 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.0060.14 | Poles Type 5 – Aluminum Bronze | Each |

Payment is full compensation for furnishing all work and for labor, tools, equipment and incidentals necessary to complete the work.

## 52. Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT Bronze, Item SPV.0060.15.

**A Description**
This special provision describes furnishing and installing aluminum Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT anodized dark bronze.

**B Materials**
Conform to all the requirements of standard bid item 657.0615, with the exception that luminaire arms shall be anodized dark bronze. Coordinate and confirm color with the City of West Allis with Mr. Peter Daniels at (414) 302-8374.

**C Construction**
Conform to all the requirements of standard bid item 657.0615.

**D Measurement**
The department will measure Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT Bronze 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.0060.15 | Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT Bronze | Each |

Payment is full compensation for furnishing all work and for labor, tools, equipment and incidentals necessary to complete the work.

## 53. Luminaires Utility LED Category A, Item SPV.0060.16.

**A Description**
This special provision describes furnishing and installing Light Emitting Diode (LED) roadway luminaires to replace 150W HPS luminaires that were used in design, powder-coated or anodized to match the poles and arms they are installed on.

**B Materials**
Furnish Luminaires Utility LED from the department qualified product list. Luminaires shall conform to applicable portions of standard spec 659.2.2 and the **WisDOT Specifications for LED Roadway Luminaires**. The luminaire housing shall be all aluminum with factory finished durable corrosion and UV resistant powder-coated or anodized aluminum finish to match the poles and arms they are installed on. Housing

access shall be tool-free. The luminaire/arm mounting configuration shall fit the specified pole fitter being used per the plan. The luminaire shall be UL listed, IP 66 rated.

LED lamps shall be in the 4000K color temperature range with a minimum of 70 CRI. A NEMA sized "Category Label" label shall be fixed to the bottom of the luminaire and be visible from a passing vehicle.

The luminaire shall be equipped with a voltage-sensing LED driver, to accommodate 120-277V with 90% power factor and THD 20% max at full load. Surge protection shall be provided and tested in accordance to the specifications. The luminaire shall also be equipped with a quick-disconnect plug for connecting the pole riser wires to the terminal block. A strain relief shall retain the pole riser wires within the luminaire.

The acceptable luminaires are as follows:

Category A:

- Philips RVS-110W64LED4K-LE3.
- Cree STR-LWY-2S-HT-05-D-UL-SV-700-43K.
- Cree STR-LWY-2M-HT-04-D-UL-SV-350-43K.

Furnish shop drawings as specified in standard spec 506.3.2, except submit 5 copies with the materials list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the dimensions of all equipment shown in the plans.

**C Construction**

Under the bid item Luminaires Utility LED, furnish and install luminaires and all necessary miscellaneous accessories and hardware to complete the installation of the luminaires.

The contractor shall follow manufacturer's instructions regarding luminaire installation.

Three single-conductor No. 12 stranded wires shall be used to connect the luminaires to their respective branch conductors in the pole base. Each luminaire feeder wire shall be protected by one 5-amp fuse. Fuses and fuse holders shall be as per the details in the Plan.

All exposed threaded equipment mounting hardware shall be stainless steel. The contractor shall coat all threaded stainless steel hardware and dissimilar metal, threaded hardware with an approved zinc-based anti-seize compound (Loctite or Jet-Lube prior to assembly.

There shall be a sticker placed on the bottom of the luminaire to clearly identify the WisDOT Luminaire Category A, B, C, or D as applicable. The sticker should be visible from to a person standing on the ground and is incidental to the luminaire item.

Luminaires to be finished in dark bronze or utility gray powder-coat or anodized to match the poles and arms they are installed on. Confirm color matches the anodized poles.

**D Measurement**
The department will measure Luminaires Utility LED Category A as each individual 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.0060.16 | Luminaires Utility LED Category A | Each |

Payment is full compensation for furnishing, installing and for furnishing all materials, including luminaire, accessories, hardware and fittings necessary to install the luminaire in workable first class condition.

## 54. Installing State-Furnished Distribution Centers, Item SPV.0060.17.

**A Description**
This special provision describes the installing of street lighting distribution centers furnished by the department.

**B Materials**
Provide small parts, fittings, fasteners, connectors, splice kits, etc., needed to complete the installation and approved by the engineer.

**C Construction**
Install and connect the distribution center as shown in the plans. Make all connections for a complete and operable system.

Restore surfaces at locations where WE Energies has excavated for service extensions (to either side of its transformer) and rough backfilled.

Ground the chain link fence and electrically bond the gates to the fence with flexible jumpers whenever fences are crossed by an underground utility high-voltage service lateral, or where in the vicinity of overhead transmission lines.

Coordinate all necessary arrangements with the utility for installing and closing the utility service extension on behalf of the City of West Allis, which will be the billing customer. The department will pay all required utility service extension fees.

Pick up and haul to the site from the department, as described elsewhere in these special provisions.

**D Measurement**
The department will measure Installing State-Furnished Distribution Centers 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.0060.17 | Installing State-Furnished Distribution Centers | Each |

Payment is full compensation hauling and installing the distribution center; for making connections; for providing and installing all parts, fittings, fasteners, connectors, splice kits, etc.; for fence grounding; for restoration of WE Energies rough backfill; and for coordination with the utility.

## 55. Section Corner Monuments, Item SPV.0060.18.

**A Description**
This special provision describes coordinating with the Southeast Wisconsin Regional Planning Commission (SEWRPC), removing and disposing of the existing section corner monument, backfilling the space that the existing monument occupied and providing a 2 foot by 2 foot block out in the concrete pavement for placement of the new monument.

**B Materials**
Furnish base aggregate dense 3/4-inch that is according to the pertinent requirements of standard spec 305. SEWRPC will provide and set a pre-cast monument.

**C Construction**
Contact SEWRPC one week before beginning removal operations around the existing section corner to coordinate section corner perpetuation measurements. The existing monument shall not be removed until its location has been documented by SEWRPC representatives. After the monument's location has been established the contractor may remove, with the approval of a SEWRPC representative, the monument and backfill and compact the space that was occupied by the existing monument.

Contact SEWRPC one week before beginning concrete paving operations for SEWRPC to provide a stake to locate a 2 foot by 2 foot box-out in the concrete pavement.

Contact SEWRPC after the pavement is cured and safe to drive on for SEWRPC to excavate, set and backfill the proposed section corner monument. After the proposed monument is set the contractor shall place concrete pavement to the thickness as show on the plans to close the box-out area tight to the proposed monument.

**SEWRPC Contact Information:**

Attn: Don Simon and John Washburn
Southeastern Wisconsin Regional Planning Commission
W239 N1812 Rockwood Drive
P.O. Box 1607
Waukesha, WI 53187-1607
Phone (262) 547-6721
Fax (262) 547-1103
E-mail sewrpc@sewrpc.org

**D Measurement**

The department will measure Section Corner Monuments by each individual unit, acceptably completed.

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0060.18 | Section Corner Monuments | Each |

Payment is full compensation for furnishing all excavation; removals; for placing and compacting backfill; for disposing of surplus materials; and for furnishing all coordination with SEWRPC.

## 56. Fence Decorative Bridge, Item SPV.0090.01.

**A Description**

This special provision describes how to fabricate, galvanize, paint, deliver and install decorative fencing on bridge superstructures.

**B Materials**

**B.1 General**

All materials shall meet the requirements as shown on the plans and the applicable provisions of the standard specifications as follows:

- Structural Steel: standard spec 506.2.2
- Steel Mesh: standard spec 505.2.5
- Painting: standard spec 517.2 and 517.3

Prior to fabrication, steel shall be blast cleaned per SSPC-SP 6 and galvanized according to ASTM A 123. All bolts, nuts and washers shall be supplied as factory galvanized according to ASTM A 153. Repair zinc coating damaged during fabrication as specified in standard spec 635.3.4. Grind the welded joints to a smooth finish where shown on the plans.

Steel preparation includes the chamfering of sharp edges. All sharp edges shall be flattened by a single pass of a grinder or suitable device along the sharp edge. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed in accordance to AASHTO M 160 prior to blast cleaning.

The fence fabric shall consist of 8 GA. 2 inch by 2 inch welded wire mesh galvanized to ASTM A 123 and then painted with a pre-approved tie and top coat as given in this special provision. The vertical wires of the mesh shall be placed on the inside (Pedestrian/Traffic side) face of the fence.

**B.2 Painting**

All galvanizing surfaces shall be cleaned per SSPC-SP1 to remove, chlorides, sulfates zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface should then be Brush Blast Cleaned per SSPC-SP7 to create a slight angular surface profile (1.0 – 1.5 mils suggested) for adhesion. Blasting should not fracture the galvanized finish or remove any dry film thickness.

After cleaning provide a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat matching the specified color. The tie and top coats shall be of contrasting colors. Use a pre-approved top coat that is resistant to the effects of the sun, and is suitable for use in a marine environment. The various decorative fence components shall be painted with the tie and top coats before final assembly of the fence panels. Exercise care so as not to damage the painted surface during panel assembly or fence installation.

Use one of the qualified paint sources and products given below. An equivalent system may be used with the written approval of the engineer.

| Producer | Coat | Products | Dry Film Minimum Thickness (mils) | Minimum Time Between Coats (hours) |
|---|---|---|---|---|
| Sherwin Williams<br>1051 Perimeter Drive,<br>Suite 710<br>Schaumburg, IL 60173<br>(847) 330.1562 | Tie | Recoatable Epoxy Primer B67-5 Series/B67V5 | 2.0 to 4.0 | 6 |
| | Top | Acrolon 218 HS Polyurethane , B65-650 | 2.0 to 4.0 | NA |
| Carboline<br>350 Hanley Industrial<br>St. Louis, MO 63144<br>(314) 644.1000 | Tie | Rustbond Penetrating Sealer FC | 1 | 36 |
| | Top | Carboline 133 LH | 4 | NA |
| Wasser Corporation<br>4118 B Place NW<br>Suite B<br>Auburn, WA 98001 | Tie | MC-Ferrox B 100 | 3.0 to 5.0 | 8 |
| | Top | MC-Luster 100 | 2.0 to 4.0 | NA |

**B.2 Color**
The finished color for coating system for decorative fencing shall match Federal Color 37038 – Black

**C Construction**
Provide shop drawings in accordance to the requirements of standard spec 506.3.2 of the standard specifications. Shop drawings shall contain material sizes and types, weld sizes and locations, and all necessary details, dimensions, and information to allow fabrication of the fence in conformance with the requirements of the contract. Do not begin fabrication prior to shop drawing review and acceptance.

Provide a full sized painted 6-foot by 10-foot test panel for the fence. The test panel shall be 10 feet long. The test panel shall be delivered to the job site within 60 days of the award of the contract. Unload and set up test panel in an area designated by the engineer. Do not begin fabrication of fences prior to the test panel acceptance.

During construction and at the time of delivery the engineer will inspect the frame components. The engineer will accept the product after the delivery is unloaded on the site. After the product is unloaded, the installation contractor shall signify in writing that the fence was received in acceptable condition per the engineer's inspection. Any damage to the fence panels after the acceptable delivery will be the responsibility of the installation contractor.

All welding shall conform to the applicable requirements of section 506 of the standard specifications. No field welding, field cutting, or drilling shall be permitted without the approval of the engineer.

Take special care during construction to minimize the number and size of touch-up spots. Follow the manufacturer's recommendations for damaged area repairs. The engineer must approve the field paint appearance prior to final acceptance.

Provide the engineer with the name, address, and phone number of a representative of the fence fabricator for future coordination.

During handling, protect finish coating from damage. If damaged during handling the fencing may be rejected by the engineer or engineer may direct fabricator that the finish shall be repaired in accordance to the manufacturer's recommendations.

**D Measurement**

The department will measure Fence Decorative Bridge by the linear foot, acceptably completed.

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0090.01 | Fence Decorative Bridge | LF |

Payment is full compensation for fabricating painting, galvanizing and delivering test panel to site; fabricating, furnishing, delivering and unloading fence panels, lighting access panels, posts; installing fence posts and panels and hardware; for preparing shop drawings, painting, galvanizing metal fence components.

## 57. Pavement Marking Grooved Thermoplastic Stop Line 18-Inch, Item SPV.0090.02; Crosswalk 6-Inch, Item SPV.0090.03.

**A Description**

This special provision describes grooving the pavement surface, and furnishing and installing preformed thermoplastic pavement marking as shown on the plans, in accordance to standard spec 647, and as hereinafter provided.

**B Materials**

Furnish 125 mils preformed thermoplastic pavement marking from the department's approved products list. If required, furnish sealant material recommended by the manufacturer.

**C Construction**

**C.1 General**

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

Plane the grooved lines in accordance to the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

**C.2 Groove Depth**
Cut the groove to a depth of 120 mils ±10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

**C.3 Groove Width – Linear Markings**
Cut the groove 1-inch wider than the width of the thermoplastic.

**C.4 Groove Position**
Position the groove edge in accordance to the plan details.

**C.4.1 Linear Marking**
Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

**C.4.2 Special Marking**
Groove at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

**C.5 Groove Cleaning**
**C.5.1 Concrete**
Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the sealant, and placement of the pavement marking. Use a high-pressure air blower with at least 185 $ft^3$/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

**C.5.2 Asphalt**
Use a high-pressure air blower with at least 185 $ft^3$/min air flow and 90 psi air pressure to clean the groove.

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

**C.6 Preformed Thermoplastic Application**
Preheat the surface if necessary based on manufacturer's recommendation.

Apply preformed thermoplastic in the groove as per manufacturer's recommendations. If manufacturer's recommendations require a sealant, apply a sealant lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any sealant in the remainder counties and for the remainder of the year. The sealant must be wet.

**D Measurement**
The department will measure Pavement Marking Grooved Preformed Thermoplastic (Type) (Size) in length by the linear foot of tape placed, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0090.02 | Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch | LF |
| SPV.0090.03 | Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch | LF |

Payment is full compensation for cleaning and preparing the pavement surface, furnishing and installing the material.

## 58. Fence Temporary, Item SPV.0090.04.

**A Description**
This special provision describes furnishing, erecting and maintaining temporary chain link fence including gates, as shown on the plans and as directed by the engineer, in accordance to section 616 of the standard specifications, and as hereinafter provided. The intent of this specification is to provide a secure enclosure.

**B Materials**
Fencing parts furnished do not have to be new materials. Used, re-rolled and open seam materials will be permitted. Gates shall be a minimum of 12 feet wide.

No specific metallic coating will be required for the chain link fencing materials. Materials furnished do not have to be of the same type. Fence height shall be a minimum of 6 feet.

The engineer may reject fencing materials which, in the engineer's opinion, are too damaged or misaligned to provide acceptable closure.

**C Construction**

Fence posts may be driven into the ground or set in augered holes, backfilled and compacted. Minimum embedment shall be 4 feet. In paved areas fence posts shall be fastened to either temporary concrete barrier or the pavement by methods ensuring a secure enclosure. Where fence is installed in areas that are not to be disturbed by subsequent construction activities, the disturbed area shall be restored in kind at no additional cost to the department.

**D Measurement**

The department will measure Fence Temporary by the linear foot from end posts, center to center, along the ground line, acceptably completed. Temporary fence will be measured once for payment. Additional measurement for fence maintenance and removal will not be made.

**E Payment**

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0090.04 | Fence Temporary | LF |

Payment is full compensation for furnishing all materials; erecting posts, gates and fence; maintaining fencing; removing and disposing of fencing; and for restoring disturbed areas.

Work under this item shall include maintenance and removal of the temporary fence.

## 59. Survey Project 1090-07-73, Item SPV.0105.01.

**A Description**

This special provision describes modifying sections 105.6 and 650 of the standard specifications to define the requirements for construction staking for this contract.

*Replace standard spec 105.6.2 with the following:*

The department will not perform any construction staking for this contract. Perform all survey required to lay out 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, 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 surveys during the project. These quality assurance surveys do not relieve the responsibility for performing all survey work required to lay out and construct the work under this contract.

*Delete standard spec 650.1.*

**B (Vacant)**

**C Construction**
Conform to standard spec 650.3 and as modified in this special provision.

*Replace standard spec 650.3.3.1 with the following:*

Under the Survey Project bid item, global positioning system (GPS) machine guidance for conventional subgrade staking on all or part of the work may be substituted. The engineer may require reverting to conventional subgrade staking methods for all or part of the work at any point during construction if, in the engineer's opinion, the GPS machine guidance is producing unacceptable results.

*Replace standard spec 650.3.3.3.4.1 with the following:*

The department will provide the contractor staking packet as described in the Construction and Materials Manual (CMM) 7.10. At any time after the contract is awarded, the available survey and design information may be requested. The department will provide that information within 5 business days of receiving the contractor’s request. The department incurs no additional liability beyond that specified in standard specification 105.6 or standard spec 650 by having provided this additional information.

*Add the following to standard spec 650.3.3.3.6.2:*

Record all subgrade elevation checks and submit a hard copy to the engineer at the completion of the project.

**D Measurement**
*Replace standard spec 650.4 with the following:*

The department will measure Survey Project 1090-07-73 as a separate single lump sum unit of work, acceptably completed.

**E Payment**
*Replace standard spec 650.5 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.0105.01 | Survey Project 1090-07-73 | LS |

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract. No additional payments will be made for restaking due to construction disturbance and knock-outs.

## 60. Maintenance of Lighting Systems, Item SPV.0105.02.

### A Description

This special provision describes the maintenance of existing and proposed lighting systems beginning on the date that the contractor's activities (electrical or otherwise) at the job site begin. Be responsible for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by, the work until final acceptance or as otherwise determined by the engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. Make the request for the maintenance preconstruction inspection no less than seven calendar days prior to the desired inspection date.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. Visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained.

### B (Vacant)

### C Construction

#### C.1 Existing Lighting Systems

Existing lighting systems are defined as any lighting system or part of a lighting system in service prior to this contract. The contract drawings indicate the general extent of any existing lighting. Ascertain the extent of effort required for compliance with these specifications; failure to do so will not be justification for extra payment or reduced responsibilities. Maintain existing lighting system as follows:

**Partial Maintenance:** Only maintain the affected circuits if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work unless otherwise indicated. Isolate the affected circuits by means of in-line waterproof fuse holders as specified elsewhere and as approved by the engineer.

**Full Maintenance:** Maintain the entire controller and all associated circuits if the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work.

**C.2 Proposed Lighting Systems**
Proposed lighting systems shall be defined as any temporary or final lighting systems or part of a lighting system which is to be constructed under this contract.

Maintain all items installed under this contract. Maintenance shall include, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, contractor operations, or other means. Include the potential cost of replacing or repairing any malfunctioning or damaged equipment in the bid price of this item; it will not be paid for separately.

**C.3 Maintenance Operations**
Maintain lighting units (including sign lighting), cable runs, and lighting controls. In the case of a pole knockdown or sign light damage caused by normal vehicular traffic, promptly clear the lighting unit and circuit discontinuity and restore the system to service.

Provide weekly night-time patrol of the lighting system, with patrol reports filed immediately with the engineer and with deficiencies corrected within 24 hours of the patrol. Present patrol reports on standard forms as designated by the engineer. Uncorrected deficiencies may be designated by the engineer as necessitating emergency repairs as described elsewhere herein.

Perform corrective action on specific lighting system equipment according to the following chart. The chart lists the maximum response, service restoration, and permanent repair time.

| Incident or Problem | Service Response Time | Service Restoration Time | Permanent Repair Time |
|---|---|---|---|
| Control cabinet out | 1 hour | 4 hours | 7 Calendar days |
| Hanging mast arm | 1 hour to clear | na | 7 Calendar days |
| Motorist caused damage or leaning light pole 10 degrees or more | 1 hour to clear | 4 hours | 7 Calendar days |
| Circuit out – Needs to reset breaker | 1 hour | 4 hours | na |
| Circuit out – Cable trouble | 1 hour | 24 hours | 21 Calendar days |
| Outage of 3 or more successive lights | 1 hour | 4 hours | na |
| Outage of 75% of lights on one tower | 1 hour | 4 hours | na |
| Outage of light nearest RR crossing approach, Islands and gores | 1 hour | 4 hours | na |
| Outage (single or multiple) found on night outage survey | na | na | 7 Calendar days |

**C.4 Lighting**

1. **Serve Response Time:** The amount of time from the initial notification to the contractor until a patrolman physically arrives at the location.
2. **Service Restoration Time**: The amount of time from the initial notification to the contractor until the time the system is fully operational again. (In cases of motorist-caused damage, the undamaged portions of the system are operational.)
3. **Permanent Repair Time**: The amount of time from initial notification to the contractor until the time permanent repairs are made if the contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of $500 per day per occurrence. In addition, the department reserves the right to assign any work not completed within this timeframe to the State Electrical Engineering and Electronics Unit. Reimburse all costs associated to repair this uncompleted work. Failure to pay these costs to the State Electrical Engineering and Electronics Unit within one month after the incident will result in additional liquidated damages of $500 per month per occurrence. Unpaid bills will be deducted from the cost of the contract. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Engineering and Electronics Unit being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

Repair damage caused by the contractor's operations at no additional cost to the contract.

**C.5 Operation of Lighting**

The lighting shall be operational every night, dusk to dawn. Duplicate lighting systems (such as temporary lighting and proposed new lighting) shall not be operated simultaneously. Do not keep lighting systems in operation during long daytime periods. Demonstrate to the satisfaction of the engineer that the lighting system is fully operational prior to submitting a pay request. Failure to do so will be grounds for denying the pay request.

**D Measurement**

The department will measure Maintenance of Lighting Systems as a single lump sum unit of work, per contract, 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.0105.02 | Maintenance of Lighting Systems | LS |

Payment is full compensation for Maintenance of Lighting Systems.

## 61. Pavement Cleanup 1090-07-73, Item SPV.0105.03.

### A Description

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site.

### B Materials

#### B.1 Pavement Cleanup

Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Vacuum equipment shall have a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified herein or approved by the engineer.

### C Construction

#### C.1 Pavement Cleanup

Keep all pavements, curb lanes and gutters both closed and open to public traffic within the job-site boundaries free of dust and debris generated from any activity under the contract. Keep all pavements, curb lanes and gutters adjacent to the project free of dust and debris that are affected by land disturbing, dust generating activities, as defined in the contractor's dust control implementation plan.

Provide surveillance to identify if material is being tracked from the jobsite. Clean up spillage and material tracked from the project within an hour of occurrence or as directed by the engineer. Perform cleanup operations in a safe manner.

Provide routine sweeping of all pavements, curb lanes and gutters on local street active haul routes a minimum of once a day as defined in the Dust Control Implementation Plan (DCIP) or as directed by the engineer. Routine sweeping shall occur on Cleveland Avenue at a minimum.

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to deal with dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Respond to emergency sweeping requests within 4 hours.

If the vacuum-type sweeper breaks down, a mechanical broom sweeper may be substituted for no more than 24 hours total elapsed time. Repair the vacuum-type sweeper within that 24 hours or substitute a vacuum-type sweeper.

Skid steers with mechanical power brooms may only be utilized on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer.

**D Measurement**
The department will measure Pavement Cleanup 1090-07-73 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.0105.03 | Pavement Cleanup 1090-07-73 | LS |

Payment schedule for this item will be in accordance to the percentage of contract value earned.

Payment is full compensation for surveillance, mobilization, sweeping, and disposing of materials.

## 62. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot, Item SPV.0165.01.

**A Description**
This special provision describes designing, furnishing materials and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the mechanically stabilized earth (MSE) wall and all wall components shall be 75 years.

This special provision describes the quality management program (QMP) for 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. The contractor may obtain the CMM from the department's web site at:
http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

**B Materials**
**B.1 Proprietary Mechanically Stabilized Earth Concrete Panel 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 may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures, Structures Design Section. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance 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 Structures Design Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

**B.2 Design Requirements**

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision, for review by the department, to show the proposed wall design is in compliance with the design specifications. Four copies of the following shall be submitted to the engineer for review and acceptance no later than 60 days from the date of notification to proceed with the project.

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 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 shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5$^{th}$ Edition 2010*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (Standard Specifications), 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 in accordance to Table11.5.6-1 LRFD.

Design and construct the walls in accordance 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 contract 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 in accordance 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 Concrete Panel Mechanically Stabilized Earth by the contractor shall consider the internal and compound stability of the wall mass in accordance 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.

Facing panels shall meet the design requirements of 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 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. 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 a minimum of six 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 steel 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 in accordance 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. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited unless approved by the Structures Design Section. A minimum clearance of 3" shall be maintained between any obstruction and reinforcement unless otherwise approved by the Structures Design Section. Splicing steel reinforcement is not allowed, unless approved by the Structures Design.

MSE facing panels shall be installed on concrete leveling pads. The minimum cross section of the leveling pad shall be 6-inches deep by 1-foot wide. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

Submit the following to the engineer for review: complete design calculations, explanatory notes, supporting materials, specifications, and detailed plans and shop drawings for the proposed wall system. Sample analyses and hand output shall be submitted to verify the output by the software. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

The wall submittal package shall be submitted electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls.

**B.3 Wall System Components**

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

**B.3.1 General**

The walls shall have 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 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.

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 D-2000, 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 $lb/in^3$ in accordance to ASTM 1505.

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 subsection 645.2.4 of the standard specifications for Geotextile Fabric, 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.

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.

Use a wall leveling pad that consists of poured concrete masonry, Grade A, A-FA, A-S, A-T, A-IS or A-IP concrete conforming to standard spec 501 as modified in the QMP Concrete Structures section of this contract. Provide QMP for leveling pad concrete as specified in the QMP Concrete Structures section of this contract.

The minimum embedment to the top of the leveling pad shall be 1 foot 6 inches or as given on the plan or given in AASHTO LRFD 11.10.2.2 whichever is greater. Step the leveling pad to follow the general slope of the ground line. The leveling pad's steps shall keep the bottom of the wall within one half the panel heights of the minimum embedment i.e. the minimum embedment plus up to one half the height of one panel. Additional embedment may be detailed by the contractor, but will not be measured for payment.

**B.3.2 Backfill**

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain recycled or milled asphalt, recycled concrete, foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

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

| Sieve Size | Percentage 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. In addition, backfill material shall meet the following requirements.

| Test | Method | Value |
|---|---|---|
| pH | AASHTO T-289 | 5 – 10.0 |
| 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. |
| Organic Content | AASHTO T-267 | 1.0% max. |
| Angle of Internal Friction | AASHTO T-236 | 30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99) |

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. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. Additional certified report of tests (except Angle of Internal Friction test) are required for every 2000 cubic yards of backfill used per wall. In addition, when backfill characteristics and/or sources change, a certified report of all tests will be provided for the new backfill material.

## C Construction

### C.1 Excavation and Backfill

Excavation will encompass preparing the leveling pad foundation and the area below the reinforcing strips in accordance 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.

**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 density as determined by AASHTO T-99, Method C. Ensure that 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.

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 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 ¾-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed ½-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 ¾-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.

**C4 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:

- An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
- 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.
- A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
- Descriptions of stockpiling and hauling methods.
- An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
- Location of the QC laboratory, retained sample storage, and other documentation.
- A summary of the locations and calculated quantities to be tested under this provision.

**C.4.2 Quality Control Personnel**

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I 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/materials. 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 D 6938 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 Quality Control (QC) Testing**

Perform compaction testing on the backfill. Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the site during all wall backfill operations, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I, or ACT certified technician, perform field density and field moisture content testing. Conform to CMM 8.15 for testing and gauge monitoring methods. The QC technician must retain a split sample for the region and deliver it to the region laboratory within 72 hours. Conduct testing at a minimum frequency of 1 test per 50 cubic yards of backfill, or major portion thereof. 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 and 5-point Proctor test every 750 cubic yards of fill and provide the region a split sample within 72 hours 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.4.5 Department Testing**

**C.4.5.1 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.4.5.2 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 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 tests.

(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 split each QV sample, testing half for QV, and retaining the remaining half for 10 business days.

(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 this special provision, the department will take no further action. If QV test results are nonconforming, the area shall be reworked until the requirements of this special provision are met.

**C.4.5.3 Independent Assurance (IA)**

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

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. 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.4.5.4.

**C.4.5.4 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.

**C.6 Aesthetic Requirements**

**C.6.1 Decorative Panels**

Provide precast panels with decorative relief patterns, decorative form liner treatments or textured surface finishes as shown in the plans.

**C.6.2 Sample Decorative Panels**

When the plans call for precast panels with decorative relief patterns, decorative form liner treatments or textured surface finishes, supply to the engineer a minimum of three test panels with the decorative details as shown in the plans. These test panels shall be a minimum size of 5' x 5', and may be incorporated into the project, if allowed by the engineer. The submitted test panels shall fit together to demonstrate the continuation of the decorative relief patterns, form liner treatments and textured surface finishes across horizontal and vertical panel joints. Obtain the engineer's acceptance of the decorative patterned test panels, prior to production of the decorative patterned panels required for the contract. Only one set of accepted decorative test panels per contract is required.

**D Measurement**

The department will not measure Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot. The department will use pay plan quantity according to the Pay Plan Quantity article.

**E Payment**

The department will pay for plan quantities according to the Pay Plan Quantity article:

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0165.01 | Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot | 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 system including cap and copings; supplying decorative panels, form liner treatments and textured surface finishes; supplying sample panels; constructing the retaining system and drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management

program, performing compaction testing. Parapets, railings, abutment bodies and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

## 63. Concrete Staining Structure B-40-884, R-40-580 and R-40-581, Item SPV.0165.02; R-40-581, Item SPV.0165.03; B-40-884, Item SPV 0165.04.

### A Description

This special provision describes furnishing and applying concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided. Staining may require several coats as determined by the engineer in the field.

### B Materials

### B.1 Mortar

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

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

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

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

### B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department:

- Tri-Sheen Concrete Surfacer, Smooth by TK Products
- Tri-Sheen Acrylic by TK Products
- TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
- Safe-Cure and Seal EPX by Chem Masters
- H + C Shield Plus by Sherwin-Williams
- Safe-Cure and Seal EPX by Chem Masters
- B-97 Series Concrete Sealer by Sherwin Williams
- B-97-200 Series Concrete Stain by Sherwin Williams

## C Construction

### C.1 General

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

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

### C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing. Fill all voids larger than ¾" diameter and finish to match surface pattern.

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

### C.3 Staining Concrete Surfaces

Apply the concrete stain in accordance to the manufacturer's recommendations.

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

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the coats shall be compatible with each other.

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

### C.4 Test Areas

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

**C.5 Surfaces to be Coated**
Apply concrete stain to the surfaces in accordance to the plan.

**D Measurement**
The department will measure Concrete Staining (Structure) in area by the square foot of prepared and stained surface, acceptably completed.

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

| ITEM NUMBER | DESCRIPTION | UNIT |
|---|---|---|
| SPV.0165.02 | Concrete Staining R-40-580 | SF |
| SPV.0165.03 | Concrete Staining R-40-581 | |
| SPV.0165.04 | Concrete Staining B-40-884 | |

Payment is full compensation for furnishing all materials and staining, regardless of the number of coats; for preparing the concrete surface; and for preparing the sample panels.

## ADDITIONAL SPECIAL PROVISION 4

Payment to all Subcontractors. Within 10 calendar days of receipt by a contractor of a progress payment for work performed, materials furnished, or materials stockpiled by a subcontractor, the contractor shall pay that subcontractor for all work satisfactorily performed and for all materials furnished or stockpiled.

The contractor agrees further to release retainage amounts to each subcontractor within 10 calendar days after the subcontractor's work is satisfactorily completed. In addition, whenever the Department reduces the contract retainage amount, within 10 calendar days of receipt by a contractor of a retainage payment, the contractor must reduce the total amount retained from subcontractors to no more than remains retained by the Department.

The contractor shall pay the subcontractor within the time frames described above unless the contractor complies with both of the following within 10 calendar days of receiving the Department's progress payment:

1) The contractor notifies the subcontractor in writing that the work is not satisfactorily completed.
2) The contractor requests approval from the Department to delay payment because the subcontractor has not satisfactorily completed the work.

The contractor's request for approval should include the written notification to the subcontractor and shall provide sufficient documentation of good cause to assist the engineer in making a timely decision. If the engineer does not grant approval, the contractor shall pay the subcontractor within 10 calendar days of the Department's decision.

All subcontracting agreements made by a contractor shall include the above provisions and shall be binding on all contractors and subcontractors.

The contractor certifies compliance with the requirements of this Additional Special Provision by signing the contract. This clause applies to both DBE and non-DBE subcontractors.

# ADDITIONAL SPECIAL PROVISION 6
# ASP 6 - Modifications to the standard specifications

*Make the following revisions to the 2013 edition of the standard specifications:*

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**106.3.4.3.1 General**

*Replace paragraph two with the following effective with the November 2012 letting:*

(2) Required sampling and testing methodologies and documentation are specified in CMM chapter 8.

(3) If disputed, approval of materials and components, as well as acceptance of the work incorporating those materials or components, is subject to review under the QMP dispute resolution process.

---

**107.17.3 Railroad Insurance Requirements**

*Replace the entire text with the following effective with the August 2012 letting:*

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the department has accepted the work as specified in 105.11.2.4.

(2) Provide railroad protective liability insurance coverage written as specified in 23 CFR part 646 subpart A. Provide a separate policy for each railroad owning tracks on the project. Ensure that the railroad protective liability insurance policies provide the following minimum limits of coverage:

1. Coverage A, bodily injury liability and property damage liability; $2 million per occurrence.
2. Coverage B, physical damage to property liability; $2 million per occurrence.
3. An annual aggregate amount of $6 million that shall apply separately to each policy renewal or extension.

(3) Obtain coverage from insurance companies licensed to do business in Wisconsin that have an A.M. Best rating of A- or better. The cost of providing the required insurance coverage and limits is incidental to the contract. The department will make no additional or special payment for providing insurance.

(4) Submit the following to each railroad owning tracks on the project as evidence of that railroad's respective coverage:

1. A certificate of insurance for the types and limits of insurance specified in 107.26.
2. The railroad protective liability insurance policy or other acceptable documentation to the railroad company.

(5) Submit the following to the region as evidence of the required coverage:

1. A copy of the letter to the railroad company transmitting the submittal documents specified in 107.17.3(4).
2. A certificate of insurance for the required railroad protective liability coverages.

(6) Do not begin work on the right of way or premises of the railroad company until the region receives the submittals specified in 107.17.3(5) and notification from the railroad company that the contractor has provided sufficient insurance information to begin work.

(7) Notify the railroad and the region immediately upon cancellation or initiating cancellation, whichever is earlier, or any material change in coverage. Cease operations within 50 feet of the railroad right of way immediately if insurance is cancelled or reduced. Do not resume operations until the required coverage is in force.

**460.2.8.3.1.4 Department Verification Testing Requirements**

*Replace paragraph four with the following effective with the December 2012 letting:*

(4) The department will randomly test each design mixture at the following minimum frequency:

| FOR TONNAGES TOTALING: | |
|---|---|
| Less than 501 tons | no tests required |
| From 501 to 5,000 tons | one test |
| More than 5,000 tons | add one test for each additional 5,000-ton increment |

**501.2.1 Portland Cement**

*Replace paragraph one with the following effective with the March 2013 letting:*

(1) Use cement conforming to ASTM specifications as follows:

- Type I portland cement; ASTM C150.
- Type II portland cement; ASTM C150.
- Type III portland cement; ASTM C50, for high early strength.
- Type IP portland-pozzolan cement; ASTM C595, except maximum loss on ignition is 2.0 percent.
- Type IS portland blast-furnace slag cement; ASTM C595.
- Type IL portland-limestone cement; ASTM C595, except maximum nominal limestone content is 10 percent with no individual test result exceeding 12.0 percent.

**501.2.5.5 Sampling and Testing**

*Replace the entire text with the following effective with the January 2013 letting:*

(1) Sample and test aggregates for concrete according to the following:

| | |
|---|---|
| Sampling aggregates | AASHTO T2 |
| Lightweight pieces in aggregate | AASHTO T113 |
| Material finer than No. 200 sieve | AASHTO T11 |
| Unit weight of aggregate | AASHTO T19 |
| Organic impurities in sands | AASHTO T21 |
| Sieve analysis of aggregates | AASHTO T27 |
| Effect of organic impurities in fine aggregate | AASHTO T71 |
| Los Angeles abrasion of coarse aggregate | AASHTO T96 |
| Freeze-thaw soundness of coarse aggregate | AASHTO T103 |
| Sodium sulfate soundness of aggregates | AASHTO T104 |
| Specific gravity and absorption of fine aggregate | AASHTO T84 |
| Specific gravity and absorption of coarse aggregate | AASHTO T85 |
| Flat & elongated pieces based on a 3:1 ratio | ASTM D4791[1] |
| Sampling fresh concrete | AASHTO R60 |
| Making and curing concrete compressive strength test specimens | AASHTO T23 |
| Compressive strength of molded concrete cylinders | AASHTO T22 |

[1] As modified in CMM 8-60.

**501.2.6 Fly Ash**

*Replace paragraph three with the following effective with the March 2013 letting:*

(3) Test fly ash using a recognized laboratory, as defined in 501.2.2(1), starting at least 30 days before its proposed use, and continuing at ASTM-required frequencies as the work progresses. The manufacturer shall test the chemical and physical properties listed in tables 1 and 2 of ASTM C618 at the frequencies and by the test methods prescribed in ASTM C311.

**501.3.1.1.1 Air-Entrained Concrete**

*Replace paragraph one with the following effective with the March 2013 letting:*

(1) Prepare air-entrained concrete with type I, IL, II, IS, or IP portland cement and sufficient air-entraining admixture to produce concrete with the air content specified in 501.3.2.4.

**503.2.2 Concrete**

*Replace paragraph five with the following effective with the March 2013 letting:*

(5) Furnish prestressed concrete members cast from air-entrained concrete, except I-type girders may use non-air-entrained concrete. Use type I, IL, IS, , IP, II, or III portland cement. The contractor may replace up to 30 percent of type I, IL, II, or III portland cement with an equal weight of fly ash, slag, or a combination of fly ash and slag, except for prestressed box girders and slabs, the contractor shall replace 20-30 percent of the cement with fly ash, slag, or a combination of fly ash and slag. Ensure that fly ash conforms to 501.2.6 and slag conforms to 501.2.7. Use only one source and replacement rate for work under a single bid item. Use a department-approved air-entraining admixture conforming to 501.2.2 for air-entrained concrete. Use only size No. 1 coarse aggregate conforming to 501.2.5.4.

**506.3.22 Shop Inspection**

*Replace paragraph one with the following effective with the July 2010 letting:*

(1) The engineer or an independent inspection agency under department contract may inspect all structural steel and miscellaneous metals furnished. The department will provide the contractor with monthly consultant inspection invoices and identify any quality deficiencies at the fabrication facility.

**506.5 Payment**

*Add paragraph nine as follows effective with the June 2010 letting:*

(9) The department will limit costs for inspections conducted under 506.3.2 to $0.05 per pound of material and deduct costs in excess of that amount from payment due the contractor. The department will determine costs for in-house inspections based on hourly rates for department staff plus overhead and use invoiced costs for contracted-out inspections. The department will administer deductions for the contractor's share of the total inspection cost under the Excess Costs For Fabrication Shop Inspection administrative item.

**507.2.2.1 General**

*Replace paragraph four with the following effective with the December 2012 letting:*

(4) Ensure that there are no unsound knots or knot holes. Also ensure that there are no tight knots of a diameter exceeding one-quarter of the greater dimension at the point where they occur. Measure a knot by taking its diameter at right angles to the length of the timber. Ensure that the sum of sizes of all knots in any one-foot length does not exceed 2 times the size of the largest allowed single knot. The engineer will treat cluster knots as if they were a single knot. A cluster knot is 2 or more knots grouped together, with the fibers of the wood deflected around the entire unit.

**512.3.1 Driving and Cutting Off**

*Replace the entire text with the following effective with the December 2012 letting:*

**512.3.1.1 General**

(1) Coordinate driving operations to prevent damage or displacement of concrete in substructure units or damage to adjacent facilities due to vibrations.

(2) Drive sheeting with a variation of 1/4 inch or less per foot from the vertical or from the batter the plans show. Ensure that the sheetpiles are within 6 inches of the plan position after driving. Do not damage sheetpiles attempting to correct for misalignment.

(3) Remove and replace, or otherwise correct, sheetpiles the engineer deems unacceptable under 105.3. Submit details of planned corrections to the engineer for review and approval before initiating any corrective actions.

(4) Drive sheetpiles to or beyond the required tip elevation the plans show.

**512.3.1.2 Driving System**

(1) Furnish a sheetpile driving system capable of driving the sheetpiles to the required minimum tip elevation the plans show.

(2) The engineer may order the contractor to remove a pile driving system component from service if it causes insufficient energy transfer or damages the sheetpiles. Do not return a component to service until the engineer determines that it has been satisfactorily repaired or adjusted.

(3) Drive sheetpiles with diesel, air, steam, gravity, hydraulic, or vibratory hammers.

**512.3.1.3 Cut-Offs**

(1) Cut off sheetpiles at the elevations the plans show or as the engineer directs. Pile cut-offs become the property of the contractor. Dispose of cut-offs not incorporated into the work.

---

**518.2.1 General**

*Replace paragraph one with the following effective with the March 2013 letting:*

(1) Furnish portland cement and water as specified in 501.2. Unless the engineer allows an alternate, use either type I, IL, IS, , or IP portland cement.

---

**526.3.3 Temporary Structures**

*Replace paragraphs two through four with the following effective with the January 2013 letting:*

(2) Inspect temporary structures conforming to the National Bridge Inspection Standards (NBIS) and the department's structure inspection manual before opening to traffic. Perform additional inspections, as the department's structure inspection manual requires, based on structure type and time in service. Submit inspection reports on department form DT2007 to the engineer and electronic copies to the department's bureau of structures maintenance section. Ensure that a department-certified active team leader, listed online in the department's highway structures information system (HSIS), performs the inspections.

(3) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.4. Contractor-furnished materials remain the contractor's property upon removal.

---

**614.2.5 Wood Posts and Offset Blocks**

*Retitle and replace the entire text with the following effective with the July 2012 letting:*

**614.2.5 Posts and Offset Blocks**

**614.2.5.1 Wood Posts and Offset Blocks**

(1) Furnish sawed posts and offset blocks of one of the following species:

| | | | | |
|---|---|---|---|---|
| Douglas fir | Southern pine | Ponderosa pine | Jack pine | White pine |
| Red pine | Western hemlock | Western larch | Hem-fir | Oak |

(2) Ensure that posts are the size the plans show and conform to the nominal and minimum dimensions tabulated in 507.2.2.3. The contractor does not have to surface the posts. Provide posts of the net length the plans show after setting and cut off.

(3) Use stress graded posts rated at 1200 psi $f_b$ or higher. Determine the stress grade rating for douglas fir, western larch, and southern pine as specified in 507.2.2.4.

(4) For hem-fir, hemlock, red pine, white pine, jack pine, ponderosa pine, and oak conform to the following:

**TABLE 614-1 PROPERTIES FOR WOOD POSTS AND BLOCKS**

| SPECIES | | | WESTERN HEMLOCK, HEM-FIR, RED PINE, WHITE PINE, JACK PINE, PONDEROSA PINE | | OAK | |
|---|---|---|---|---|---|---|
| MAXIMUM SLOPE OF GRAIN | | | 1 in 15 | | 1 in 12 | |
| NOMINAL WIDTH OF FACE | | | 6" | 8" | 6" | 8" |
| SHAKES, CHECKS, AND SPLITS | | GREEN | 1" | 1 3/8" | 2 3/8" | 3 1/8" |
| | | SEASONED | 1 1/2" | 2" | 2 5/8" | 3 1/2" |
| MAXIMUM WANE | | | 1" | 1 3/8" | 1 1/8" | 1 5/8" |
| MAXIMUM ALLOWABLE KNOTS | NARROW FACE | MIDDLE 1/3 OF LENGTH | 1 3/8" | 1 5/8" | 2 1/8" | 2 3/8" |
| | | END[1] | 2 3/4" | 3 1/4" | 4 1/4" | 4 3/4" |
| | | SUM IN MIDDLE 1/2 OF LENGTH[2] | 11" | 13" | 17" | 19 |
| | WIDE FACE | EDGE KNOT N MIDDLE 1/3 OF LENGTH | 1 3/8" | 1 5/8" | | |
| | | EDGE KNOT AT END[1] | 2 3/4" 7 | 3 1/4" | | |
| | | CENTERLINE | 1 3/8" | 1 7/8" | 2 1/4" | 2 7/8" |
| | | SUM IN MIDDLE 1/2 OF LENGTH | 5 1/2" | 7 1/2" | 9" | 11 1/2" |

[1] But do not exceed the maximum allowable knot on the centerline of the wide face of the same piece.

[2] But do not exceed 4 times the maximum allowable knot on the centerline of the wide face of the same piece.

(5) Pressure treat posts and offset blocks as specified in 507.2.2.6. Use one of the oil-soluble preservatives or chromated copper arsenate conforming to 507.2.3. Use the same material for offset blocks and posts and treat material used in each continuous installation with the same type of preservative.

**614.2.5.2 Steel Posts**

(1) Furnish steel posts conforming to AASHTO M270 Grade 36 and galvanized according to AASTHO M111.

**614.2.5.3 Plastic Offset Blocks**

(1) Furnish plastic offset blocks from the department's approved products list.

---

**614.3.1 General**

*Replace the entire text with the following effective with the July 2012 letting:*

(1) Paint the ends of cut-off galvanized posts, rail, bolts, cut or drilled surfaces of galvanized components, and areas of damaged zinc coating with 2 coats of zinc dust/zinc oxide paint. Clean the damaged and adjacent areas thoroughly before applying paint.

(2) Apply 2 coats of wood preservative to cut surfaces of wood components. Use the same preservative originally used to treat that component or use a 2-percent solution of copper naphthenate conforming to AWPA Standard P8 or P36.

---

**614.3.2.1 Installing Posts**

*Replace paragraph four with the following effective with the July 2012 letting:*

(4) Cut post tops to the finished elevation the plans show.

**628.2.13 Rock Bags**

*Replace paragraph one with the following effective with the November 2012 letting:*

(1) Furnish rock bags made of a porous, ultraviolet resistant, high-density polyethylene or geotextile fabric that will retain 70% of its original strength after 500 hours of exposure according to ASTM D4355 and a minimum in-place filled size of 18-inches long by 12-inches wide by 6-inches high. Ensure that the fabric conforms to the following:

| TEST REQUIREMENT | METHOD | VALUE |
|---|---|---|
| Minimum Tensile | ASTM D4632 | |
| Machine direction | | 70 lb minimum |
| Cross direction | | 40 lb minimum |
| Elongation | ASTM D4632 | |
| Machine direction | | 20% minimum |
| Cross direction | | 10 % min |
| Puncture | ASTM 4833 | 65 lbs minimum |
| Minimum Apparent Opening | | 0.0234 inches (No. 30 sieve) |
| Maximum Apparent Opening | | 0.0787 inches (No. 10 sieve) |

**639.2.1 General**

*Replace paragraph two with the following effective with the March 2013 letting:*

(2) For grout use fine aggregate conforming to 501.2.5.3 and type I, IL, IS, or IP portland cement.

**649.3.1 General**

*Replace paragraphs three and four with the following effective with the March 2013 letting:*

(3) For pavements open to all traffic, apply centerline and no-passing barrier line markings as follows:

- On intermediate pavement layers, including milled surfaces, on the same day the pavement is placed or milled.
- On the upper layer of pavement, on the same day the pavement is placed unless the contractor applies permanent marking on the same day the pavement is placed.

If weather conditions preclude same-day application, apply as soon as weather allows. Do not resume next-day construction operations until these markings are completed unless the engineer allows otherwise.

(4) If required to apply no passing zone temporary pavement marking, reference the beginning and end of all existing no-passing barrier lines. Apply temporary no-passing barrier lines at those existing locations. If the contract contains the Locating No-Passing Zones bid item, relocate the no-passing zones as specified in section 648 for permanent marking.

**701.4.2 Verification Testing**

*Replace paragraph two with the following effective with the December 2012 letting:*

(2) The department will sample randomly at locations independent of the contractor's QC tests and use separate equipment and laboratories. The department will conduct a minimum of one verification test for each 5 contractor QC tests unless specific QMP provisions specify otherwise.

**715.2.3.1 Pavements**

*Replace paragraph two with the following effective with the March 2013 letting:*

(2) Provide a minimum cement content of 565 pounds per cubic yard, except if using type I, IL, or III portland 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.

**715.3.1.3 Department Verification Testing**

*Replace paragraph one with the following effective with the December 2012 letting:*

(1) The department will perform verification testing as specified in 701.4.2 except as follows:

- Air content, slump, and temperature: a minimum of 1 verification test per lot.
- Compressive strength: a minimum of 1 verification test per lot.

## Errata

*Make the following corrections to the 2013 edition of the standard specifications:*

**102.12 Public Opening of Proposals**

*Correct 102.12(1) errata by changing htm to shtm in the web link.*

(1) The department will publicly open proposals at the time and place indicated in the notice to contractors. The department will post the total bid for each proposal on the Bid Express web site beginning at 9:30 AM except as specified in 102.8. If a proposal has no total bid shown, the department will not post the bid. After verification for accuracy under 103.1, the department will post bid totals on the department's HCCI web site.

http://roadwaystandards.dot.wi.gov/hcci/bid-letting/index.shtm

**107.22 Contractor's Responsibility for Utility Facilities, Property, and Services**

*Correct errata by eliminating references to the department. Costs are determined by statute.*

(3) If the contractor damages or interrupts service, the contractor shall notify the utility promptly. Coordinate and cooperate with the utility in the repair of the facility. Determine who is responsible for repair costs according to Wisconsin statutes 66.0831 and 182.0175(2).

**204.3.2.2 Removing Items**

*Correct errata by changing the reference from 490.3.2 to 490.3.*

(5) Under the Removing Asphaltic Surface Milling bid item, remove and dispose of existing asphaltic pavement or surfacing by milling at the location and to the depth the plans show. Mill the asphaltic pavement or surfacing as specified for milling salvaged asphaltic pavement in 490.3.

**501.2.9 Concrete Curing Materials.**

*Correct errata by changing AASHTO M171 to ASTM C171.*

(4) Furnish polyethylene-coated burlap conforming to ASTM C171 for white burlap-polyethylene sheets.

**506.2.6.5.2 Pad Construction**

*Correct errata by changing ASTM A570 to ASTM A1011.*

(4) For the internal steel plates use rolled mild steel conforming to ASTM A36, or ASTM A1011 grade

**512.3.3 Painting**

*Correct errata by changing 511.3.5 to 550.3.11.3.*

(1) Paint permanent steel sheet piling as specified for painting steel piling in 550.3.11.3.

**513.2.2.8 Toggle Bolts**

*Correct errata by changing ASTM A570 to ASTM A1011.*

(1) Use toggle bolts made of steel, conforming to the plans. Make the assembly from the material specified below:

Toggle bolt and pin ..... Cold finished steel heat-treated Brinell 311-363 ASTM A354.

Toggle washer ..... Hot rolled steel ASTM A1011. Manufacturer's standard washer.

Spacer nut ..... Grade 1213, ASTM A108. Cold finished steel heat-treated ASTM A325.

**660.2.1 General**

*Correct errata by changing section 511 to 550.*

(1) Furnish materials conforming to the following:

Concrete ..... section 501

Concrete bridges ..... section 502

Luminaires ..... section 659

Steel piling ..... section 550

Steel reinforcement ..... section 505

**660.3.2.3 Pile Type Foundations**

*Correct errata by changing section 511 to 550.*

(1) Drive piles as specified in for steel piling in section 550.

**701.3 Contractor Testing**

*Correct errata by updating AASHTO T141 to AASHTO R60 and changing AASHTO T309 to ASTM C1064.*

(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] |
| 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.

# ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

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

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

# ADDITIONAL SPECIAL PROVISION 9
# Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

**Effective with September 2004 Letting**

# WISCONSIN DEPARTMENT OF TRANSPORTATION
# DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

## SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS



## I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

## II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

## III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

## IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

## V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

**ANNUAL PREVAILING WAGE RATE DETERMINATION**
**FOR ALL STATE HIGHWAY PROJECTS**
**MILWAUKEE COUNTY**

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on April 1, 2012

**CLASSIFICATION:** Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

**OVERTIME:** Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

**FUTURE INCREASE:** If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

**PREMIUM PAY:** If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

**SUBJOURNEY:** Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

| TRADE OR OCCUPATION | HOURLY BASIC RATE OF PAY | HOURLY FRINGE BENEFITS | TOTAL |
|---|---|---|---|
| | $ | $ | $ |
| Bricklayer, Blocklayer or Stonemason | 32.66 | 15.92 | 48.58 |
| Carpenter | 33.43 | 19.31 | 52.74 |
| Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. | | | |
| Cement Finisher | 29.33 | 17.03 | 46.36 |
| Future Increase(s): Add $1.86 on 6/1/12; Add $1.87 on 6/1/13; Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/ 1/ 16. | | | |
| Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise. | | | |
| Electrician | 31.64 | 23.78 | 55.42 |
| Fence Erector | 35.62 | 0.00 | 35.62 |
| Ironworker | 31.31 | 21.54 | 52.85 |
| Line Constructor (Electrical) | 35.97 | 18.08 | 54.05 |
| Painter | 27.87 | 14.39 | 42.26 |
| Pavement Marking Operator | 27.87 | 14.39 | 42.26 |
| Piledriver | 29.56 | 24.96 | 54.52 |
| Premium Pay: Add $.65/hr for Piledriver Loftsman; Add $.75/hr for Sheet Piling Loftsman. DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. | | | |
| Roofer or Waterproofer | 28.85 | 14.60 | 43.45 |
| Teledata Technician or Installer | 24.65 | 15.17 | 39.82 |
| Tuckpointer, Caulker or Cleaner | 34.30 | 15.47 | 49.77 |
| Underwater Diver (Except on Great Lakes) | 36.20 | 18.81 | 55.01 |

| TRADE OR OCCUPATION | HOURLY BASIC RATE OF PAY | HOURLY FRINGE BENEFITS | TOTAL |
|---|---|---|---|
| | $ | $ | $ |
| Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY | 33.87 | 16.10 | 49.97 |
| Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY | 29.64 | 14.64 | 44.28 |
| Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. | | | |
| Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY | 25.18 | 13.07 | 38.25 |
| Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY | 23.38 | 12.48 | 35.86 |
| Groundman - ELECTRICAL LINE CONSTRUCTION ONLY | 21.30 | 10.97 | 32.27 |
| **TRUCK DRIVERS** | | | |
| Single Axle or Two Axle | 22.35 | 16.19 | 38.54 |
| Future Increase(s): Add $1.75/hr on 6/1/2012; Add $1.85/hr on 6/1/2013. | | | |
| Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. | | | |
| Three or More Axle | 24.91 | 15.63 | 40.54 |
| Articulated, Euclid, Dumptor, Off Road Material Hauler | 22.50 | 16.19 | 38.69 |
| Future Increase(s): Add $1.75/hr on 6/1/2012; Add $1.85/hr on 6/1/2013. | | | |
| Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. | | | |
| Pavement Marking Vehicle | 23.84 | 14.70 | 38.54 |
| Shadow or Pilot Vehicle | 24.76 | 15.35 | 40.11 |
| Truck Mechanic | 24.91 | 15.63 | 40.54 |
| **LABORERS** | | | |
| General Laborer | 24.34 | 17.85 | 42.19 |
| Future Increase(s): Add $1.60/hr on 6/1/2012: Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. | | | |
| Premium Pay: Add $.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.50/hr for line and grade specialist; Add $.65/hr for blaster and powderman; Add $2.01/hr for topman; Add $2.46/hr for bottomman; Add $3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period). | | | |
| Asbestos Abatement Worker | 22.00 | 16.86 | 38.86 |
| Landscaper | 23.71 | 15.03 | 38.74 |
| Flagperson or Traffic Control Person | 20.83 | 17.85 | 38.68 |
| Future Increase(s): Add $1.60/hr on 6/1/2012; Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. | | | |
| Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise. | | | |
| Fiber Optic Laborer (Outside, Other Than Concrete Encased) | 17.09 | 14.40 | 31.49 |
| Railroad Track Laborer | 17.00 | 1.06 | 18.06 |

| TRADE OR OCCUPATION | HOURLY BASIC RATE OF PAY $ | HOURLY FRINGE BENEFITS $ | TOTAL $ |
|---|---|---|---|
| **HEAVY EQUIPMENT OPERATORS** | | | |
| Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type).<br>Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.<br>Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period). | 34.22 | 18.90 | 53.12 |
| Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.<br>Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.<br>Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period). | 33.72 | 18.90 | 52.62 |
| Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches | 33.22 | 18.90 | 52.12 |

| TRADE OR OCCUPATION | HOURLY BASIC RATE OF PAY $ | HOURLY FRINGE BENEFITS $ | TOTAL $ |
|---|---|---|---|
| & A- Frames.<br>Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.<br>Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period). | | | |
| Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine.<br>Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.<br>Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period). | 32.96 | 18.90 | 51.86 |
| Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.<br>Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.<br>Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period). | 32.67 | 18.90 | 51.57 |
| Fiber Optic Cable Equipment. | 24.39 | 15.45 | 39.84 |
| Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer. | 36.20 | 18.81 | 55.01 |
| Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder. | 36.20 | 18.81 | 55.01 |
| Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery. | 26.80 | 18.52 | 45.32 |
| Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks-Great Lakes ONLY. | 26.80 | 18.52 | 45.32 |

| TRADE OR OCCUPATION | HOURLY BASIC RATE OF PAY | HOURLY FRINGE BENEFITS | TOTAL |
|---|---|---|---|
| | $ | $ | $ |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| | SECTION 0001 ROADWAY | | | | | |
| 0010 | 108.4400 CPM PROGRESS SCHEDULE | 1.000 EACH | | . | | . |
| 0020 | 201.0120 CLEARING | 1.000 ID | | . | | . |
| 0030 | 201.0220 GRUBBING | 1.000 ID | | . | | . |
| 0040 | 203.0200 REMOVING OLD STRUCTURE (STATION) 01. 49+94.01 | LUMP | LUMP | | | . |
| 0050 | 203.0225.S DEBRIS CONTAINMENT (STRUCTURE) 01. B-40-884 | LUMP | LUMP | | | . |
| 0060 | 204.0100 REMOVING PAVEMENT **P** | 3,045.000 SY | | . | | . |
| 0070 | 204.0105 REMOVING PAVEMENT BUTT JOINTS **P** | 32.000 SY | | . | | . |
| 0080 | 204.0110 REMOVING ASPHALTIC SURFACE | 390.000 SY | | . | | . |
| 0090 | 204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS **P** | 54.000 SY | | . | | . |
| 0100 | 204.0150 REMOVING CURB & GUTTER **P** | 1,127.000 LF | | . | | . |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0110 | 204.0155 REMOVING CONCRETE SIDEWALK **P** | 435.000 SY | | . | | . |
| 0120 | 204.0157 REMOVING CONCRETE BARRIER **P** | 350.000 LF | | . | | . |
| 0130 | 204.0170 REMOVING FENCE **P** | 150.000 LF | | . | | . |
| 0140 | 204.0175 REMOVING CONCRETE SLOPE PAVING | 570.000 SY | | . | | . |
| 0150 | 204.0195 REMOVING CONCRETE BASES | 1.000 EACH | | . | | . |
| 0160 | 204.0220 REMOVING INLETS | 2.000 EACH | | . | | . |
| 0170 | 204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH **P** | 90.000 LF | | . | | . |
| 0180 | 205.0100 EXCAVATION COMMON **P** | 717.600 CY | | . | | . |
| 0190 | 206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-40-884 | LUMP | LUMP | | | . |
| 0200 | 206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 01. R-40-580 | LUMP | LUMP | | | . |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0210 | 206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 02. R-40-581 | LUMP | LUMP | | | . |
| 0220 | 206.6000.S TEMPORARY SHORING | 2,520.000 SF | | . | | . |
| 0230 | 209.0100 BACKFILL GRANULAR | 175.000 CY | | . | | . |
| 0240 | 210.0100 BACKFILL STRUCTURE | 100.000 CY | | . | | . |
| 0250 | 211.0200 PREPARE FOUNDATION FOR CONCRETE PAVEMENT (PROJECT) 01. 1090-07-73 | LUMP | LUMP | | | . |
| 0260 | 213.0100 FINISHING ROADWAY (PROJECT) 01. 1090-07-73 | 1.000 EACH | | . | | . |
| 0270 | 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH | 1,815.000 TON | | . | | . |
| 0280 | 415.0080 CONCRETE PAVEMENT 8-INCH **P** | 3,045.000 SY | | . | | . |
| 0290 | 415.0410 CONCRETE PAVEMENT APPROACH SLAB **P** | 174.000 SY | | . | | . |
| 0300 | 416.0180 CONCRETE DRIVEWAY 8-INCH **P** | 65.000 SY | | . | | . |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0310 | 416.0610 DRILLED TIE BARS | 158.000 EACH | | . | | . |
| 0320 | 416.0620 DRILLED DOWEL BARS | 16.000 EACH | | . | | . |
| 0330 | 465.0105 ASPHALTIC SURFACE | 138.800 TON | | . | | . |
| 0340 | 502.0100 CONCRETE MASONRY BRIDGES **P** | 756.000 CY | | . | | . |
| 0350 | 502.3200 PROTECTIVE SURFACE TREATMENT **P** | 1,513.000 SY | | . | | . |
| 0360 | 503.0137 PRESTRESSED GIRDER TYPE I 36W-INCH **P** | 2,110.000 LF | | . | | . |
| 0370 | 504.0500 CONCRETE MASONRY RETAINING WALLS **P** | 38.000 CY | | . | | . |
| 0380 | 505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES **P** | 157,300.000 LB | | . | | . |
| 0390 | 505.0615 BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS **P** | 3,490.000 LB | | . | | . |
| 0400 | 506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED **P** | 44.000 EACH | | . | | . |
| 0410 | 506.4000 STEEL DIAPHRAGMS (STRUCTURE) 01. B-40-884 **P** | 40.000 EACH | | . | | . |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0420 | 516.0500 RUBBERIZED MEMBRANE WATERPROOFING | 24.000 SY | | . | | . |
| 0430 | 531.0200.S NOISE BARRIERS SINGLE-SIDED SOUND ABSORPTIVE (STRUCTURE) 01. SN-40-005-95 **P** | 1,200.000 SF | | . | | . |
| 0440 | 550.1140 PILING STEEL HP 14-INCH X 73 LB | 4,790.000 LF | | . | | . |
| 0450 | 601.0331 CONCRETE CURB & GUTTER 31-INCH **P** | 1,127.000 LF | | . | | . |
| 0460 | 602.0410 CONCRETE SIDEWALK 5-INCH **P** | 3,920.000 SF | | . | | . |
| 0470 | 602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW **P** | 48.000 SF | | . | | . |
| 0480 | 603.1156 CONCRETE BARRIER TYPE S56 **P** | 150.000 LF | | . | | . |
| 0490 | 603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED | 662.500 LF | | . | | . |
| 0500 | 603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED | 1,162.500 LF | | . | | . |
| 0510 | 604.0400 SLOPE PAVING CONCRETE **P** | 34.000 SY | | . | | . |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0520 | 604.0600 SLOPE PAVING SELECT CRUSHED MATERIAL | 550.000 SY | | . | | . |
| 0530 | 608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH | 137.300 LF | | . | | . |
| 0540 | 611.0420 RECONSTRUCTING MANHOLES | 2.000 EACH | | . | | . |
| 0550 | 611.0430 RECONSTRUCTING INLETS | 2.000 EACH | | . | | . |
| 0560 | 611.0555 MANHOLE COVERS TYPE Q | 4.000 EACH | | . | | . |
| 0570 | 611.0648 INLET COVERS TYPE R | 8.000 EACH | | . | | . |
| 0580 | 611.1230 CATCH BASINS 2X3-FT | 4.000 EACH | | . | | . |
| 0590 | 611.2004 MANHOLES 4-FT DIAMETER | 1.000 EACH | | . | | . |
| 0600 | 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH | 80.000 LF | | . | | . |
| 0610 | 612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH | 210.000 LF | | . | | . |
| 0620 | 614.0905 CRASH CUSHIONS TEMPORARY | 4.000 EACH | | . | | . |

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CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0630 | 616.0206 FENCE CHAIN LINK 6-FT | 300.000 LF | | . | | . |
| 0640 | 616.0329 GATES CHAIN LINK (WIDTH) 01. 4-FT | 1.000 EACH | | . | | . |
| 0650 | 619.1000 MOBILIZATION | 1.000 EACH | | . | | . |
| 0660 | 624.0100 WATER | 50.000 MGAL | | . | | . |
| 0670 | 625.0500 SALVAGED TOPSOIL | 2,620.000 SY | | . | | . |
| 0680 | 628.1504 SILT FENCE | 1,190.000 LF | | . | | . |
| 0690 | 628.1520 SILT FENCE MAINTENANCE | 1,190.000 LF | | . | | . |
| 0700 | 628.1905 MOBILIZATIONS EROSION CONTROL | 2.000 EACH | | . | | . |
| 0710 | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL | 4.000 EACH | | . | | . |
| 0720 | 628.2002 EROSION MAT CLASS I TYPE A | 1,637.000 SY | | . | | . |
| 0730 | 628.7005 INLET PROTECTION TYPE A | 14.000 EACH | | . | | . |

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CONTRACTOR :_____

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|---|---|---|---|---|---|---|
| 0740 | 628.7010 INLET PROTECTION TYPE B | 14.000 EACH | | . | | . |
| 0750 | 628.7015 INLET PROTECTION TYPE C | 16.000 EACH | | . | | . |
| 0760 | 628.7560 TRACKING PADS | 2.000 EACH | | . | | . |
| 0770 | 629.0205 FERTILIZER TYPE A | 2.000 CWT | | . | | . |
| 0780 | 630.0130 SEEDING MIXTURE NO. 30 | 45.000 LB | | . | | . |
| 0790 | 631.0300 SOD WATER | 200.000 MGAL | | . | | . |
| 0800 | 631.1000 SOD LAWN | 983.000 SY | | . | | . |
| 0810 | 634.0618 POSTS WOOD 4X6-INCH X 18-FT | 2.000 EACH | | . | | . |
| 0820 | 635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS | 1,000.000 LB | | . | | . |
| 0830 | 636.0100 SIGN SUPPORTS CONCRETE MASONRY **P** | 1.600 CY | | . | | . |
| 0840 | 636.0500 SIGN SUPPORTS STEEL REINFORCEMENT **P** | 98.000 LB | | . | | . |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 0850 | 637.0202 SIGNS<br>REFLECTIVE TYPE II | 117.860<br>SF | | . | | . |
| 0860 | 638.2101 MOVING SIGNS<br>TYPE I | 1.000<br>EACH | | . | | . |
| 0870 | 638.2602 REMOVING SIGNS<br>TYPE II | 12.000<br>EACH | | . | | . |
| 0880 | 638.3000 REMOVING SMALL<br>SIGN SUPPORTS | 1.000<br>EACH | | . | | . |
| 0890 | 638.3100 REMOVING<br>STRUCTURAL STEEL SIGN<br>SUPPORTS | 2.000<br>EACH | | . | | . |
| 0900 | 643.0100 TRAFFIC CONTROL<br>(PROJECT) 01.<br>1090-07-73 | 1.000<br>EACH | | . | | . |
| 0910 | 643.0300 TRAFFIC CONTROL<br>DRUMS | 8,317.000<br>DAY | | . | | . |
| 0920 | 643.0420 TRAFFIC CONTROL<br>BARRICADES TYPE III | 5,436.000<br>DAY | | . | | . |
| 0930 | 643.0705 TRAFFIC CONTROL<br>WARNING LIGHTS TYPE A | 20,181.000<br>DAY | | . | | . |
| 0940 | 643.0800 TRAFFIC CONTROL<br>ARROW BOARDS | 50.000<br>DAY | | . | | . |
| 0950 | 643.0900 TRAFFIC CONTROL<br>SIGNS | 10,118.000<br>DAY | | . | | . |

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CONTRACTOR :_____

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|---|---|---|---|---|---|---|
| 0960 | 643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE | 234.000 SF | | . | | . |
| 0970 | 643.1050 TRAFFIC CONTROL SIGNS PCMS | 20.000 DAY | | . | | . |
| 0980 | 643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 01. 1090-07-73 | 1.000 EACH | | . | | . |
| 0990 | 643.3000 TRAFFIC CONTROL DETOUR SIGNS | 38,965.000 DAY | | . | | . |
| 1000 | 646.0106 PAVEMENT MARKING EPOXY 4-INCH | 6,175.000 LF | | . | | . |
| 1010 | 646.0600 REMOVING PAVEMENT MARKINGS | 11,200.000 LF | | . | | . |
| 1020 | 649.0100 TEMPORARY PAVEMENT MARKING 4-INCH | 9,600.000 LF | | . | | . |
| 1030 | 649.2100 TEMPORARY RAISED PAVEMENT MARKERS | 224.000 EACH | | . | | . |
| 1040 | 652.0125 CONDUIT RIGID METALLIC 2-INCH | 144.000 LF | | . | | . |
| 1050 | 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH | 1,236.000 LF | | . | | . |
| 1060 | 652.0700.S INSTALL CONDUIT INTO EXISTING ITEM | 1.000 EACH | | . | | . |

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|---|---|---|---|---|---|---|
| 1070 | 653.0135 PULL BOXES STEEL 24X36-INCH | 3.000 EACH | | . | | . |
| 1080 | 653.0222 JUNCTION BOXES 18X12X6-INCH | 4.000 EACH | | . | | . |
| 1090 | 653.0905 REMOVING PULL BOXES | 6.000 EACH | | . | | . |
| 1100 | 654.0105 CONCRETE BASES TYPE 5 | 1.000 EACH | | . | | . |
| 1110 | 654.0215 CONCRETE CONTROL CABINET BASES TYPE 9 | 1.000 EACH | | . | | . |
| 1120 | 655.0615 ELECTRICAL WIRE LIGHTING 10 AWG | 2,069.000 LF | | . | | . |
| 1130 | 655.0625 ELECTRICAL WIRE LIGHTING 6 AWG | 135.000 LF | | . | | . |
| 1140 | 656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. NE CORNER 101ST ST & CLEVELAND AVENUE | LUMP | LUMP | | | . |
| 1150 | 656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. US 45 AT CLEVELAND AVENUE | LUMP | LUMP | | | . |

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|---|---|---|---|---|---|---|
| 1160 | 656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 01. US 45 AT CLEVELAND AVENUE | LUMP | LUMP | | | . |
| 1170 | 657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE | 1.000 EACH | . | | | . |
| 1180 | 657.0322 POLES TYPE 5-ALUMINUM | 1.000 EACH | . | | | . |
| 1190 | 657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT | 1.000 EACH | . | | | . |
| 1200 | 657.6005.S ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES | 4.000 EACH | . | | | . |
| 1210 | 659.0802 PLAQUES SEQUENCE IDENTIFICATION | 1.000 EACH | . | | | . |
| 1220 | 670.0100 FIELD SYSTEM INTEGRATOR | LUMP | LUMP | | | . |
| 1230 | 670.0200 ITS DOCUMENTATION | LUMP | LUMP | | | . |
| 1240 | 671.0300 FIBER OPTIC CABLE MARKER | 3.000 EACH | . | | | . |
| 1250 | 672.0250 BASE CAMERA POLE 50-FT | 1.000 EACH | . | | | . |

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|---|---|---|---|---|---|---|
| 1260 | 673.0225.S INSTALL POLE MOUNTED CABINET | 1.000 EACH | | . | | . |
| 1270 | 674.0300 REMOVE CABLE | 595.000 LF | | . | | . |
| 1280 | 675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY | 1.000 EACH | | . | | . |
| 1290 | 675.0400.S INSTALL ETHERNET SWITCH | 1.000 EACH | | . | | . |
| 1300 | 677.0100 INSTALL CAMERA POLE | 1.000 EACH | | . | | . |
| 1310 | 677.0200 INSTALL CAMERA ASSEMBLY | 1.000 EACH | | . | | . |
| 1320 | 677.0300.S INSTALL VIDEO ENCODER | 1.000 EACH | | . | | . |
| 1330 | 678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT | 135.000 LF | | . | | . |
| 1340 | 678.0300 FIBER OPTIC SPLICE | 15.000 EACH | | . | | . |
| 1350 | 678.0400 FIBER OPTIC TERMINATION | 6.000 EACH | | . | | . |
| 1360 | 690.0150 SAWING ASPHALT | 390.000 LF | | . | | . |

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|---|---|---|---|---|---|---|
| 1370 | 690.0250 SAWING CONCRETE | 324.000 LF | | . | | . |
| 1380 | 715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT | 913.500 DOL | 1.00000 | | 913.50 | |
| 1390 | 715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES | 5,536.000 DOL | 1.00000 | | 5536.00 | |
| 1400 | SPV.0060 SPECIAL 01. CONCRETE BARRIER TRANSITION TYPE NJ32 TO S56 | 4.000 EACH | | . | | . |
| 1410 | SPV.0060 SPECIAL 02. INLET COVER REPLACEMENT | 6.000 EACH | | . | | . |
| 1420 | SPV.0060 SPECIAL 03. REMOVING CONTROLLER CABINET | 1.000 EACH | | . | | . |
| 1430 | SPV.0060 SPECIAL 04. REMOVING CONTROLLER CABINET BASE | 1.000 EACH | | . | | . |
| 1440 | SPV.0060 SPECIAL 05. REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL | 1.000 EACH | | . | | . |
| 1450 | SPV.0060 SPECIAL 06. SALVAGE MICROWAVE DETECTOR STATION | 1.000 EACH | | . | | . |
| 1460 | SPV.0060 SPECIAL 07. GROUND ROD | 1.000 EACH | | . | | . |

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|---|---|---|---|---|---|---|
| | SPV.0060 SPECIAL 08. | | | | | |
| 1470 | TRAFFIC CONTROL | 10.000 | | | | |
| | CLOSE-OPEN FREEWAY | EACH | | | | |
| | ENTRANCE RAMP | | | . | | . |
| | SPV.0060 SPECIAL 09. | | | | | |
| 1480 | TRAFFIC CONTROL | 10.000 | | | | |
| | CLOSE-OPEN FREEWAY TO | EACH | | | | |
| | FREEWAY SYSTEM RAMP | | | . | | . |
| | SPV.0060 SPECIAL 10. | | | | | |
| 1490 | ADJUST WATER VALVE | 5.000 | | | | |
| | | EACH | | . | | . |
| | SPV.0060 SPECIAL 11. | | | | | |
| 1500 | ADJUST COVER AND INSTALL | 2.000 | | | | |
| | INTERNAL SANITARY | EACH | | | | |
| | MANHOLE SEAL | | | . | | . |
| | SPV.0060 SPECIAL 12. | | | | | |
| 1510 | TRAFFIC CONTROL INTERIM | 12.000 | | | | |
| | FREEWAY LANE CLOSURE | EACH | | . | | . |
| | SPV.0060 SPECIAL 13. | | | | | |
| 1520 | SALVAGING LIGHT POLES | 5.000 | | | | |
| | ARMS LUMINAIRIES LAMPS | EACH | | . | | . |
| | SPV.0060 SPECIAL 14. | | | | | |
| 1530 | POLES TYPE 5 ALUMINUM | 4.000 | | | | |
| | BRONZE | EACH | | . | | . |
| | SPV.0060 SPECIAL 15. | | | | | |
| 1540 | LUMINAIRIE ARMS SINGLE | 4.000 | | | | |
| | MEMBER 4 1/2-INCH CLAMP | EACH | | | | |
| | 8-FT BRONZE | | | . | | . |
| | SPV.0060 SPECIAL 16. | | | | | |
| 1550 | LUMINAIRIES UTILITY LED | 5.000 | | | | |
| | CATAGORY A | EACH | | . | | . |
| | SPV.0060 SPECIAL 17. | | | | | |
| 1560 | INSTALLING | 1.000 | | | | |
| | STATE-FURNISHED | EACH | | | | |
| | DISTRIBUTION CENTERS | | | . | | . |

CONTRACT: 20130409014 PROJECT(S): 1090-07-73 FEDERAL ID(S): N/A

CONTRACTOR :_____

| LINE NO | ITEM DESCRIPTION | APPROX. QUANTITY AND UNITS | UNIT PRICE DOLLARS | UNIT PRICE CTS | BID AMOUNT DOLLARS | BID AMOUNT CTS |
|---|---|---|---|---|---|---|
| 1570 | SPV.0060 SPECIAL 18. SECTION CORNER MONUMENTS | 1.000 EACH | | . | | . |
| 1580 | SPV.0090 SPECIAL 01. FENCE DECORATIVE BRIDGE | 390.000 LF | | . | | . |
| 1590 | SPV.0090 SPECIAL 02. PAVEMENT MARKING GROOVED THERMOPLASTIC STOP LINE 18-INCH | 31.000 LF | | . | | . |
| 1600 | SPV.0090 SPECIAL 03. PAVEMENT MARKING GROOVED THERMOPLASTIC CROSSWALK 6-INCH | 260.000 LF | | . | | . |
| 1610 | SPV.0090 SPECIAL 04. FENCE TEMPORARY | 1,160.000 LF | | . | | . |
| 1620 | SPV.0105 SPECIAL 01. SURVEY PROJECT 1090-07-73 | LUMP | LUMP | | | . |
| 1630 | SPV.0105 SPECIAL 02. MAINTENANCE OF LIGHTING SYSTEMS | LUMP | LUMP | | | . |
| 1640 | SPV.0105 SPECIAL 03. PAVEMENT CLEANUP 1090-07-73 | LUMP | LUMP | | | . |
| 1650 | SPV.0165 SPECIAL 01. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD QMP PILOT **P** | 4,290.000 SF | | . | | . |
| 1660 | SPV.0165 SPECIAL 02. CONCRETE STAINING STRUCTURE R-40-580 | 970.000 SF | | . | | . |

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|---|---|---|---|---|---|---|
| 1670 | SPV.0165 SPECIAL 03. CONCRETE STAINING STRUCTURE R-40-581 | 900.000 SF | | . | | . |
| 1680 | SPV.0165 SPECIAL 04. CONCRETE STAINING STRUCTURE B-40-884 | 8,300.000 SF | | . | | . |
| | SECTION 0001 TOTAL | | | | | . |
| | TOTAL BID | | | | | . |

# PLEASE ATTACH SCHEDULE OF ITEMS HERE