HIGHWAY WORK PROPOSAL

Proposal Number: 1 1

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	1030-20-85	WISC 2017 485	N-S Freeway - Ryan Road Interchange Ryan Rd Bridge & Ramps	IH 94
Milwaukee	1030-26-72		North -South Freeway Ryan Road to Rawson Avenue (Box Culvert Extensions)	IH 94

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, $ 400,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: September 12, 2017 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time November 22, 2020	
Assigned Disadvantaged Business Enterprise Goal 15%	This contract is subject to federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Removals, grading, base, concrete pavement, concrete barrier, asphaltic surface, storm sewer, erosion control, permanent signing, traffic control, pavement marking, lighting, structures.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

The bidder, signing and submitting this proposal, agrees and declares as a condition thereof, to be bound by the following conditions and requirements.

If the bidder has a corporate relationship with the proposal design engineering company, the bidder declares that it did not obtain any facts, data, or other information related to this proposal from the design engineering company that was not available to all bidders.

The bidder declares that they have carefully examined the site of, and the proposal, plans, specifications and contract forms for the work contemplated, and it is assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications, special provisions and contract. It is mutually agreed that submission of a proposal shall be considered conclusive evidence that the bidder has made such examination.

The bidder submits herewith a proposal guaranty in proper form and amount payable to the party as designated in the advertisement inviting proposals, to be retained by and become the property of the owner of the work in the event the undersigned shall fail to execute the contract and contract bond and return the same to the office of the engineer within fourteen (14) days after having been notified in writing to do so; otherwise to be returned.

The bidder declares that they understand that the estimate of quantities in the attached schedule is approximate only and that the attached quantities may be greater or less in accordance with the specifications.

The bidder agrees to perform the said work, for and in consideration of the payment of the amount becoming due on account of work performed, according to the unit prices bid in the following schedule, and to accept such amounts in full payment of said work.

The bidder declares that all of the said work will be performed at their own proper cost and expense, that they will furnish all necessary materials, labor, tools, machinery, apparatus, and other means of construction in the manner provided in the applicable specifications and the approved plans for the work together with all standard and special designs that may be designed on such plans, and the special provisions in the contract of which this proposal will become a part, if and when accepted. The bidder further agrees that the applicable specifications and all plans and working drawings are made a part hereof, as fully and completely as if attached hereto.

The bidder, if awarded the contract, agrees to begin the work not later than ten (10) days after the date of written notification from the engineer to do so, unless otherwise stipulated in the special provisions.

The bidder declares that if they are awarded the contract, they will execute the contract agreement and begin and complete the work within the time named herein, and they will file a good and sufficient surety bond for the amount of the contract for performance and also for the full amount of the contract for payment.

The bidder, if awarded the contract, shall pay all claims as required by Section 779.14, Statutes of Wisconsin, and shall be subject to and discharge all liabilities for injuries pursuant to Chapter 102 of the Statutes of Wisconsin, and all acts amendatory thereto. They shall further be responsible for any damages to property or injury to persons occurring through their own negligence or that of their employees or agents, incident to the performance of work under this contract, pursuant to the Standard Specifications for Road and Bridge Construction applicable to this contract.

In connection with the performance of work under this contract, the contractor agrees to comply with all applicable state and federal statutes relating to non-discrimination in employment. No otherwise qualified person shall be excluded from employment or otherwise be subject to discrimination in employment in any manner on the basis of age, race, religion, color, gender, national origin or ancestry, disability, arrest or conviction record (in keeping with s.111.32), sexual orientation, marital status, membership in the military reserve, honesty testing, genetic testing, and outside use of lawful products. This provision shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The contractor further agrees to ensure equal opportunity in employment to all applicants and employees and to take affirmative action to attain a representative workforce.

The contractor agrees to post notices and posters setting forth the provisions of the nondiscrimination clause, in a conspicuous and easily accessible place, available for employees and applicants for employment.

If a state public official (section 19.42, Stats.) or an organization in which a state public official holds at least a 10% interest is a party to this agreement, this contract is voidable by the state unless appropriate disclosure is made to the State of Wisconsin Ethics Board.

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

(3) The department will provide bidding information through the department's web site at:
http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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

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

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

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

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:
http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

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

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

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

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

Bidder

Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.
3. The diskette or CD ROM is not submitted at the time and place the department designates.

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

Table of Contents

Article	Description	Page #
1.	General.	7
2.	Scope of Work.	7
3.	Prosecution and Progress.	8
4.	Lane Rental Fee Assessment.	16
5.	Traffic.	17
6.	Traffic Meetings and Traffic Control Scheduling.	18
7.	Holiday and Special Event Work Restrictions.	19
8.	Utilities.	19
9.	Municipality Acceptance of Sanitary Sewer Construction.	30
10.	Referenced Construction Specifications.	30
11.	Other Contracts.	30
12.	Contractor Notification.	31
13.	Contractor Document Submittals.	31
14.	CPM Progress Schedule.	32
15.	Hauling Restrictions.	32
16.	Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.	33
17.	Construction Over or Adjacent to Navigable Waters.	33
18.	Environmental Protection, Aquatic Exotic Species Control.	34
19.	Erosion Control.	34
20.	Dust Control Implementation Plan.	36
21.	Public Convenience and Safety.	38
22.	Public Involvement Meetings.	38
23.	Clearing and Grubbing, Emerald Ash Borer.	38
24.	Notice to Contractor - Right-of-Way Fencing.	41
25.	Notice to Contractor – Airport Operating Restrictions.	41
26.	Notice to Contractor – Traffic Signal Equipment Lead Time.	42
27.	Information to Bidders, Use of Recovered Material.	42
28.	Available Documents.	42
29.	Geotechnical Investigation Information.	42
30.	Material and Equipment Staging.	43
31.	Work Force Opportunities.	43
32.	Leadership Partnering Meetings – Light.	43
33.	Maintaining Drainage.	44
34.	Subletting the Contract.	45
35.	Force Account.	45
36.	Removing Old Culverts and Bridges.	45
37.	Pavement Breaking Equipment.	47
38.	Removing Concrete Barrier.	48
39.	Disposing of Surplus Material.	48
40.	QMP Subgrade.	48

41. QMP Base Aggregate. 59
42. Select Crushed Material. 67
43. Concrete Maturity Testing. 67
44. Asphaltic Surface Temporary. 68
45. QMP Concrete Pavement Special Requirements. 69
46. Concrete Masonry Structures. 73
47. Driven Piles Using Pile Dynamic Analyzer. 75
48. Storm Sewer. 76
49. Catch Basins, Manholes, and Inlets. 76
50. Furnishing Plant Materials. 76
51. Digging, Handling, and Packing Plant Stock. 77
52. Landscape Planting Surveillance and Care. 77
53. Sign Supports Concrete Masonry. 77
54. Signs Type I and II. 78
55. Blue Specific Service Signs. 79
56. Traffic Control. 79
57. Flexible Tubular Markers. 80
58. Traffic Control Signs Removal. 81
59. Traffic Control Detour Signs Not in Use. 81
60. Late Season Marking Requirements. 81
61. Nighttime Work Lighting-Stationary. 81
62. Coordination with Businesses. 83
63. Construction Trenches. 83
64. Milwaukee County Transit System. 84
65. Temporary Sidewalks and Driveways. 84
66. Freeway Lighting Systems – WISDOT Owned Systems. 84
67. Intelligent Transportation Systems (ITS) – Control of Materials. 87
68. General Requirements for Electrical Work. 88
69. Traffic Signals, General. 88
70. Electrical Conduit. 88
71. Traffic Signal Faces. 89
72. Pedestrian Signal Face 16-Inch. 89
73. Pedestrian Push Buttons. 89
74. Intelligent Transportation Systems – General Requirements. 89
75. Abatement of Asbestos Containing Material Structure B-40-0226, Item 203.0210.S.0001. 94
76. Removing Old Structure Over Waterway Station 282+34.12, Item 203.0500.0001.S; Station 294+49.00, Item 203.0500.0002.S; Station 385+19.39, Item 203.0500.0003.S. 96
77. Backfill Controlled Low Strength, Item 209.0200.S. 97
78. Cold Patch, Item 495.1000.S. 99
79. Ice Hot Weather Concreting, Item 501.1000.S. 100
80. Bar Steel Reinforcement HS Stainless Structures, Item 505.0800.S. 100
81. Concrete Staining B-40-809, Item 517.1010.S.0001; Concrete Staining R-40-388, Item 517.1010.S.0002; Concrete Staining R-40-391, Item 517.1010.S.0003. 103
82. Cover Plates Temporary, Item 611.8120.S. 105

83. Pipe Grates, Item 611.9800.S. 106
84. Fence Safety, Item 616.0700.S. 106
85. Traffic Control Surveillance and Maintenance 1030-20-85, Item 643.0200.S.0001..... 107
86. Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch, Item 646.0841.S; 8-Inch, Item 646.0843.S. 109
87. Pavement Marking Grooved Wet Reflective Epoxy 4-Inch, Item 646.2304.S; Pavement Marking Grooved Contrast Wet Reflective Epoxy 4-Inch, Item 646.0842.S; 8-Inch 646.0844.S..... 111
88. Install Conduit Into Existing Item, Item 652.0700.S. 114
89. Electrical Service Meter Breaker Pedestal STH 100 & S. 20th Street, Item 656.0200.3001; IH 94 Ramps & STH 100, Item 656.0200.3002. 114
90. Signal Housings. 115
91. Temporary Traffic Signals for Intersections STH 100 & S. 22nd Street, Item 661.0200.3001; IH 94 EB Ramps & STH 100 Existing, Item 661.0200.3002; IH 94 WB Ramps & STH 100 Existing, Item 661.0200.3003; STH 100 & S. 13th Street, Item 661.0200.3004; IH 94 EB Ramps & STH 100 Proposed, Item 661.0200.3005; IH 94 WB Ramps & STH 100 Proposed, Item 661.0200.3006. 115
92. Ramp Closure Gates Hardwired 24-FT, Item 662.1024.S; Ramp Closure Gates Hardwired 28-FT, Item 662.1028.S; Ramp Closure Gates Hardwired 37-FT, Item 662.1037.S. 117
93. Ramp Closure Barricade Rack 2-Unit, Item 662.6020.S. 122
94. Install ITS Field Cabinet, Item 673.0200.S. 122
95. Install Ethernet Switch, Item 675.0400.S. 123
96. Removing Advance Flasher Assemblies Type 1, Item 676.9001.S. 124
97. Removing 50-Foot Camera Pole, Item 677.9051.S. 124
98. Removing CCTV Camera, Item 677.9200.S. 125
99. Biofiltration Device Hardwood Mulch, SPV.0035.0001; Biofiltration Device Engineered Soil, Item SPV.0035.0002; Biofiltration Device Sand Seam, Item SPV.0035.0003; Biofiltration Device Observation Well, Item SPV.0060.0002; Biofiltration Device Curb Opening Casting SPV.0060.0003; Biofiltration Device Restoration, Item SPV.0060.0006. 126
100. No. 2 Aggregate, Item SPV.0035.0004. 129
101. Topsoil Special, Item SPV.0035.0005. 130
102. Riprap Medium Special, Item SPV.0035.0006. 130
103. HPC Masonry Structures, Item SPV.0035.4000. 131
104. Detention Basin Clay Lining, Item SPV.0035.8001. 138
105. Watering Bags, Item SPV.0060.0001. 142
106. Rootstock Vegetation, Item SPV.0060.0004. 143
107. Silt Fence Drainage Outlet, Erosion Control Filter Bags, Item SPV.0060.0005. 146
108. Permanent Stone Ditch Check, SPV.0060.0007. 148
109. Maintain Crash Cushions Temporary Left In Place, Item SPV.0060.0014. 149
110. Field Facilities Office Space, Item SPV.0060.0020. 150
111. Traffic Control Interim Freeway Lane Closure, Item SPV.0060.0022. 151
112. Traffic Control Close-Open Freeway Entrance Ramp, Item SPV.0060.0023. 152
113. Sand Bags, Item SPV.0060.0024. 152
114. Removing Sanitary Manhole, Item SPV.0060.0025. 153

115. Sanitary Sewer Manhole Precast Concrete 48-Inch w/ Casting, Item SPV.0060.0026. 154
116. Removing High Mast Tower Concrete Bases, Item SPV.0060.1000. 157
117. Concrete Bases Type 7 Special, Item SPV.0060.1002. 158
118. Removing Distribution Centers, Item SPV.0060.1004. 158
119. Removing High Mast Lighting Towers, Item SPV.0060.1005. 159
120. Removing Lighting Units, Item SPV.0060.1006. 159
121. Removing Wood Pole Lighting Units, Item SPV.0060.1007. 160
122. Poles Aluminum City of Oak Creek Nominal Height 30 FT Bronze, Item SPV.0060.1008. 161
123. Temporary Wood Pole Lighting Units, Item SPV.0060.1009. 162
124. Luminaires LED City of Oak Creek GARDCO P21 Bronze, Item SPV.0060.1010. 163
125. Lamp Disposal High Intensity Discharge, Item SPV.0060.1013. 163
126. Transformer Bases Breakaway 11 ½-Inch Bolt Circle City of Oak Creek Bronze, Item SPV.0060.1014. 165
127. Ground Rod, Item SPV.0060.2001. 165
128. Removing Ramp Control Signal Assembly Sidemount, Item SPV.0060.2002. 166
129. Removing Controller Ramp Meter Processor Assembly, Item SPV.0060.2003. 167
130. Removing Controller Cabinet, Item SPV.0060.2004. 168
131. Removing Controller Cabinet Base, Item SPV.0060.2005. 168
132. Removing Electrical Service Meter Breaker Pedestal, Item SPV.0060.2006. 169
133. Installing Portable Video Surveillance System, Item SPV.0060.2008. 170
134. Relocating Portable Video Surveillance System, Item SPV.0060.2009. 171
135. Installing Temporary Vehicle Detector Assembly, Item SPV.0060.2010. 171
136. Refocusing Temporary Vehicle Detector Assembly, Item SPV.0060.2011. 173
137. Removing Communication Vault, Item SPV.0060.2012. 174
138. Pull Box Non-Conductive 24x42-Inch, Item SPV.0060.2013. 175
139. Solar Powered Vehicle Detector Assembly, Item SPV.0060.2014. 176
140. Concrete Control Cabinet Bases Type 9 Special (Mod.), Item SPV.0060.3001. 178
141. Install Poles Over Height Type 12, Item SPV.0060.3002. 178
142. Pile Dynamic Analyzer (PDA) Testing, Item SPV.0060.4010; Pile Dynamic Analyzer (PDA) Restrikes, Item SPV.0060.4020; CAse Pile Wave Analysis Program (CAPWAP) Evaluation, Item SPV.0060.4030. 179
143. Concrete Base Sleeves, Item SPV.0060.4120. 183
144. MMSD Sanitary Manhole Reconstruct, Item SPV.0060.6001. 184
145. Inlet Covers Type 57, Item SPV.0060.8004. 186
146. Pipe Connection to Existing Structure, Item SPV.0060.8015. 187
147. Removing Bulkhead, Item SPV.0060.8018. 187
148. Remove and Cap Existing Drainage Storm Sewer Structure, Item SPV.0060.8061. 188
149. Pavement Cleanup Project 1030-20-85, Item SPV.0075.0001. 189
150. Seed Mix Special, Item SPV.0085.0001. 191
151. Concrete Curb and Gutter 4-Inch Sloped 12-Inch Depth 60-Inch Type A, Item SPV.0090.0001. 194
152. Heavy Duty Silt Fence, Item SPV.0090.0002. 195
153. Coconut Fiber Rolls Delivered, Item SPV.0090.0003 and Coconut Fiber Rolls Installed, Item SPV.0090.0004. 196

154. Maintain Concrete Barrier Temporary Precast Left In Place, Item SPV.0090.0006..... 197
155. Removing Sanitary Sewer Pipe 15-Inch, Item SPV. 0090.0007. 197
156. Sanitary Sewer 15-Inch SDR 35 Class "C" Bedding, Item SPV.0090.0008. 199
157. Concrete Barrier Temporary Precast Delivered Special, Item SPV.0090.0502. 201
158. Cable in Duct, 3-6 AWG, 1-8 AWG, Item SPV.0090.1000; Cable in Duct, 3-4 AWG, 1-8 AWG, Item SPV.0090.1001; Temporary Cable in Duct, 2-4 AWG, 1-8 AWG, Item 0090.1002. 202
159. Temporary Overhead Cable Triplex 4 AWG, Item SPV.0090.1003. 202
160. Removing Overhead Lighting Cable, Item SPV.0090.1004..... 204
161. Fence Decorative Bridge, Item SPV.0090.4300; Fence Decorative Wing, Item SPV.0090.4310. 205
162. Piling Sleeves, Item SPV.0090.4320. 211
163. Survey Project 1030-20-85, Item SPV.0105.0001..... 212
164. Rootstock Protection 1030-26-72, Item SPV.0105.0002; 1030-20-85, SPV.0105.0004. 215
165. Concrete Pavement Joint Layout, Item SPV.0105.0003..... 216
166. Lighting System Integrator, Item SPV.0105.1000..... 216
167. Maintenance of Lighting Systems, Item SPV.0105.1002. 218
168. Remove Traffic Signals IH 94 EB Ramps & STH 100, Item SPV.0105.3001; IH 94 WB Ramps & STH 100, Item SPV.0105.3002..... 221
169. Remove Traffic Signals IH 94 EB Ramps & STH 100, Item SPV.0105.3001; IH 94 WB Ramps & STH 100, Item SPV.0105.3002..... 222
170. Transport and Install State Furnished Traffic Signal Cabinet STH 100 & S. 20th Street, Item SPV.0105.3006; IH 94 Ramps & STH 100 CB1, Item SPV.0105.3007; IH 94 Ramps & STH 100 CB2, Item SPV.0105.3008..... 223
171. Transporting Traffic Signal and Intersection Lighting Materials STH 100 & S. 20th Street, Item SPV.0105.3009; IH 94 Ramps & STH 100, Item SPV.0105.3010..... 225
172. Transport and Install State Furnished Radar Detection System STH 100 & S. 20th Street, Item SPV.0105.3011..... 226
173. Transport and Install State Furnished Emergency Vehicle Preemption (EVP) Detector Heads STH 100 & S. 20th Street, Item SPV.0105.3012; IH 94 Ramps & STH 100, Item SPV.0105.3013. 227
174. Temporary EVP System STH 100 & S. 22nd Street, Item SPV.0105.3014; IH 94 EB Ramps & STH 100 Existing, Item SPV.0105.3015; IH 94 WB Ramps & STH 100 Existing, Item SPV.0105.3016; IH 94 EB Ramps & STH 100 Proposed, Item SPV.0105.3017; IH 94 WB Ramps & STH 100 Proposed, Item SPV.0105.3018; STH 100 & S. 13th Street, Item SPV.0105.3019. 228
175. Temporary Vehicle Detection System for Intersections STH 100 & S. 22nd Street, Item SPV.0105.3020; IH 94 EB Ramps & STH 100 Existing, Item SPV.0105.3021; IH 94 WB Ramps & STH 100 Existing, Item SPV.0105.3022; IH 94 EB Ramps & STH 100 Proposed, Item SPV.0105.3023; IH 94 WB Ramps & STH 100 Proposed, Item SPV.0105.3024; STH 100 & S. 13th Street, Item SPV.0105.3025..... 229
176. Install Fiber Optic Communications in Cabinet STH 100 & STH 241, Item SPV.0105.3026; STH 100 & S. 22nd Street, Item SPV.0105.3027; STH 100 & S. 20th Street, Item SPV.0105.3028; IH 94 Ramps & STH 100, Item SPV.0105.3029; STH 100 & S. 13th Street, Item SPV.0105.3030. 231

177. Longitudinal Grooving Bridge Deck, Item SPV.0165.4010..... 233
178. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, Item SPV.0165.4610. 234
179. Temporary Wall Wire Faced Mechanically Stabilized Earth LRFD/QMP, Item SPV.0165.4620. 247
180. Geogrid Reinforcement, Item SPV.0180.0001. 258
181. Seeding Special, Item SPV.0180.0002. 260
182. Seed Bed Preparation, Item SPV.0180.0003. 261
183. Coarse Aggregate Mix for Stream Bed, Item SPV.0195.0001. 262
184. Excavation, Hauling, and Disposal of Creosote Contaminated Soil, Item SPV.0195.4000. 263

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1030-20-85, IH-94 N-S Freeway - Ryan Road Interchange, Ryan Rd Bridge & Ramps, IH 94; 1030-26-72 North - South Freeway, Ryan Road to Rawson Avenue, (Box Culvert Extensions), IH 94, all work is located within 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, 2017 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 (20161130)

2. Scope of Work.

The work under this contract shall consist of removals, grading, base, select crushed material, concrete pavement, concrete barrier, curb and gutter, asphaltic surface, storm sewer, erosion control, permanent signing, traffic control, pavement marking, lighting, signals, FTMS, structures, restoration and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

Structures:

Project 1030-20-85

Bridges
B-40-809

Retaining walls
R-40-388
R-40-391

Sign structures
S-40-763
S-40-764
S-40-765
S-40-776
S-40-777
S-40-778

Project 1030-26-72

Culverts
C-40-31
C-40-32
C-40-33

104-005 (20090901)

3. Prosecution and Progress.

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

Do not begin construction on project 1030-26-72 until the Section 404 permit has been approved. The department anticipates approval of this permit November 15, 2017.

Do not begin construction on project 1030-20-85 until on or after March 1, 2018.

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

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

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment; work on Saturdays, Sundays, and nationally recognized legal holidays; and work at night.

Indicate on the proposed schedule of operations that a large force and adequate equipment will be needed to assure that the work will be completed within the established contract time.

Winter weather work, excavation of frozen ground, high ground water, dewatering during winter months, and mitigation efforts for high water table elevations shall not be considered adverse weather delays to construction. Cost for dewatering is considered incidental to construction.

Anticipate cold weather and early spring concrete paving and ancillary concrete work (curb, median barrier, etc). Plan to heat aggregates and water for mixes. The heating of the aggregate and water is considered incidental to those concrete items. There will be no adverse weather delay for cold weather construction.

Maintain pedestrian access at all locations outside the immediate construction area.

During construction operations, ramp sawed joints at intersecting streets with asphaltic surface material between the existing pavement surface and the adjacent surface in the construction zone, as directed by the engineer, to permit the safe passing of vehicles. The cost of the materials, labor, and equipment necessary to install such ramps is to be paid under bid item, Asphaltic Surface Temporary.

Lay out all doweled transverse joints on this project, including intersections. The engineer will approve joint layout. Joint spacing must not exceed 15 feet, as shown on the standard detail drawing. Place joints at end-of-radii, center line and flange line extended, all zero face driveway openings for depressed driveways and, when feasible, at all manholes, catch basins or inlets, and water valve boxes. Include the cost of all jointing and dowel baskets in the unit bid price for concrete pavement.

Obtain any noise variance permits to complete work outside of standard hours. Any permits obtained must be provided to the engineer.

Maintain the integrity of the inlet protection throughout the project. Remove and dispose of any debris that may prevent the flow of water.

Liquidated Damages
Complete all contract work, except for the Landscape Surveillance and Care Cycle bid item, prior to 12:01 AM November 23, 2018.

If the contractor fails to complete all contract work, except for the Landscape Surveillance and Care Cycle bid item, prior to 12:01 AM November 23, 2018, the department will assess the contractor standard liquidated damages of $2,065 per calendar day for each calendar day that any contract work, except for the Landscape Surveillance and Care Cycle bid item, remains incomplete beyond 12:01 AM November 23, 2018. An entire calendar day will be charged for any period of time within a calendar day that any contract work, except for the Landscape Surveillance and Care Cycle bid item, remains incomplete beyond 12:01 AM.

Navigable Waterway Restrictions
There shall be no in-stream disturbance of the unnamed tributary of the Oak Creek as a result of construction activity under or for this contract, from March 1, 2018 to June 15, 2018, both dates inclusive, in order to avoid adverse impacts upon the spawning of fish.

All dewatering devices shall comply with technical standard:
http://dnr.wi.gov/topic/stormWater/documents/Dewatering_1061.pdf

Culvert pipe checks are not to be placed in navigable waterways to include the Oak Creek and the unnamed tributary from 255RYA+50 LT to 242RYB+00 RT.

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

A Schedule of Operations
Traffic shifts shown in a given stage may occur at different times during that stage depending on the controlling elements for a given traffic movement.

Project 1030-20-85 Staging

Stage 1A Construction:
- Install temporary traffic signals
- Install temporary pavement

Stage 1A Traffic:
- Night closure for Ryan Road
- Detour Ryan Road

Stage 1B Construction:
- Demo Ryan Road westbound Bridge
- Construct the westbound portion of B-40-809
- Reconstruct the north half of Ryan Road from Station 42RY+50 to 58RY+60
- Construct Ramp RYA from Station 248RYA+11 to 256RYA+30 and from Station 258RYA+20 to Ramp RYATB
- Construct Ramp RYD from Station 248RYD+04 to 254RYD+70
- Construct Temporary Ramp RYATB
- Construct Temporary Ramp RYDTB from 259RYDTB+00 to IH 94
- Construct Temporary Ramps RYATA and RYDTA.
- Begin construction for the NWDP.
- Begin construction for the Park and Ride.

Stage 1B Traffic:
- Close westbound Ryan Road from Station 42RY+50 to 58RY+60.
- Traffic diverted to south half of Ryan Road, one lane each way. Cross-overs in Project 2040-16-70.
- Lane Shifts on IH 94 abutment and pier construction.
- Night closures on IH 94 for bridge demo and girder placement.
- Close Park and Ride.

Stage 2A Construction:
- Adjust temporary traffic signals.
- Install permanent traffic signals at in ramp intersection.
- Demo Ryan Road eastbound Bridge.
- Construct the eastbound portion of B-40-809.
- Reconstruct the south half of Ryan Road from Station 42RY+50 to 58RY+60.
- Construct Ramp RYB from Station 242RYB+00 to 248RYB+60.
- Construct Ramp RYC from Station 241RYC+11 to 248RYC+57.
- Construct mainline shoulders and barrier from Station 247+41 to 249+21.
- Continue construction for the NWDP and the Park and Ride.

Stage 2A Traffic:

- Close eastbound Ryan Road from Station 42RY+50 to 58RY+60.
- Traffic diverted to north half of Ryan Road, one lane each way. Cross-overs in 2040-16-70.
- Continued Lane Shifts on IH 94 for abutment and pier construction.
- Night closures on IH 94 for bridge demo and girder placement.
- Park and Ride closed.

Stage 2B Construction:

- Construct Ramp RYA RT from Station 256RYA+30 to 258RYA+20.
- Construct Ramp RYD RT from Station 254RYD+70 to 259RYD+00.
- Construct Ramp RYB from Station 239RYB+50 to 242RYB+00.
- Construct Ramp RYC from Station 239RYC+20 to 241RYC+11.
- Construct outside lane and shoulder on Ryan Road from Station 38RY+08 to Station 42RY+50 and from Station 58RY+60 to 60RY+42.
- Continue to construct Park and Ride and NWDP.

Stage 2B Traffic:

- Route traffic to Ramps RYA, RYB, RYC and RYD.
- Shift Ryan Road traffic to inside lanes, one lane each way.
- Use permanent signals, bag lights accordingly.
- Night closures for rerouting ramp traffic.

Stage 2C Construction:

- Construct inside lanes and medians from Station 38RY+08 to 42RY+50 and from Station 58RY+60 to 60RY+42.
- Continue to construct the Park and Ride and NWDP.
- Construct Ramp RYA LT from 256RYA+75 to 259RYA+25
- Construct Ramp RYD LT from Station 254RYD+00 to 256RYD+83
- Construct mainline shoulder from Station 257+75 RT to 266+53 RT and from 257+25 LT to 262+18 LT.

Stage 2C Traffic:

- Reroute traffic on RYA RT and RYD RT.
- Shift Ryan Road traffic to outside lanes.
- Night closure for rerouting Ryan Road and ramp traffic.

Stage 2D Construction:

- Construct median from Station 253RYA+25 to 249RYA+35
- Finish constructing Park and Ride and NWDP.
- Construct fence.
- Complete all remaining restoration and erosion control items.

Stage 2D Traffic:

- Route traffic to outside lanes of RYA while median is being constructed.
- Activate permanent traffic signals.

Project 1030-26-72 Staging

It is intended that construction of C-40-31 will take place during Stage 1B of Project No. 1030-20-85 as noted in the plans. Construction of C-40-32 and C-40-33 shall take place within the project timeframe and as detailed in the plans.

Definitions

The following definitions apply to this contract:

Weekday Peak Hours

- 5:30 AM – 9:00 AM Monday, Tuesday, Wednesday, Thursday, and Friday
- 2:00 PM – 7:00 PM Monday, Tuesday, Wednesday, Thursday, and Friday

Weekday Off-Peak Hours

- 9:00 AM – 2:00 PM Monday, Tuesday, Wednesday, Thursday, and Friday
- 7:00 PM – 9:30 PM Monday, Tuesday, Wednesday, Thursday
- 7:00 PM – 11:00 PM Friday

Weekend Peak Hours

- 10:00 AM – 7:00 PM Saturday, Sunday

Weekend Off-Peak Hours

- 8:00 AM – 10:00 AM Saturday, Sunday
- 7:00 PM – 11:00 PM Saturday
- 7:00 PM – 9:30 PM Sunday

Night Time Hours

- 9:30 PM Sunday, Monday, Tuesday, Wednesday and Thursday – 5:30 AM the following day
- 11:00 PM Friday and Saturday – 8:00 AM the following day

Full Freeway Closure Hours

- 11:00 PM Sunday, Monday, Tuesday, Wednesday and Thursday – 4:30 AM the following day

Rolling Closure

Short term freeway mainline rolling closures may be allowed for a maximum of 15 minutes for the removal and erection of sign structures, equipment moves across the road, or other required work as determined by the engineer. The department will allow short term rolling closures only between 2:00 AM and 4:00 AM, and they may only be performed by freeway law enforcement.

Obtain approval from the engineer before coordinating these closures with freeway law enforcement. Coordinate 14 days in advance of closure. Present the scheduled time for the short term rolling closure at the weekly traffic meeting a minimum of one week prior to the closure.

Freeway Work Restrictions

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 and to perform work related to major traffic shifts. Provide signed detour routes as shown in the plans fully open and free of construction during all full freeway and system ramp closures. Full closure of ramps will be restricted to Night Time Hours.

Submit requests for freeway closures 14 calendar days prior to the planned closure events. Obtain prior approval from the engineer and the WisDOT Statewide Traffic Operations Center for said closures. Notify local emergency and police agencies seven calendar days prior to closure.

Lane restrictions of the freeway beyond that shown on the traffic control plans must be approved by the engineer. If plan details are not provided in the traffic control plan, furnish plans for review by the engineer and the WisDOT Statewide Traffic Operations Center at (414) 227-2142 so that approval, or disapproval, is obtained at least three business days prior coordination of roadway, lane, and ramp closures as identified in contractor Coordination.

No freeway lane closures are allowed until 5 hours after the beginning of a Milwaukee Brewers home game against the Chicago Cubs or the Chicago White Sox. No freeway lane closures are allowed 5 hours before the beginning of a Green Bay Packers game against the Chicago Bears. Full closure of service ramps and mainline will be restricted to Night Time Hours.

Do not, at any time, conduct construction operations in the median area and adjacent outside shoulder area of the freeway at the same time without permission of the engineer.

Restrict work on freeway roads and freeway ramps to working in closed shoulders or closed lanes as allowed by the plans or engineer. Provide and utilize temporary access roads and ramps to access the work zones. Construct temporary access incidental to other items of work. Access into the work zones will not be allowed directly from freeway roads during Peak Hours. Access into the work zones from freeway roads will be allowed during Night Time hours and Off-Peak Hours, subject to approval by the engineer, if operations can be safely accomplished and do not result in non-construction traffic entering the work zones. Access from ramps will be allowed as shown in the plans or as modified with written approval from the engineer. Exiting the work zones directly onto freeway roads will be allowed only when operations do not obstruct or slow traffic on the freeway.

Do not begin or continue any work that closes traffic lanes or ramps outside the allowed time periods specified in this contract. If the contractor fails to open freeway lanes of traffic and/or ramps to traffic by the specified times, deductions shown in the article Lane Rental Fee

Assessment will be made from the monies due to the contractor based on the hourly rental rate for the closure type and hourly definition that the non-compliant closure occurs.

Permitting the contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the department of any of its rights under the contract.

Do not reopen freeway entrance ramps to traffic unless the ramp meters are fully functional, at a fixed metered rate. Communications connection may be made at later date.

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.

All Work Restrictions
Comply with the noise level restrictions as defined in the article Public Convenience and Safety. Any ordinance variance issued by the municipality or required permits shall be furnished to the engineer, by the contractor, in writing 3 workings days before performing such work.

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

Excavation material and cleared and grubbed material should be stockpiled on upland areas an adequate distance away from wetlands, storm sewer inlets, floodplains, and the waterways as determined by engineer.

Provide Milwaukee County Highway Maintenance and Milwaukee County Sheriff's Department with a 24-hour emergency contact number for when maintenance is required.

Submit any traffic control change requests to the engineer at least 48 hours prior to an actual traffic control change. A request does not constitute approval.

Work Zone Ingress/Egress.
Provide engineer approved signage and parallel deceleration and acceleration lanes for freeway access into and out of the work zones at locations approved by the engineer.

At the weekly traffic meetings, provide an Emergency Work Zone Access Plan and required updates, as approved by the engineer, to direct emergency responders accessing a mainline median barrier restricted work zone.

Locations of work zone egress or ingress for construction vehicles, other than as shown in the plans, is subject to approval from the engineer. Access into the work zones are not allowed directly from the freeway during peak, weekday midday, and off-peak hours. Access into the work zones from the freeway will be allowed during night-time hours, subject to approval by the engineer, if operations can be safely accomplished and do not result in non-construction traffic entering the work zones. Exiting work zones directly onto the freeway are only allowed when operations do not obstruct or slow traffic on the freeway. All construction vehicles shall yield to all through traffic at all locations.

Residential Driveways
Inform property owners and tenants at least 48 hours prior to removing a driveway approach which serves that property. Schedule driveway approach removal and replacement so that the time lapse between removal and replacement is minimal.

Do not close residential approaches or remove from service without sufficient notice given to the occupants of the premises to remove their vehicles prior to driveway removal or closing of the driveway approach access.

Commercial Driveways
For all commercial properties affected by construction activities, inform property owners in writing at least 4-days prior to closing driveway approaches that serve the property. The commercial driveway reconstruction work shall be built in stages as to ensure access is provided at all times. Schedule driveway approach removal and replacement so that the time lapse between removal and replacement is minimal.

Freeway Traffic Management System (FTMS) Restrictions
Maintain the functionality of existing FTMS devices as long as is practical and the respective impacted roadways are open, or until the respective temporary devices are functional as specified under the interim completion milestones in this contract. Specifically, existing ramp meters must remain functional as long as the existing on-ramps being metered are open to traffic and new ramp meters must be operational before opening the associated new on-ramps to traffic.

Ryan Road Park and Ride
Close Park and Ride for Stages 1 and 2. Open new Park and Ride upon completion.

Migratory Birds
Swallow and other migratory birds' nests have been observed on or under the existing bridge. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

The nesting season for swallows and other birds is usually between May 1 and August 30. Either prevent active nests from becoming established, or apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds, or clearing nests from all structures before the nests become active in early spring. As a last resort, prevent birds from nesting by installing a suitable netting device on the remaining structure prior to nesting activity. Include the cost for preventing nesting in the cost of Removing Old Structure.
Birds (20090901)

Contractor Coordination
We Energies has existing transite conduits attached below the Ryan Road structure crossing IH 94. We Energies will remove these conduits in conjunction with structure demolition. Provide freeway traffic control and lane closures for the removal of the conduits. Allow We Energies two working days to complete their removals once traffic control has been established. Lane rental assessments will apply to these closures. Contact Erich Wuestenhagen, (414) 944-8765 office, of We Energies 15 days prior to the demolition of the structure to coordinate removal.

4. Lane Rental Fee Assessment.

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

The allowable lane closure times are shown in the Prosecution and Progress article.

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

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

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

- IH 94 mainline - $7,500 per full closure, per hour broken into 15 minute increments
- Ryan Road Ramp - $2,000 per full closure, per hour broken into 15 minute increments

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

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

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

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

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance. If interim completion time or contract time expires prior to the completion of specified work in the contract, additional liquidated damages will be assessed according to standard spec 108.11 or as specified within this contract.
stp-108-070 (20161130)

5. Traffic.

The work under this contract shall be performed in a manner that will interfere as little as possible with active traffic on local streets. Vehicles, equipment, or materials shall not be parked or stored on City of Oak Creek or Franklin streets adjacent to active traffic except at the time of performance of the work. Materials or equipment may be stored within the right-of-way only at locations meeting the approval of the engineer.

At all times maintain access to businesses and residents on the existing local streets within the project work area. No driveway approach or parking stall shall be closed or removed from service without a five day notice given to the occupants of the premises to remove their vehicles prior to driveway removal or closing of the driveway approach access.

Traffic requirements under this contract shall be coordinated with other ongoing department construction projects. This contractor shall be responsible for implementing and coordinating with other contractors all traffic control as shown on the plans.

The construction sequence, including associated traffic control, shall be substantially accomplished as detailed in the Traffic Control Plans and as described herein.

Submit to the engineer for approval a detailed traffic control plan if different than the traffic control plan provided in the plan set. This plan is to be submitted ten days prior to the preconstruction conference.

Employ flaggers, signs, barricades, and drums as may be necessary to safeguard and direct traffic at all locations where construction operations may interfere with or restrict the smooth flow of traffic.

6. 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 between 11:00 - 11:30 AM on Wednesdays at the project field office 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 with the engineer during the 11:00 AM meeting.

Every Wednesday at 2:00 PM, or as scheduled by the engineer, attend a weekly traffic meeting. 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.
SEF Rev. 15_0319

Advance Notification
Notify the engineer and WisDOT SE Region Work Zone Engineer (262-548-6730) 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 following minimum advance notification to the engineer for incorporation into the Wisconsin Lane Closure System.

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

7. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highways carrying IH-94 and ramps, STH 100, STH 241 or STH 38 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 Wednesday, November 22, 2017 to 6:00 AM Monday, November 27, 2017 for Thanksgiving;
- From noon Friday, December 22, 2017 to 6:00 AM Tuesday, January 2, 2018 for Christmas and New Year's Day;
- From noon Friday, May 25, 2018 to 6:00 AM Tuesday, May 29, 2018 for Memorial Day;
- From noon Friday, June 29, 2018 to 6:00 AM Thursday, July 5, 2018 for Independence Day;
- From noon Friday, August 31, 2018 to 6:00 AM Tuesday, September 4, 2018 for Labor Day.

8. Utilities.

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

Additional information regarding recently relocated utility facilities may be available on permits issued to the utility companies. These permits can be viewed at the Region Office during normal working hours. Contact WisDOT SE Freeways Utility Coordinator Douglas Gendron 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 discontinued utility facilities within the project limits. If a conflict with a discontinued 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.

Known utilities in the project area are as follows:

IH 94/ RYAN ROAD INTERCHANGE (1030-20-85)

AT&T Corporation has an existing underground communications duct package within the project limits beginning beyond the southerly project limits and running northerly along the westerly right-of-way of IH 94 to Station 239+57, 221'LT. From there the line turns and runs northwesterly to Station 39RY+95, 112'RT where the line turns and runs northerly, crossing Ryan Road at Station 40RY+02, and continuing northerly to Station 40RY+08, 92'LT. From there the line turns and runs northeasterly along the westerly right-of-way line of IH 94 to Station 257+33, 227'LT and continues northerly beyond the project limits. This duct package consists of six 2-inch ducts that are bundled with three 2-inch ducts owned by Level 3 Communications, for a total of nine ducts. Prior to construction AT&T Corporation will relocate their duct package between Station 257+05, 280' LT and 258+65, 217' LT to a location along the new right-of-way line. The remainder of the line will remain in place without adjustment. AT&T Corporation will also relocate the three Level 3 ducts to the same location along the right-of-way in this area.

Contact Ken Nine, (574) 842-8830 office / (574) 904-6336 cell, of JMC Engineers & Associates, Inc. 7 days in advance to coordinate locations and any excavation near their facilities.

AT&T Wisconsin has a discontinued underground communications line within the project limits beginning beyond the easterly project limits and running westerly along the north side of Ryan Road to Station 56RY+47, 123'LT where it turns and runs northerly to Station

56RY+26, 291'LT. From there the line runs westerly and ends at Station 55RY+14, 291'LT.

Contact Jay Bulanek, (262) 896-7669 office / (414) 491-2855 cell, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Charter Communications has an existing overhead communication line on We Energies poles within the project limits beginning beyond the westerly project limits and running easterly to a pole at Station 260+12, 202'LT, where it turns and runs northerly along the westerly right-of-way of IH 94 to a pole at Station 261+20, 191'LT. From there the line turns and runs easterly, crossing IH 94 at Station 261+28, and continuing easterly to beyond the project limits. Prior to construction, Charter Communications will bore a new underground communication line beginning at the pole at Station 261+20, 191'LT and running easterly, crossing below IH 94, and continuing easterly to a new We Energies' pole at Station 261+41, 305'RT. The overhead line in the area of the new bore will be removed and the remainder of the line will remain in place without adjustment.

Contact Steve Cramer, (414) 227-4045 office / (414) 688-2385 cell, of Charter Communications 7 days in advance to coordinate locations and any excavation near their facilities.

Level 3 Communications has an existing underground communications duct package within the project limits beginning beyond the southerly project limits and running northerly along the westerly right-of-way of IH 94 to Station 239+57, 221'LT. From there the line turns and runs northwesterly to Station 39RY+95, 112'RT where the line turns and runs northerly, crossing Ryan Road at Station 40RY+02, and continuing northerly to Station 40RY+08, 92'LT. From there the line turns and runs northeasterly along the westerly right-of-way line of IH 94 to Station 257+33, 227'LT and continues northerly beyond the project limits. This duct package consists of three 2-inch ducts that are bundled with six 2-inch ducts owned by AT&T Corporation, for a total of nine ducts. Prior to construction AT&T Corporation will relocate this duct package between Station 257+05, 280' LT and 258+65, 217' LT to a location along the new right-of-way line. The remainder of the line will remain in place without adjustment. AT&T Corporation will also relocate their ducts to the same location along the right-of-way in this area.

Contact Brahim Gaddour, (414) 908-1027 office / (414) 704-1026 cell, of Level 3 Communications 7 days in advance to coordinate locations and any excavation near their facilities.

Milwaukee Metropolitan Sewerage District has an existing underground sanitary sewer line within the project limits beginning beyond the westerly project limits and running easterly along the northerly curb line of Ryan Road to a manhole at Station 45RY+30, 60'LT. From there the line continues easterly along the curb line, crossing IH 94 at Station 248+91, and continuing easterly to a manhole at Station 54RY+26, 59'LT. From there the line continues easterly to beyond the project limits. This line will remain in place without adjustment. Reconstruct the manholes as shown in the plans.

Contact Bob Rebitski, (414) 225-2214, of the Milwaukee Metropolitan Sewerage District 7 days in advance to coordinate locations and any excavation near their facilities.

Oak Creek Water and Sewer Utility has an existing underground water line within the project limits beginning beyond the westerly project limits and running easterly, crossing IH 94 at Station 260+17, and continuing easterly to Station 260+24, 135'RT. From there it turns and runs northeasterly to beyond the project limits. This line will remain in place without adjustment. Protect the main during construction activities and place geogrid reinforcement and select crushed material over portions of this main as shown in the plans.

Oak Creek Water and Sewer Utility also has a discontinued water line beginning beyond the westerly project limits and running easterly, crossing IH 94 at Station 260+44, and continuing easterly to beyond the project limits.

Contact Ron Pritzlaff, (414) 570-8200 Ext. 24 office / (414) 852-3910 cell, of Oak Creek Water and Sewer Utility 7 days in advance to coordinate locations and any excavation near their facilities.

WE Energies – Electric has existing overhead and underground electric and lighting facilities within the project limits in the following locations:

- An existing overhead electric line beginning beyond the westerly project limits and running easterly to a pole at Station 260+12, 202'LT, where it turns and runs northerly along the westerly right-of-way of IH 94 to a pole at Station 261+20, 191'LT. From there the line continues northerly along the right-of-way to beyond the northerly project limits. This line will remain in place without adjustment.
- An existing overhead electric line beginning at a pole at Station 261+20, 191'LT and running easterly, crossing IH 94 at Station 261+28, and continuing easterly to a pole at Station 261+36, 177'RT. From there it continues easterly to beyond the project limits. Prior to construction, We Energies – Electric will bore a new underground electric line beginning at the pole at Station 261+20, 191'LT and running easterly, crossing below IH 94, and continuing easterly to a new pole at Station 261+41, 305'RT. The overhead line in the area of the new bore will be removed and the remainder of the line will remain in place without adjustment.
- An existing overhead electric line beginning at a pole at Station 261+36, 177'RT and running southerly and ending at a pole at Station 261+01, 186'RT. We Energies will remove these facilities prior to construction.
- An empty electric conduit package attached to the Ryan Road westbound structure over IH 94 between Station 48RY+83, 40'LT and Station 51RY+11, 40'LT. This conduit is composed of transite material and it will be removed by We Energies in conjunction with the demolition of the structure and removal of adjacent pavement. Allow We Energies 2 consecutive working days to perform removal of the transite conduit on the structure and 3 working days once the pavement has been removed in the areas east and west of the existing structure. Contact Erich Wuestenhagen,

(414) 944-5780 office / (262) 483-3896 cell, of We Energies 15 days prior to the demolition of the structure to coordinate removal.

- An existing underground electric line beginning beyond the westerly project limits and running easterly along the south right-of-way of Ryan Road to Station 3877109'RT. From there the line runs easterly and northeasterly to Station 42RY+55, 59'RT where it turns and runs northerly across eastbound Ryan Road and ends at a light pole at Station 42RY+57, 1'RT. Allow 1 day for We Energies to perform this work.
- Light poles and overhead electric lines beginning at a light pole at Station 42RY+57, 1'RT and running easterly along the median of Ryan Road and ending at a light pole at Station 48RY+70, 2'LT. Allow 3 days for We Energies to perform this work.
- Light poles and overhead electric lines beginning beyond the easterly project limits and running westerly behind the southerly Ryan Road curb line to a light pole at Station 56RY+72, 59'RT. From there the line continues westerly and ends at a light pole at Station 51RY+20, 60'RT. Allow 1 day for We Energies to perform this work.
- An existing overhead electric line beginning at a light pole at Station 56RY+72, 59'RT and running northerly, crossing Ryan Road at Station 56RY+68, and continuing northerly to a light pole at Station 56RY+65, 61'LT. From there it turns and runs westerly behind the northerly Ryan Road curb line and ends at a light pole at Station 51RY+20, 62'LT. Allow 1 day for We Energies to perform this work.
- An overhead lighting line beginning at a light pole at Station 56RY+65, 61'LT and running easterly behind the northerly Ryan Road curb line and ending at a light pole at Station 57RY+69, 60'LT. Allow 1 day for We Energies to perform this work.
- An existing underground electric line beginning at a light pole at Station 56RY+65, 61'LT and running northerly ending at a cabinet at Station 56RY+48, 119'LT. Allow 1 day for We Energies to perform this work.

We Energies also has a discontinued underground electric line beginning at a pole at Station 261+01, 186'RT and running southerly and ending at Station 259+56, 229'RT.

Contact Erich Wuestenhagen, (414) 944-5780 office / (262) 483-3896 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT Lighting has existing underground and overhead lighting facilities throughout the project limits. Relocate, reconstruct, remove, discontinue and leave in place portions of these facilities as shown in the plans.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT 7 days in advance to coordinate construction, locations and any excavation near their facilities.

WisDOT – Signals has existing signal facilities throughout the project limits. Relocate, reconstruct, remove, discontinue and leave in place portions of these facilities as shown in the plans.

Contact WisDOT Traffic Signal Operations, (414) 750-2605, 7 days in advance to coordinate construction, locations and any excavation near their facilities.

WisDOT STOC has existing underground traffic management and communication facilities throughout the project limits. Relocate, reconstruct, remove, discontinue and leave in place portions of these facilities as shown in the plans.

Contact Jeff Madson. (414) 225-3723, of WisDOT 7 days in advance to coordinate construction, locations and any excavation near their facilities.

RYAN ROAD/ HOWELL AVENUE INTERSECTION (1030-20-85)

AT&T Wisconsin has existing underground communication facilities within the project limits in the following locations:

- An underground communications line beginning beyond the westerly project limits and running easterly along the back of the southerly Ryan Road sidewalk to a pedestal at Station 114RY+91, 152'RT. From there it continues easterly beyond the project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a pole at Station 114RY+80, 286'RT and running northerly along the back of the westerly Howell Avenue sidewalk to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a pedestal at Station 114RY+91, 152'RT and running easterly, crossing Howell Avenue, and continuing easterly to beyond the project limits. This line will remain in place without adjustment.

Contact Jay Bulanek, (262) 896-7669 office / (414) 491-2855 cell, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Charter Communications has existing underground communication facilities within the project limits in the following locations:

- An underground communications line beginning beyond the westerly project limits and running easterly behind the southerly curb line of Ryan Road to a pull box at Station 114RY+87, 129'RT where it turns and runs southerly behind the westerly curb line of Howell Avenue to beyond the project limits. This line will remain in place without adjustment.
- An underground communications line beginning at a pedestal at Station 114RY+93, 154'RT and running easterly, crossing Howell Avenue, and continuing easterly to beyond the project limits. This line will remain in place without adjustment.

Contact Steve Cramer, (414) 227-4045 office / (414) 688-2385 cell, of Charter Communications 7 days in advance to coordinate locations and any excavation near their facilities.

Milwaukee Metropolitan Sewerage District has an existing underground sanitary sewer line within the project limits beginning at a manhole at Station 102RY+67, 25'RT and running easterly along the eastbound lanes of Ryan Road to a manhole at Station 115RY+73, 38'RT. From there the line continues to beyond the project limits. This line will remain in place without adjustment.

Contact Larry Anderson, (414) 225-2241, of the Milwaukee Metropolitan Sewerage District 7 days in advance to coordinate locations and any excavation near their facilities.

Oak Creek Water and Sewer Utility has an existing underground water line within the project limits beginning beyond the southerly project limits and running northerly along the westerly curb line of Howell Avenue to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Ron Pritzlaff, (414) 570-8200 Ext. 24 office / (414) 852-3910 cell, of Oak Creek Water and Sewer Utility 7 days in advance to coordinate locations and any excavation near their facilities.

TDS Metrocom has an existing underground communication line within the project limits beginning at a pull box at Station 114RY+87, 129'RT and running southerly below the westerly sidewalk of Howell Avenue to beyond the southerly project limits. This line will remain in place without adjustment.

Contact Matt Schulte, (262) 754-3063 office / (262) 409-1177 cell, of TDS Metrocom 7 days in advance to coordinate locations and any excavation near their facilities.

WE Energies – Electric has existing overhead and underground electric facilities within the project limits in the following locations:

- An existing overhead electric line beginning beyond the southerly project limits and running northerly along the westerly right-of-way of Howell Avenue to a pole at 114RY+81, 183'RT. This line will remain in place without adjustment.
- An existing underground electric line beginning at a pole at Station 114RY+81, 183'RT and running northerly along the westerly right-of-way of Howell Avenue to Station 114RY+82, 145'RT where it turns and runs westerly to a transformer at Station 113RY+32, 109'RT. From there it continues northwesterly to a lighting cabinet at Station 112RY+96, 87'RT. This line will remain in place without adjustment.

Contact Erich Wuestenhagen, (414) 944-5780 office / (262) 483-3896 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

WE Energies – Gas has an existing underground gas line within the project limits beginning beyond the westerly project limits and running easterly along the south right-of-way of Ryan Road to Station 114RY+77, 154'RT where it turns and runs southerly along the westerly right-of-way of Howell Avenue to beyond the southerly project limits. This line will remain in place without adjustment.

We Energies also has discontinued underground gas facilities within the project limits in the following locations:

- A discontinued underground gas line beginning beyond the westerly project limits and running easterly along a line approximately 21' north of and parallel to the southerly right-of-way of Ryan Road, crossing Howell Avenue, and continuing easterly to beyond the easterly project limits.
- A discontinued underground gas line beginning beyond the southerly project limits and running northerly along a line approximately 44' east of the westerly right-of-way of Howell Avenue to beyond the northerly project limits.

Contact Erich Wuestenhagen, (414) 944-5780 office / (262) 483-3896 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT Lighting has existing underground and overhead lighting facilities throughout the project limits. These facilities will remain in place without adjustment.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT 7 days in advance to coordinate construction, locations and any excavation near their facilities.

WisDOT – Signals has existing signal facilities throughout the project limits. Relocate, reconstruct, remove, discontinue and leave in place portions of these facilities as shown in the plans.

Contact WisDOT Traffic Signal Operations, (414) 750-2605, 7 days in advance to coordinate construction, locations and any excavation near their facilities.

WisDOT STOC has existing underground traffic management and communications facilities within the project limits in the following locations:

- An underground signal interconnect line beginning beyond the westerly project limits and running easterly along the median of Ryan Road to a pull box at Station 114RY+30, 5'RT. From there it turns and runs southerly and ends at a pull box at Station 114RY+25, 104'RT. This line will remain in place without adjustment.
- An underground signal interconnect line beginning beyond the westerly project limits and running easterly along the southerly right-of-way of Ryan Road to a pull box at Station 114RY+95, 162'RT. From there it continues easterly across Howell Avenue to beyond the project limits. This line will remain in place without adjustment.

Construct, adjust and leave in place STOC communications facilities as shown in the plans.

Contact Jeff Madson, (414) 225-3723, of WisDOT 7 days in advance to coordinate locations and any excavation near their facilities.

RYAN ROAD BOX CULVERT (1030-26-72)

C-40-31

AT&T Corporation has an existing underground duct package beginning beyond the southerly project limits and running northerly along the westerly right-of-way of IH 94 and continuing beyond the northerly project limits. This duct package consists of six 2-inch ducts that are bundled with three 2-inch ducts owned by Level 3 Communications, for a total of nine ducts. This line will remain in place without adjustment.

Contact Ken Nine, (574) 842-8830 office / (574) 904-6336 cell, of JMC Engineers & Associates, Inc. 7 days in advance to coordinate locations and any excavation near their facilities.

Level 3 Communications has an underground duct package beginning beyond the southerly project limits and running northerly along the west right-of-way of IH 94. This duct package consists of three 2-inch ducts that are bundled with six 2-inch ducts owned by AT&T Corporation, for a total of nine ducts. This line will remain in place without adjustment.

Contact Brahim Gaddour, (414) 908-1027 office / (414) 704-1026 cell, of Level 3 Communications 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT STOC has an existing underground communications line beginning beyond the southerly project limits and running northerly along the easterly right-of-way of IH 94 and continuing beyond the northerly project limits. This line will remain in place without adjustment.

WisDOT STOC also has a discontinued underground communications line beginning beyond the southerly project limits and running northerly along the easterly shoulder of IH 94 and continuing beyond the northerly project limits.

Contact Jeff Madson. (414) 225-3723, of WisDOT 7 days in advance to coordinate locations and any excavation near their facilities.

C-40-32

AT&T Corporation has an existing underground duct package beginning beyond the southerly project limits and running northerly along the westerly right-of-way of IH 94 and continuing beyond the northerly project limits. This duct package consists of six 2-inch

ducts that are bundled with three 2-inch ducts owned by Level 3 Communications, for a total of nine ducts. This line will remain in place without adjustment.

Contact Ken Nine, (574) 842-8830 office / (574) 904-6336 cell, of JMC Engineers & Associates, Inc. 7 days in advance to coordinate locations and any excavation near their facilities.

Level 3 Communications has an underground duct package beginning beyond the southerly project limits and running northerly along the west right-of-way of IH 94. This duct package consists of three 2-inch ducts that are bundled with six 2-inch ducts owned by AT&T Corporation, for a total of nine ducts. This line will remain in place without adjustment.

Contact Brahim Gaddour, (414) 908-1027 office / (414) 704-1026 cell, of Level 3 Communications 7 days in advance to coordinate locations and any excavation near their facilities.

Oak Creek Water and Sewer Utility has an existing sanitary sewer line beginning beyond the westerly project limits and running northeasterly to a manhole at Station 294+29, 160'LT where it turns and runs easterly, crossing IH 94 at Station 294+29, and continuing easterly to a manhole at Station 294+29, 165'RT. From there the line runs easterly to beyond the project limits. This line will remain in place without adjustment.

Contact Ron Pritzlaff, (414) 570-8200 Ext. 24 office / (414) 852-3910 cell, of Oak Creek Water and Sewer Utility 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT STOC has an existing underground communications line beginning beyond the southerly project limits and running northerly along the easterly right-of-way of IH 94 and continuing beyond the northerly project limits. This line will remain in place without adjustment.

WisDOT STOC also has a discontinued underground communications line beginning beyond the southerly project limits and running northerly along the easterly shoulder of IH 94 and continuing beyond the northerly project limits.

Contact Jeff Madson, (414) 225-3723, of WisDOT 7 days in advance to coordinate locations and any excavation near their facilities.

C-40-33

AT&T Corporation has an existing underground duct package beginning beyond the southerly project limits and running northerly along the westerly right-of-way of IH 94 and continuing beyond the northerly project limits. This duct package consists of six 2-inch ducts that are bundled with three 2-inch ducts owned by Level 3 Communications, for a

total of nine ducts. AT&T Corporation will adjust this line in place prior to construction. AT&T Corporation will also adjust the Level 3 ducts prior to construction.

Contact Ken Nine, (574) 842-8830 office / (574) 904-6336 cell, of JMC Engineers & Associates, Inc. 7 days in advance to coordinate locations and any excavation near their facilities.

Level 3 Communications has an underground duct package beginning beyond the southerly project limits and running northerly along the west right-of-way of IH 94. This duct package consists of three 2-inch ducts that are bundled with six 2-inch ducts owned by AT&T Corporation, for a total of nine ducts. AT&T Corporation will adjust this duct package on behalf of Level 3 prior to construction as previously described.

Contact Brahim Gaddour, (414) 908-1027 office / (414) 704-1026 cell, of Level 3 Communications 7 days in advance to coordinate locations and any excavation near their facilities.

Oak Creek Water and Sewer Utility has existing underground sewer and water facilities within the project limits in the following locations:

- An existing underground sanitary sewer line beginning at a manhole at Station 384+92, 160'LT and running easterly, crossing IH 94 at Station 384+83, and continuing easterly to beyond the project limits. Reconstruct the manhole at Station 384+92, 160'LT as shown in the plans.
- An existing underground water line beginning at an air vent at Station 384+81, 160' LT and running easterly, crossing IH 94 at Station 384+73, and continuing easterly to beyond the project limits. This line will remain in place without adjustment.

Contact Ron Pritzlaff, (414) 570-8200 Ext. 24 office / (414) 852-3910 cell, of Oak Creek Water and Sewer Utility 7 days in advance to coordinate locations and any excavation near their facilities.

WE Energies – Electric has an underground electric line beginning beyond the southerly project limits and running northerly along a line approximately 8' west of and parallel to the westerly right-of-way of IH 94 to beyond the northerly project limits. We Energies will reconstruct this line in place prior to construction.

Contact Erich Wuestenhagen, (414) 944-5780 office / (262) 483-3896 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT Lighting has an existing underground electric lines and light poles beginning beyond the southerly project limits and running northerly along the median of IH 94 to beyond the northerly project limits. These facilities will remain in place without adjustment.

Contact Eric Perea, (262) 574-5422 office / (414) 750-0935 cell, of WisDOT 7 days in advance to coordinate locations, construction activities and any excavation near their facilities.

WisDOT STOC has an existing underground communications line beginning beyond the southerly project limits and running northerly along a line approximately 94' west of the centerline of IH 94 to beyond the northerly project limits. This line will remain in place without adjustment.

WisDOT STOC also has an existing underground communications line beginning beyond the southerly project limits and running northerly along a line approximately 10' west of and parallel to the easterly right-of-way of IH 94 to Station 383+64, 140'RT where it turns and runs northwesterly to Station 384+78, 95'RT. From there the line runs northerly to Station 385+70, 99'RT where it turns and runs northeasterly to Station 386+75, 140'RTwhere it turns and runs northerly along a line 10 west of and parallel to the easterly right-of-way of IH 94 to beyond the project limits. This line will remain in place without adjustment.

Contact Jeff Madson, (414) 225-3723, of WisDOT 7 days in advance to coordinate locations and any excavation near their facilities.

9. Municipality Acceptance of Sanitary Sewer Construction.

Both the department and Milwaukee Metropolitan Sewerage District personnel will inspect construction of sanitary sewer under this contract. However, construction staking, testing, and acceptance of the sanitary sewer construction will be by the Milwaukee Metropolitan Sewerage District.
stp-105-001 (20140630)

10. Referenced Construction Specifications.

Construct the sanitary sewer work conforming to the Standard Specification for Sewer and Water Construction in Wisconsin, latest Edition. If there is a discrepancy or conflict between the referenced specification and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

11. Other Contracts.

A Description
Coordinate your work according 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.

12. 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 standard spec 104.3.3, of the specific differing condition before further disturbing the site and before further performing the affected work.

104.3.2 (Vacant)

104.3.3 Contractor Initial Written Notice
Replace standard spec 104.3.2 and 104.3.3 with the following:

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:

1. A written description of the nature of the issue.
2. The time and date of discovering the problem or issue.
3. 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.

SEF Rev. 14_1211

13. Contractor Document Submittals.

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

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

The department will return one reviewed, accepted, or approved 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. 15_0619

14. CPM Progress Schedule.

Modify the standard specs as follows:

Submit a CPM Progress Schedule and updates conforming to standard spec 108.4.4, and as provided in this special provision.

To ensure compatibility with the Master Program Schedule, use the latest version of Primavera P6 Project Management, by Oracle Corporation, Redwood Shores, CA, 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 to use to develop the Initial CPM Progress Schedule.

Designate a Project Scheduler who will be responsible for scheduling the Work and submit 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. Obtain approval of the submitted resume before scheduling the work.

With each Monthly CPM Progress Schedule Update also include:

- Activities underway and as-built dates for the past month.

- Agreement on the as-built dates with the department depicted in the Monthly CPM Progress Schedule Update.Document all disagreements. Use the as-built dates from the Monthly CPM Progress Schedule Update for the month when updating the CPM schedule.

- Actual as-built dates for completed activities through final acceptance of the project.

sef-108-010 (20170403)

15. Hauling Restrictions.

Hauling will not be permitted on S. 13th Street, S. 20th Street, S. 22nd Street. At all times, conduct operations in a manner that will cause a minimum of disruption to traffic on existing roadways. Coordinate with the local authority.

Replace standard spec 107.2 with the following:

Present to the department, five business days before any proposed hauling, a proposed haul route plan detailing any additional haul routes if additional haul routes are needed that are not shown on the Local Road Haul Routes Overview Plan or part of the state trunk highway system. Include the months, days of the week, time of day, number of trucks, types of trucks and maximum loads of trucks anticipated to accomplish the project work in the additional haul route submittal.

The department will review the submittal and either approve or provide a letter with comments and proposed revisions to the contractor within five business days of its receipt. If approved, the department will subsequently survey the existing condition of that haul route to establish a baseline for assessing damage that the contractor's hauling operations might cause.

At all times, conduct operations in a manner that will cause a minimum of disruption to traffic on existing roadways.

SEF Rev. 16_0817

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

The department has submitted a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. When approved, a copy of the permit will be available from the regional office by contracting Linda Matthews at (262) 548-6458 or Lisa Lumley at (414) 322-1429.

17. Construction Over or Adjacent to Navigable Waters.

Supplement standard spec 107.19 with the following:

The unnamed tributary of the Oak Creek, and the Oak Creek itself are classified as a navigable waterways.

The unnamed tributary of the North Branch of Oak Creek is classified as a navigable waterway.

Southland Creek crosses IH 94 at Station 282+30.

The unnamed tributary to Southland Creek crosses IH 94 at Station 294+45.

The North Branch of Oak Creek, N5 Tributary, crosses IH 94 at Station 385+20.

No work in any navigable waterway (of any calendar year) from March 1 to June 15.

107-060 (20150630)

18. Environmental Protection, Aquatic Exotic Species Control.

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

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

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels prior to being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf for disinfection:

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

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
107-055 (20130615)

19. Erosion Control.

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMP's) shown on the plans are at suggested locations. The actual locations will be determined by the contractor's ECIP and by the engineer. Include each dewatering (mechanical pumping) operation in the ECIP submittal. The ECIP will supplement information shown on the plans and not reproduce it. The ECIP will identify how to implement the project's erosion control plan. ECIP will demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-application of top soil to minimize the period of exposure to possible erosion. The ECIP will include the plan for the culvert removal and stream restoration at the Southeast Detention Pond. The contractor will contact WDNR for a field meeting prior to starting the culvert removal. The erosion control plan will include details for the methods of debris containment devices required, particularly during the removal of the old bridges and construction of the new structures.

Provide the ECIP 14 days prior to the pre-construction conference. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison, Kristina Betzold, (414) 263-8517, Kristina.betzold@wisconsin.gov. Do not implement the ECIP until department approval, and perform all work in accordance to the approved ECIP.

Maintain Erosion Control BMP's until permanent vegetation is established or until the engineer determines that the BMP is no longer required.

Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Immediately install perimeter silt fence protection around stockpiles. If stockpiled materials will be left for more than 14 days, install temporary seed and mulch or other temporary erosion control measures the engineer orders.

Re-apply topsoil on graded areas, as designated by the engineer, immediately after grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as designated by the engineer, within 5 days after placement of topsoil. If graded areas are left not completed and exposed for more than 14 days, seed those areas with temporary seed and mulchin .

Do not allow any excavation for; structures, utilities, grading, maintaining drainage that requires dewatering(mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Prior to each dewatering operation, submit to the department a separate ECIP amendment describing in words and pictorial format an appropriate BMP for sediment removal, in accordance to WisDNR Storm Water Construction Technical Standard, Code 1061, Dewatering. Include reasoning, location, and schedule duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide

additional inlet protection for back-up protection. Dewatering is considered incidental to the project.

SEF Rev. 17_0323

20. Dust Control Implementation Plan.

A Description

This special provision describes developing, updating, and implementing 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. Incorporate contract bid items that this article specifies into the DCIP.

B (Vacant)

C Construction

C.1 General

Control dust 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. Control dust at all times during the contract.

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 DCIP 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.

Include 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. Provide:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
2. 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 employing various dust control or prevention strategies.
3. A matrix, or plan, for each anticipated land disturbing, dust generating activity, showing the following:

- Preventive measures that shall be employed.
- The applicable contact person.
- The contractor's timetable and surveillance measures used to determine when remediation is required.
- The specific dust control and remediation measures that shall be employed. Identify the specific contract bid items that shall be used for payment. Indicate costs and practices that are incidental to the contract.
- Both maintenance and cleanup schedules and procedures.
- Excess and waste materials disposal strategy.

4. A description of monitoring and resolving off-site impacts.

C.3 Updating the DCIP

Update the DCIP during the contract or as the engineer directs. Obtain the engineer's approval for all DCIP alterations. Also obtain the engineer's approval for routine DCIP 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

Coordinate with engineer to determine deadlines for resolving dust control deficiencies. Deficiencies include actions or lack of actions resulting in excessive dust, failing to comply with the contractor's DCIP 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 includes the contract bid items listed below:

623.0200	Dust Control Surface Treatment
624.0100	Water
628.7560	Tracking Pads
SPV.0105.0001	Pavement Cleanup 1030-20-85

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.

SEF Rev. 16_0414

21. 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 6:00 AM, unless prior written approval is obtained from the engineer. 107-001 (20060512)

22. Public Involvement Meetings.

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

SEF Rev. 14_0312

23. 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 according to standard spec 201.3 (14).

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

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval according 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 according to standard spec 201.3 (14)(15).

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval according 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 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 1-800-303-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.
201-SER1 (20100401)

24. Notice to Contractor - Right-of-Way Fencing.

Maintain all existing freeway right-of-way fencing or temporary fencing that is disturbed by your operations. At no time leave a site where the fencing is inadequate to protect the general public. Notify property owners 5 working days in advance of existing fence removal and 30 working days in advance of temporary fence removal.

25. Notice to Contractor – Airport Operating Restrictions.

Fill out the FAA Notice Criteria tool for any permanent structure (bridge, light pole, etc.) or equipment (crane, etc.) used during construction.

http://oeaaa.faa.gov/oeaaa/external/portal.jsp

If required by the Notice Criteria tool, and for all cranes or construction equipment higher than 200 feet above the ground, submit completed form 7460-1 (Notice of Proposed Construction or Alteration) to The Federal Aviation Administration (FAA) at least 45 days before starting construction.
SEF Rev. 17_0104

26. Notice to Contractor – Traffic Signal Equipment Lead Time.

Lead time for traffic signal equipment specified for this project has been ranging from 12-weeks to 18-weeks. Order equipment as soon as possible to assure the equipment is procured in a timely fashion and, therefore, installed, inspected, and ready for turn-on at the required date.

27. Information to Bidders, Use of Recovered Material.

The department encourages the use of waste materials and recovered industrial byproducts as material substitutions (106.2.1), provided they meet standard specification gradation requirements, conform to NR 538 requirements, and follow standard engineering practice for their intended use.
SEF Rev. 14_1211

28. Available Documents.

The department desires to make all its information available to bidding contractors. The list of documents that are available for contractors' information includes but is not limited to:

- Exceptions to Standards Report
- Interstate Access Justification Report
- Pavement Type Selection Report
- Preliminary Plans
- Environmental Impact Statement
- As-Built Drawings
- Traffic Management Plan

These documents are available from Frank Pritzlaff at 141 NW Barstow Street, Waukesha, WI 53187. He may be reached at (262) 548-5683.

Reproduction costs will be applied to any copies requested.
SEF Rev. 15_0619

29. 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 Frank Pritzlaff, 141 NW Barstow Street, Waukesha, WI 53187, (262) 548-5683

Additional geotechnical information is available from studies and analyses that have been performed by Milwaukee Transportation Partners (MTP) for the Wisconsin Department of Transportation (WisDOT) for other aspects of this project. Review the available information to determine if it is of use. The use or not of the geotechnical information does not relieve performing the work according to the plans and specifications.
SEF Rev. 14_1211

30. Material and Equipment Staging.

Submit a map showing all proposed material stockpile or equipment storage locations to the engineer 14 days prior to either preconstruction or proposed use, whichever comes first. Identify the specific purposes for the location. Obtain written permits from the property owner, and submit two copies to the engineer before use. Do not stockpile or store materials or equipment on wetlands.

SEF Rev. 13_0204

31. Work Force Opportunities.

After contract award, attend the Work Force Opportunities workshop. The workshop will take place on the same day and be in the same location as the pre-construction meeting.

The Work Force Opportunities workshop will provide a venue for contractors to have meaningful dialogue with Transportation Alliance for New Solutions (TrANS) providers regarding the hiring of TrANS graduates. Reference ASP-1 for additional information regarding TrANS. The prime contractor and the [3] largest subcontractors according to let value of work shall provide staff with hiring authority to participate in a job-matching session during this workshop. Workshop participants will, at a minimum:

1. Review contractor hiring processes for general labor positions.
2. Listen to a presentation provided by TrANS providers regarding the TrANS training program, including details regarding how contractors can hire TrANS graduates.
3. Review TrANS graduate availability for working on the project.
4. Meet one-on-one for two minutes with each TrANS graduate in attendance at the meeting.

SEF Rev. 12_0510

32. Leadership Partnering Meetings – Light.

The department will implement mandatory monthly leadership partnering meetings on this contract.

Key members of the contractor project team shall meet with department leadership monthly from project start until the scheduled completion date, unless otherwise agreed to by both parties. Attendance at this meeting shall include project level supervisory personnel and contractor/state level management personnel. The following may also be invited to attend, as needed:

1) FHWA
2) Project design engineers
3) Key project personnel of the contractor's principal subcontractors and suppliers
4) Local government representatives
5) Environmental regulators
6) Emergency service personnel
7) Utility companies
8) Impacted business and landowners
9) Other stakeholders

This meeting will facilitate a cooperative team environment that establishes roles and responsibilities, determines common goals and objectives, and provides a platform to build trust and accountability. Meeting topics may include issue and risk management, dispute resolution procedures, safety, public outreach, traffic management, cost reducing incentives, claim resolution, scheduling issues, and quality control.

All costs are incidental to the contract work.

SEF Rev.

33. Maintaining Drainage.

Maintain drainage at and through worksite during construction according to standard specs 107.22, 204, 205 and 520.

Use existing storm sewers, existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the project.

Dewatering (Mechanical Pumping) for Bypass Water (sediment-free) Operations
If dewatering bypass operations are required from one pipe structure to another downstream pipe structure or from the upstream to downstream end of a culvert and the bypass flow is not transporting sediments (sand, silt, and clay particles) from a tributary work site area, bypass pumping operations will be allowed provided that the department has been made aware of and approves operation. When pumping bypass flows, the discharge location will need to be stable and not produce any erosion from the discharge velocity that would cause release of sediment downstream.

Dewatering (Mechanical Pumping) for treatment Water (sediment-laden) Operations
If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Refer to article Erosion Control in these special provisions for additional requirements.

SEF Rev. 15_0209

34. Subletting the Contract.

Replace standard spec 108.1.1 (3) with the following:

If proposing to have a party other than a subcontractor perform work, notify the engineer and submit details of this arrangement in writing. The engineer will determine if that arrangement constitutes subcontracting. Submit copies of all other agreements between any parties regarding the performance of work under the contract with the Request to Sublet.

SEF Rev. 14_1212

35. Force Account.

Supplement standard spec 109.4.5.1 (3)1 *with the following:*

Include accumulation of wages to date for each employee performing force account work and identify allowable Federal Unemployment Tax (FUTA) and State Unemployment Tax (SUTA) multipliers.

SEF Rev. 14_1211

36. Removing Old Culverts and Bridges.

Modify the standard specs as follows:

Supplement standard spec 203.3.1 with the following:

Structure Removal Site Safety Plan
Prepare a Structure Removal Site Safety Plan covering all structure removal work included in the contract. Maintain posted copies of the Structure Removal Site Safety Plan at the site in the project field office. Provide two copies of the Structure Removal Site Safety Plan to the engineer at least four weeks prior to beginning removal work.

Structure Removal Plans
Prepare a structure specific removal plan for each of the following existing structures indicating the methods and sequence of demolition:

Existing Structure	Structure Type	Feature On	Feature Under
B-40-225	4 Span Prestressed Girder	West Ryan Road (eastbound)	I-94 (Station 248+02)
B-40-226	4 Span Prestressed Girder	West Ryan Road (westbound)	I-94 (Station 248+62)

The above table does not include all the structure removals included in the contract. The above table is a list of existing structure removals included in the contract for which a structure specific detailed removal plan is required to be submitted.

Examine the existing structure plans and visit the site prior to preparing and submitting the structure removal plan(s). The contractor is responsible for the methods and sequence of demolition, including effects on the overall stability of each structure being removed. At a minimum, each removal plan shall include:

1. The name of the professional engineer, registered in the state of Wisconsin who will be on site and monitoring the removal of existing structures as required in this specification.

2. The name of the contractor's on-site-employee designated in responsible charge of all removal operations.

3. The removal method and sequence of removal for each individual structure, including the staging of bridge removals.

4. Analysis of the stability of the structure based on the methods and sequence of demolition proposed, to ensure that the structure is demolished in a safe and controlled manner. The analysis computations shall be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.

5. Design and details of temporary supports, shoring or temporary bracing, if required to stabilize portions of partially remaining structures during the removal sequence or support partially remaining structures after staged removals. Include design computations and detail drawings for all temporary supports, shoring and bracing that indicate the exact placement of the temporary supports, shoring or bracing; verification of design loads; attachment details; and methods for the safe transfer of loads from existing structural elements to be removed to the temporary supports, shoring, or bracing. Temporary support, shoring, or bracing design computations and drawings details are to be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.

6. Design and details of temporary support foundations. Include in the foundation design the evaluation of expected foundation settlement and the effect that this will have on the structure being supported. Temporary support foundation design computations and drawing details are to be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.

7. Equipment type and locations of equipment on the structure(s) or adjacent roadways during the removal operations

8. Locations and type of work to be performed directly adjacent to traffic.

9. Details and locations of protective covers and other measures to ensure that people, property and improvements will not be endangered or damaged as a result of the removal operations. Include methods for protecting any pavement surfaces including shoulders, concrete barriers, and other highway features.

10. Methods of removal, hauling and disposal, including haul routes and disposal destination.

11. A schedule of anticipated roadway and lane closures to accommodate removal operations. Include the timing of individual lane or temporary roadway closures and the nature of removal operations that will be performed during the lane or roadway closures.

12. Acknowledgement that the contractor and removal design engineer responsible for preparing the removal plan have visited the site and reviewed the existing structure plans in preparing the removal plan.

Structure Pre-Removal Meetings
After submission of the Structure Removal Site Safety Plan and required Structure Removal Plan(s), schedule and conduct structure pre-removal meetings at a time agreed to by the engineer. Hold structure pre-removal meetings at least three working days prior to beginning structure removal activities. If the engineer agrees in advance, multiple structure removals can be combined and discussed at one structure pre-removal meeting. Otherwise, schedule and conduct a separate structure pre-removal meeting for each structure to be removed.

Supplement standard spec 203.3.2.1 with the following:

Perform structure removals according to the submitted Structure Removal Site Safety Plan and applicable Structure Removal Plan(s).

Supplement standard spec 203.5.1(2) with the following:

Payment includes preparation and submittal of a Structure Removal Site Safety Plan; preparation and submittal of Structure Removal Plan(s) and performing all structure removal work according to the submitted plans.

SEF Rev. 14_1215

37. Pavement Breaking Equipment.

Use only hydraulic pavement breaking equipment for breaking pavement within 300 feet of any structure. Do not use guillotine, drop hammer, falling weight, gravity impact breakers or equivalent equipment. A multi-head hydraulic drop hammer is allowed unless a structure is within 50 feet of the roadway.

SEF Rev. 14_0415

38. Removing Concrete Barrier.

Modify the standard specs as follows:

Supplement standard spec 204.3.2.2 with the following:

Under the Removing Concrete Barrier bid item, remove barrier and footing, unless specified in the plans, at the locations the plans show. Removal includes all required sawing according to standard spec 690.

Supplement standard spec 204.5.1(2) with the following:

Payment for Removing Concrete Barrier is full compensation for furnishing all required sawing and removal of existing barrier and footing, and sludge removal.
SEF Rev 14_1212

39. Disposing of Surplus Material.

Supplement standard spec 205.3.12 with the following:

Surplus excavation may be disposed of at the following location:

Oak Creek Storage and Handling property
9006 5th Avenue
Oak Creek, WI

Contact - Sigma Environmental Services, Inc.
Jim Jalovec
c/o Josh Neudorfer, Senior Consultant
1300 W. Canal Street, Milwaukee, WI 53233
Phone (414) 643-4132 office / (414) 588-7940 mobile

Furnish written permits to the engineer as required from the owner of the property under 205.3.11 before disposal.

40. QMP Subgrade.

A Description
This special provision describes requirements for subgrade materials within the roadway foundation as defined in standard spec 101.3. Conform to standard spec 207 as modified

in this special provision for all work within the roadway foundation at the following locations:

- All roadways; Ryan Road, IH 94 Mainline, mainline shoulder repairs, all temporary left in place and permanent freeway ramps, park and ride lot.

Provide and maintain a quality control program. A quality control program is defined as all activities, including process control inspection, sampling and testing, documentation, and necessary adjustments in the process that are related to the construction of subgrade which meets all the requirements of this provision.

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://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/rdwy/default.aspx

B Materials

B.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform grading 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. 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 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.
- 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 control charts and other documentation.
- A summary of the locations and calculated quantities to be tested under this provision.
- An explanation regarding the basis of acceptance for material that cannot be tested by nuclear methods due to a high percentage of oversized particles.

B.2 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 (or ACT Grading Technician under the direction of a certified technician) present at the site during all subgrade preparation, fill 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.

B.3 Laboratory

Perform quality control testing in a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Laboratory
3502 Kinsman Boulevard
Madison, WI 53704-2583
Telephone: (608) 246-7938
http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/qual-labs.aspx

B.4 Equipment

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

Furnish nuclear gauges from the department's approved product list at:
http://www.atwoodsystems.com/.

Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge within 12 months before using it on the project. Retain a copy of the calibration certificate with the gauge. Nuclear density gauge calibration verification is required daily when earthwork construction operations require testing under this special provision article. This calibration verification shall be performed using the departments "Validator" apparatus which is located at the Zoo Interchange Construction Field Office: 2424 S. 102nd St., West Allis, Wisconsin 53227. Establish a standard gauge reading for the "Validator" using the ten test average method. The source emitter depth for calibration verification, in the direct transmission mode, will be determined by the engineer. This procedure will establish the "Validator" apparatus, as the contractor's project reference site.

Conform to ASTM D 2950 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.

B.5 Soil Source Study

Conduct and submit a soil source study before beginning of grading operations. Ensure that this study identifies each distinct soil type on the project within the top 15 feet of cut areas and all borrow material. Provide the in-bank natural moisture content for each soil. Develop moisture-density curves for each identified soil type by utilizing AASHTO T 99, with a minimum of five individual points, and a zero air voids curve at a specific gravity of 2.65. If a different specific gravity is used perform a specific gravity test. Determine the maximum density and corresponding optimum moisture level for each soil type. Develop

a site-specific family of Proctor curves for this contract from the completed soil source study and submit to the engineer for review and acceptance.

Perform characterization tests on each of the soil types selected for the soil source study. The tests for roadway include AASHTO T 89, AASHTO T 90, AASHTO T 27, and AASHTO T 11. Classify each soil type selected according to the AASHTO soil classification system based on the characterization tests. Do not begin grading operations until the engineer accepts the soil source study.

Use the soil types identified in the soil source study with corresponding maximum densities and optimum moisture values to determine the compaction compliance on the project. Continue the soil source study in those areas of cuts greater than 15 feet that were not accessible during the initial study. Include data on additional soil types if project conditions change. Ensure that tests of additional soil types are complete and the engineer accepts the results before incorporating the material into the roadway foundation.

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 at:

Regional Materials Laboratory
Attn: Paul Emmons
935 S. 60th Street
West Allis, WI 53214
Telephone: (414) 266-1158

Retain and identify two representative samples of each Proctor. Submit one sample to the engineer. Retain one sample on site for use when performing textural identification.

B.6 Quality Control Documentation

B.6.1 Control Charts

Maintain separate control charts for the field density and field moisture content of each grading area. Designate grading areas within the project as follows:

- Embankment portions of the project, except within 200 feet of bridge abutments.
- Embankment within 200 feet of bridge abutments.
- Subgrade cut portions of the project.
- Embankment in pipe culvert, sewer and waterline trenches.
- Structure and granular backfill placed at bridge abutments.
- Embankments of the project where embankments are 20 feet or higher regardless of location to be known as special compaction area.

Ensure that all tests are recorded and become part of the project records. Plot required test results on the control charts. Include random and engineer-requested testing but only include the contractor's randomly selected QC test results in the 4-point running average. The contractor may plot other contractor-performed process control or informational tests on the control charts, but do not include them in 4-point running averages.

Post control charts in an engineer-approved location and update daily. Ensure that the control charts include the project number, the test number, each test element, the applicable control limits, the contractor's individual test results, the running average of the last 4 data points, and the engineer's quality verification test data points. Use the control charts as part of a process control system for identifying potential problems and assignable causes. Format control charts according to the CMM.

Submit control charts to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.6.2 Records

Document all observations, inspection records, and adjustments to fill placement procedures, soil changes, and test results daily. Note the results of the observations and inspection records as they occur in a permanent field record.

Provide copies of the field density and field moisture running average calculation sheets, the one-point Proctor tests, records of procedure adjustments, and soil changes to the engineer daily.

Submit original testing records to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.7 Contractor Testing

B.7.1 General

Have a grading technician certified under HTCP at level I (or ACT Grading Technician under the direction of a certified technician) present during all subgrade preparation, fill placement, compaction, and testing. Have a nuclear density technician certified under HTCP at level I perform the testing for field density and field moisture content. During subgrade construction, use sampling and testing methods identified in the CMM to perform the required tests at randomly selected locations at the indicated minimum frequency for each grading area.

Determine the cubic yards for testing based on a total load count system the engineer and contractor agree to.

For each test, provide the cubic yards represented and the test location to within 2 feet horizontally and 0.5 feet vertically. Use project stationing to determine horizontal location and grade stakes to determine vertical location.

Test areas of suspect compaction or areas which appear to be nonconforming as determined by the engineer.

B.7.2 Field Density and Field Moisture

Perform the field density and field moisture tests using the nuclear density meter method according to AASHTO T 310. Ensure that each field density test material is related to one of the specific soil types identified in the soil source study in determining the percent

compaction. Use textural identification as the primary method of establishing this relationship. Use the representative samples retained from the soil source study when performing the textural identification. Use a coarse particle correction according to AASHTO T 224.

If field density and field moisture tests cannot be performed by the nuclear density method due to a high percentage of oversized particles as determined according to AASHTO T 99 for highway embankments, observe the placement of the embankment and document the basis of acceptance. Document daily quantities of untested embankment and locations where untested embankment is placed, and keep a cumulative quantity of untested embankment material during the project. Include the daily documentation and a summary of the cumulative quantity of untested embankment material with the project records.

B.7.3 One-Point Proctor

Obtain a representative sample of the fill material and test according to AASHTO T 272. Compare the sample to the curves developed in the soils source study to determine the maximum dry density and optimum moisture. Use the appendix for AASHTO T 272 as a guide in this determination.

B.7.4 Testing Frequency

B.7.4.1 Subgrade Embankment portions of the project, except within 200 Feet of bridge abutments

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 2,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 9,000 cubic yards or when a change in fill material occurs.

B.7.4.2 Subgrade Embankment Within 200 Feet of Bridge Abutments

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 1,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 9,000 cubic yards or when a change in fill material occurs.

B.7.4.3 Subgrade Cut

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 1,000 linear feet of cut or one test per cut area whichever yields the most tests. The testing will be completed at the finished subgrade elevation.

B.7.4.4 Subgrade Embankment in Pipe Culvert, Sewer and Waterline Trenches
Perform the required tests at the following minimum frequencies per trench run between structures. Test trenches individually at the frequency listed ion this section. For example, lateral lines and trunk lines are to be considered individual trenches:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 100 CY of backfill placed per lift or one test per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 3,000 cubic yards or when a change in fill material occurs.

B.7.4.5 Structure and Granular Backfill at Bridge Abutments
Perform the required tests at the following minimum frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 2 feet of vertical backfill height per abutment.
One-Point Proctor (AASHTO T 272)	One per 3,000 cubic yards or when a change in fill material occurs.

B.7.4.6 Embankments of the project 20 feet or higher regardless of location to be known as special compaction area
Perform the required tests at the following minimum frequencies but exclude MSE wall backfill:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 2,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 6,000 cubic yards or when a change in fill material occurs.

B.7.5 Compaction Zones
B.7.5.1 Subgrade Embankment portions of the project, except within 200 Feet of bridge abutments
Embankment material placed within 6 feet of the finished subgrade elevation is classified as upper zone material. Material placed more than 6 feet below the finished subgrade elevation is classified as lower zone material.

B.7.5.2 Subgrade Embankment Within 200 Feet of Bridge Abutments
All embankment material placed within 200 feet of bridge abutments is subject to the quality controls for upper zone material.

B.7.5.3 Subgrade Cut
Subgrade material in cut areas is subject to the quality controls for upper zone material.

B.7.5.4 Subgrade Embankment in Culvert Pipe Trenches
Material placed within culvert pipe trenches is subject to the quality controls for the zone that the material is located in.

B.7.5.5 Structure and Granular Backfill at Bridge Abutments
All backfill material placed adjacent to bridge abutments is subject to the quality controls for upper zone material.

B.7.5.6 Embankments of the project 20 feet or higher regardless of zone to be known as special compaction area

All embankment material placed where embankments are 20 feet or higher regardless of zone is subject to the quality controls for upper zone material. Exclude MSE wall backfill.

For this contract, the station ranges where embankments are 20 feet or higher and require higher levels of compaction (special compaction) are as follows:

- Station 47RY+50 to Station 48RY+77
- Station 51RY+23 to Station 52RY+00

Also see plan notes identifying special compaction.

B.7.6 Control Limits
B.7.6.1 Field Density
B.7.6.1.1 General Conditions
The lower control limit for field density measurements in the upper zone is a minimum of 95.0 percent of the maximum dry density as determined by AASHTO T 99 or T 272for the 4-point running average and a minimum of 92.0 percent of the maximum dry density for any individual test.

The lower control limit for field density measurements in the lower zone is a minimum of 93.0 percent of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 90.0 percent of the maximum dry density for any individual test.

B.7.6.1.2 Embankments of the project 20 feet or higher regardless of zone to be known as special compaction area excluding MSE wall backfill

The lower control limit for field density measurements in the special compaction area is a minimum of 98.0 percent of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 95.0 percent of the maximum dry density for any individual test.

B.7.6.2 Field Moisture Content
B.7.6.2.1 general conditions
The upper control limit for the field moisture content in the upper and lower zones is 105.0 percent of the optimum moisture as determined by AASHTO T 99 or T 272 for the 4-point running average.

The lower control limit for the field moisture content in the upper and lower zones is 65.0 percent of the determined optimum moisture for the 4-point running average. There is no lower control limit for the field moisture of material having less than 5 percent passing the No. 200 sieve.

B.7.6.2.2 Embankments of the project 20 feet or higher regardless of zone to be known as special compaction area excluding MSE wall backfill
The upper control limit for the field moisture content in the special compaction area is 105.0 percent of the optimum moisture as determined by AASHTO T 99 or T 272 for the 4-point running average. The lower control limit for the field moisture content in the special compaction area is 90 percent of the determined optimum moisture for the 4-point running average.

B.7.7 Corrective Action
Notify the engineer if an individual field density test falls below the individual test control limit. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer to improve the density of the subgrade material. After corrective action, perform a randomly located retest within the represented quantity to ensure that the material is acceptable.

Notify the engineer if the field density or field moisture running average point falls below the running average control limit for field density or outside the control limits for field moisture. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer to improve the quality of the material represented by the running average point. Retest each corrected area at a new random location within its represented quantity and determine a new 4-point running average. If the new running average is not acceptable, perform further corrective actions and retest at new random locations.

If the contractor's control data is proven incorrect resulting in a field density or field moisture point falling below the control limit for field density or outside the control limits for field moisture, the subgrade is unacceptable. Employ the methods described in this special provision for unacceptable material.

B.8 Department Testing
B.8.1 General

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 verification and independent assurance personnel for the project.

The department will provide field density and field moisture test results to the contractor on the day of testing. Test results from Proctor split samples will be provided to the contractor within 7 business days after the sample has been received by the department.

B.8.2 Verification Testing

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

The department will test field density and field moisture randomly at locations independent of the contractor's QC work. The department will use split samples for verification of Proctor testing. In all cases, the department will conduct the verification tests in a separate laboratory and with separate equipment from the contractor's QC tests.

The department will perform verification testing as follows:

1. The department will conduct verification tests on Proctor split samples taken by the contractor. These samples may be from the Soil Source Study or the one-point Proctor or sample locations chosen by the engineer from anywhere in the process. The minimum verification testing frequency is one per 90,000 cubic yards, with at least one for each soil type identified in the Soil Source Study.
2. The department will test the first split sample obtained by the contractor for the one-point Proctor. The engineer may select any contractor-retained sample for verification testing.
3. The department will conduct at least one verification test for field density and field moisture per 20,000 cubic yards.

Plot verification tests on the contractor's quality control charts as specified in B.6.1. Do not include verification tests in the 4-point running average.

If verification tests are within specified control limits, no further action is required. If verification tests are not within specified control limits, the engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's sampling and testing procedures and equipment. Both parties will document all investigative work.

Correct all deficiencies. If the contractor does not respond to an engineer request to correct a deficiency or resolve a testing discrepancy, the engineer may suspend grading work until action is taken. Resolve disputes as specified in B.9.

B.8.3 Independent Assurance Testing

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

Plot the independent assurance tests on the contractor's quality control charts as specified in B.6.1. Do not include independent assurance tests in the 4-point running average.

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

B.9 Dispute Resolution

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.

If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming 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 tests 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.

B.10 Acceptance

The department will accept the material tested under this provision based on the contractor QC tests unless it is shown through verification testing or the dispute resolution process that the contractor's test results are in error.

C (Vacant)

D (Vacant)

E Payment

Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor does not 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.

sef-207-005 (20170310)

41. QMP Base Aggregate.

A Description

A.1 General

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

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

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

(4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:

1. Production and placement control and inspection.
2. Material sampling and testing.

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

A.2 Small Quantities

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

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

A.2.1 Quality Control Plan

(1) Submit an abbreviated quality control plan consisting of the following:

1. Organizational chart including names, telephone numbers, current certification(s) with HTCP number(s) and expiration date(s), and roles and responsibilities of all persons involved in the quality control program for material under affected bid items.

A.2.2 Contractor Testing

1.

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

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

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

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

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

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

2. Stockpile testing for concrete pavement recycled in place will be sampled on the first day of production.

3. Until a four point running average is established, individual placement tests will be used for acceptance. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Material represented by a 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.

A.2.3 Department Testing

(1) The department will perform testing as specified in B.8 except as follows:

- Department stockpile verification testing prior to placement is optional for contract quantities of 500 tons or less.

B Materials

B.1 Quality Control Plan

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

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
5. Descriptions of stockpiling and hauling methods.
6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2 Personnel

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

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

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

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

B.3 Laboratory

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

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

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

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

(1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within one business day after obtaining a sample. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

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

(2) Provide control charts to the engineer within one business day after obtaining a sample. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:

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

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

B.5 Contractor Testing

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

(2) Perform one stockpile test from each source prior to placement.

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

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

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

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

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

B.6 Test Methods

B.6.1 Gradation

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

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

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

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

1. Control limits are at the upper and lower specification limits.
2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.

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

B.6.2 Fracture

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

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

B.6.3 Liquid Limit and Plasticity

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

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

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

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

(2) Notify the engineer whenever the running average exceeds a warning limit. When two consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:
   1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
   2. For fracture, increase the QC testing frequency to at least one test per gradation test.

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

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

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

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

B.8 Department Testing

B.8.1 General

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

B.8.2 Verification Testing

B.8.2.1 General

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

(2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:

1. Perform one stockpile test from each source prior to 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 or for a lift thickness of 3-inch or less, the department will collect samples at load-out. The department will split each sample, test half for QV, and retain half.

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

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

B.8.3 Independent Assurance

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

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

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

B.9 Dispute Resolution

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

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

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

or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C (Vacant)

D (Vacant)

E Payment

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

(2) For material represented by a running average exceeding a control limit, the department will reduce pay according to CMM 8-10.5.2 for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

stp-301-010 (20161130)

42. Select Crushed Material.

Modify the standard specs as follows:

Replace standard spec 312.2(6) with the following:

The department will assess select crushed material acceptability based primarily on the engineer's visual inspection. The department may require contractor to sample, test and report gradation or fracture results to show conformance of material. One test per source, production process or change of production process may be required.

Replace standard spec 312.5(2) with the following:

Payment for Select Crushed Material is full compensation for providing and compacting select crushed material and all work necessary to provide gradation or fracture test results.

SEF Rev. 14_1212

43. Concrete Maturity Testing.

A Description

This special provision requires using concrete maturity testing to determine strength for project control of concrete pavement, falsework removal, and structural concrete under the designated standard specs as follows:

- Duration of the curing period 415.3.12

- Duration of the cold weather protection period 415.3.13
- Opening to service 415.3.15
- Removing falsework 502.3.4.2
- Duration of the required curing period 502.3.8
- Duration of the cold weather protection period 502.3.9
- Opening to service 502.3.10.1

The requirement for determining strength by the concrete maturity testing method supersedes all provisions for strength determination by other methods or provisions based on equivalent days within those designated subsections. The concrete maturity testing requirement also applies to all other provisions referencing strength determination under these designated subsections.

B Materials
Provide a maturity testing system that uses data-encrypted sensor devices permanently embedded in the field-placed concrete. Data-encrypted sensors have a chip that records both temperature and time information that can be downloaded to a reading device not permanently attached to those sensors.

Provide the department with a maturity reading device for each maturity testing system utilized on the project. Devices provided for the department use will become department property under the contract.

C Construction
Perform concrete maturity testing according to standard spec 502.3.10.1.3.3. Develop a strength/maturity relationship for each concrete mix design used under the contract. Base that relationship on strength results of cylinders from pavement, appurtenant construction, ancillary concrete, or structural masonry units incorporated into the work and using those same mixes.

D (Vacant)

E Payment
No additional payment will be made by the department for maturity testing.

SEF Rev. 14_1211

44. Asphaltic Surface Temporary.

Replace standard spec 465.2 (1) with the following:

Under the Asphaltic Surface Temporary bid item; submit a mix design. Furnish asphaltic mixture meeting the requirements specified for type MT under standard spec 460.2; except the engineer will not require the contractor to conform to the quality management program specified under standard spec 460.2.8.

45. QMP Concrete Pavement Special Requirements.

This is a specialized QMP Concrete Pavement specification modified for I-94 North/South Corridor projects.

Supplement standard spec 701, 710, 715 with the following:

A Description
A.1 General
Conform to standard spec 320, 415, 416, and 501 as modified in this special provision. Apply this special provision only to the following bid items:

- 320.0100 - 0199 Concrete Base (inch)
- 320.0300 - 0399 Concrete Base HES (inch)
- 415.0060 - 0199 Concrete Pavement (inch)
- 415.1080 - 1199 Concrete Pavement HES (inch)
- 415.0410 Concrete Pavement Approach Slab
- 415.1410 Concrete Pavement Approach Slab HES
- 415.0310 Concrete Alley
- 415.1310 Concrete Alley HES
- 415.0210 Concrete Pavement Gaps
- Concrete Pavement (inch) Special

A.2 Quality Control Program
A.2.1 Control Charts
Maintain control charts when required by the test reporting procedures. Ensure that all tests are recorded and become part of the project records. Plot required test results on the control charts. Include random, non-random, and engineer requested testing, but only include the contractor's randomly selected QC test results in the 4-point running average. Other process control or informational tests on the control charts may be plotted, but do not include them in 4-point running averages.

Post control charts in an engineer-approved location, and update daily. Ensure that the control charts include the project number, the test number, each test element, the applicable warning and control limits, the contractor's individual test results, the running average of the last 4 data points, and the engineer's verification and independent assurance test data points. Use the control charts as part of a process control system for identifying potential problems and assignable causes. Format control charts according to CMM 8.30.

A.2.2 Department Testing
A.2.2.1 Verification Testing
Supplement standard spec 701.4.2 with the following:

The department will perform verification testing as follows:

	Testing Frequency Guide[1]	Sampling Material and Location	Test Method	Alternate Test Methods
Air content	1 per lot	Plastic concrete, ahead or behind[2] the paver	AASHTO T 152 as modified	Hardened air content testing[2] after construction
28-day compressive strength	1 per lot	Cylinders	AASHTO T 22, T 23 and T 141 as modified	Random cores[2] after construction

[1] The engineer may increase the frequency at start-up or as necessary to validate the quality of the materials.
[2] Evaluation of test results shall account for systematic differences in testing methods or sampling locations.

Plot verification tests on the contractor's quality control charts as specified in B.4.1. Do not include verification tests in the 4-point running average.

A.2.2.1.1 Independent Assurance Testing
Supplement standard spec 701.4.3 with the following:

Plot the independent assurance tests on the contractor's quality control charts as specified in A.2.1. Do not include independent assurance tests in the 4-point running average.

A.2.3 Contractor Testing for Small Quantities
Supplement standard spec 701.2.2(3) with the following:

1. No concrete control charts are required. Submit test results to the engineer each day as they become available. Ensure that all properties are within the limits specified in the standard specs for each sublot tested.

B Materials
B.1 Class I Concrete Mixes
B.1.1 General
Supplement standard spec 501 with the following:

Use clean, hard, durable crushed limestone with 100 percent fractured surfaces and free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.

Use virgin aggregates only.

B.1.2 Aggregates

B.1.2.1 Fine Aggregates
Delete standard spec 501.2.5.3.4.

B.1.2.2 Course Aggregates
B.1.2.2.1 Deleterious Substances
Replace standard spec 501.2.5.4.2(1) with the following:

The quantity of deleterious substances shall not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0
Clay lumps	0.3
Soft fragments	3.0
Any combination of above	3.0
Thin or elongated pieces based on a 3:1 ratio	15.0
Materials passing the No. 200 (75 µm) sieve	1.5
Chert[1]	3.0

[1] Material classified lithologically as chert and having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of chert by dividing the weight of chert in the sample retained on a 3/8-inch (9.5 mm) sieve by the weight of the total sample.

B.1.2.3 Combined Aggregate Gradation
Replace standard spec 715.2.2(1) items 2 and 3 with the following:

2. The percent passing the 1 inch (25 mm) sieve is less than or equal to 95.
3. The percent passing the No. 4 (4.75 mm) sieve is less than or equal to 47.

C Construction
C.1 Sampling and Testing
C.1.1 Aggregate Testing
C.1.1.1 General
Supplement standard spec 710.5.6.1 with the following:

Ensure that only results of randomly selected QC tests are included in the 4-point running average.

Use control limits for sieve sizes as identified in the project concrete mix report or, if the concrete mix report is not published at the time of testing, in the contractor's quality control plan. Gradation warning limits are inside the upper and lower control limit values by one percentage point for all sieves except as follows:

1. The upper warning limits for percent passing the No. 100 (150 µm) and No. 200 (75 µm) sieves are inside the control limit by 0.5 percent.
2. For sieves allowing 100 percent passing, there is no upper warning limit. For sieves with 0 percent passing, there is no lower warning limit.

C.2 Testing and Acceptance
C.2.1 Class I Concrete Testing
C.2.1.1 Lots by Lane-Feet
Supplement standard spec 715.3.1.2.2 with the following:

Lots and sublots may include concrete from more than one day of paving.

A sublot is 350 linear feet for 3-lane paving width or 2-lane plus shoulder.

Sublots at either end of a paving pass may be greater than 1000 lane-feet in size to accommodate the actual project length and staging requirements. For ease of layout, begin the first sublot at the first even station of the project. Place the resulting partial quantity into the first full sublot.

Document the locations and quantities of integral shoulders, and identify the travel lane sublot tests used for acceptance. For a shoulder pavement placed in a separate paving pass, designate separate lots and sublots.

C.3 Strength Evaluation
C.3.1 Pavement
Replace standard spec 715.3.2.2.1 with the following:

If a sublot strength is less than 3000 psi (17.2 MPa), the department may direct that sublot to be cored to determine its structural adequacy and whether to direct removal. Cut and test cores according to AASHTO T 24 as and where the engineer directs. Have an HTCP certified PCC technician I perform or observe the coring. Bear all coring and testing costs, fill all core holes with an approved grout, and provide traffic control during coring at no cost to the department.

The sublot pavement is conforming if the compressive strengths of all cores from the sublot are 3000 psi (17.2 MPa) or greater or the engineer does not require coring.

The sublot pavement is nonconforming if the compressive strengths of any core from the sublot is less than 3000 psi (17.2 MPa). The department may direct removal and replacement or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.3.2 Acceptance
The department will accept concrete pavement based on the contractor QC tests unless it is shown through the verification or the dispute resolution process that the contractor's tests are in error.

D (Vacant)

E Payment

E.1 General
Replace standard spec 715.5.1(4) with the following:

The department will adjust pay for each lot using percent within limits (PWL) of the 28-day sublot average strengths for that lot. The department will measure PWL relative to the lower specification limit of 4500 psi.

E.2 Pavements
Replace standard specs 715.5.2(1) through 715.5.2(3) with the following:

(1)The department will adjust pay for each lot using equation "QMP 3.03" as follows:

Percent Within Limits (PWL)	**Pay Adjustment**[1] (dollars per square yard)
≥ 85 to 100	0
≥ 30 to < 85	(1.5/55 x PWL) – (127.5/55)
< 30	-1.50

(2) The department will not pay incentive if the lot standard deviation is greater than 400 psi.

(3) For lots with less than 4 sublots, the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 4500 psi by $1.50 per square yard.

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46. Concrete Masonry Structures.

A Description
A.1 General
Work under this item applies to cast in place concrete for structures. Conform to standard specs 501, 502, 504, 701, 710 and 715 and as modified in this special provision. Apply this special provision to all cast in place concrete placed under the following bid items:

502.0100	Concrete Masonry Bridges
502.0200	Concrete Masonry Bridges HES
502.1100	Concrete Masonry Seal
504.0100	Concrete Masonry Culverts
504.0200	Concrete Masonry Culverts HES
504.0500	Concrete Masonry Retaining Walls
504.0600	Concrete Masonry Retaining Walls HES
504.0900	Concrete Masonry Endwalls
SPV.0035.4010	Concrete Masonry Soldier Pile Footings

A.2 Concrete Masonry Bridges

Work under the item Concrete Masonry Bridges applies to cast in place concrete for bridge substructures, which includes abutments and piers. Cast in place concrete for bridge superstructures, which includes bridge decks, raised medians, sidewalks, and parapets, is covered under the special provision item HPC Masonry Structures.

B (Vacant)

C Construction
Replace standard spec 501.3.8.2 with the following:

The contractor is responsible for the quality of the concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions taken to control concrete temperature if the concrete temperature at the point of placement exceeds 80° F (27° C). Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

If the concrete temperature at the point of placement exceeds 90° F (32° C), do not place concrete under the following bid items:

Concrete Masonry Bridges
Concrete Masonry Bridges HES
Concrete Masonry Retaining Walls
Concrete Masonry Retaining Walls HES
Concrete Masonry Culverts
Concrete Masonry Culverts HES
Concrete Masonry Endwalls
Concrete Masonry Soldier Pile Footings

Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80º F (27º C). If project information is not available, obtain information from similar mixes placed for other nearby work.

Any additive or action taken to control the temperature of the Concrete Masonry to within the limits of this special provision, including but not limited to the addition of ice to the concrete mix, is considered incidental to the work and will not be measured or paid for separately.

Supplement standard spec 501.3 with the following:

501.3.11 Slip Forming
Do not place concrete by the slip-form method for any item covered by this special provision.

D (Vacant)

E (Vacant)

47. Driven Piles Using Pile Dynamic Analyzer.

Where indicated in the structure plans, replace standard spec. 550.3.6 with the following:

550.3.6 Driving Resistance

(1)

a. Drive piles 1 through 10 in the west and east abutments and piles 1 through 24 in the pier no further than the depths shown in the plans to obtain the required driving resistance per the driving resistance determination method called for in the plans.
b. Drive all other piles to the depths necessary to obtain the required driving resistance per the driving resistance determination method called for in the plans.

(2) Driving resistance will be developed by the engineer from Pile Dynamic Analyzer (PDA) testing performed on the designated piles at each substructure unit as shown on the plans. The driving criteria will be given as blows per foot with hammer stroke and minimum penetration of the pile or as directed by the engineer.

The PDA test piles at each substructure unit are designated on the plans and will be monitored using a PDA. Pile installation for these test piles will be controlled by the PDA testing and the engineer per the Pile Dynamic Analyzer (PDA) Testing and Restrike Special Provision within this contract.

For the PDA driving resistance determination method, pile restrikes will be required per the PDA Testing and Restrike Special Provision, or as directed by the engineer. Accommodate a time delay in the pile driving sequence as defined in the PDA Testing Special Provision to allow the engineer time to develop the production pile driving criteria.

(3)

a. If the required driving resistance is not met for piles 1 through 10 in the west and east abutments and piles 1 through 24 in the pier at the minimum tip elevation, driving shall be halted and the engineer shall be contacted for further direction. If the required driving resistance is achieved above the minimum tip elevation, driving shall continue until both the minimum tip elevation and required driving resistance criteria are met. If practical pile refusal is encountered prior to the minimum tip elevation, the engineer will determine if driving can be halted.
b. If the required driving resistance is not met for all other piles at the minimum tip elevation, driving shall continue until it is achieved. If the required driving resistance is achieved above the minimum tip elevation, driving shall continue until both the minimum tip elevation and required driving resistance criteria are

met. If practical pile refusal is encountered prior to the minimum tip elevation, the engineer will determine if driving can be halted.

Where indicated in the structure plans, delete standard spec. 550.3.7.

48. Storm Sewer.

General
Contractor is responsible to review the Plans, Specifications, and existing site conditions prior to bidding to ascertain the extent of the work requiring ground support systems.

Contractor is to ensure the awareness of the risk involved in constructing sewers in close proximity to existing utilities, structures, and live traffic lanes.

Contractor is responsible for the design, furnishing of materials, installation, monitoring and removal of ground support systems

Supplement standard spec 608.5.1 with the following:

Supporting utilities in storm sewer trench is considered incidental to storm sewer pipe.

49. Catch Basins, Manholes, and Inlets.

Supplement standard spec 611.3.1 with the following:

Use a Grade "A" concrete for final adjustment of manhole cover. Provide a butyl rubber gasket or butyl rubber rope for joints of precast reinforced concrete manhole sections. Butyl Rubber gasket joint used for manholes conforms to 8.41.6 of the Standard Specification for Sewer and Water Construction in Wisconsin, latest Edition. Provide non-rocking covers for all drainage structures subject to traffic loading.

Submit shop drawings for all drainage structures. For structures where WisDOT standard detail drawings are not available, provide shop drawings prepared, verified and stamped by a professional engineer currently registered in the State of Wisconsin. Submit one electronic copy of shop drawings in portable document format for engineer's review two weeks prior to start fabrication. Show clearly on shop drawings information for all pipe connections to the structure. The contractor is responsible for all errors of detailing and fabrication. The omission from the shop drawings of any pipe connection shall not relieve contractor of the responsibility of furnishing and installing such materials, even though the shop drawings may have been reviewed and accepted by the engineer.

Construct height adjustments of 4-inches or more with concrete grade rings. Never use grade rings less than 2-inches thick.

50. Furnishing Plant Materials.

Amend standard spec 632.2.2.1 to include the following:

All plants shall be grown within the states of Wisconsin, Minnesota, Michigan, or parts of northern Illinois located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January, 2012.

51. Digging, Handling, and Packing Plant Stock.

Amend standard spec 632.2.2.9.1 to include the following:

Plant materials specified for Fall planting, that require spring digging, shall be reserved by the contractor in advance of the project to allow plant installation in conformance with the project schedule.

Spring dug plants shall be placed in a holding area where the root ball shall be covered to the existing soil line with hardwood bark mulch or a material approved the Landscape Architect. Holding area shall allow for watering and protection from wind and sun. All plants in leaf shall be sprayed with an anti-descant in conformance with standard spec 632.2. Plants may be held by either the contractor or supplier.

52. Landscape Planting Surveillance and Care.

Amend standard spec 632.3.19.2 to include the following:

If the care specialist fails to perform any of the required care-cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $200 per day to cover the cost of performing the work with other forces.

53. Sign Supports Concrete Masonry.

Modify the standard specs as follows:

Supplement standard spec 636.3.2 with the following:

(3) Drill or excavate and maintain a stable open excavation for subsequent installation of drilled footings for sign structure foundations as shown in the plans. The subsurface conditions vary across the project site and are not necessarily the same at each sign structure foundation in the project. Anticipate the possibility of encountering randomly interlaced seams of loose, permeable sand or gravel of substantial thickness situated within glacial clays and till deposits; saturated soils; ground water; isolated cobbles or boulders; and nested cobbles and boulders at any sign structure foundation when selecting equipment and methods for drilling or otherwise excavating. Partial or full depth temporary casing may be required to maintain the stability of the excavation prior to placement of reinforcement and filling the excavation with concrete.

It is strongly advised to obtain and review the Geotechnical Exploration and Foundation Evaluation Reports for the sign structures and as well as nearby structures

to the sign structure foundation being constructed. See article "Geotechnical Investigation Information" in these special provisions for information on obtaining geotechnical reports.

Supplement standard spec 636.3.3 with the following:

(8) For drilled foundations, no more than 3 inches of standing water is permitted in the bottom of the drilled excavation immediately prior to placing concrete masonry in the excavation.

Replace standard spec 636.5.2(1) with the following:

Payment for Sign Supports Concrete Masonry is full compensation for providing, transporting, placing and curing the concrete; for providing and removing casing if applicable; for providing required ground rods; for furnishing all required excavating; for placing post stubs or anchor bolts, and for providing and placing electrical conduit if required; for pumping of ground water seepage if applicable; for cleaning-up, repairing damage, and for disposing of excavation and surplus materials.

SEF Rev. 14_1212

54. Signs Type I and II.

Furnish and install new mounting brackets per approved product list for type II signs on overhead sign supports incidental to sign. For type II signs on sign bridges use aluminum vertical support beams noted above incidental to sign. New mounting brackets are incidental to the sign being installed.

Add the following to standard spec 637.2.4:

Use stainless steel bolts, washers and nuts for type I and type II signs mounted on sign bridges or type I signs mounted on overhead sign supports. Use clips on every joint for Sign Plate A 4-6 when mounted on a sign bridge or overhead sign support. Inspect installation of clips and assure bolts and nuts are tightened to manufacturers recommended torque values.

Use aluminum vertical sign support beams that have a 5-inch wide flange and weigh 3.7 pounds per foot, if the L-brackets are 4 inches wide then use 4 inch wide flange beams weighing 3.06 pounds per foot. Contractor shall measure the width of the L-brackets on existing structures of determine the width needed for sign support beams

Use beams a minimum of 6 feet in length or equal to the height of the sign to be supported, whichever is greater. Use U-bolts that are made of stainless steel, 1/2 inch diameter and of the proper size to fit the truss cords of each sign bridge. Install vertical sign support beams on each sign and use new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss.

For type II signs on overhead sign supports follow the approved product list for mounting brackets.

Replace standard spec 637.2.4.1(2)2 with the following:

Clips may be either stainless steel or ASTM B 108, aluminum alloy, 356.0-T6.

Add the following to standard spec 637.3.3.2(2):

Install Type I Signs at the offset stated in the plan, which shall be the clear distance between the edge of mainline pavement right edgeline and the near edge of the sign.

Add the following to standard spec 637.3.3.3(3):

Furnish and install new aluminum vertical sign support beams on each sign and new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss for Type I or Type II Signs and Type I signs on overhead sign supports incidental to sign. New I-beams are incidental to the sign being installed.

Add the following to standard spec 641.2.9(3):

Submit shop drawings for sign bridges and overhead sign supports to SE Region, Traffic Operations Engineer

637-SER1 (20120401)

55. Blue Specific Service Signs.

Add the following to standard spec 638.3.4:

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

The contractor is responsible for damage done to these signs due to contractor operations.
stp-638-010 (20150630)

56. Traffic Control.

Supplement standard spec 643.3.1 with the following:

Have available at all times sufficient experienced personnel to promptly install, remove and reinstall the required traffic control devices to route traffic in order to perform the operations.

Place traffic control devices for work in the proper location before operations proceed. Traffic Control is subject to change at the direction of the engineer in the event of an emergency.

Provide the Milwaukee County Sheriff's Department, the Wisconsin State Patrol, City of Oak Creek Police Department and the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a safety hazard develops.

Do not park or store equipment, contractor's and personal vehicles or construction materials within the clear zone as designated in the plans on any roadway carrying traffic during working and non-working hours except at locations and periods of time approved by the engineer.

Do not permit construction or personnel equipment or vehicles to directly cross the live traffic lanes of the freeway. Yield to all through traffic at all locations. Equip all vehicles or equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light) that is visible from 360 degrees. Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on shoulders. Do not park personal vehicles within the access control limits of the freeway. Do not cross live freeway traffic lanes with equipment or vehicles

Obtain prior approval from the engineer for the locations of egress or ingress for construction vehicles to prosecute the work.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, sand barrel array, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer.

Do not use flag persons to direct, control, or stop freeway traffic. Obtain approval from the engineer to use a flag person to direct, control, or stop local street traffic. Adhere to the Manual of Uniform Traffic Control Devices chapter 6E standard requirements for flagger control.

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

Replace standard spec 643.3.1(6) with the following:

Provide 24-hour a day availability of equipment, forces and materials to promptly restore barricades, lights, or other traffic control devices that are damaged or disturbed.
643-SER1 (20160321)

57. Flexible Tubular Markers.

Replace standard spec 643.2.5.2 with the following:

Only flexible tubular markers with bases that bolt to the pavement surface will be allowed for installations in which the flexible tubular markers will be in place during December, January, February and March. Provide a base designed to hold the post securely using locking pins, or other devices, to withstand a series of direct wheel impacts with speeds up to 70 mph.
SEF Rev. 16_0620

58. Traffic Control Signs Removal.

Supplement standard spec 643.3.8.3 with the following:

Remove all signs on temporary mounts and other potential associated hazards to the traveling public from the right-of-way when not in use.
SEF Rev. 14_1212

59. Traffic Control Detour Signs Not in Use.

Replace standard spec 643.3.8.6(6) with the following:

Immediately remove or cover signing when the detour is no longer in effect. When removing signs, remove all signs, posts, supports, and other potential associated hazards to the traveling public from within the right-of-way.
SEF Rev. 14_1212

60. Late Season Marking Requirements.

Replace standard spec 646.3.1.4(1) with the following:

Do not place wet reflective contrast tape marking after November 15 and before April 15 of the following calendar year unless both air and surface temperatures are 40 degrees F and rising. If those conditions are not met, apply epoxy marking material from the department's approved products list in the exact locations the plans show for wet reflective contrast tape. Maintain that marking until April 15. Then, unless the engineer allows otherwise, completely remove while installing wet reflective contrast tape.
SEF 14_0312

61. 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)

62. Coordination with Businesses.

The department will arrange and conduct a meeting between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting a minimum of 2-weeks prior to the start of work under this contract and hold two meetings per month thereafter.

63. Construction Trenches.

Upon completion of the normal work day and when work is not in progress, all trenches within the roadway or sidewalk resulting from construction activities which are not fully backfilled shall be plated with steel plates suitable for carrying a vehicle or pedestrian traffic, respectively, as directed by the engineer. The plating shall be in addition to the

barricades and traffic control devices required for lane colure or traffic control, and shall be incidental to other items of work.

64. Milwaukee County Transit System.

The Milwaukee County Transit System (MCTS) maintains a Freeway Flyer bus route to the Ryan Road Park and Ride. The Park and Ride will be closed from Stage 1B to Stage 2D. While the Park and Ride is closed, the Freeway Flyer will not stop at Ryan Road. Notify MCTS at least ten days prior to beginning work. The MCTS contact is Ms. Melanie Flynn, (414) 343-1764.

Invite MCTS to all coordination meetings between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations.

MCTS will remove their existing bus stop signs and shelter. Notify MCTS at least ten (10) days in advance. MCTS will install new bus stop signs and shelter prior to the opening of traffic in the new Park and Ride. Notify MCTS at least ten (10) days prior to opening new Park and Ride to vehicular traffic.

65. Temporary Sidewalks and Driveways.

Construct and maintain, in satisfactory condition, temporary sidewalks and driveways at locations specified by the engineer. Construct temporary sidewalks and driveways of base aggregate dense 1 1/4 –inch to dimensions determined by the engineer.

Base aggregate for construction of the temporary sidewalks and driveways will be paid for under the item Base Aggregate Dense 1 1/4 –Inch. Cost of labor and equipment necessary to place and remove the temporary sidewalks and driveways shall be included in the contract unit price for Base Aggregate Dense 1 1/4 –Inch.

66. Freeway Lighting Systems – WISDOT Owned Systems.

The following modifications are made to standard specifications and standard detail drawings as they apply to state-owned highway lighting.

Append standard spec 651.2 with the following:

For materials to be furnished by the department, pick-ups shall be scheduled three working days in advance so as to occur during normal business hours Monday through Thursday. Contact Miss Bree Johns-Konkol at (414) 266-1170.

State Electrical Shop, 935 South 60th Street, West Allis and in Wauwatosa, Milwaukee County.

Append standard spec 651.3.1 with the following:

The department does not employ a load dispatcher and has no intent to do so. Each electrical worker is responsible for his own protection from automatic switching and from switching by others. Conform to lock-out and tag-out rules that apply in the industry. Tags shall be signed and dated, and include the name of the contractor. If possible, clear lock-outs and tag-outs by the end of the work day. If not possible, notify the engineer.

The plans show required disconnections of existing lighting circuits, most in the form of abandoning existing underground conductors in place. The contractor may need to mobilize several times per each existing lighting distribution center. The contractor is expected to build these costs into the various paid items for removals and installations.

Replace all existing slotted junction box cover screws with stainless hex head cover screws at each location where it is required to open the cover of an existing lighting junction box.

Append standard spec 651.5 with the following:

Work to disconnect and connect conductors will be incidental to the paid measurement of footage.

There will be no measurement for payment for abandoning conductors or removing conductors for scrap.

Work to disconnect and connect electrical system, splice through, or to connect conductors are incidental to the installation or removal of the freeway lighting pay items included in this contract. The department will not measure conductors or conduits that have been abandoned in place or removing them for scrap. The department will allow, at the contractor's discretion, for the salvaging of conductors to be abandoned, if possible.

The department will not measure for the removal of electrical facilities except lamps disposal on sign bridges shown on the plans to be removed and disposed of from the site.

Append standard spec 652.3.1 with the following:

Install a minimum of 3-inch diameter PVC conduit elbows in a ground mounted concrete bases for Cable in Duct (CID) type cable entering into the base unless conduit and cable size specified. Install an additional conduit elbow in foundation where three way circuits are entering or leaving the pole base.

Append standard spec 652.3.1.2 with the following:

Furnish and install an UL listed liquid tight flexible metallic conduit transition wherever a conduit exits from below grade.

Furnish a UL listed fitting appropriate for the purpose at each transition from one type of conduit to another type. Coupling not individually measured for payment

Append standard spec 652.3.1.4 with the following:

Conductors shall be supported at the top of the vertical raceway or as close as practical if the vertical rise exceeds 50-feet. Additional supports shall be provided as shown and in no case greater shall the distance between supports exceed that shown in Table 300.19(A) of the Wisconsin State Electric Code.

Append standard spec 655.3.1(1) with the following:

Wet location splices may be allowed under the following circumstances:

- Where shown in the plans;
- Where the best available location to connect new work to existing work below grade.
- In long runs where a reel of wire ends, or to prevent excessive pulling through numerous pull points.

Wet location splices shall be made with an approved epoxy kit.

Append standard spec 655.3.1 with the following:

Where two or more cable networks occupy the same pull box, manhole, etc., bundle and tag each circuit network (i.e. A/B/N and C/D/N) with approved all-weather tags.

At each pull point or access point, indicate the line side bundle with a lap of blue tape.

Exception: Where the direction the bundle comes from is obvious, the lap of blue tape is not required. *Example of exception:* a bridge parapet junction box.

Modify standard spec 657.3.1(3) with the following:

Use corrosion protection measures for breakaway transformer bases and aluminum light poles for installation on freeway lighting systems.

Append standard spec 659.3. with the following:

Contractor shall be responsible to provide adequate temporary roadway lighting during all the construction stages not shown on the temporary lighting plans, but which are necessitated by field conditions or by any construction phasing changes. Installation of temporary lighting not shown on temporary lighting plans shall be paid according to appropriate pay items included in this contract.

The necessity for temporary lighting not shown on plans must be coordinated with the engineer.

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

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

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

Department-Furnished Items
Ethernet Switch
6-Count Fiber Optic Cable
72-Count Fiber Optic Cable
Splice Enclosure
CCTV Camera Assembly
Camera Pole
Microwave Detector Assembly
Ramp Meter Processor
ITS Field Cabinet

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
Add the following to standard spec 106.3:

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

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

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

1. Mounting assemblies for the vehicle speed and classification sensors, including their attachment to the structure.
2. Mounting 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.

670-005 (20150630)

68. General Requirements for Electrical Work.

Replace standard spec 651.3.3 (3) with the following:

(3) Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. Notify the department's Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The department's Region Electrical personnel will perform the inspection. In the event of deficiencies, request a re-inspection when the work is corrected. The engineer will not authorize continuation to aboveground work or turn-on until the contractor corrects all deficiencies.

69. Traffic Signals, General.

State Owned Traffic Signals

Work under this item shall consist of furnishing and installing all materials, except for the traffic signal cabinet, monotube equipment, EVP equipment, pre-terminated fiber optic pigtails, Ethernet switches and non-intrusive detection system for the department owned traffic signals along STH 100. Install the traffic signal cabinet, monotube equipment, EVP equipment, pre-terminated fiber optic pigtails, Ethernet switches and non-intrusive detection system furnished by the department.

70. Electrical Conduit.

Replace standard spec 652. 5 (2) with the following:

(2) Payment for Conduit Rigid Metallic, Conduit Rigid Nonmetallic, Conduit Reinforced Thermosetting Resin, and Conduit Special bid items is full compensation for providing the conduit, conduit bodies, and fittings; for providing all conduit hangers, clips, attachments, and fittings used to support conduit on structures; for pull wires or ropes; for expansion

fittings and caps; for making necessary connections into existing pull box, manhole, junction box or communication vault; for excavating, bedding, and backfilling, including any sand, concrete, or other required materials; for disposing of surplus materials; and for making inspections.

Replace standard spec 652.5 (5) with the following:

(5) Payment for Conduit Loop Detector is full compensation for providing all materials, including conduit, compacted backfill, surface sealer if required, pull wire if required, condulets, conduit fittings, and for making necessary connections into existing pull box, manhole, junction box or communication vault.

71. Traffic Signal Faces.

Append standard spec 658.3.2(3) with the following:

(3) Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

72. Pedestrian Signal Face 16-Inch.

Append standard spec 658.3.4(3) with the following:

(3) Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

73. Pedestrian Push Buttons.

Replace standard spec 658.2.5 with the following:

(1) Furnish freeze-proof ADA compliant pedestrian push buttons made by a department-approved manufacturer. The contractor shall place a Size 1, Type H reflective (R10-3EL, R, D) sign sticker (per state sign plate), message series – B directly above each push button. Include a directional arrow or arrows on the sign as the plans show.

74. Intelligent Transportation Systems – General Requirements.

A Description

A.1 General

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

Unusual aspects of this project include:

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

A.2 Surge Protection

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

B Materials

B.1 General

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

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

B.2 Outdoor Equipment

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

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

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

B.3 Custom Equipment

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

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

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

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

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

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

B.4 Environmental Conditions

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

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.

4. Electrical Power:
    a. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.
    b. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.
    c. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.
5. Temperature and Humidity:
    a. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
    b. **Equipment in Controlled Environments** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

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

B.6 Surge Protection

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

1. The protectors shall suppress a peak surge current of up to 10k amps.
2. The protectors shall have a response time less than one nanosecond.
3. The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage, and clamp the voltage between each wire and ground at 50 volts.
4. The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
5. The protector shall also contain a resettable fuse (PTC) to protect against excessive current.

6. There shall be no more than two pairs per protector.
7. It shall be possible to replace the protector without using tools.

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

C Construction

C.1 Thread Protection

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

C.2 Cable Installation

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

C.3 Wiring

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

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

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

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

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

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

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

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

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

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

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

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

75. Abatement of Asbestos Containing Material Structure B-40-0226, Item 203.0210.S.0001.

A Description
This special provision describes abating asbestos containing material on structures according to the plans, the pertinent provisions of the standard specifications, and as hereinafter provided.

B (Vacant)

C Construction
Timothy G. Petrofske, License Number All-115985, inspected Structure B-40-0226 for asbestos on October 22, 2008 Regulated Asbestos Containing Material (RACM) was found on this structure in the following locations and quantities:

Structure B-40-0226				
Location	Description	Analytical Results and Method	Category	Quantity
North Bridge Railing	Gasket – Light Grey	ATC	Category I Non-Friable	66(6 in x 6 in) +2 (2 feet x 6 in) = 20.5 sq ft
North Bridge Railing – Bolts	Locktite – Light Grey	ATC	Category II Non-Friable	280(1 in x 1 in) = 2 sq ft
Underside of Deck	Transite Pipe	ATC	Category II Non-Friable	6 pipe – 4 in dia x 210 ft

Note: ATC = Assumed to Contain Asbestos

The RACM on this structure must be abated by a licensed abatement contractor. A copy of the inspection report is available from:

Name: Bill Mohr, P.E.
Address: 141 NW Barstow Street, Waukesha, WI 53187-0798
Phone: (262) 548-5666
Fax: (262) 548-6891
E-mail: Bill.mohr@dot.wi.gov

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form and the abatement report to Bill Mohr at (262) 548-5666 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-40-0226, STH 100 Northbound (Ryan Rd Westbound) over USH 41/IH 94
- Site Address: 0.2M N JCT CTH V, City of Oak Creek (40265)
- Ownership Information: WisDOT Transportation Souteast Region, 141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
- Contact: Kurt Flierl
- Phone: (262) 548-8724
- Age: 52years. This structure was constructed in 1965.
- Area: 10,385 SF of deck

Insert the following paragraph in Section 6.g.:

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

D Measurement

The department will measure Abatement of Asbestos Containing Material (Structure), completed according to the contract and accepted, as a single complete unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
203.0210.S.0001	Abatement of Asbestos Containing Material Structure B-40-0226	LS

Payment is full compensation for submitting necessary forms; removing all asbestos; properly disposing of all waste materials; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

203-005 (20120615)

76. Removing Old Structure Over Waterway Station 282+34.12, Item 203.0500.0001.S; Station 294+49.00, Item 203.0500.0002.S; Station 385+19.39, Item 203.0500.0003.S.

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

Add the following to standard spec 203:

203.3.6 Removals Over Waterways and Wetlands

203.3.6.1 Removing Old Structure Over Waterway

(1) Remove the existing Structure C-40-31 over the Southland Creek, existing Structure C-40-32 over the Unnamed Tributary to Southland Creek, and existing Structure C-40-33 over the North Branch of Oak Creek N5 Tributary conforming to the contractor's approved structure removal and clean-up plan. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. Remove large pieces of the structure within 36 hours. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.

(2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:
   1. Methods and schedule to remove the structure.
   2. Methods to control potentially harmful environmental impacts.
   3. Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
   4. Methods for cleaning the waterway or wetlands.

(3) If stockpiling spoil material, place it on an upland site an adequate distance from the waterway, wetland, or any open water created by excavation. Install silt fence between the spoil pile and the waterway, wetland, or excavation site.

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

ITEM NUMBER	DESCRIPTION	UNIT
203.0500.0001.S	Removing Old Structure Over Waterway Station 282+34.12	LS
203.0500.0002.S	Removing Old Structure Over Waterway Station 294+49.00	LS
203.0500.0003.S	Removing Old Structure Over Waterway Station 385+19.39	LS

203-015 (20090105)

77. Backfill Controlled Low Strength, Item 209.0200.S.

A Description

This special provision describes furnishing and placing a controlled low strength material designed for use as backfill in trenches for culverts, sewers, utilities, or similar structures, as backfill behind bridges abutments, or as fill for the abandonment of culverts, pipes, or tanks.

B Materials

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

Test	Method	Value
Flow (inch)	ASTM D-6103	9 min
Compressive Strength (psi)	ASTM D-6024	20-40 @ 14 days 40-80 @ 28 days 80-120 @ 90 days

Chemical admixtures to control air content and setting time are allowable. Ten days prior to placement, furnish the engineer with a design mix detailing all components and their proportions in the mix. Also, provide documentation from the supplier of the industrial byproducts that the foundry sand and fly ash used in the mixture meet the requirements for Industrial Byproducts Categories 1, 2, 3, or 4 in NR 538 of the Wisconsin Administrative Code for use as a confined geotechnical fill.

C Construction

Place controlled low strength backfill at the locations and to the lines and grades as shown on the plan. Proportion and mix materials to produce a product of consistent texture and flow characteristics. The engineer may reject any materials exhibiting a substantial change in properties, appearance, or composition.

If the official Weather Bureau forecast for the construction site predicts temperatures at or below freezing within the next 24 hours after placement of controlled low strength backfill, protect the placed materials from freezing during that time period. If the temperature is not forecast to rise above 40º F for 72 hours after placement, the engineer may require protection from freezing for up to 72 hours.

No controlled low strength backfill shall be allowed to enter any stream, lake, or sewer system. The contractor shall be responsible for any clean up or remediation costs resulting from such occurrences.

D Measurement

The department will measure Backfill Controlled Low Strength in volume by the cubic yard of material placed and accepted. Such volume shall be computed from actual measurements of the dimensions of the area to be backfilled. In irregular or inaccessible areas, the engineer may allow volume to be determined by other appropriate methods.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
209.0200.S	Backfill Controlled Low Strength	CY

Payment is full compensation for designing the mix; supplying all materials; preparing the proportioned mix; hauling it to the construction site; placing the material; and protecting it from freezing.

209-010 (20090901)

78. Cold Patch, Item 495.1000.S.

A Description

This special provision describes furnishing cold patch and filling potholes and other voids in existing pavement surfaces as the engineer directs.

B Materials

Furnish a mixture of course aggregate, natural sand, and MC-250 bituminous material designed to have a workability range of 15-100º F without heating. Ensure that the mixture:

- Adheres to wet surfaces.
- Resists damage from water, salt, and deicing products.
- Requires no mixing or special handling before use.
- Supports traffic immediately after placement and compaction.

Conform to the following gradation:

SIEVE SIZE	PERCENT PASSING (by weight)
1/2-inch (12.5 mm)	100
3/8-inch (9.5 mm)	90 - 100
No. 4 (4.75 mm)	–90 max
No. 8 (2.38 mm)	20 - 65
No. 200 (0.074 mm)	2 - 10
Bitumen	4.8 - 5.4

The department will accept cold patch based primarily on the engineer's visual inspection. The department may also test for gradation.

C Construction

Stockpile cold patch on site on a smooth, firm, well-drained area cleared of vegetation and foreign material. Cover the stockpile and ensure that it is easily accessible. Replenish the stockpile throughout the project duration, but limit the size at any given time to 10 tons on site unless the engineer approves otherwise. Dispose of unused material at project completion unless the engineer directs otherwise.

Place cold patch by hand. Remove ponded water and loose debris before placement. Compact flush with a tamper, roller, or vehicle tire after placement.

Refill patched areas as necessary to maintain a flush pavement surface until project completion.

D Measurement

The department will measure Cold Patch by the ton, acceptably stockpiled on site.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
495.1000.S	Cold Patch	TON

Payment for Cold Patch is full compensation for providing and maintaining patches; for furnishing and replenishing stockpiled material on-site; and for disposing of excess material at project completion.
495-010 (20160607)

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

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

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

High Performance Concrete (HPC) Masonry Structures

Replace standard spec 501.4 and 501.5 with the following:

501.4 Measurement

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

501.5 Payment

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

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

(2) Payment for Ice Hot Weather Concreting is full compensation for ice used to cool concrete placed in hot weather as specified in standard spec 501.3.8.2.

(3) The department will not pay directly for the concrete specified under this section. Concrete is incidental to the various bid items using it. Payment under those bid items includes providing all materials, including aggregates and associated aggregate source testing, cement, fly ash, slag, and admixtures; for preparing, transporting, storing, protecting and curing concrete; and for contractor requirements related to testing specified in standard spec 501.3.10.

(4) If required to remove and replace any concrete damaged by lack of proper protection. Perform this work at no expense to the department.

stp-501-010 (20151210)

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

A Description

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

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

B Materials

B.1 General

Furnish stainless steel reinforcing bars conforming to ASTM A955 and to one of the following Unified Numbering System (UNS) designations: S31653, S31803, S32205, or S32304. Supply grade 60 bars, all of the same UNS designation. Conform to the chemical composition specified for the given UNS designation in ASTM A276 table 1.

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

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

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

B.2 Fabrication

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

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

B.3 Control of Material

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

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

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

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

C Construction

C.1 General

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

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

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

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

C.2 Splices

Splice as the plans show. The contractor may substitute stainless steel couplers for lap slices the plans show if the engineer approves in writing.

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

D Measurement

The department will measure Bar Steel Reinforcement HS Stainless Structures by the pound acceptably completed, computed from the nominal weights of corresponding sizes for carbon steel deformed bars in AASHTO M31 regardless of stainless steel alloy provided. The department will not measure extra material used if the contractor alters the reinforcement layout as allowed under C.2, extra material for splices or couplers the plans do not show, or the weight of devices used to support or fasten the steel in position.

E Payment

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

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

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

stp-505-005 (20141107)

81. Concrete Staining B-40-809, Item 517.1010.S.0001; Concrete Staining R-40-388, Item 517.1010.S.0002; Concrete Staining R-40-391, Item 517.1010.S.0003.

A Description

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

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, as part of the two coat finish system:

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure & Seal EPX by Chem Masters
H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

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

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

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

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

C.4 Test Areas
Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between the stones produced by the form liner if applicable. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.
Apply concrete stain to the surfaces according to the plan.

D Measurement
The department will measure Concrete Staining (Structure) in area by the square foot of surface, acceptably prepared and stained

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.0001	Concrete Staining B-40-809	SF
517.1010.S.0002	Concrete Staining R-40-388	SF
517.1010.S.0003	Concrete Staining R-40-391	SF

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

82. Cover Plates Temporary, Item 611.8120.S.

A Description
This special provision describes furnishing, installing and removing a steel plate to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

B Materials
Provide a 0.25-inch minimum thickness steel plate that extends to the outside edge of the existing masonry.

C (Vacant)

D Measurement
The department will measure Cover Plates Temporary as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	EACH

Payment is full compensation for furnishing, installing, and removing the cover plates.

The steel plates shall become the property of the contractor when no longer needed in the contract work.
611-006 (20151210)

83. Pipe Grates, Item 611.9800.S.

A Description
This special provision describes furnishing and installing pipe grates on the ends of pipes as shown in the plans, and as hereinafter provided.

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

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

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

D Measurement
The department will measure Pipe Grates in units of work, where one unit is one grate, completed and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S	Pipe Grates	EACH

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to pipes.
611-010 (20030820)

84. Fence Safety, Item 616.0700.S.

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

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

Furnish fence fabric meeting the following requirements.

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

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

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.
616-030 (20160607)

85. Traffic Control Surveillance and Maintenance 1030-20-85, Item 643.0200.S.0001.

A Description
This special provision describes providing personnel to inspect and maintain the traffic control devices, furnished, and installed, in proper condition.

B Materials

Provide one person, called the traffic control specialist, all necessary vehicles, equipment, tools, and repair materials. Provide other personnel to accomplish the inspection and maintenance if needed.

C Construction

Inspection and maintenance includes all traffic control signs or devices included in the contract, including those on detour routes. Begin when the first traffic control sign or device is put into operation and end when the last traffic control sign or device is removed from operation.

1. Ensure that the traffic control specialist inspects the traffic control signs and devices at least twice each workday and once each non-workday with at least one of the daily inspections during daytime. Separate inspections done on workdays by at least 8 hours or the amount of time from the beginning to the end of that day's work operations, whichever is less. During each inspection, clean, repair, or replace each traffic control sign or device not performing as intended, as necessary.

2. Ensure that the traffic control specialist inspects each reflective traffic control sign or device at least once each week during hours of darkness. View the signs and devices using low beam vehicle headlights to ensure reflectorization is unimpaired. Clean, repair, or replace each reflectorized traffic control sign or device not performing as intended, as necessary, before sunset of the next calendar day, or as the engineer directs otherwise.

3. Ensure that the traffic control specialist meets once each workday with the department representative responsible for traffic control on the project to discuss possible problems with the traffic control.

4. Ensure that the traffic control specialist submits a written report weekly to the engineer documenting both daytime and nighttime inspections.

5. Make the control specialist, or other contractor-designated person, available 24 hours per day, 7 days per week to clean, repair, or replace traffic control devices not performing as intended throughout the period traffic control signs and devices are operating under this contract. Provide to the engineer, the County Sheriff, and the State Patrol Region Headquarters responsible for that county the telephone number to contact the control specialist or other contractor-designated person. Ensure that the control specialist, or other designated person, is able to reach any location within the contract limits, or on detour routes, within 2 hours of being contacted, and can promptly accomplish the necessary cleaning, repair, or replacement.

D Measurement

The department will measure the Traffic Control Surveillance and Maintenance bid items by the day, acceptably completed. The measured quantity will equal the number of calendar days from the date the first traffic control sign or device is placed into operation through the date the last traffic control sign or device is removed from operation.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
643.0200.S.0001	Traffic Control Surveillance and Maintenance 1030-20-85	DAY

Payment is full compensation for Payment for the Traffic Control Surveillance and Maintenance bid items is full compensation for providing all labor, materials, tools, equipment, vehicles, and incidentals, including reports and telephone charges, necessary to complete the work; and for partially or fully covering or uncovering signs not paid separately under the Traffic Control Covering Signs bid items. The department will not pay for replaced traffic control signs or devices under this bid item; replacement is incidental to the respective contract bid item or items.

643-016 (20160607)

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

A Description

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

B Materials

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

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

C Construction

C.1 General

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

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

C.2 Groove Depth
Cut the groove to a depth of 120 mils ± 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings
Cut the groove one-inch wider than the width of the tape.

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

C.5 Groove Cleaning
C.5.1 Concrete
Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

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

C.5.2 New Asphalt
Groove pavement five or more days after paving.

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

C.5.3 Existing Asphalt
Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

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

C.6 Tape Application
Apply the tape when both the air and surface temperature are 40 degrees F and rising.

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

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

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

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

2) For the remainder counties:

   · Apply either adhesive.

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

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

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

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

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

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

87. Pavement Marking Grooved Wet Reflective Epoxy 4-Inch, Item 646.2304.S; Pavement Marking Grooved Contrast Wet Reflective Epoxy 4-Inch, Item 646.0842.S; 8-Inch 646.0844.S.

A Description
This special provision describes furnishing, grooving, and installing wet reflective epoxy pavement marking as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials
Furnish a 20 mils application of an epoxy binder pavement marking, from the Wisconsin's Approved Products List, in a grooved slot. Provide a double drop system of 5.3 pounds per gallon of wet reflective elements from Wisconsin's Approved Products List and Utah Performance beads mixture at a drop rate of 12-22 pounds per gallon.

Replace standard spec 646.2.3 (1) with the following:

Furnish Utah Performance beads with the following gradation:

Utah Bead Gradation

US Mesh	Percent Passing (ASTM D1214)
18	65-80
20	
25	
30	30-50
40	
50	0-5

Beads **shall** achieve a minimum of 275 mcd (dry reading), initial for white and 180 mcd (dry reading) for yellow.

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 the grooved wet reflective epoxy.

Plane the grooved lines according to details in the plan. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove. Remove lane line and center line pavement markings during the grooving process.

C.2 Groove Depth
Cut the groove to a depth of 80 mils ±10 mils from the pavement surface. The department may periodically check groove depths.
C.4 Groove Width – Longitudinal Markings
Cut the groove 1inch wider than the width of the pavement marking.

C.5 Groove Position

Position the groove edge according to Standard Detail Drawing Pavement Marking (Mainline). If necessary, groove a minimum of 4 inches from both ends of the pavement marking segment. Achieve straight alignment with the grooving equipment.

C.6 Groove Cleaning

C.6.1 Concrete

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

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the marking. Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove.

C.6.2 Asphalt

Groove pavement five or more days after paving.

If opening to traffic an asphalt lane that is not grooved, place temporary pavement marking. For asphalt lanes not open to traffic, temporary pavement marking is not required.

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

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

D Measurement

The department will measure Pavement Marking Grooved Wet Reflective Epoxy (Width) bid items by the linear foot of line, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF
646.0842.S	Pavement Marking Grooved Contrast Wet Reflective Epoxy 4-Inch	LF
646.0844.S	Pavement Marking Grooved Contrast Wet Reflective Epoxy 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the epoxy, 3M elements and beads; and for removing existing or temporary marking, if necessary.

646-024 (20170227)

88. 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, 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)

89. Electrical Service Meter Breaker Pedestal STH 100 & S. 20th Street, Item 656.0200.3001; IH 94 Ramps & STH 100, Item 656.0200.3002.

Append standard spec 656.2.3 with the following:

(2) The department will be responsible for the electrical service installation request for any department maintained facility. Notify the maintaining authority if the signal is not state maintained that it is their responsibility to arrange for the electrical service installation.

(3) Electrical utility company service installation and energy cost will be billed to and paid for by the maintaining authority.

(4) Install the cabinet base and meter breaker pedestal first, so the electrical utility company can install the service lateral. Install a 3" conduit from the point of service from the utility to the meter breaker pedestal. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electrical utility company.

Append standard spec 656.5 with the following:

(8) Payment is full compensation for grading the service trench; replacing topsoil; and for fertilizing, seeding, and mulching to restore the disturbed area of the service trench.

90. Signal Housings.

Replace standard spec 658.2.3.2(1) with the following:

(1) Furnish polycarbonate resin housings, doors, and visors. Use yellow, Federal Standard 595 - FS13538, housings and dull black door faces and visors. For 16-inch heads, mount a z-crate visor and gasket to the door with stainless steel tabs. Drill the housing for top and bottom pipe mounting with the ability to rotate 270 degrees on the poly mounting brackets.

91. Temporary Traffic Signals for Intersections STH 100 & S. 22nd Street, Item 661.0200.3001; IH 94 EB Ramps & STH 100 Existing, Item 661.0200.3002; IH 94 WB Ramps & STH 100 Existing, Item 661.0200.3003; STH 100 & S. 13th Street, Item 661.0200.3004; IH 94 EB Ramps & STH 100 Proposed, Item 661.0200.3005; IH 94 WB Ramps & STH 100 Proposed, Item 661.0200.3006.

Replace standard spec 661.2.1 paragraph (3) with the following:

(3) Use the existing underground electric service and/or meter breaker pedestal for the operation of the Temporary Traffic Signal at STH 100 & S. 22nd Street, IH 94 eastbound Ramps & STH 100 Existing, IH 94 WB Ramps & STH 100 Existing, and STH 100 & S. 13th Street. The department will pay for all energy costs for the operation of the Temporary Traffic Signal.

The department has initiated the installation of the temporary electrical service with the electrical utility at the intersections of IH 94 EB Ramps & STH 100 Proposed and IH 94 WB Ramps & STH 100 Proposed to expedite the process. Contact Parwinder Virk at (262) 548-6717 to coordinate the temporary electrical service. The department will pay for all

installation and Energy Costs associated with the operation of the Temporary Traffic Signal. It is the contractor's responsibility to contact the electrical utility and arrange timely installation of the temporary service.

Coordinate with the Traffic Control contractor for the installation of temporary stop signs during switch over of the signal service whenever a generator is used. Placement of signs shall be according to the MUTCD, Signing Guidelines Manual and Work Zone Safety Guide.

Add the following to standard spec 661.2.1:

(5) Furnish all temporary traffic signal equipment as shown on the plan. All wood poles shall be plumb and level. Provide primary and secondary temporary traffic signal contact names and phone numbers who will be responsible for implementing temporary traffic signal timing changes. The department may request traffic signal timing changes to an approved timing plan during the project. Implement any approved timing plan change within 24 hours upon notification of the change. Immediately notify the department of implementation of temporary traffic signal timing changes.

(6) Furnish pedestrian signal faces as shown in the plans, according to standard spec 658.2.3.

(7) Furnish pedestrian push buttons as shown in the plans, according to standard spec 658.2.5.

Add the following to standard spec 661.3.1:

(4) Install pedestrian signal faces on the wood pole or wood post as the plans show. Maintain the height to the bottom of the pedestrian signal face as indicated in SDD Traffic Signal Standard Poly Bracket Mountings (Typical) 13 FT. or 15 FT.

(5) Install pedestrian push buttons according to standard spec 658.3.5. Mount push buttons so that they are according to MUTCD Chapter 4.

Replace standard spec 661.3.1.1(2) with the following:

(2) Place the pole in the ground to no less than 1/5 of the pole's length as the plans show. Sawcut existing pavement and concrete curb and gutter as needed to install the wood poles and guy wire anchors. Sawcut existing pavement according to the pertinent provisions in standard spec 690.3, Construction. Remove pavement and concrete curb and gutter as shown on the plans and if needed to install the wood poles and guy wire anchors. Remove only as much pavement as needed to install the wood poles. Remove pavement and curb and gutter according to the pertinent provisions in Section 204.3, Construction. Hold any wood poles in place and/or move wood poles during construction due to conflicts with proposed work.

Replace standard spec 661.5(2) with the following:

(2) Payment for the Temporary Traffic Signals for Intersections bid item is full compensation for providing, operating, maintaining, and repairing the complete temporary installation; and for removal. Payment also includes the following:

1. Furnishing and installing the replacement equipment.
2. The cost of delivery and pick-up of the cabinet assemblies.
3. Removal of service and site restoration.
4. Traffic signal controller programming and timings (including timing changes).

Payment is full compensation for drilling holes; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding, and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; for making inspections; for performing any and all maintenance related to the temporary traffic signal installation; for cleaning up and properly disposing of waste; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

92. Ramp Closure Gates Hardwired 24-FT, Item 662.1024.S; Ramp Closure Gates Hardwired 28-FT, Item 662.1028.S; Ramp Closure Gates Hardwired 37-FT, Item 662.1037.S.

A Description

This special provision describes providing hardwired freeway on-ramp closure gates on type 5 steel luminaire poles. This special provision also describes furnishing and delivering spare gate arms and flashers.

B Materials

B.1 General

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

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

B.2 Components

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

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

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

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

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

Gate arm: model MU605

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

Furnish hardwire power system and connections conforming to the following:

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

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

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

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

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

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

Set screws shall be stainless steel.

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

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

The aluminum shall meet the following minimum requirements:

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

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

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

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

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

Furnish gate flasher assemblies conforming to the following:

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

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

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

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

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

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

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

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

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

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

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

C Construction

C.1 Ramp Closure Gates

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

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

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

Attach the male side of the 4 conductor electrical connector, mercury switch, wiring harness, and the three LED flasher units to the portion of the flasher assembly mounted on the breakaway portion of the gate arm. Adjust mercury switch so that as the gate arm is lowered to a maximum of 45 degrees from the vertical, the gate flasher assembly is

energized, and the LEDs begin to flash. Ensure that when the gate arm is raised to a minimum of 15 degrees from vertical, the mercury switches the gate flasher assembly off.

Install structure identification plaques in the location the plan details show.

Joanna Bush
(608) 261-5845

C.2 Furnishing Gate Arms
Under the Ramp Closure Gate Arms Stockpilebid items, furnish and deliver spare arms of the nominal length the bid item indicates conforming to B.2. Deliver spare gate arms to an address provided by:

Miss. Bree Johns-Konkol
(414) 266-1170

C.3 Furnishing Flashers
Under the Ramp Closure Gate Flasher Stockpilebid item, furnish and deliver spare gate flasher assemblies conforming to B.2. Deliver spare gate arms to an address provided by:

Miss Bree Johns-Konkol
(414) 266-1170

D Measurement
The department will measure the Ramp Closure Gates Hardwired bid items as each individual installation, acceptably completed.

The department will measure the Ramp Closure Gate Arms Stockpilebid items and Ramp Closure Gate Flashers Stockpile as each individual unit, acceptably furnished and delivered.

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

ITEM NUMBER	DESCRIPTION	UNIT
662.3024.S	Ramp Closure Gate Arms Hardwired 24-FT	EACH
662.3028.S	Ramp Closure Gate Arms Hardwired 28-FT	EACH
662.3037.S	Ramp Closure Gate Arms Hardwired 37-FT	EACH

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

Payment for the Ramp Closure Gate Arms Stockpile is full compensation for furnishing and delivering spare ramp closure gate arms.

Payment for the Ramp Closure Gate Flashers Stockpile is full compensation for furnishing and delivering ramp spare closure gate flasher assemblies.
662-005 (2014630)

93. Ramp Closure Barricade Rack 2-Unit, Item 662.6020.S.

A Description

This special provision describes providing storage racks for barricades used to temporarily close off entrance ramps to divided highways.

B Materials

Furnish wooden posts conforming to standard spec 634.2.1.

Fabricate tubular steel components using structural quality 12-gauge strip steel conforming to ASTM designation A1011, grade 50 with an average minimum yield strength, after cold-forming, of 55,000 psi. The contractor may use perforated tubing.

Hot dip galvanize each tube according to ASTMA653 grade 90. Treat corner welds and cut ends with cold-galvanized organic zinc paint as manufacturer recommends.

Furnish galvanized bolts, nuts, and washers zinc-coated according to ASTM A153.

C Construction

Install wood posts conforming to standard spec 634.3.1 and the plan details. Fabricate and install tubular steel components as the plans show.

D Measurement

The department will measure the Ramp Closure Barricade Rack bid items as each individual barricade rack, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
662.6020.S	Ramp Closure Barricade Rack 2-Unit	EACH

Payment is full compensation for providing barricade racks; for wood posts; and for galvanized tubular steel components and hardware.
662-015 (20130615)

94. Install ITS Field Cabinet, Item 673.0200.S.

A Description

This special provision describes installing a state-furnished type 170, size 334 field cabinet.

B Materials

The department will furnish the type 170, size 334 field cabinet. Provide all necessary miscellaneous mounting hardware and internal power cables. With the field cabinet, the department will furnish cabinet bolts to anchor the cabinet to the concrete base.

C Construction
Install the field cabinet on a new or existing concrete base paid separately. Make all power connections to the cabinet, isolating the neutral bus from the cabinet and equipment ground.

Effectively ground all cable grounding shields and any spare or unused conductors in the field cabinet to the equipment grounding terminal strip.

D Measurement
The department will measure Install ITS Field Cabinet by the unit, installed according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
673.0200.S	Install ITS Field Cabinet	EACH

Payment is full compensation for installing the state-furnished field cabinet; making all connections; and grounding as necessary.
673-005 (20100630)

95. 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 Switch by the unit, installed according to the contract, tested and accepted.

E Payment
The department will pay for the 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 installation of the Ethernet switch; furnishing all necessary incidental hardware; and making all necessary connections.
675-040 (20100630)

96. Removing Advance Flasher Assemblies Type 1, Item 676.9001.S.

A Description
Remove advance flasher assemblies at the locations shown on the plan. Rewire and disconnect all wiring in the control cabinet as necessary and properly dispose of materials, according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B Materials
Dispose of all materials resulting from removing the Advance Flasher Assemblies including but not limited to poles, break-a-way bases, signal assemblies, bulbs, and wire off the job site.

C Construction
Do not remove existing advance flasher assemblies until proper disconnects and wiring changes in the controller cabinet have been made.

Where an existing advance flasher assembly is mounted to a light pole, remove all signal hardware including wire, conduit, signal assemblies and mounts. Where existing conduit has been installed under concrete sidewalk or roadway, do not remove buried conduit unless directed otherwise by the engineer or unless it is not possible to install new wire through the existing conduit.

D Measurement
The department will measure Removing Advance Flasher Assemblies (Type) by the unit, acceptably removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
676.9001.S	Removing Advance Flasher Assemblies, Type 1	EACH

Payment is full compensation for removing advanced flasher assemblies; for rewiring, as necessary; for disconnecting wiring as necessary in the controller cabinet; and for properly disposing of all materials.

Removal of concrete bases and signs associated with this item will be measured and paid for separately.
676-900 (20100630)

97. Removing 50-Foot Camera Pole, Item 677.9051.S.

A Description
This special provision describes removing an existing camera pole.

B (Vacant)

C Construction
Disconnect all cables, wiring and equipment that are mounted on or in the poles, and remove the pole from the concrete footing. The department will pick up any antennae, cameras, or other equipment mounted on the pole; contact maintenance staff at (414) 227-2166 at the department's Statewide Traffic Operations Center, when the material is ready to be picked up. Properly dispose of the pole, conduit, cabling, and wiring away from the project site.

D Measurement
The department will measure Removing 50-Foot Camera Pole by the unit, acceptably removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
677.9051.S	Removing 50-Foot Camera Pole	EACH

Payment is full compensation for removing and disposing of the existing camera pole; disconnecting any necessary wiring; removing the equipment mounted on the poles; disposing of cabling and wiring; and transportation.
677-901 (20100630)

98. Removing CCTV Camera, Item 677.9200.S.

A Description
This special provision describes removing an existing CCTV camera from an existing camera pole as described in the plan.

B (Vacant)

C Construction
Disconnect all wiring at the control cabinet and at the top of the camera pole. Remove all fastening hardware and remove the existing camera and pan, tilt, and zoom mechanisms from the top of the pole. Salvage and store the cameras for pick up by the department; contact maintenance staff at (414) 227-2166 at the department's Statewide Traffic Operations Center to coordinate when the materials will be picked up.

The contractor may request a meeting with the engineer to assess the condition and operability of the camera prior to beginning work on removing the camera. Any damage or improper operation not noted at the meeting, or prior to the contractor starting work on the removal, will be assumed to be the fault of the contractor; repair or replace the camera

at no additional cost to the department. Store the camera until the department picks up the camera.

D Measurement
The department will measure Removing CCTV Camera by the unit, acceptably and completely removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
677.9200.S	Removing CCTV Camera	EACH

Payment is full compensation for removing an existing CCTV camera; for disconnecting all necessary cables and wiring; and properly storing the materials.
677-902 (20100630)

99. Biofiltration Device Hardwood Mulch, SPV.0035.0001; Biofiltration Device Engineered Soil, Item SPV.0035.0002; Biofiltration Device Sand Seam, Item SPV.0035.0003; Biofiltration Device Observation Well, Item SPV.0060.0002; Biofiltration Device Curb Opening Casting SPV.0060.0003; Biofiltration Device Restoration, Item SPV.0060.0006.

A Description
This special provision describes furnishing and installing Biofiltration Devices as the plans show, and as hereinafter provided.

B Materials
B.1 Planting Bed
Planting bed shall be constructed according to the plans. The Planting bed consists of three parts: Hardwood Mulch, Engineered Soil, and Sand Seam.

B.1.1 Hardwood Mulch
Hardwood mulch shall be dark brown to black mulch processed from hardwoods such as maple and oak. Mulch shall be free of foreign material, including other plant material. Mulch shall be placed over Engineered Soil, and covered by Erosion Mat Urban Class 1 Type B to keep mulch from floating. Small slits may be cut into mat with utility knife to allow for plant installation.

B.1.2 Engineered Soil
Engineered soil mix shall conform to the Engineered Soil Composition requirements as listed in Wisconsin DNR Technical Standard 1004, Bioretention for Infiltration.

B.1.3 Sand Seam
Sand shall conform to the Engineered Soil Composition requirements as listed in Wisconsin DNR Technical Standard 1004, Bioretention for Infiltration.

B.2 Observation Well
Observation well materials shall meet the requirements of 612.2.6 Polyvinyl Chloride Drainage Pipe, with required fittings. Cap shall be a grated cover. The well screen shall be cemented to a 6-inch inside diameter coupling and the coupling shall be cemented to a 12-inch by 12-inch ¼-inch PVC sheet.

B.3 Biofiltration Device Restoration
Areas disturbed for biofiltration device construction shall be restored according to the landscape and erosion control plans.

B.4. Curb Opening Casting
Curb Opening Casting shall be provided conforming to Section 611, Catch Basins, Manholes, and Inlets, except as modified by the plans and herein. The Opening Casting shall conform to the dimensions as provided in the plans. The material for the inlets shall be ASTM-A-48, Class 35B Gray Iron or ASTM A536 Grade 80-55-06 for Ductile Iron, and shall be furnished with 35,000 psi tensile strength (minimum).

C Construction
Construction of biofiltration device and bioswale shall be the same except as otherwise noted for bioswale. Silt fence shall be placed surrounding the area of the biofiltration device upon start of construction. No equipment shall work within the biofiltration area until such time as the site has been determined "stabilized" by the engineer. Excavation of the biofiltration devices shall be done by backhoe method, without tracking in the limits of the biofiltration device to avoid compaction. Hand dig excavations to required elevations as needed. Correct over-excavation with crushed gravel, free from organic matter and debris; graded according to Section 305, WisDOT 1-1/4-inch gradation. Large stones or other hard matter that could damage device or impede consistent backfilling or compaction shall be removed.

Construction site runoff from disturbed areas shall not be allowed to enter biofiltration device.

Construction of biofiltration device shall be suspended during periods of rainfall or snowmelt. Construction shall remain suspended if ponded water is present or if residual soil moisture contributes significantly to the potential for soil smearing, clumping, or other forms of compaction.

Compaction and smearing of soils beneath bottom and side slopes of biofiltration device, and compaction of soils used for backfill in the soil planting bed shall be minimized. If compaction occurs at the base of the biofiltration device, soil shall be refractured to a depth of at least 12 inches. If smearing occurs, smeared areas shall be corrected by raking or roto-tilling.

Prior to placement in biofiltration device, premix engineered soil to obtain moisture content low enough to prevent clumping and compaction during placement.

Submit certifications prior to use for all materials proposed for project stating compliance with all standards.

Installation of the **biofiltration device** shall meet the following requirements:

- Install Curb Opening Casting with concrete curb and gutter.
- Place Observation Well at locations identified on the plans. Install underdrain in conformance of the requirements of Section 612.3. Place on clean storage layer material at elevations as the plans show.
- Install No. 2 Aggregate as the plans show. Install 12 inches of aggregate. Place remainder of aggregate in 6-inch lifts, lightly consolidating each lift, to depth shown on plans.
- Install 2" sand seam.
- Install engineered soil.
- Install hardwood mulch and erosion mat.
- Install Planting Bed as the plans show.
- Do not displace underdrain or observation well while placing materials.
- Restore any disturbed areas with seed, fertilizer, and topsoil. Install erosion control on hardwood mulch areas.
- Curb opening casting shall be placed integrally with the curb at the location and grade identified by the plans.

Installation of the **bioswale** shall meet the following requirements:

- Install No. 2 Aggregate as the plans show.
- Install underdrain in conformance of the requirements of standard spec 612.3. Place on clean storage layer material at elevations as the plans show.
- Install 2" sand seam.
- Install engineered soil
- Install hardwood mulch and erosion mat.
- Install Planting Bed as the plans show.
- Do not displace underdrain while placing materials.
- Restore any disturbed areas with seed, fertilizer, and topsoil. Install erosion control mat on hardwood mulch areas.
- Install 6 permanent stone ditch checks as shown in the plans, payable per cubic yard of No. 2 Aggregate and Rip Rap Medium.

D Measurement

The department will measure Hardwood Mulch by cubic yards, acceptably completed.

The department will measure Engineered Soil by cubic yards, acceptably completed.

The department will measure Biofiltration Device Sand Seam by cubic yards, acceptably completed.

The department will measure Biofiltration Device Observation Well as each individual observation well, acceptably completed.

The department will measure Biofiltration Device Curb Opening Casting, acceptably placed.

The department will measure Biofiltration Device Restoration as each biofiltration device, acceptably restored.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.0001	Biofiltration Device Hardwood Mulch	CY
SPV.0035.0002	Biofiltration Device Engineered Soil	CY
SPV.0035.0003	Biofiltration Device Sand Seam	CY
SPV.0060.0002	Biofiltration Device Observation Well	EACH
SPV.0060.0003	Biofiltration Device Curb Opening Casting	EACH
SPV.0060.0006	Biofiltration Device Restoration	EACH

Payment is full compensation for furnishing and installing the Biofiltration Device materials and appurtenances according to the drawings and details. Excavation of native material required to install the materials according to the plans and details, along with disposal, is considered incidental.

The department will pay separately for underdrain furnishing, installation and materials under the other bid items in this contract.

The department will pay separately for No. 2 Aggregate furnishing and materials under the other bid items in this contract.

100. No. 2 Aggregate, Item SPV.0035.0004.

A Description
This special provision describes furnishing and installing No. 2 Aggregate for biofiltration device construction and permanent stone ditch check construction as the plans show, and as hereinafter provided

B Materials
No. 2 Aggregate shall be open graded coarse aggregate and shall meet the requirements of standard spec 501.2.5.4.4, size No. 2. Stone shall be double washed.

C Construction
Construct the aggregates according to standard spec 209.3 except as modified by the plans, details and specifications.

D Measurement
The department will measure No. 2 Aggregate by cubic yards, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.0004	No. 2 Aggregate	CY

Payment is full compensation for furnishing and installing the No. 2 Aggregate according to the drawings and details.

101. Topsoil Special, Item SPV.0035.0005.

This work is according to the standard spec 625, except as hereinafter modified.

A Description
Use Topsoil Special for the streambank and floodplain seeding zones within the limits of the stream work.

B Materials
Provide Topsoil Special consisting of clean topsoil free of debris, with no weed seed, including reed canary grass, purple loosestrife, box elder, buckthorn species, Canada thistle, garlic mustard, phragmites (tall reed grass), or other invasive species.

C Construction
Place Topsoil Special to a minimum depth of 6 inches.

D Measurement
The department will measure Topsoil Special by the cubic yards, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.0005	Topsoil Special	CY

Payment for Topsoil Special is full compensation for providing, excavating, loading, hauling and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. The department will make no allowance, adjustment, or measurement for payment under the Excavation bid items for undercutting cut sections, or underfilling embankments.

102. Riprap Medium Special, Item SPV.0035.0006.

This work is according to standard spec 606, except as hereinafter modified.

A Description
This special provision describes the furnishing and placing Riprap Medium Special.

B Materials
Furnish all materials according to standard spec 606.2.

C Construction
Perform work according to the pertinent provisions of standard spec 606.3 and as hereinafter provided.

C.1 Constrained Conditions
The contractor is advised that the placement of Riprap Medium Special shall be within existing box culverts. These culverts also have existing fill along their bottoms of which the riprap will be placed on. These constrained conditions may require delivery and placement of material by non-mechanical means. Restore any existing fill which is disturbed during delivery and placement of material.

D Measurement
The department will measure Riprap Medium Special by the cubic yard, acceptably completed, measured as the volume within the limiting dimensions the contract designates or the engineer establishes in the field.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.0006	Riprap Medium Special	CY

Payment for Riprap Medium Special is full compensation for preparing the bed, providing and placing riprap, restoring disturbed existing fill within the box culverts and disposing of surplus material.

103. HPC Masonry Structures, Item SPV.0035.4000.

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

MODIFY THE STANDARD SPECIFICATIONS AS FOLLOWS:

501.2.5.4.1 General
Replace the entire text with the following:

(1) Use clean, hard, durable crushed limestone with 100percent fractured surfaces and free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.

(2) Use virgin aggregates only.

501.2.5.4.2 Deleterious Substances
Replace paragraph one with the following:

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

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

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

501.2.5.4.3 Physical Properties
Replace paragraph one with the following:

(1) The department will ensure that Los Angeles wear testing conforms to AASHTO T 96, soundness testing conforms to AASHTO T 104 using 5 cycles in sodium sulfate solution on aggregate retained on the No. 4 sieve, and freeze-thaw soundness testing conforms to AASHTO T 103. The percent wear must not exceed 30, the weighted soundness loss must not exceed 6 percent, and the weighted freeze-thaw average loss must not exceed 15 percent.

501.2.9 Concrete Curing Materials
Replace the entire text with the following:

(1) Furnish burlap conforming to AASHTO M 182, class 1, 2, 3 or 4.

501.3.2.4.3.3 Extended Delivery Time
Delete paragraph one.

501.3.5.1 General
Replace paragraph one with the following:

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

501.3.5.2 Delivery
Replace paragraph three with the following:

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

501.3.7.1 Slump
Replace the entire text with the following:

(1) Use a 2-inch to 4-inch slump.
(2) Perform the slump tests for concrete according to AASHTO T 119.

501.3.8.2.1 General
Replace paragraphs one and two with the following:

(1) Take the following steps to ensure the quality of the concrete placed. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions to control concrete temperature if the concrete temperature at the point of placement exceeds 80° F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

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

501.3.8.2.2 Bridge Decks
Replace the entire text with the following:

(1) Do not place concrete for bridge decks when the air temperature is above 80° F.

(2) For concrete placed in bridge decks, submit a written evaporation control plan at each pre-pour meeting. In that plan, outline the actions to maintain concrete surface evaporation at or below 0.15 pounds per square foot per hour. Do not place concrete for bridge decks without the engineer’s written acceptance of that evaporation control plan. If the engineer accepts an evaporation control plan calling for ice, the department will pay $0.75 per pound for that ice. Perform the work as outlined in the evaporation control plan.

(3) If predicting a concrete surface moisture evaporation rate exceeding 0.15 pounds per square foot per hour, do not place concrete for bridge decks.

(4) Provide evaporation rate predictions to the engineer 24 hours before each bridge deck pour.

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

(6) At least 8 hours before each pour, the engineer will inform the contractor in writing whether or not to proceed with the pour as scheduled. If the actual computed evaporation rate during the pour exceeds 0.15 pounds per square foot per hour, at the engineer's discretion, the contractor may be allowed to implement immediate corrective action and complete the pour. If the engineer allows the placement to continue, the department will pay $0.75 per pound for the quantity of ice required to maintain the concrete surface evaporation at or below 0.15 pounds per square foot per hour.

502.3.2.1 Detailed Plans
Replace the entire text with the following:

(1) As specified in standard spec 105.2, submit four copies of detailed plans and computations for falsework, signed and sealed by a professional engineer registered in the State of Wisconsin, three weeks before erection of falsework for review and acceptance. Acceptance of the detailed plans and computations will in no way relieve the contractor of the responsibility of providing a safe and stable structure, and obtaining satisfactory results.

502.3.5.4 Superstructures
Delete paragraph six.

502.3.7.8 Floors
Replace paragraph five with the following:

(5) Set the rails or tracks that the finish machine rides on, to the required elevation; and ensure they adjust to allow for settlement under load. Support the rails or tracks outside the limits of the finished riding surface. Do not support rails or tracks on the tops of girders, or within the finished riding surface, without the engineer's written permission.

Delete paragraph thirteen, fourteen and fifteen.

Add the following to the end as paragraphs nineteen, twenty, twenty-one, twenty-two, and twenty three.

(19) Do not place bridge deck concrete more than 10 feet ahead of the finishing machine. If there is a delay of more than 10 minutes during the placement of a bridge deck, cover all concrete (unfinished and finished) with wet burlap to protect the concrete from evaporation until placement operations resume.

(20) Keep hand finishing, except for the edge of deck, to a minimum. Equip the finishing machine with a pan behind the screed. Apply micro texture using a broom or turf drag following the use of a 10-foot straight edge. Only finish by hand as necessary to close up finished concrete. Begin wet curing the deck immediately following the micro texture.

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

(22) Place HPC Masonry Structures for bridge decks during nighttime hours. Begin work no earlier than two hours before sunset and end no later than 2 hours after sunrise; unless alternate begin and end times are approved before the concrete placement by the engineer. To determine acceptable hours, use the sunset and sunrise times published by the National Weather Service for the proposed date of the concrete placement or as mutually agreed to by the contractor and the engineer.

(23) Provide lighting as necessary to safely perform the required work and facilitate inspection during nighttime hours. Ensure that lighting does not interfere with or impede traffic on open roadways and does not cause glare, shine or directly face the eyes of oncoming drivers. After initial setup, drive through and observe the lighted work area from each direction on the main roadway. Adjust lighting alignment if lighting causes glare, shine or directly faces the eyes of oncoming drivers

502.3.8.1 General
Replace paragraph one with the following:

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

502.3.8.2.1 General
Replace the entire text with the following:

(1) Wet-cure the concrete for bridge decks, structural approach slabs, sidewalks on bridges and raised medians on bridges for 14 days by use of a soaker hose system, or other engineer-approved methods. Cover the finished surface of bridge decks and overlays with one layer of wetted burlap or wetted cotton mats within 10 minutes after the finishing machine has passed. Apply the burlap/cotton gently to minimize marking of the fresh concrete. Keep the first layer of burlap/cotton continuously wet until the bridge deck or overlay is sufficiently hard to apply a second layer of wetted burlap/cotton. Immediately after applying the second layer of burlap/cotton, continue to keep the deck wet until placing and activating the soaker hose system. Throughout the remainder of the curing period, keep the burlap/cotton continuously wet with soaker hoses

hooked up to a continuous water source. Inspect the burlap/cotton twice daily to ensure the entire surface is moist. If necessary, alter the soaker hose system as needed to ensure the entire surface is completely covered and stays moist. After 48 hours from the time of completion of the bridge deck or overlay pour, the soaker hose system and burlap/cotton may be covered with polyethylene sheeting. Provide a continuous flow of water through the soaker hose system for the entire curing period.

(2) Do not uncover any portion of the deck at any time for any reason during the first 7 days of the curing period except as allowed by the engineer.

(3) Set up and test the fogging system before each bridge deck, structural approach slab, bridge mounted sidewalk or bridge mounted raised median pour. Keep the fogging system set up and operational for the duration of the pour.

502.3.8.2.3 Decks
Delete the entire text.

502.3.8.2.4 Parapets
Replace the entire text with the following:

(1) Cure the inside and outside concrete faces and tops of railings or parapets by covering with wetted burlap immediately after form removal and surface finish application. Keep the burlap thoroughly wet for at least 7 days; or by covering for the same period with thoroughly wet polyethylene-coated burlap conforming to 502.2.6.4

(2) Secure coverings along all edges to prevent moisture loss.

502.3.9.6 Bridge Decks
Replace paragraph two with the following:

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

502.5.1 General
Replace paragraph one with the following:

(1) The department will pay for plan quantities at the contract unit price and incidentals necessary to complete the work under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.4000	HPC Masonry Structures	CY

Lighting for nighttime bridge deck placement is included in the item HPC Masonry Structures and will not be measured or paid for separately.

710.5 Sampling and Testing
Add the following subsection:

710.5.7 Chloride Penetration Resistance

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

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

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

715.2.3.2 Structures
Replace paragraph one with the following:

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

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

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

(1C) The 28-day compressive strength must be at least 4000 psi. The 28-day results of the permeability test must be at most 1500 coulombs.

Replace paragraph two with the following:

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

1. Use class C fly ash or grade 100 or 120 slag as a partial replacement for portland cement. For binary mixes use fly ash within a range of 15 to 30 percent or slag within a range of 20 to 30 percent. For ternary mixes use fly ash plus slag in combination within a range of 15 to 30 percent. Percentages are stated as percent by weight of the total cementitious material in the mix.
2. Use a type IP, IS, or IT blended cement.

SEF Rev. 16_1121

104. Detention Basin Clay Lining, Item SPV.0035.8001.

A Description

This section describes furnishing and installing clay lining to the interior surfaces of the detention basin.

B Materials

The clay material can be acquired on site or be furnished by the contractor from a borrow site. The contractor shall submit laboratory test results of the clay lining material from onsite or borrow source(s) documenting that the clay meets or exceeds the clay material specifications prior to the start of lining construction and prior to bringing borrow to the site. The laboratory tests shall be conducted on clay material from on site or borrow areas at the frequency listed below and be performed according to ASTM standard methods as listed below. The test results shall be submitted to the engineer for review and approval prior to construction. The following tests are required:

- A minimum of 50 percent by weight which passes the 200 sieve.
- Liquid Limit (LL): 22 percent or greater.
- Plasticity Index (PI): 12 percent or greater.

Clay not meeting these three requirements shall be removed and disposed of by the contractor without additional payment.

In addition to the three above testing requirements, the contractor shall provide additional test results for any clay furnished to be used for informational purposes. These testing results are listed below.

Reference standards are listed as follows:

American Society for Testing and Materials (ASTM):

- ASTM D698 Test for Moisture-Density Relations of Soils and Soil Aggregate Mixtures Using 5.5 lb Rammer and 12 in. Drop (Standard Proctor).
- ASTM D2922 Test for Density of Soil In Place by Nuclear Method (Shallow Depth).
- ASTM D1140 Test Method for Amount of Materials in Soils Finer than the No. 200 Sieve.
- ASTM D422 Method for Particle-Size Analysis of Soils.
- ASTM D4318 Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.
- ASTM D2487 Classification of Soils for Engineering Purposes.

Table of Testing for Clay

Test	Number of Required Tests: One Borrow Source Only and Also For Onsite Clay	Number of Required Tests: Multiple Borrow Sources	Minimum Requirement
Grain Size Analysis	3 (Total)	1 test/2,500 cy or less/site[(a)]	≥ 50% by Wt. Passing 200 Sieve
Hydrometer Analysis	3 (Total)	1 test/2,500 cy or less/site[(a)]	Info. Only
Atterberg Limits (ASTM D4318)	3 (Total)	1 test/2,500 cy or less/site[(a)]	LL ≥ 22% PI ≥ 12%
USCS Classification (ASTM D2487)	3 (Total)	1 test/2,500 cy or less/site[(a)]	Info. Only
Standard Proctor Analysis 5-Point Curve (Minimum) (ASTM D698)	2 (Total)	1 test/10,000 cy or less/site[(b)]	Info. Only
Permeability Test (use falling head method)	2 (Total)	1 test/10,000 cy or less/site[(b)]	1 x 10^{-7} cm/sec

[a] For each clay borrow site to be used, one test shall be performed and provided to engineer for each 2,500 cubic yards or less of clay to be obtained from each of the borrow sources.
[b] For each clay borrow site to be used, one test shall be performed and provided to engineer for each 10,000 cubic yards or less of clay to be obtained from each of the borrow sources.

C Construction

C.1 Clay Lining Placement

C.1.1 Detention Basin Subgrade

The detention basin subgrade shall be compacted to a minimum compaction of 95 percent of Standard Proctor Maximum Density (ASTM D-698) prior to placing any required detention basin lining material.

C.1.2 Erosion Protection

The detention basin lining shall not be placed until after all adjacent site grading has been completed and only after silt fence has been installed completely around the perimeter of the detention basin.

C.1.3 Clay Lining

After the rough grading is complete, the contractor shall undercut, place and compact approved clay material in four 6-inch lifts for a total compacted thickness of 2 feet, including a height of 1 foot above the normal detention basin elevation.

Contractor shall notify the engineer at least three days prior to start of placing clay lining.

Lift thickness shall be 6 inches maximum after compaction.

Clay lining shall be a minimum of 2 feet thick measured perpendicular to the surface.

Compact clay to a minimum of 98% Standard Proctor Maximum Density (ASTM D698) with a sheepsfoot roller or other suitable equipment.

Placement of each lift shall not proceed until all required clay testing and documentation has been completed for the previous lift.

The moisture content of the clay during placement shall be:

- No drier than 1 % below the optimum moisture content as determined by ASTM D698.
- No wetter than 3% above the optimum moisture content as determined by ASTM D698.

Excessively dry or wet clay soil shall be properly moisture-conditioned to within the above range of values.

Provide all equipment necessary to adjust clay to the proper moisture content for compaction.

The maximum permeability of constructed clay lining material and tested under Section B shall be $1x10^{-7}$ cm/sec.

The contractor is responsible for construction of the clay lining per the plans. If the in-place clay lining fails to meet the requirements of this section, the contractor shall be responsible for the following:

- Removing and replacing or reworking any portion of the clay lining not meeting the project specifications until project specifications are met.
- The contractor shall not be compensated for removing, replacing and reworking clay lining not meeting the specification requirements.

C.1.4 Testing of Constructed Soils

As construction of the clay lining proceeds, the department will provide all required on-site quality control testing of installed materials as follows:

- Record thickness of clay lining.
- Density testing (ASTM D2922) on after the clay is placed and compacted. One test per lift (minimum) or one test for every 25,000 sq. ft. of lift constructed, whichever is greater.
- HTCP certified person will perform all necessary sampling, testing, data analysis and documentation during all Pond Liner Clay placement and compaction.

- One Standard Proctor (ATM D698) for each soil type used but no less than one Proctor analysis for each 5,000 cubic yards of clay placed.
- After the lining is placed and compacted, one Shelby tube sample and bulk sample shall be retrieved and analyzed for the following:
  - Grain size distribution and hydrometer analysis.
  - Moisture content.
  - Dry density.
  - Atterberg Limits.
  - Permeability.

The contractor shall provide the following:

- Access for on-site testing, inspection, and documentation.
- Machinery required to grade/blade density test locations.
- Machinery required to obtain undisturbed clay samples (i.e., with Shelby tubes).
- Replace and recompact clay material removed for testing purposes.

C.1.5 Detention Basin Dewatering

The contractor is responsible for the temporary lowering of the water table to 2 feet below the clay liner below the detention basin bottom during construction and testing of the detention basin as described in bid item Dewatering for Detention Basin Construction.

The pond is a wet pond.

D Measurement
The department will measure Detention Basin Clay Lining by the cubic yard, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.8001	Detention Basin Clay Lining	CY

Payment is full compensation for furnishing, placing and compacting the detention basin clay lining.

105. Watering Bags, Item SPV.0060.0001.

A Description
This special provision describes furnishing and installation of slow release watering bags on deciduous shade and ornamental trees, and their removal by October 15 of the second growing season.

B Materials
Watering bags shall be UV stabilized polyethylene, polypropylene or polyvinyl chloride with nylon zippers for installation.

Bag capacity shall be a minimum of 20 gallons. There shall be two to four water release openings on the bottom of each bag. Water release rate shall be 20 gallons per 5 to 9 hours.

Bag height shall be approximately two times the base width.

Bags shall be filled with water and is considered a part of standard spec 632.3.19.1(2). Watering is not part of the item Watering Bag. It is considered proper care after planting and is incidental to the planting.

Remove and dispose of watering bags by October 15, at the end of the two year establishment period and prior to freezing.

C Construction
Install watering bag per manufacturer's recommendations

D Measurement
The department will measure Watering Bag 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.0060.0001	Watering Bags	EACH

Payment is full compensation for the installation and removal Watering Bag units, as required per manufacturer's instructions.

106. Rootstock Vegetation, Item SPV.0060.0004.

A Description

This special provision describes providing wetland herbaceous plant rootstock of the species specified, complete in place at the locations designated on the plans or as directed by the engineer. It includes providing all necessary materials and performing all necessary work such as excavating plant holes, anchoring Rootstock Vegetation plants, necessary care and required replacements pending acceptance, and work necessary to complete the item according to the plans and specifications. Use in conjunction with Rootstock Protection special provision.

B Materials

Use only nursery grown stock plant materials, not wild-collected, from an area not to exceed 75 linear miles from the project site. Use only healthy, 1 to 2 years old plants, with well-developed root systems. Plants that show evidence of mold, rot, freezing or frost damage will be rejected. Species substitutions are not allowed.

B.1 Project 1030-20-85 Materials

50 percent of the furnished rootstock vegetation shall consist of a minimum of four species of the approved wildflower species, and 50 percent shall consist of a minimum of four species of the approved grasses, sedges and Rushes:

B.1.1 Wildflowers:

- Nodding Pink Onion
- Red Milkweed New England Aster
- Pale Indian Plantain
- Wild Senna
- Canada Tick Trefoil
- Joe Pye Weed
- Boneset
- Dogtooth Daisy
- Ox Eye Sunflower
- Blue Flag Iris
- Wild Iris
- Prairie Blazingstar
- Dense Blazingstar
- Great Blue Lobelia

- Wild Bergamot
- Yellow Coneflower
- Black Eyed Susan
- Sweet Black Eyed Susan
- Brown Eyed Susan
- Rosinweed
- Cupplant
- Prairie Dock
- Ohio Goldenrod
- Stiff Goldenrod
- Blue Vervain
- Ironweed
- Culver's Root
- Golden Alexanders
- Cardinal Flower
- Mountain Mint
- Common Yarrow
- Prairie Alumroot
- Columbine

B.1.2 Grasses, Sedges and Rushes:

- Big Bluestem
- Bottlebrush Sedge
- Porcupine Sedge
- Lance Fruited
- Oval Sedge
- Awl Fruited Sedge
- Fox Sedge
- Canada Wild Rye
- Virginia Wild Rye
- Switchgrass
- Dark Green Bulrush
- Indiangrass
- Prairie Cordgrass
- Annual Rye
- Little Bluestem
- Blue Fescue.

B.2 Project 1030-26-72 Materials

The following plant material, provided in the indicated percentages, shall be furnished:

Wetland/Flood Plain Planting Zone (450 sq. feet)

Scientific Name	**Common Name**	**Quantity**
Scirpus atrovirens	green bulrush	30
Scirpus cyperinus	wool grass	18
Scirpus fluviatilis	river bulrush	54

Juncus effusus	soft rush	30
Leersia oryzoides	rice cut grass	30
Spartina pectinata	prairie cord grass	18
Total		180

C Construction

C.1 General

Plant Rootstock Vegetation between May 1 and June 15 or October 15 and November 15. Do not plant when the ground is frozen, or when the conditions are otherwise unsuitable for planting. Give the engineer five working days' notice of the intended date of delivery of Rootstock Vegetation to the project site. Present all Rootstock Vegetation plants to the engineer for inspection and acceptance before planting. Handle and pack the Rootstock Vegetation to prevent damage, and ensure arrival at the project site in good condition. Keep the Rootstock Vegetation moist and cool before planting

C.2 Timing of Planting

Plant Rootstock Vegetation on the day of delivery at the project site. If this is not possible, temporarily store plants by placing them in a well ventilated, cool, shaded, moist storage space. Adequately protect the Rootstock Vegetation against drying by packing sphagnum moss around the roots. This storage period shall not exceed 48 hours.

C.3. Planting Layout

Project 1030-20-85

Mix Rootstock Vegetation species randomly in their placement, planted at a uniform density of approximately one plant per two square feet in those areas shown on the Plans or as directed by the engineer. Plant Rootstock Vegetation in rows. Supplement planting with Seeding Mixture No. 75, provided per standard spec 630.

Project 1030-26-72

Plant Rootstock Vegetation at a density of approximately 600 plants per acre within the Streambank/Flood Plain Planting Zone. Plant tubers and rhizomes in groupings, as determined by the Southeast Regional wetland ecologist, and plant at a uniform density of approximately one plant per square yard in those areas shown on the Planting Plan. Mix planting species randomly in their placement. Do not plant Rootstock in rows.

C.4. Planting Method

Project 1030-20-85

Plant Rootstock Vegetation by hand with a tree spud or other comparable method, or as directed by the engineer. Plant all plants 2 to 3 inches into the ground.

Project 1030-26-72

Tubers and rhizomes lacking or with limited fibrous root systems may be pushed into the soil by hand or with a dowel. In areas with firmer substrates, open planting holes with a dibble, spade, or suitable tool. Transplant all plants 4 to 6 inches into the substrate.

C.5. Care

Do not disturb freshly planted Rootstock Vegetation with subsequent activities that would cause uprooting or injury. Properly care for all plants from the time of planting until the final acceptance of the work. Proper care of plants shall consist of watering and other necessary work to keep the plants in a healthy growing condition.

Perform watering two to three day intervals between May 15 and September 15, if necessary. Intervals may be lengthened when weather conditions and soil moisture permit. Maintain vegetation for three calendar years, as needed, or within 24 hours of notification by the engineer.

Maintenance includes:

- Inspect weekly after each 1-inch rain event during months of March through November for the first growing season. Repair erosion or sedimentation during time of inspection.
- Remove debris and trash to be removed as needed.
- Water seed, rootstock, or plugs as needed.
- Pull weeds or spot treat with a biodegradable herbicide.
- Do not use fertilizer or pesticide after the initial fertilizer is applied as recommended by the nursery
- Inspect plants and replace as needed to achieve 80% survivability.
- Avoid storing snow within the biofiltration device and bioswale.
- After the first growing season, inspect in the spring and fall. Minimal maintenance should be required. Mow once annually after dormant and remove dead material.

D Measurement

The department will measure Rootstock Vegetation by the number of plants, 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.0060.0004	Rootstock Vegetation	EACH

Payment is full compensation for furnishing, delivering, storing, handling and planting the Rootstock Vegetation, watering, maintaining, anchoring, and supplying wire as necessary. The department will pay separately for providing Seeding Mixture No. 75 furnishing, installation and materials under the other bid items in this contract.

107. Silt Fence Drainage Outlet, Erosion Control Filter Bags, Item SPV.0060.0005.

A Description

This special provision describes construction of erosion control filter bags at openings/outlets in silt fence alignments where water may pond against the silt fence, to allow a path for water discharge while still maintaining erosion protection of the

downstream/downslope area. Specifically the protection provided by the erosion control filter bags will apply to environmentally sensitive areas such as wetlands and stream tributaries.

B Materials

Bags shall be made of synthetic net with a mesh size of 1/8-inches by 1/8-inches that is of sufficient strength to hold the aggregate and to be lifted vertically.

Fill material shall be clean, sound, hard, durable coarse aggregate meeting the approval of the engineer and conforming to the size and gradation requirements for Size No. 1 coarse aggregate as specified in standard spec 501.2.5.4.4.

C Construction

Provide suitable erosion control filter bags to complete installations at locations shown on the plans or as the engineer directs.

Install erosion control filter bags at the silt fence outlets as directed by the engineer and per plan detail. Place erosion control filter bags immediately after the silt fence has been installed and before starting any construction operation that may cause sedimentation or siltation at the site of the proposed silt fence outlets.

Inspect all erosion control filter bags immediately after each rainfall and at least daily during prolonged rainfall. Immediately correct any deficiencies. In addition, make a daily review of the erosion control filter bags in areas where construction activity has changed the earth contour and drainage runoff to ensure that the bags are functioning properly. Where deficiencies exist, move or adjust existing erosion control filter bags or install additional erosion control filter bags as approved or directed by the engineer and at no additional cost to the department.

Remove sediment deposits when the deposits reach approximately one-half of the height of the erosion control filter bag(s), or as directed by the engineer. The contractor shall dispose of the sediment outside of the right-of-way unless allowed by the engineer. Replace any bags that have been damaged.

Remove erosion control filter bags as part of the silt fence removal operation. The engineer will determine when the contractor will be allowed to do this as specified in standard spec 628.3.4.1. Dispose of erosion control filter bags and any sediment outside of the right-of-way. Reshape the area where the bags were located, fill sumps and trenches, dispose of erosion control filter bags, sediment and any excess eroded material outside of the right-of-way, and restore the affected area to match the adjacent vegetation.

D Measurement

The department will measure Silt Fence Drainage Outlet, Erosion Control Filter Bags for each installation, acceptably completed.

Individual erosion control filter bags will not be measured.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0005	Silt Fence Drainage Outlet, Erosion Control Filter Bags	EACH

Payment is full compensation for providing, installing and removing erosion control filter bags used at silt fence drainage outlets at project completion or as the engineer directs; for inspecting and maintaining the erosion control filter bags as specified; for repairing and restoring damaged areas; and for removing and disposing of all surplus and waste material. SEF 100106

108. Permanent Stone Ditch Check, SPV.0060.0007.

A Description
This special provision describes furnishing and installing permanent stone ditch check as shown on the plans or as directed by the engineer, or both, and as hereinafter provided.

B Materials
Materials shall conform to applicable portions of standard spec 501, 505, 612, and 645.

B.1 PVC Pipe
PVC pipe shall be a pipe underdrain unperforated 6-inch, manufactured and tested according to ASTM D2665 and shall be Schedule 40.

B.2 Geotextile Fabric
The geotextile fabric shall be according to the standard spec 645.2.7.

B.3 Coarse Aggregate
Provide materials conforming to size requirements for size no. 2 coarse aggregate for concrete masonry or riprap according to the standard spec 501.2.5.4.4. Railroad ballast or breaker run stone conforming to the following applicable gradation may also be used:

Railroad Ballast

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

Breaker Run Stone

Sieve Size	Percent by Weight Passing
5 Inch	100
1 1/2 Inch	0 – 50

3/8 Inch	0 – 5

Incorporate stone or rock in the Permanent Stone Ditch Check that is hard, sound, and durable, and meets the approval of the engineer.

C Construction
Place Permanent Stone Ditch Check immediately after shaping of the ditches or slopes is completed. Place Permanent Stone Ditch Check at right angles to direction of flow and construct the dimensions and according to the details shown in the plans.

Remove sediment from behind the Permanent Stone Ditch Check when it has accumulated to one of the original height of the dam.

D Measurement
The department will measure Permanent Stone Ditch Check as individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0007	Permanent Stone Ditch Check	EACH

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

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

109. Maintain Crash Cushions Temporary Left In Place, Item SPV.0060.0014.

A Description
This special provision describes receiving existing temporary crash cushions. The temporary crash cushions have been left in place under a previous contract. Assume ownership and responsibility of the temporary crash cushions upon the contract's Notice to Proceed. The location of these temporary crash cushions is shown in the Traffic Control plans.

The temporary crash cushions shall become the property of the contractor at the completion of the contract.

B (Vacant)

C Construction
Maintain, move and remove temporary crash cushions according to standard spec 614.

D Measurement

The department will measure Maintain Crash Cushions Temporary Left In Place by the individual unit, acceptably maintained.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0014	Maintain Crash Cushions Temporary Left In Place	EACH

Payment is full compensation for receiving, maintaining, and removing temporary crash cushions.

110. Field Facilities Office Space, Item SPV.0060.0020.

A Description

This special provision describes furnishing, equipping, and maintaining a field office as required in the contract at engineer-approved locations conforming to standard spec 642 and as hereinafter provided.

B Materials

Provide Field Facilities Office Space conforming to standard spec 642.2.1 except revise by deleting paragraphs (1), (7), and (9).

Replace standard spec 642.2.1(4) with the following:

Provide and maintain suitable interior sanitary facilities conforming to State and local health requirements, in clean and good working condition, and stock with sanitary supplies for the duration of the contract. Furnish office space in an existing office building or existing building converted to office space with a minimum of 1200 square feet. The facility shall have no fee parking with a minimum parking for 15 cars. The space shall include a meeting room with a minimum of 350 square feet. The exterior door(s) shall have locks in good working order and keys provided for all field staff. The office space shall be located within 2 miles of the construction project.

Equip the office as specified in standard spec 642.2.2.1 except delete paragraph (1) and (4) and add the following:

1. 5 suitable office desks with drawers and locks.
2. 5 ergonomically correct office chairs in working condition with at a minimum: 5-legged base with casters, seat adjustable from 15 to 22 inches from the floor with a seamless waterfall, rounded, front edge, and high backrest with no arms or adjustable arms.
3. 4 six foot folding tables.
4. 1 ten foot folding table.
5. 5 two-drawer file cabinets.
6. 3 four-shelf bookcases.
7. 20 folding chairs.

Provide for the professional cleaning of the field office during regular business hours twice monthly. Provide clearly marked recycling and waste receptacles within the field office, and separate recycling and waste dumpsters near the field office. Cover outdoor containers to keep out rain, snow, and wind-driven debris. Provide regularly scheduled recycling and waste pick-up.

C Construction
Conform to standard spec 642.3 except delete paragraph (2).

D Measurement
The department will measure the Field Facilities Office Space as each office, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0020	Field Facilities Office Space	EACH

Payment is full compensation for providing, equipping, securing, and maintaining the facility; for parking, for telecommunications equipment, installation, and service fees; and for providing bottled water, utilities, fuel, ventilation, and toilet facilities as required, either independently or jointly with the field laboratory, for the time specified in standard spec 642.3.

The department will pay for the cost of telecommunications usage fees incurred by department staff.
SER-642.2 (20160808)

111. Traffic Control Interim Freeway Lane Closure, Item SPV.0060.0022.

A Description
This item shall consist of adjusting existing traffic control items that have previously been placed on the freeway for a lane closure, intended lane closure or are in position for staged construction as shown on the plans into position for an additional one, two or three lane closure, and for readjusting the traffic control items to their original state or position upon removal of the additional one, two or three lane closure within a 24 hour period. All work shall be according to standard spec 643, the plans, and as directed by the engineer.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Traffic Control Interim Freeway Lane Closure as each individual freeway one, two or three lane closure is setup and subsequently removed per direction of traffic within a 24-hour time period, 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.0060.0022	Traffic Control Interim Freeway Lane Closure	EACH

Payment is full compensation for furnishing the labor and equipment for setup and subsequent removal per direction of traffic within a 24-hour time period of a freeway one, two, or three lane closure.

112. Traffic Control Close-Open Freeway Entrance Ramp, Item SPV.0060.0023.

A Description
This item shall consist of furnishing the labor and equipment required for closing and subsequently opening a freeway entrance ramp according to standard spec 643, the plans, and as directed by the engineer. Drums, barricades and signs may remain along the roadway when the exit ramp is open to traffic. Signs shall not be visible to traffic when the ramp is open. Drums, barricades and signs will be paid for separately under the various traffic control items.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Traffic Control Close-Open Freeway Entrance Ramp by each individual traffic control, close-open freeway ramp, 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.0060.0023	Traffic Control Close-Open Freeway Entrance Ramp	EACH

Payment is full compensation for furnishing the labor and equipment for closing and subsequently opening a freeway entrance ramp.

113. Sand Bags, Item SPV.0060.0024.

A Description
This special provision describes the construction of dikes, berms or barriers with sand filled bags as shown on the plans.

B Materials

Provide bags made of canvas, burlap, nylon or other approved material. Use bags that will contain a minimum of one half cubic foot of sand, be of one size and shape and be securely closed.

Use sand that conforms to the requirements Subsection 501.2.5.3 of the Standard Specifications except that Subsection 501.2.5.3.4 shall be deleted. The maximum size of particle shall pass a No. 4 sieve.

C Construction
Remove and dispose of the sand bags and all surplus material upon completion of its use under this contract.

D Measurement
The department will measure Sand Bags as each individual sand bag placed and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0024	Sand Bags	EACH

Payment is full compensation for furnishing and installing sand filled bags; for all excavation; for removal and disposal of the sand bags and all waste or surplus materials, including eroded materials and for shaping and restoring the area.

Any required topsoiling, fertilizing, seeding or mulching will be paid for under the applicable item.

114. Removing Sanitary Manhole, Item SPV.0060.0025.

A Description
This work includes removing existing sanitary manholes according to the plans, the standard spec, Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

B Materials
Backfill existing sanitary sewer structure locations shown for removal outside the new traveled way with native backfill immediately after completing the sewer work.

All backfill, including native material, provided for removal of existing sanitary sewer structures is considered incidental to the appropriate bid item.

C Construction
Remove the manhole in its entirety. Perform work according to the pertinent specifications of standard spec 204. The contractor is responsible for the safe methods and sequence of

controlled removal operations. Completely remove the existing manhole to the extent required to avoid interfering with new construction work as shown on plans and as directed by the engineer.

Consolidate all backfill by mechanical compaction per specification 2.6.14(b) of the SSSW. Special compaction equipment and measures are required where standard compaction equipment cannot be utilized. Flooding of backfill will not be allowed. Compaction shall achieve uniform consolidation in conformance with standard spec 2.6.14(b) of the SSSW.

Salvaged castings become the property of the contractor.

D Measurement

The department will measure Removing Sanitary Manhole as a unit for each individual manhole, 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.0060.0025	Removing Sanitary Manhole	EACH

Payment is full compensation for providing all excavating; furnishing and installing all materials; for removing manhole; for furnishing and placing backfill; for salvaging frames and covers; for hauling and disposing of all materials.

115. Sanitary Sewer Manhole Precast Concrete 48-Inch w/ Casting, Item SPV.0060.0026.

A Description

Construct sanitary manholes consisting of pre-cast reinforced concrete, pre-cast concrete adjustment rings, watertight joints, pre-cast concrete base, pre-cast concrete eccentric cone tops, frames and covers, internal frame/chimney seals, steps, connections with all incoming and outgoing sewer, and all excavation and granular backfill.

Perform the work according to the plans, the standard spec, the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

B Materials

B.1 General

All materials and work required to install the manhole will conform to the SSSW. Any material tests required as part of the sewer work shall be performed at a testing laboratory designated by the “facility owner”. The test results shall be provided to the construction engineer for approval at the time of delivery.

B.2 Bedding
Bedding shall conform Class "C" bedding of section 3.2.6(a) and File No. 3 of the SSSW. Bedding material shall conform to Table 32 of Section 8.43.2 of the SSSW except the gradation requirements shall be modified as follows;

Gradation requirements for 3/8-Inch Crushed Stone Chips

Sieve sizes	Percent passing by weight
1/2-inch	100%
3/8-inch	90-100
No. 8	0-50
No. 30	0-5

B.3 Backfill
Granular backfill as required in Chapter 2.6.2 of the SSSW, shall conform to the requirements for Base Aggregate Dense 3/4-Inch, of standard spec 305.1.

B.4 Manhole
Provide sanitary manholes with a minimum 48-inch inside diameter pre-cast concrete barrel sections, with eccentric type cone top section with 24-inch minimum opening, and with an 8-inch thick integral pre-cast concrete base. Provide concrete with a compressive strength of 4000 psi and conforming to ASTM C478. Minimum manhole wall thickness shall be 5 inches. Manholes shall conform to Chapter 8.39.0 of the SSSW and construction details in the plans.

B.6 Frame and Cover
New frames and covers are required on all new sanitary manholes and shall be supplied by the contractor. Sanitary sewer manhole covers shall be self-sealing with an O-ring gasket. Castings shall be non-rocking, Type-B self-sealing lid with concealed pick holes. Neenah R-1661-B or approved equal. They shall have one 1-Inch vent hole which is sealed with a removable flexible plug and two concealed pick holes. Frames for sanitary sewer manholes shall be compatible with the covers.

B.7 Manhole Adjusting Rings
Adjustment rings shall be precast concrete rings and shall have an inside diameter to match the manhole opening. Do not use any cracked or broken rings. The individual adjusting rings shall have a maximum height of 8 inches and a minimum of 2 inches and shall be sealed with bituminous or plastic mastic to assure water tightness. The minimum chimney height shall be no less than 2 inches and the maximum chimney height shall not exceed 24 inches from the top of the pre-cast section to the bottom of the casting.

B.8 Manhole Seal
Each sanitary manhole within the paving limits shall receive an internal/external adaptor furnished by the Oak Creek Water and Sewer Utility. Coordinate delivery/pick-up with Mr. Seth Ricker, (262) 930-7113, of the Oak Creek Water and Sewer Utility.

Manholes outside of the paving limits shall be bolted down according to File No. 32 of the SSSW using stainless steel hardware. The contractor shall drill four holes in the casting spaced as per File No. 32 of the SSSW.

B.9 Manhole Boots

Provide sanitary sewer pipe to pre-cast manhole wall connection with flexible, watertight boot or cast-in seal. Manhole boots for connecting pipes to the sanitary manholes shall be a watertight flexible connection meeting the requirements of ASTM C923. The rubber boots shall be supplied with two stainless steel clamps for attaching the boot to the pipe. A stainless steel "power sleeve" shall be supplied for connecting the boot to the manhole.

B.10 Joints

Provide manhole barrel joints with rubber ring gasket material or butyl plastic gasket material. Rubber gaskets shall conform to requirements of ASTM C443. Butyl plastic gasket material shall conform to requirements of ASTM C990 and AASHTO M-198.

All exterior joints shall be wrapped with Mac-Wrap or approved equal. This shall be considered incidental to the installation of the sanitary sewer manhole.

B.11 Steps

Furnish and install ½ inch diameter manhole steps of grade 60 steel reinforcing rods with molded plastic covering conforming to Detail File No. 15 of the SSSW. Each section of the manhole shall be aligned so the steps create a continuous ladder.

C Construction

C.1 General

Excavate to provide a smooth, compacted flat bottom. Place a minimum 6-inch depth of bedding material conforming to the requirements of the SSSW and compact prior to setting manhole base and riser section.

Construct concrete bench in the interior bottom of the sanitary manhole which are precast or poured-in-place. The bench shall extend to the top of the pipe. Construct the bench invert to provide a smooth flow line and conform to the curvature of the pipe.

Install external manhole joint seal on all manhole barrel section joints in addition to joint gasket seal.

Provide granular backfill as required in Chapter 2.6.2 of the SSSW, meeting the requirements for Base Aggregate Dense 3/4-Inch, of standard spec 305.1.

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the SSSW, except the initial compacted lift shall be 2 feet, and shall be modified to read, "Each subsequent compacted lift of material shall be 1 foot". Special compaction equipment and measures are required where standard compaction equipment cannot be utilized. Flooding of backfill will not be allowed. Compaction shall achieve uniform consolidation in conformance with section 2.6.14(b) of the SSSW.

Final rim elevations shall be ¼" to ½" below final grade in asphalt pavement and at final grade in concrete pavement and in grass. Adjustment rings shall not exceed 8 inches.

D Measurement
The department will measure Sanitary Sewer Manhole Precast Concrete 48-Inch w/ Casting as each individual manhole, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0026	Sanitary Sewer Manhole Precast Concrete 48-Inch w/ Casting	EACH

Payment is full compensation for furnishing and installing all materials including pre-cast manhole base, riser, bench, cone section, chimney adjustment rings, frames, grates or lids, gaskets, manhole boots, manholes seals, joint seals, steps, bedding material, granular backfill material; for furnishing all excavation, dewatering, sheathing and shoring, forming foundation, and masonry work; for making sanitary sewer connections; for removing sheeting and shoring; for disposal of all surplus or waste material; and for clean-up. The removal of existing sanitary sewer pipe and manholes from within the trench of replacement of sanitary sewer manholes will not be paid for separately, but shall be considered incidental to the item.

116. Removing High Mast Tower Concrete Bases, Item SPV.0060.1000.

A Description
This special provision describes removing high mast tower concrete bases.

B (Vacant)

C Construction
Conform to standard spec 204.3. Contractor shall coordinate with the engineer concerning construction around each high mast tower concrete base and remove each high mast tower concrete base as directed by the engineer. Contractor must cut off the anchor bolts flush to the foundation if decided to leave the foundation in place.

D Measurement
The department will measure Removing High Mast Tower Concrete Bases as each individual installed, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1000	Removing High Mast Tower Concrete Bases	EACH

Payment is full compensation conforming to standard spec 204.5.1 (2).

117. Concrete Bases Type 7 Special, Item SPV.0060.1002.

A Description
This special provision describes a concrete light pole base as shown on the plans and details.

B Materials
Furnish materials that are according to the pertinent requirements of standard spec 654.2.1.

C Construction
Under the Concrete Bases bid item, construct concrete foundations, including necessary hardware as shown on plans and details.

Conform to standard spec 654.3.

D Measurement
The department will measure Concrete Bases bid item as each individual base, 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.0060.1002	Concrete Bases Type 7 Special	EACH

Payment is full compensation conforming to standard spec 654.5(2).

118. Removing Distribution Centers, Item SPV.0060.1004.

A Description
This special provision describes removing an existing highway lighting distribution center and electrical service pedestal as shown on the plans, in accordance to the pertinent provisions of standard spec 204, and as hereinafter provided.

B (Vacant)

C Construction
Remove the lighting distribution center and the electrical service pedestal and dispose off the project site.

The department will issue the demolition request to WE-Energies. Coordinate with the utility for disconnection of services. The department will pay any fees charged by the utility.

Removal of the concrete base will be paid under a separate bid item.

D Measurement
The department will measure Removing Distribution Centers 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.0060.1004	Removing Distribution Centers	EACH

Payment is full compensation for removal of the distribution center, electrical service pedestal, and for utility coordination for the services.

119. Removing High Mast Lighting Towers, Item SPV.0060.1005.

A Description
This special provision describes the removing of high mast lighting towers as shown on the plans, and in accordance to the pertinent provisions of standard spec 204, and as hereinafter provided. Lamp disposal and concrete base removal shall be paid under separate bid items.

B (Vacant)

C Construction
Remove high mast lighting towers including high mast shaft, luminaires, tenons, lowering rings and associated hardware and appurtenances. All removed material shall become the property of the Contractor and be disposed off the project site.

No removal work will be permitted without approval from the Engineer. Removal shall start as soon as the temporary lighting or permanent lighting, as applicable, is placed in approved operation. An inspection and approval by the Engineer will take place before any associated proposed permanent or temporary lighting is approved for operation.

D Measurement
The department will measure Removing High Mast Lighting Towers by each unit, acceptably removed completely.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1005	Removing High Mast Lighting Towers	EACH

Payment is full compensation for removing and disposal.

120. Removing Lighting Units, Item SPV.0060.1006.

A Description
This special provision describes the removing lighting units as shown on the plans, in accordance to the pertinent provisions of standard spec 204, and hereinafter provided. Lamp disposal and concrete base removal shall be paid under a separate bid items.

B (Vacant)

C Construction
WisDOT Lighting
Remove lighting units consisting of pole, arm, luminaire, lamp, wires, breakaway device, and associated hardware and appurtenances. All removed material shall become the property of the Contractor and be disposed off the project site.

No removal work will be permitted without approval from the Engineer. Removal shall start as soon as the temporary lighting or permanent lighting, as applicable, is placed in approved operation. An inspection and approval by the Engineer will take place before any associated proposed permanent or temporary lighting is approved for operation.

City of Oak Creek Lighting
All light poles owned and maintained by City of Oak Creek shall be returned to City of Oak Creek including luminaire and lamp at 720 West Puetz Road, Oak Creek, WI (recycling yard). Luminaire shall be removed and circuits shall be disconnected before removing light pole. Removal of concrete bases will be paid separately.

D Measurement
The department will measure Removing Lighting Units by each unit removed and disposed of, or returned to the department or City of Oak Creek, as directed by the engineer.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1006	Removing Lighting Units	EACH

Payment will be full compensation for removing lighting units; for disposal or return to City of Oak Creek as directed by the engineer.

121. Removing Wood Pole Lighting Units, Item SPV.0060.1007.

A Description
This special provision describes removing existing wood pole lighting units as shown on the plans. Included is removal of mast arm, luminaire, air terminal, junction box, including all backfilling of openings or holes to the elevation of the surrounding ground, and landscaping all disturbed areas from these removals. Separate payment will be made for lamp disposal.

B (Vacant)

C Construction
Dispose of all materials except lamps off site. Lamps shall be turned in to the department under a separate item.

D Measurement
The department will measure Removing Wood Pole Lighting Units by each unit removed and disposed, as directed by the engineer.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1007	Removing Wood Pole Lighting Units	EACH

Payment is full compensation for removing wood pole lighting units; all excavation and backfill; removal and disposal of material.

122. Poles Aluminum City of Oak Creek Nominal Height 30 FT Bronze, Item SPV.0060.1008.

A Description
This special provision describes furnishing and installing aluminum light poles as shown on plans and as directed by the engineer.

B Materials
Light pole shall be Valmont model 2708-45806T4 alloy aluminum with internal vibration dampers as shown in the plans and bronze in color to match luminaire. Light pole shall be according to the pertinent requirements of standard spec 657.2 and shall be approved by City of Oak Creek.

Light pole mast arm shall be 6 foot in length with 4½-inch clamp (Valmont mounting clip part no. 1MA0630C45Z). Arm shall be bronze in color to match pole and luminaire.

C Construction
Conform to standard spec 657.3.1.

D Measurement
The department will measure Poles Aluminum City of Oak Creek Nominal Height 30 FT Bronze by each unit, furnished and installed.

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

ITEM NUMBER	DESCRIPTION	UNIT

SPV.0060.1008	Poles Aluminum City of Oak Creek Nominal Height 30 FT Bronze	EACH

Payment is full compensation conforming to standard spec 657.5(4).

123. Temporary Wood Pole Lighting Units, Item SPV.0060.1009.

A Description
The work under this item consists of furnishing and installing described items which include wood pole, arm(s) and luminaire(s), junction box, grounding system, and lightning protection system as shown on the plans. All work shall be according to standard spec 651 and 659 and as hereinafter provided. Remove and dispose of the temporary wood pole lighting units as a part of this item.

B Materials
Temporary Wood poles shall be Class 4 or larger with a 60-foot minimum overall length. The poles shall be western red cedar according to ANSI standards 05.1. Pressure treatment shall be 5% pentachlorophenol with a minimum of 8 pounds per cubic foot net retention of the oil-borne preservative. All poles shall be shaved the entire length.

Luminaire arm and luminaire for wood pole lighting units and temporary wood pole lighting units shall be per standard spec 657.2.3 and 659.2, respectively.

C Construction
This work shall be according to the pertinent provisions of standard spec 661.3.1.1 and as shown on the plans. Install #4 AWG grounding wire exothermically bonded to a 5/8 inch by 8 foot copper clad grounding electrode, cable guard, NEMA 3R junction box at minimum 10ft above grade for fuses and splice, air terminal with #2 AWG grounding wire exothermically bonded to a 5/8 inch by 8 foot copper clad grounding electrode for lightning protection, #2 AWG bare copper exothermically bonding between grounding electrodes, conduit and wiring between junction boxes, wire racks and require hardware as necessary and as shown on lighting plans and detail drawings.

Install luminaire arm and luminaire for temporary lighting units as shown on the plans and details and as per applicable portion of standard spec 657.3 and 659.3.

Temporary wood pole lighting units shall be removed during or after construction as shown on temporary lighting plans or as directed by the engineer. Removed temporary wood pole lighting units will become property of contractor. The bid price shall reflect the salvage value of the temporary wood pole lighting unit. The department will allow, at the contractor's discretion, to reuse removed temporary wood pole lighting units at new location, if possible.

D Measurement
The department will measure Temporary Wood Pole Lighting Units by each individual item, 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.0060.1009	Temporary Wood Pole Lighting Units	EACH

Payment is full compensation for furnishing and installing items as mentioned above; for furnishing all excavation and backfill; removal and disposal.

124. Luminaires LED City of Oak Creek GARDCO P21 Bronze, Item SPV.0060.1010.

A Description

This special provision describes furnishing and installing LED luminaires as shown on the plans and as directed by the engineer.

B Materials

Luminaire shall be Philips Gardco P21-MA-3-130LA-NW-HVU-BRP-SPRH to match existing stock of City of Oak Creek. Luminaire shall be according to the pertinent requirements of standard spec 659.2 and shall be approved by the City of Oak Creek; luminaire shall be bronze in color.

C Construction

Luminaire shall be installed per manufacturer requirements and installation guides and shall conform to pertinent requirements of standard spec 659.3. The pole plaque (paid separately) shall conform to the requirements for LED luminaires and shall be coordinated with City of Oak Creek.

A sticker shall be placed on the bottom of the luminaire to clearly identify the luminaire as "LED 130LA". The sticker should be visible to a person standing on the ground. Sticker is included in the cost of the luminaire.

D Measurement

The department will measure Luminaires LED City of Oak Creek GARDCO P21 Bronze by the method of standard spec 659.4(1).

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1010	Luminaires LED City of Oak Creek GARDCO P21 Bronze	EACH

Payment is full compensation conforming to standard spec 659.5(2).

125. Lamp Disposal High Intensity Discharge, Item SPV.0060.1013.

A Description

This special provision describes the packaging and delivering to the department for disposal as hazardous material, high intensity discharge lamps (mercury vapor, metal halide, and high-pressure sodium) removed as shown on the plans and as hereinafter provided.

B Materials

Lamps delivered to the department will be considered the property of the department and the contractor will have no further obligation for their disposal.

C Construction

Pack intact lamps in the packaging of the new lamps used to replace them or packaging affording the equivalent protection. Place in full, closed, and sealed stackable cartons.

Pack broken lamps into a minimum 6 mil thick plastic bags and place inside sturdy cardboard boxes or the equivalent. Mark the outer packaging with the term "broken lamps" with the number of broken lamps clearly marked on the box. Deliver all broken lamps to the department.

The department will not accept lamps improperly packaged or packed in metal containers. The department will reject any lamps not removed as part of a contract pay item or otherwise required under this contract.

Pile cartons no more than four high if palletized and secure cartons with shrink wrap to prevent shifting or falling of the loads. Clearly mark each pallet with the number of lamps on each pallet.

Deliver the lamps to the department at the South 60th Street office in West Allis. Consolidate all deliveries into a truckload or more, except when all the lamps removed under a contract measure less than a truckload, deliver as one load at one time. Contact 414 266-1170, to set up an appointment for delivery.

D Measurement

The department will measure Lamp Disposal High Intensity Discharge as each individual unit delivered to the Department properly packaged, acceptably completed. The department will not measure broken lamps that exceed a total of ten percent of all lamps to be delivered.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1013	Lamp Disposal High Intensity Discharge	EACH

Payment is full compensation for handling, packaging, labeling and delivering the lamps. Payment will be in addition to payment for the work under which the lamps are removed from service.

126. Transformer Bases Breakaway 11 ½-Inch Bolt Circle City of Oak Creek Bronze, Item SPV.0060.1014.

A Description
This special provision describes furnishing and installing aluminum transformer bases as shown on plans and as directed by the engineer.

B Materials
Transformer base shall be Valmont model 08R1012B17 (Lexington) to match existing transformer bases. Transformer base shall be in accordance to the pertinent requirements of standard spec 657.2.2.5 and shall be approved by City of Oak Creek.

C Construction
Conform to standard spec 657.3.1.

D Measurement
The department will measure Transformer Bases Breakaway 11 ½ Inch Bolt Circle City of Oak Creek Bronze by each unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1014	Transformer Bases Breakaway 11 ½ Inch Bolt Circle City of Oak Creek Bronze	EACH

Payment is full compensation conforming to standard spec 657.5(2).

127. Ground Rod, Item SPV.0060.2001.

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 unit, acceptably installed.

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.0060.2001	Ground Rod	EACH

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

128. Removing Ramp Control Signal Assembly Sidemount, Item SPV.0060.2002.

A Description
This special provision describes removing an existing sidemount ramp control signal assembly.

B Materials
Materials included in sidemount ramp control signal assemblies are:

1. Traffic signal standards.
2. Pedestal bases for traffic signal use.
3. Vehicular traffic signal heads.
4. Signal mounting brackets.
5. Sign mounting brackets.
6. Enforcement signal displays.

C Construction
Remove sidemount ramp control signal assemblies at the locations shown in the plans, or as directed by the engineer. Salvage the signal assemblies for the department to pick up, or dispose of them properly as directed by the engineer.

All work shall be according to the applicable requirements of standard spec 655, 656, 657, and 658, the Wisconsin Electrical Code, these special provisions, and the details shown in the plans.

Salvage and store all removed materials for pickup by the department. Coordinate with the engineer on a schedule to have the removed items picked up. Maintain all materials in a condition suitable for reutilization. Replace all items damaged during construction operations.

Electrical work under this item shall be completed by a journeyman electrician or be completed under the supervision of a journeyman electrician. Legal status or standing as a journeyman electrician shall be certified or otherwise documented to the engineer before any electrical work may begin.

D Measurement

The department will measure Removing Ramp Control Signal Assembly Sidemount by each unit, acceptably removed, salvaged, and stored.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2002	Removing Ramp Control Signal Assembly Sidemount	EACH

Payment is full compensation for removal and storage of the ramp control signal assembly; disconnecting all wiring connections; removing all conduit connections; for any necessary restoration, including backfill, topsoil, and seeding.

129. Removing Controller Ramp Meter Processor Assembly, Item SPV.0060.2003.

A Description

This special provision describes removing existing controller ramp meter processor assembly at locations shown on the plan including all materials needed, rewiring and/or disconnect of wiring in the cabinet and return of removed equipment to the department.

B Materials

Materials include existing ITS cabinets and existing 170 ramp meter processor assemblies.

C Construction

Make all the proper disconnects and wiring changes in the controller cabinet.

Remove the existing controller ramp meter processor assembly as the plans show. Use caution not to damage any existing devices or processor assembly.

The department will pick up the controller ramp meter processor assembly. Contact Kurt Wilm, (414) 940-5570, Wisconsin Department of Transportation, Statewide Traffic Operations Center. Dispose of the cabling and wiring properly away from the project site.

D Measurement

The department will measure Remove Controller Ramp Meter Processor Assembly as each individual unit, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2003	Remove Controller Ramp Meter Processor Assembly	EACH

Payment is full compensation for removing an existing controller ramp meter processor assembly; for disconnecting all necessary cables and wiring; and properly storing the materials.

130. Removing Controller Cabinet, Item SPV.0060.2004.

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 unit, acceptably removed, salvaged, and stored.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2004	Removing Controller Cabinet	EACH

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

131. Removing Controller Cabinet Base, Item SPV.0060.2005.

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 according 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 according to the pertinent requirements of the standard specifications.

D Measurement
The department will measure Removing Controller Cabinet Base by each unit, removed from the ground, removed from the project site, and the disturbed area restored according to the contract.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2005	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; for topsoil, fertilizer, seed and mulch.

132. Removing Electrical Service Meter Breaker Pedestal, Item SPV.0060.2006.

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 unit, acceptably removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2006	Removing Electrical Service Meter Breaker Pedestal	EACH

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

133. Installing Portable Video Surveillance System, Item SPV.0060.2008.

A Description
This special provision describes deploying a portable trailer-mounted video surveillance system as shown in the plans to provide continuous video surveillance of the project area during permanent CCTV sites downtime.

B Materials
Materials will be department-furnished and will be an all inclusive unit consisting of a cable erected pole with a direct IP CCTV camera, a solar power system, a wireless Ethernet bridge, and stability outriggers, all mounted on a trailer.

C Construction
Pick up the department-furnished video surveillance system at the department facility at 531 W. Newhall Ave, Waukesha, WI.

Deploy the surveillance system in the initial location as shown on the plans and as directed by the engineer following all recommended procedures by the manufacturer.

Integrate the surveillance system with the new and existing communications system through the wireless Ethernet bridge. Installation of the backhaul end of the wireless Ethernet bridge will be compensated for with other pay items in this contract.

D Measurement
The department will measure Installing Portable Video Surveillance System as each unit, acceptably installed and tested.

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.0060.2008	Installing Portable Video Surveillance System	EACH

Payment is full compensation for picking up the surveillance system in Waukesha; for deploying it in the project area; for making functional.

134. Relocating Portable Video Surveillance System, Item SPV.0060.2009.

A Description

This special provision describes moving a previously deployed portable video surveillance system to a new location as directed by the engineer or as made necessary by construction operations in the area.

B Materials

Portable video surveillance system and wireless Ethernet bridge previously deployed through other pay items in this contract.

C Construction

Coordinate all planned down-time of the portable video surveillance system with the STOC at (414) 227-2166. Notify the STOC an amount of time ahead of planned down-time equal to the planned down-time. Examples would be that a 4-hour temporary down-time of the system would require notification 4-hours ahead of time while an 8-hour planned down-time would require 8-hours of advance notification.

Per manufacturer's recommendations, prepare the surveillance system for towing, relocate to the new location, re-deploy, and make functional as directed by the engineer and as made necessary by construction operations.

No payment will be made for this work unless previously approved by the engineer. No payment will be made for this work for relocations made necessary by operations not previously planned with the engineer's approval.

D Measurement

The department will measure Relocating Portable Video Surveillance System by each unit, acceptably relocated and operational, including re-integrating the wireless Ethernet bridge as required by the relocation.

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.0060.2009	Relocating Portable Video Surveillance System	EACH

Payment is full compensation for taking the surveillance system down, moving to a new location, and re-deploying in a new location; for re-integrating the wireless Ethernet bridge into the communications system.

135. Installing Temporary Vehicle Detector Assembly, Item SPV.0060.2010.

A Description

This special provision describes assembling from a combination of state-furnished and contractor furnished materials a temporary vehicle detector assembly and installing, calibrating, and integrating the assembly into the existing system. At the completion of the project it includes removal of all equipment.

B Materials

Materials will include department-furnished materials and contractor furnished materials.

Department-furnished materials include the following:

- One Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS) with integral 900 MHz serial radio.
- One solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.

Contractor furnished materials include the following:

- One 40-foot type 4 or larger wood pole. The wood pole shall be western red cedar according to ANSI standards 05.1. Pressure treatment shall be 5% pentachlorophenol with a minimum of 8 pounds per cubic foot net retention of the oil-borne preservative. Pole shall be shaved the entire length.
- Outdoor rated Power cable between solar power system output and state-furnished RTMS.
- Mounting hardware for solar power system and RTMS detector.

C Construction

RTMS Detector Installation:

Install the wood pole according to industry standards for supplied pole length.

Install the RTMS detector as required in standard spec 675. Additionally, integrate the integral serial communications radio with the radio installed at the field cabinet end. Installation of field cabinet radio is covered with other pay items in this contract.

Solar Power System Installation:

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

Removal:
As directed by the engineer, remove the temporary vehicle detector assemblies from their respective locations in the project. Be careful not to damage any of the components to be salvaged for the department.

Salvage the materials described above for pick up by the department.

Dispose non-reusable materials appropriately away from the project site.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

D Measurement
The department will measure Installing Temporary Vehicle Detector Assembly as each unit, with each assembly installed, focused on initial traffic lane configuration, functioning, and accepted according to the contract.

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.0060.2010	Installing Temporary Vehicle Detector Assembly	EACH

Payment is full compensation for providing the contractor furnished materials, assembling the state-furnished and contractor furnished materials, installing the assembly, calibrating the detector, and making the assembly functional; and for removing the assembly.

136. Refocusing Temporary Vehicle Detector Assembly, Item SPV.0060.2011.

A Description
This special provision describes refocusing an existing microwave detector for operation with a new lane configuration when relocation of the vehicle detector assembly pole is not required.

B Materials
Materials include the following items purchased and installed in other pay items in this contract or other contracts:

- One or more Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS).
- One cellular modem and antenna.

C Construction
Coordinate all planned down-time of the temporary vehicle detector assembly with the STOC at (414) 227-2166. Notify the STOC an amount of time ahead of planned down-time equal to the planned down-time. Examples would be that a 4-hour temporary down-

time of the system would require notification 4-hours ahead of time while an 8-hour planned down-time would require 8-hours of advance notification.

Verify to the satisfaction of the engineer that the existing detector assembly is working properly. Inspect the vehicle detector assembly for damage.

Reinstall the RTMS detector as required in standard spec 675 and reintegrate the detector and modem into the existing FTMS system.

D Measurement
The department will measure Refocusing Temporary Vehicle Detector Assembly by each site, regardless of the number of detectors, acceptably refocused and operational.

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.0060.2011	Refocusing Temporary Vehicle Detector Assembly	Each

Payment is full compensation for making the detector site fully operational with a new lane configuration.

137. Removing Communication Vault, Item SPV.0060.2012.

A Description
This special provision describes removing an existing communication vault.

B Materials
Materials include existing communication vault and restoration materials such as backfill, topsoil, seeding, mulch, and fertilizer according to the pertinent provisions of standard spec 201, 625, 627, 629, 630, 636, and 640.

C Construction
Disconnect and cap conduit entering the communication vault. Remove and dispose of the communication vault. Backfill with material similar to the material surrounding the removal and restore the disturbed area by placing 4-inches of topsoil, and fertilize, seed, and mulch all disturbed areas according to the pertinent requirements of the standard specifications.

It is acceptable to re-use the vault lid in instances where new communications vaults are being installed in the project and the existing lid is undamaged. It is the contractor's responsibility to determine if the existing vault lids fit on the proposed vaults.

D Measurement
The department will measure Removing Communication Vault by each unit, removed from the ground, removed from the project site, and the disturbed area restored according to the contract.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2012	Removing Communication Vault	EACH

Payment is full compensation for removing and disposing of a communication vault; for backfill, topsoil, fertilizer, seed and mulch.

138. Pull Box Non-Conductive 24x42-Inch, Item SPV.0060.2013.

A Description
This special provision describes furnishing and installing Pull Box Non-Conductive 24x42-Inch as shown on the plans.

B Materials
Furnish pull boxes, frames, and lids made of non-conductive material. Pull boxes, frames, and lids shall be suitable for Tier 15 loading as specified in ANSI/SCTE 77.

Furnish one 24" length of #6 reinforcing steel.

C Construction
Provide pull boxes, frames, and lids made of non-conductive materials. The contractor may extend Pull Box Non-Conductive 24x42-Inch as the plan details show using the same material as the pull box. Saw extensions parallel to the extension ring. Secure extension to original box as shown in the plan details. Excavate, place coarse aggregate drain material, and backfill as the plan details show. Dispose of surplus or unsuitable materials as specified under standard spec 205.3.12. Use covers stamped with "Electric" for traffic signal and lighting pull boxes or "WISDOT FTMS" for pull boxes shown in the FTMS section of the plan set.

Install one 24" length of #6 reinforcing steel vertically on the north side of the pull box. Reinforcing steel is for future locating purposes.

D Measurement
The department will measure Pull Box Non-Conductive 24x42-Inch as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2013	Pull Box Non-Conductive 24x42-Inc	EACH

Payment for Pull Bon Non-Conductive 24x42-Inch is full compensation for providing and installing pull boxes, frames, lids, aggregate, fasteners, reinforcing steel; conduit

extensions less than 10 feet long including fittings; and for furnishing all excavating, backfilling and disposing of surplus material. The department will pay separately for engineer-directed pull box drain duct under the Conduit Rigid Nonmetallic bid items as specified in standard spec 652.5.

139. Solar Powered Vehicle Detector Assembly, Item SPV.0060.2014.

A Description

This special provision describes assembling a solar powered vehicle detector assembly and installing, calibrating, and integrating the assembly into the existing system. Assembly will be done on a Type 5 aluminum pole provided under other pay items in the contract. Inclusion of a second solar power and detector system will be paid for by additional quantities of this pay item.

This special provision also includes removing the existing temporary vehicle detector assembly mounted on a wood pole, removing the wood pole, and disposing of the wood pole.

B Materials

Materials will include existing materials, department-furnished materials, and contractor furnished materials.

Department-furnished materials include the following:

- One Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS).
- One cellular modem and antenna.
- One solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.

These materials will also be removed from the existing assembly and salvaged for the department.

Contractor furnished materials include the following:

- Outdoor rated Power cable between solar power system output and state-furnished RTMS.
- Mounting hardware for solar power system and RTMS detector.

The existing wood pole will be removed and will become the property of the contractor.

C Construction

RTMS Detector Installation:

Install the RTMS detector as required in standard spec 675 and connect the detector to the furnished cellular modem. Coordinate integration of the detector and modem assembly into the existing communications and FTMS system.

Solar Power System Installation:
Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

RTMS Detector and Solar Power System Removal:
As directed by the engineer, remove the temporary vehicle detector assembly from its location in the project. Be careful not to damage any of the components to be salvaged for the department.

Salvage the materials described above for pick up by the department.

Dispose non-reusable materials appropriately away from the project site.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

D Measurement
The department will measure Solar Powered Vehicle Detector Assembly as each individual unit consisting of one detector and one solar power assembly, acceptably installed and integrated into the existing FTMS system, and one temporary Vehicle Detector Assembly removed.

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.0060.2014	Solar Powered Vehicle Detector Assembly	EACH

Payment is full compensation for providing the contractor furnished materials, assembling the department-furnished and contractor furnished materials, installing the assembly, calibrating the detector, connecting the detector to the modem, integrating it into the existing FTMS system, making the assembly functional, removing the existing temporary vehicle detector assembly.

140. Concrete Control Cabinet Bases Type 9 Special (Mod.), Item SPV.0060.3001.

A Description
Work under this specification shall be done according to standard spec 654, contract plan detail, and these special provisions.

B Materials
Materials shall be according to standard spec 654.

C Construction
Construction shall be according to standard spec 654.

D Measurement
The department will measure Concrete Control Cabinet Bases (Type) bid items as each individual base, 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.0060.3001	Concrete Control Cabinet Bases Type 9 Special (Mod.)	EACH

Payment is full compensation for providing concrete bases; for embedded conduit and electrical components; for anchor rods, nuts, and washers; for bar steel reinforcement, if required; for excavating, backfilling, and disposing of surplus materials.

141. Install Poles Over Height Type 12, Item SPV.0060.3002.

A Description
This special provision describes the installation of state furnished Type 12 Over Height poles. The purpose is to provide a 20' minimum vertical clearance from the bottom of the traffic signal head assembly to the pavement surface.

B Materials
Use materials furnished by the department including: Type 12 Over Height Pole and associated mounting hardware, hand hole covers and pole caps.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking up the materials.

Provide all other needed materials conforming to standard spec 657.2.2.

C Construction

Perform work in accordance to standard spec 657.3 except as specified below.

Add the following to standard spec 657.3.2 (2):

Secure Type 12 Over Height structures to anchor assemblies conforming to the procedures enumerated in department form DT2321. Complete department form DT2321 for each structure. Indicate the parties responsible for the installation and submit the form to the engineer for inclusion in the permanent project record.

D Measurement
The department will measure Install Poles Over Height Type 12 as each individual pole, acceptably installed and completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3002	Install Poles Over Height Type 12	EACH

Payment is full compensation for installing department-furnished poles and for providing grounding lugs, fittings, shims, hardware, and other required components the department does not furnish.

142. Pile Dynamic Analyzer (PDA) Testing, Item SPV.0060.4010; Pile Dynamic Analyzer (PDA) Restrikes, Item SPV.0060.4020; CAse Pile Wave Analysis Program (CAPWAP) Evaluation, Item SPV.0060.4030.

A Description
The items consist of providing Pile Dynamic Analyzer (PDA) load testing and analyses/evaluation, as outlined in the contract plans and this special provision. This Dynamic Pile Load Testing is being done to set pile resistance criteria. Production piles will be driven according to pile resistance criteria produced by the contractor after PDA testing and evaluation is completed at each substructure unit. PDA restrikes will be completed as described in this special provision, or as directed by the engineer.

The piles and pile driving will be paid for under standard specification 550. This applies to both piles installed using the PDA criteria and for production piles installed using the criteria developed by the contractor from the PDA installations.

Data collected during the testing described herein will form the basis for the final driving criteria to be applied to production piles in the substructure unit under consideration. Submit to the engineer the name and qualifications of the person(s) completing this work. Provide documentation that the person(s) completing this work have successfully completed at least 5 PDA testing projects within the last 3 years, and that these identified projects are of a scope and complexity similar to that anticipated for this project. Persons without this minimum experience will not be allowed to complete work on this project.

Also submit documentation of experience with PDA equipment manufactured by Pile Dynamics, Inc. and the CAse Pile Wave Analysis Program (CAPWAP). All dynamic monitoring shall be performed using a PDA (Model PAK, PAX, or PAL). Furnish all equipment necessary for the dynamic monitoring such as sensors, cables, or wireless transmitters, etc. The equipment shall conform to the requirements of ASTM D4945. A person with a minimum of 4 years of experience and who has achieved a minimum of Advanced Level on the Foundation QA Examination for Providers of PDA Testing Services, shall be in charge of PDA operations and of data interpretation. They shall be present on site, or by remote connection, at the time of all PDA testing.

B (Vacant)

C Construction

C.1 Test Locations

Perform dynamic pile load testing at the pile locations identified on the plans. These locations are referred to simply as 'PDA Test Piles' throughout the remainder of this specification. Piles noted as PDA Test Piles are a functional load-carrying part of the completed foundation unit, and not solely used for testing.

C.2 Driving Sequence

Perform PDA testing on the first piles installed in each substructure unit. PDA Test Piles shall be located as shown on the footing plan. No other piles in the substructure unit shall be used for PDA testing unless agreed to by the engineer. Do not drive any other piles in the unit until all required testing has been completed and the final driving criteria for that substructure unit has been determined in writing and accepted by the engineer.

C.3 Pile Driving

Drive PDA Test Piles to penetration depths and/or penetration resistances as directed by the engineer. Drive PDA Test Piles using the same methods and equipment that have been accepted for driving the production piles.

Drive PDA Test Piles to one of the following lengths:

- If the required plan driving resistance is achieved at a pile length less than plan length, stop driving the pile. Pile restrikes will be required as described in Section C6 of this special provision to document that the minimum plan required driving resistance is achieved.
- If PDA indicated pile capacity is greater than or equal to 85% of the required driving resistance, at the estimated plan length, stop driving. Pile restrikes will be required as described in Section C6 of this special provision to document that the minimum plan required driving resistance is achieved.
- If the pile resistance at plan length is less than 85% of the required driving resistance for piles 1 through 10 in the west and east abutments and piles 1 through 24 in the pier, pile driving shall be halted and the engineer shall be contacted for further direction. Pile restrikes will be required as described in Section C6 of this

special provision to document that the minimum plan required driving resistance is achieved.

- If the pile resistance at plan length is less than 85% of the required driving resistance for all other piles, continue to drive the pile until the resistance reaches 85% or more of the plan driving resistance. Upon achieving 85% or more, stop driving. Pile restrikes will be required as described in Section C6 of this special provision to document that the minimum plan required driving resistance is achieved.

In all cases, the required plan driving resistance will be shown either through end of initial drive data or from restrike data, as defined above.

C.4 Scheduling

Provide a written schedule to the engineer showing all required PDA Test Pile activities for the following week. Submit this schedule a minimum of two working days prior to the first day included in the schedule.

Multiple concurrent PDA testing and/or analyses will be allowed. Any delays to the contractors schedule due to coordination or untimeliness of PDA testing or evaluation/analyses will not be grounds for extension of contract time.

C.5 Installation Testing

Perform dynamic measurements following procedures set forth in ASTM D4945 during the driving of piles designated as PDA Test Piles.

Continuous PDA monitoring may require multiple installations of PDA testing equipment depending on the supplied pile length. If multiple piles lengths are used to produce the final installed pile, multiple PDA equipment installations will be required. With the PDA testing equipment attached, drive the pile and monitor using the PDA equipment.

C.6 Restrike Tests

Perform restrike tests on all PDA test piles as part of the initial dynamic pile load testing program as described in section C5. See restrike criteria given in section C3.

Wait a minimum of 12 hours and a maximum of 72 hours or a time period as directed by the engineer, after initial pile installation is complete; then, restrike each PDA test pile with the required dynamic testing instruments attached.

Warm the hammer before the restrike by applying at least 20 blows to a non-test pile, or by other means acceptable to the engineer.

The maximum amount of penetration required during the restrike test shall be 6 inches, or the maximum number of hammer blows required will be 30, whichever occurs first.

The pre-approved pile-driving hammer used for restrike testing shall be capable of supplying enough energy to develop a minimum of twice the required driving resistance shown on the plans.

C.7 CAPWAP Evaluation and Drive Criteria

Pile-driving criteria for each substructure unit shall be determined from dynamic pile tests conducted on the total length of each pile noted for PDA Testing in the plans. Submit the required driving resistance and the driving criteria for the production piles determined by dynamic pile testing to the engineer for acceptance for the production pile installation. Electronically submit the driving criteria and a report with the results of the CAPWAP evaluation to the engineer.

Utilize the dynamic test data to establish the following pile driving criteria: (1) a minimum driven length below cutoff level, and (2) a maximum penetration rate per 10 hammer blows for 30 consecutive blows. Drive all remaining piles in each unit according to the established criteria for that unit.

Driving production piles shall continue until the required driving resistance is achieved for 30 consecutive hammer blows. Mark penetration per 10 consecutive hammer blows.
The engineer may alter driving criteria as necessary to assure development of adequate pile capacity. In any pile where pile capacity or integrity is suspect, the engineer may order PDA testing.

D Measurement

The department will measure Pile Dynamic Analyzer (PDA) Testing as each individual unit, acceptably completed, in which one unit includes all PDA-related effort on one pile during the initial driving.

The department will measure Pile Dynamic Analyzer (PDA) restrikes as each individual unit, acceptably completed, in which one unit includes all of the restrike and testing effort required on an individual pile when it is restruck.

The department will measure CAse Pile Wave Analysis Program (CAPWAP) Evaluation as each individual unit, acceptably completed, in which one unit includes all analyses and effort required to provide drive criteria for installation of production piles in one substructure unit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.4010	Pile Dynamic Analyzer (PDA)Testing	EACH
SPV.0060.4020	Pile Dynamic Analyzer (PDA) Restrikes	EACH
SPV.0060.4030	CAse Pile Wave Analysis Program (CAPWAP) Evaluation	EACH

Payment for Pile Dynamic Analyzer (PDA) Testing is full compensation for facilitating the initial dynamic pile load test on a given pile, including possible multiple sensor installations.

Payment for Pile Dynamic Analyzer (PDA) Restrikes is full compensation for facilitating and performing one restrike test on a pile, including the sensor installation, mobilization of equipment, hammer warm-up, and pile restriking.

Payment for CAse Pile Wave Analysis Program (CAPWAP) Evaluation is full compensation for providing the personnel, software and equipment to evaluate the results of the monitoring for each substructure unit for the purpose of establishing production pile driving criteria, and the electronic submittal of the driving criteria and report with the results of the CAPWAP evaluation.

143. Concrete Base Sleeves, Item SPV.0060.4120.

A Description
Furnish and install a corrugated steel pipe sleeve in the reinforced earth zone of mechanically stabilized earth (MSE) retaining walls and other locations shown in the plans. Perform work according to pertinent portions of standard spec 520 and 521, the plans, and as herein after provided

B Materials
The concrete base pipe sleeve shall meet the requirements of standard spec 521.2 for corrugated steel pipe.

C Construction
Set the sleeve within 1 inch of the required position indicated on the plans prior to placing the reinforced earth. Brace the sleeve to maintain position within 2 inches of required position as backfilling proceeds. Place soil reinforcing mats around the sleeve.

For future reference, permanently indicate the depth measured from the top of the sleeve down to the level of the nearest MSE wall soil reinforcement on the inside surface of the sleeve, near the top of the sleeve..

Correct any damage to the sleeve that would hinder the installation of the concrete base prior to placing any additional reinforced earth.

D Measurement
The department will measure Concrete Base Sleeves by each unit, acceptably installed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.4120	Concrete Base Sleeves	EACH

Payment is full compensation for furnishing and installing the concrete base sleeve.

144. MMSD Sanitary Manhole Reconstruct, Item SPV.0060.6001.

A Description

This special provision describes the reconstruction of a MMSD sanitary manhole to the elevation as shown in the plans.

B Materials

B.1 Manhole

Manhole cone sections shall be constructed of precast reinforced concrete sections. Precast manholes and cones shall conform to ASTM Specifications, C478, latest revision.

Steel reinforcement shall conform to C-478 requirements of ASTM specifications.

B.2 Frame and Cover

Salvage and re-use existing MMSD manhole frame and cover.

B.3 Internal Manhole Chimney Seal

Provide internal manhole chimney seals unless specified otherwise in the plans and construction details. Where MMSD is to provide and install the internal manhole chimney seal, contact Bob Rebitski, (414) 225-2214.

Internal rubber sleeves used in connection with sealing leakage between the manhole frame and the extension or cone shall be extruded or molded from a high-grade rubber compound conforming to the applicable requirements of ASTM C443. The sleeves shall be double pleated and capable of a vertical expansion, when installed, of not less than 2 inches.

Expandable stainless steel bands for compressing the sleeve against the manhole shall be 16 gage by a minimum of 1-3/4 inches wide and shall be fabricated of stainless steel conforming to ASTM A240, Type 304. Screws, bolts and nuts used on the band shall be stainless steel conforming to ASTM A276, Type 304.

Materials shall meet the performance requirements of section 8.42.4 of the SSSW.

B.4 Concrete Adjusting Rings

Concrete grade rings shall not be less than 2 inches nor more than 6 inches high and shall contain a minimum of one No. 2 reinforcing rod centered within the ring in conformance with section 8.39.11 of the SSSW and ASTM C-478. Concrete shall be Class B in conformance with section 8.35.3 of the SSSW. A minimum of two grade rings shall be installed with a maximum allowance of 18-inch for adjustment. Multiple grade rings will not be allowed where one will suffice.

B.5 Joints

Joints for precast manholes shall meet the requirements of ASTM C-443, latest revision, except that sealant shall be butyl rubber gasket or butyl rubber rope. Flexible butyl rubber gaskets or rope shall comply with the physical requirements for Type “B” gaskets in

AASHTO Designation M-198, or Federal Specification SSS-00210-A, sealing compound, preformed plastic for expansion joints and pipe joints.

Finish joints with a non-shrink grout finish meeting the requirements of ASTM C928.

B.6 External Manhole Joint Seal
External manhole joint seal shall conform to ASTM C-877 Type II, and installed per manufacturer's recommendations.

B.7 Steps
All manholes shall be provided with steps equally spaced vertically on center installed by the manufacturer as shown on the standard detail sheet. Steps shall be embedded into the riser or conical top section of the wall a minimum of 3 inches. Manhole steps shall be Type PS2-PFS as manufactured by M.A. Industries, Peachtree City, GA 30269; or equal with ½-inch diameter Grade 60 steel reinforcement coated with copolymer polypropylene plastic. Install steps 15-inch on center. Provide certified test data that the steps are capable of withstanding an 800-pound vertical load without sustaining more than a 3/8-inch permanent set when tested according to Section 10 of ASTM C 497.

B.8 Bentonite Waterstops
Bentonite waterstops shall be 1-inch by 3/4 inch size flexible strip of bentonite waterproofing compound with an adhesive surface on one side of the strip, waterstop Type RX.

B.9 Bonding Agent
Bonding agent for use on existing concrete surfaces shall be Sikastix 370, Sikadur Hi-Mod; Horn Co. Epoxtite Binder 2385; or equal.

B.10 Granular Backfill
Granular backfill shall meet the requirements of section 8.43.4 of the SSSW.

C Construction
C.1 General
Notify Larry Anderson (MMSD), 414-225-2241, at least three days in advance of the commencement of construction.

Reconstruct manholes as shown in the plans and construction details.

To lower manholes, remove existing 48" vertical height brick chimney. Cut existing cast-in-place concrete manhole wall and remove to required height.

Install precast concrete cone section and adjusting rings as needed to bring manhole to proposed grade. Salvage and reinstall existing frames and covers.

The sewer line shall be kept free of debris at all times. Take care to prevent any loose material from entering outlet sewer lines. The existing inside drop shall be protected from damage, including, but not limited to, from falling debris.

C.2 Backfill
Fill the excavation with granular backfill in conformance to section 2.6.2 of the SSSW unless specified otherwise on plans, to existing surface or to appropriate depth for pavement restoration. Consolidate backfill in conformance to section 2.6.14(b) of the SSSW.

Remove all trash from the excavation before placing any backfill. Backfill shall be brought up uniformly around manholes and structures to prevent unbalanced lateral loading.

Do not operate earth-moving equipment within 5 feet of walls of manholes for the purpose of depositing or compacting backfill materials. Compact backfill adjacent to concrete walls with hand-operated tampers or other equipment that will not damage the manhole.

D Measurement
The department will measure MMSD Sanitary Manhole Reconstruct as a unit for each individual manhole, 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.0060.6001	MMSD Sanitary Manhole Reconstruct	EACH

Payment is full compensation for furnishing and installing all materials including pre-cast cone section, steps, chimney adjustment rings, gaskets, joint seals, non-shrink grout, concrete, steel reinforcement, waterstops, backfill material; for furnishing all excavation, dewatering, bypass pumping, sheeting and shoring, and masonry work; for cutting and removing existing cast-in-place manhole sections, for backfilling including mechanical compaction and compaction testing; for removing sheeting and shoring; for furnishing all testing; for disposal of all surplus or waste material; and for clean-up.

145. Inlet Covers Type 57, Item SPV.0060.8004.

A Description
The work under these items shall be according to the requirements of standard spec 611 and the details as shown on the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Inlet Cover (Types) by each unit in place, furnished, installed and acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8004	Inlet Covers Type 57	EACH

Payment is full compensation conforming to standard spec 611.5.

146. Pipe Connection to Existing Structure, Item SPV.0060.8015.

A Description
This special provision describes connecting new storm sewer pipe to existing structure.

B Materials
Conform to standard spec 608.2 and 611.2

C Construction
Conform to standard spec 608.3 and 611.3.

Carefully core or saw cut a hole into an existing structure large enough to receive the new pipe. Install new pipe to grade as shown on the plans.

D Measurement
The department will measure Pipe Connection to Existing Structure by each lateral, connected and approved in the field.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8015	Pipe Connection to Existing Structure	EACH

Payment is full compensation for performing all work; excavation, backfilling, furnishing, masonry and fittings; disposing of surplus material, coring or saw cutting holes in existing structure to connect new pipe; and installing all materials, couplings, concrete collars, and pipe.

147. Removing Bulkhead, Item SPV.0060.8018.

A Description
This special provision describes removing previously constructed bulkhead as shown in the plans, and as hereinafter provided.

B (Vacant)

C Construction

Carefully remove the bulkhead without damaging the pipe. Replace portion of damaged pipe with similar size and material.

D Measurement
The department will measure Removing Bulkhead by each bulkhead removed according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8018	Removing Bulkhead	EACH

Payment is full compensation for furnishing all materials; removing bulkhead, replacing damaged pipe material including concrete collar around the pipe; and excavating and backfilling where necessary.

148. Remove and Cap Existing Drainage Storm Sewer Structure, Item SPV.0060.8061.

A Description
This item describes remove and cap existing drainage Storm Sewer Structure with concrete and necessary reinforcement, including required excavating and backfilling according to construction details shown on plan, the standard specifications, and as hereinafter provided.

B Materials
Furnish materials conforming to standard spec 501 for concrete, standard spec 505 for reinforcement, and standard spec 506 for structural steel and miscellaneous metals.

Furnish grade A concrete with Type II cement conforming to standard spec 501.2. Furnish ASTM 617 Grade 60 reinforcing steel.

Furnish plastic waterstop conforming to standard spec 502.3.6.4 or butyl rubber seal per sealant manufacturer's recommendations conforming to recommendation ASTM C 990.

Furnish support assemblies conforming to standard spec 611.2.2.

C Construction
Excavate and backfill as specified for excavation for Storm Sewer Structures in standard spec 206, except do not backfill concrete brick until at least three days after completing the unit. Use granular backfill material for backfilling.

Construct concrete as specified in standard spec 501, and as specified for culverts and retaining walls in standard spec 504.

Construct concrete brick as specified in standard spec 519.

Construct structural steel and miscellaneous metals as specified for steel bridges in standard spec 506.

Cure the concrete by one of the methods specified in standard spec 502.3.8 for curing concrete in sub Storm Sewer Structure units.

Construct the masonry and install waterstop material to provide a watertight joint between new masonry cap and existing manhole.

Clean and remove all materials and debris deposited or lodged in the manhole due to the contractor's operations during construction.

D Measurement
The department will measure Remove and Cap Existing Drainage Storm Sewer Structure as each individual 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.0060.8061	Remove and Cap Existing Drainage Storm Sewer Structure	EACH

Payment for the Remove and Cap Existing Drainage Storm Sewer Structure is full compensation for providing all materials, including all masonry; for furnishing all excavating; for sheeting and shoring; for backfilling; for providing granular backfill material; for control of water; for temporary support and protection of existing utilities to construction; for removing sheeting and shoring; disposing of surplus material, for providing waterstop or butyl rubber seal; and for cleaning out and restoring the work site. Granular backfill material required for backfilling is incidental to the work.

149. Pavement Cleanup Project 1030-20-85, Item SPV.0075.0001.

A Description
This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site. Pavement Cleanup includes surveillance and reporting of all active haul routes.

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.

Utilize vacuum equipment with 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 in this special provision or approved by the engineer.

C Construction

C.1 Surveillance

Provide daily surveillance of active haul routes to identify if material is being tracked from the jobsite. Document the condition of the roads and all sweeping recommendations in a daily report. Submit reports to the engineer daily, including hourly metered tickets for that day's sweeping activities.

C.2 Pavement Cleanup

Keep all pavements, sidewalks, driveways, curb lanes and gutters within the project boundaries, free of dust and debris generated from all activity under the contract. Keep all pavements, sidewalks, driveways, curb lanes, and gutters adjacent to the project free of dust and debris that are caused by land disturbing, dust generating activities, as defined in the contractor's Dust Control Implementation Plan (DCIP). Provide routine sweeping of all pavements, sidewalks, driveways, curb lanes and gutters on local-street active haul routes as defined in the DCIP or as directed by the engineer. Include the following roadways for routine sweeping:

- Any other roadways approved by the department

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to eliminate 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. Coordinate with engineer to determine deadlines for responding to emergency sweeping requests and cleaning up spillage and material tracked to/from the project.

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 Project 1030-20-85 by the hour, acceptably completed.

Tickets shall include:

- Date
- Company
- Operator name
- Equipment make/model
- Routes swept
- Total hours

Total hours shall be to the nearest 0.25 hour that work under this item was performed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.0001	Pavement Cleanup Project 1030-20-85	HR

Payment is full compensation for daily surveillance; preparing and submitting the daily surveillance report with hourly metered tickets; mobilization; sweeping; and disposing of materials.

SEF Rev. 16_0223

150. Seed Mix Special, Item SPV.0085.0001.

A Description

Supply native seed for planting in the following zones as indicated in the plans:

- Streambank/Flood Plain Planting Zone
- Wet Meadow Zone Planting Zone

Supply seed samples, germination test data, provide storage and deliver seed, all according to the Special Provisions provided herein.

Seed Sources

Supply seed from Wisconsin nurseries specializing in growing native species from Wisconsin genotypes.

B Material

Seed Specifications

Supply native seed and cover crop. Transport the seed from the vendor to the construction site. Notify the seed vendor and the engineer a minimum of ten working days in advance of the required pick-up date and/or delivery to the construction site. The following native seed specifications shall be used in the acquisition of the seed.

(a) Native seed shall be true to species, packed separately, and labeled as follows:

- Botanical and common name
- Quantity (in ounces)
- Date and location picked (1/4, 1/4 section, township, range and county)
- Name of company supervising the picking

(b) Seed shall be free of non-seed debris and of noxious weeds including reed canary grass, purple loosestrife, box elder, buckthorn, phragmites (giant reed grass) and Canada thistle.

(c) Seed will be of local ecotype and origin shall be no further than 150 linear miles from the project location.

(d) Seed will be picked at the appropriate time for ripeness and shall be viable. A random sample of each species will be tested and certified for germination prior to delivery to the contractor. Provide written documentation of germination tests to the engineer before seeding can begin. Provide seed with a minimum germination rate of 80 percent to be accepted. If the seed does not meet the minimum required 80 percent germination rate, supply additional seed at the cost of the seed supplier/contractor to meet the total viable seed quantity.

(e) Deliver a representative sample of each species to the engineer for inspection and identification prior to the acceptance of the seed. Deliver all seed samples before seeding can begin.

(f) Cover crop in the planting zones will be perennial ryegrass (*Lolium perenne*) for spring plantings and winter wheat (*Triticum aestivum*) for dormant fall plantings.

Seed
The following seeding schedule will be used in each of the designated zones. Prior to seeding, the engineer must approve substitutions or changes to the seeding schedule. Seeding rates and species mixes will be as follows, or as directed by the engineer:

All common and scientific species names are referenced from National List of Plant Species that Occur in Wetlands: Wisconsin (U.S. Fish and Wildlife Service May 1988).

All seed quantities provided assume a minimum 80% germination rate.

(a) Streambank/Floodplain Planting Zone Seed Mix (0.15 acres). The seed mix for the Streambank and Floodplain Planting Zone will be composed of 1.8 total pounds of native seed; 1.2 pounds of sedges and rushes, 0.6 pounds of grasses and 5.3 pounds of cover crop.

Sedges and Rushes.
0.15 acres at 8 pounds per acre for a total of 1.2 pounds. Provide a minimum of 5 species, with no individual species comprising more than 25% of the total sedge seed mix. (*required species)

Scientific Name	**Common Name**
Carex hystricina	porcupine sedge
*Carex stipata**	awl-fruited sedge
Juncus effuses	soft rush
*Scirpus atrovirens**	green bulrush
*Scirpus fluviatilis**	river bulrush
Scirpus validus	soft-stemmed bulrush

Grasses:
0.15 acres at 4 pounds per acre for a total of 0.6 pounds. A minimum of 3 species, with no individual species comprising more than 35% of the total grass seed mix. (*required species)

Scientific Name	Common Name
*Glyceria striata**	fowl manna grass
Calamagrostis canadensis	Canada blue joint
*Leersia oryzoides**	rice cut grass
Elymus virginicus	Virginia wild rye

(b) **Wet Meadow Planting Zone** Seed Mix (0.05 acres). The seed mix for the Wet Meadow Planting Zone will be comprised of 0.6 pounds of native seed; 0.2 pounds of Sedges and Rushes; 0.2 pounds of Grasses, 0.2 acres of Forbs; and 1.7 pounds of cover crop.

Sedges and Rushes.
0.05 acres at 4 pounds per acre for a total of 0.2 pounds. Provide a minimum of 4 species, with no individual species comprising more than 30% of the total sedge seed mix. (*required species)

Scientific Name	Common Name
Carex comosa	bottlebrush sedge
*Carex granularis **	meadow sedge
Carex hystericina	porcupine sedge
Carex stipata	awl-fruited sedge
*Carex vulpinoidea**	fox sedge

B.1.3.2 Grasses
0.05 acres at 4 pounds per acre for a total of 0.2 pounds. Provide a minimum of 3 species, with no individual species comprising more than 35% of the total grass seed mix. (*required species)

Scientific Name	Common Name
*Elymus Canadensis**	Canada wild rye
Glyceria striata	fowl manna grass
Calamagrostis canadensis	Canada blue joint
*Leersia oryzoides**	rice cut grass

B.1.3.3 Forbs
0.05 acres at 4 pounds per acre for a total of 0.2 pounds. A minimum of 8 species, with no individual species comprising more than 15% of the forb seed mix shall be supplied. (*required species)

Scientific Name	Common Name
*Asclepias incarnata**	marsh milkweed
*Aster novae-angliae**	New England aster
Eupatorium maculatum	joe pye weed
*Euthamia graminifolia**	grass-leaf goldenrod
Eupatorium perfoliatum	boneset
*Helenium autumnale**	sneezeweed

*Solidago gigantea**	giant goldenrod
*Verbena hastata**	blue vervain
Vernonia fasciculata	Ironweed

C (Vacant)

D Measurement
The department will measure Seed Mix Special, meeting the required 80 percent germination rate, by actual pounds of native seed supplied.

The equivalent pounds, based on the following formula for each species will be used to measure native seed not meeting the required 80 percent germination rate:

Equivalent pounds = (number of actual pounds of native seed supplied) X (actual percent germination rate/80).

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.0001	Seed Mix Special	LB

Payment is full compensation for supply and delivery of native seed and cover crop to the project site; providing seed samples and germination data.

151. Concrete Curb and Gutter 4-Inch Sloped 12-Inch Depth 60-Inch Type A, Item SPV.0090.0001.

A Description
This special provision describes constructing curb and gutter work that shall be according to the pertinent provisions of standard spec 601, the plan details and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Curb and Gutter 4-Inch Sloped 12-Inch Depth 60-Inch Type A by the linear foot acceptably completed, measured along the flow line of the gutter.

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

ITEM NUMBER	DESCRIPTION	UNIT

SPV.0090.0001	Concrete Curb and Gutter 4-Inch Sloped 12-Inch Depth 60-Inch Type A	LF

Payment is full compensation for preparing the foundation; all special construction required at driveway entrances or curb ramps; for providing all materials, including concrete, expansion joints, and tie bars in unhardened concrete; for placing, finishing, protecting, and curing concrete and for sawing joints.
SEF Rev. 14_1215

152. Heavy Duty Silt Fence, Item SPV.0090.0002.

A Description

This special provision describes the delivery, installation, maintenance and removal of Heavy Duty Silt Fence. Install fence as directed by the engineer. Do not remove fence until directed by the engineer. If so directed by the engineer, remove silt at no additional costs. Silt shall be removed before the removal of the fence.

B Materials

Provide Heavy Duty Silt Fence consisting of a composite of woven wire fence fabric, posts, geotextile, sand bags and fasteners to be assembled by the contractor. Woven wire fence fabric shall be a standard field fence type a minimum of 4 feet high, a maximum mesh spacing of 6-inches and minimum 14-$^1/_2$ gauge wire.

Provide "studded tee" or "U" type metal posts with a minimum length of 8 feet –3 inches and a minimum weight of 1.3 lb/ft.

Provide geotextile fabric meeting the following requirements

Property	Unit	Test Method	Minimum Average Roll Value
Grab Tensile Strength	LB.	ASTM D4632	380
Grab Tensile Elongation	%	ASTM D4632	50
Puncture Strength	LB.	ASTM D4833	240
Trapezoid Tear Strength	LB.	ASTM D4533	145
Apparent Opening Size	U.S. Standard Sieve	ASTM D4751	170 (0.09 mm)
Permittivity	sec^{-1}	ASTM D4491	0.7
Water Flow Rate	$Gal/min/ft^2$	ASTM D4491	50

UV Resistance after 500 hours	% strength retained	ASTM D4355	70

Furnish a manufacturer's Certified Report of Test or Analysis that the geotextile fabric delivered for use in the work meets the above requirements to the engineer at least 15 days prior to use in the work. Provide geotextile fabric bearing markings to clearly identify it with the applicable test report furnished to the engineer.

Supply material in 15'9" wide rolls and cut in half.

C Construction
Install the Heavy Duty Silt Fence as directed by the engineer. Space ties and anchors to adequately resist wave action.

D Measurement
The department will measure Heavy Duty Silt Fence by the linear foot along the fence, 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.0090.0002	Heavy Duty Silt Fence	LF

Payment is full compensation for furnishing, assembling, erecting, maintaining, and removing the silt fence.

153. Coconut Fiber Rolls Delivered, Item SPV.0090.0003 and Coconut Fiber Rolls Installed, Item SPV.0090.0004.

A Description
This special provision describes providing Coconut Fiber Roll(s) at the locations the plans show or as directed by the engineer.

B Materials
Obtain approval from the engineer for the coconut fiber roll material before use.

C Method
Deliver and install coconut fiber rolls conforming to the plan details. Securely anchor coconut fiber rolls by burying the bottom one-third of the roll and fastening them to stakes.

D Measurement
The department will measure Coconut Fiber Rolls Delivered and Coconut Fiber Rolls Installed by the linear foot, in place for each roll, complete and accepted conforming to the terms of the contract.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV. 0090.0003	Coconut Fiber Rolls Delivered	LF
SPV. 0090.0004	Coconut Fiber Rolls Installed	LF

Payment is full compensation for providing, transporting, placing, and anchoring the coconut fiber rolls and for supplying fastening materials.
sef-628-005 (20141211)

154. Maintain Concrete Barrier Temporary Precast Left In Place, Item SPV.0090.0006.

A Description
This special provision describes receiving existing concrete barrier temporary precast including any attached temporary glare screen. The temporary barrier has been left in place under a previous contract. Assume ownership and responsibility of the temporary barrier and temporary glare screen upon the contract's Notice to Proceed. The location of this temporary barrier is shown in the Traffic Control plans.

The concrete barriers temporary precast and temporary glare screen shall become the property of the contractor at the completion of the contract.

B (Vacant)

C Construction
Maintain, move and remove temporary barrier according to standard spec 603.

D Measurement
The department will measure Maintain Concrete Barrier Temporary Precast Left In Place by the linear foot of concrete barrier temporary, acceptably maintained. Moving of temporary barrier, if necessary, will be paid for under a separate item.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0006	Maintain Concrete Barrier Temporary Precast Left In Place	LF

Payment is full compensation for receiving, maintaining, and removing concrete barrier temporary precast including any attached temporary glare screen.

155. Removing Sanitary Sewer Pipe 15-Inch, Item SPV. 0090.0007.

A Description

This special provision describes completely removing existing sanitary sewer pipe and disposing of all resulting materials according to the plans, Standard Specifications for Highway and Structure Construction, latest edition and amendments, Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

B Materials

Backfill existing sanitary sewer locations shown for removal outside the new traveled way with native backfill immediately after completing the sewer work.

All backfill, including native material, provided for removal of existing sanitary sewer pipes is considered incidental to the appropriate bid item.

C Construction

Remove the sanitary sewer pipe in its entirety. Perform work according to the pertinent specifications of standard spec 204. The contractor is responsible for the safe methods and sequence of controlled removal operations. Completely remove the existing utility to the extent required to avoid interfering with new construction work as shown on plans and as directed by the engineer.

The cutting and removal of existing sanitary sewer pipe from within the trench of replacement sanitary sewer will not be paid for separately, but shall be considered incidental to the respective sanitary sewer item.

Thoroughly clean the ends of the existing pipe to remain and abandon according to Section 3.2.24 of the SSSW.

Consolidate all backfill by mechanical compaction per specification 2.6.14(b) of the SSSW. Special compaction equipment and measures are required where standard compaction equipment cannot be utilized. Flooding of backfill will not be allowed. Compaction shall achieve uniform consolidation in conformance with section 2.6.14(b) of the SSSW.

D Measurement

The department will measure Removing Sanitary Sewer Pipe by the linear foot acceptably completed, measured horizontally to the nearest foot along the centerline of the pipe.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0007	Removing Sanitary Sewer Pipe 15-Inch	LF

Payment is full compensation for providing all excavating; furnishing and installing all materials; for cutting and removing existing sanitary sewer pipe; for furnishing and placing backfill; and for hauling and disposing of all materials.

156. Sanitary Sewer 15-Inch SDR 35 Class "C" Bedding, Item SPV.0090.0008.

A Description

Furnish and install sanitary sewer along with select bedding and cover material, to proposed line and grade, including granular backfill and compaction, according to the plans.

Perform the work according to the plans, the Standard Specifications for Highway and Structure Construction, latest edition and amendments, the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

B Materials

B.1 General

Sanitary sewer main pipe shall be polyvinyl chloride (PVC) meeting the requirements of standard specifications for Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings of the ASTM D3034 for pipe sizes 4-inch through 15-inch. All PVC sewer pipe shall have maximum standard dimension ratio (SDR) of 35. Provide PVC material with a cell classification 12454-B or 12454-C as defined in ASTM D1784 with minimum modules of elasticity of 400,000 psi in tension. Provide a minimum pipe stiffness of 46 psi when tested according to ASTM D2412.

Provide pipe with elastomeric gasket bell and spigot joint conforming to ASTM D3212 sealed by a rubber gasket conforming to ASTM F477. Bells shall be formed integrally with the pipe.

Pipe shall be homogenous throughout and free of voids cracks, inclusions and other defects and shall be uniform in color, density and other physical characteristics.

B.2 Bedding

Bedding shall conform Class "C" bedding of section 3.2.6(a) and File No. 3 of the SSSW. Bedding material shall conform to Table 32 of Section 8.43.2 of the SSSW except the gradation requirements shall be modified as follows;

Gradation requirements for 3/8-Inch Crushed Stone Chips

Sieve sizes	Percent passing by weight
1/2-inch	100%
3/8-inch	90-100
No. 8	0-50
No. 30	0-5

B.3 Backfill
Granular backfill as required in Chapter 2.6.2 of the SSSW, shall conform to the requirements for Base Aggregate Dense 3/4-Inch, of standard spec 305.1.

C Construction
Provide sufficient and adequate equipment on the site of the work for unloading and lowering pipe and fittings into the trench. Store pipes on level ground free of sharp objects which could damage the pipe. Limit the stacking of the pipe to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature condition. Where necessary due to ground conditions, store the pipe on wooden sleepers, spaced suitably and of such widths as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.

Excavate the trench to provide a smooth, compacted flat bottom. The width of trench shall accommodate the pipe and the use of compaction equipment between the pipe OD and trench wall. Place and compact pipe bedding material prior to setting the pipe. Minimum depth of bedding material beneath pipe bells shall be 4 inches. Pipe cover material shall be the same material as pipe bedding material. Cover material shall extend to one foot above the top of pipe and shall be placed and compacted in lifts to achieve uniform conformance with section 2.6.14(b) of the SSSW.

Provide granular backfill as required in Chapter 2.6.2 of the SSSW, meeting the requirements for Base Aggregate Dense 3/4-Inch, of standard spec 305.1.

Consolidate all backfill by mechanical compaction per specification 2.6.14(b) of the SSSW, except the initial compacted lift shall be 2 feet, and shall be modified to read, “Each subsequent compacted lift of material shall be 1 foot”. Special compaction equipment and measures are required where standard compaction equipment cannot be utilized. Flooding of backfill will not be allowed. Compaction shall achieve uniform consolidation in conformance with section 2.6.14(b) of the SSSW.

D Measurement
The department will measure Sanitary Sewer 15-inch SDR 35 Class “C” Bedding by the linear foot of pipe in place measured from the centerline of manhole to the centerline of manhole, or from point of connection to downstream pipe line not at centerline of manhole to centerline of upstream manhole or from centerline of manhole to the end of pipeline not ending at a manhole, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0008	Sanitary Sewer 15-Inch SDR 35 Class “C” Bedding	LF

Payment is full compensation for furnishing and installing all materials, including pipes, gaskets and lubricant, bedding material, cover material, and granular backfill material; for

furnishing all excavation, dewatering, sheathing and shoring, forming foundation, and pipe laying; for making all connections including furnishing and installing all necessary adapters, including temporary connections; for backfilling, mechanical compaction, and compaction testing; for removing sheathing and shoring; for disposal of all surplus or waste material; for furnishing and installing all testing equipment and materials; for deflection testing; and for site cleanup work according to the contract. The cutting and removal of existing sanitary sewer pipe and manholes from within the trench of replacement sanitary sewer will not be paid for separately, but shall be considered incidental to the item.

157. Concrete Barrier Temporary Precast Delivered Special, Item SPV.0090.0502.

A Description

This special provision describes leaving in place temporary precast reinforced concrete barrier conforming to the shape, dimensions, and details the plans show and according to the pertinent provisions of standard spec 603, these special provisions, and as hereinafter provided.

Concrete Barrier Temporary Precast Delivered Special becomes property of the department after final acceptance by the engineer.

B (Vacant)

C Construction

C.1 Delivery, On-The-Project Trucking and Removal

Replace standard spec 603.3.2.2 (1) with the following:

Under the Concrete Barrier Temporary Precast Delivered Special bid item, furnish and deliver temporary barrier to worksites within the project and leave it in place upon project completion.

D Measurement

The department will measure the Concrete Barrier Temporary Precast Delivered Special by the linear foot acceptably completed, measured as the linear feet of installed length left in place once for each contract-identified worksite within the project and other moves the engineer directs. The department will only measure moves requiring a truck haul. The department will not measure moves made solely to accommodate the contractor's means and methods.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0502	Concrete Barrier Temporary Precast Delivered Special	LF

Replace standard spec 603.5.3 (1) with the following:

Payment for Concrete Barrier Temporary Precast Delivered Special is full compensation for providing barrier, initial delivery, trucking between worksites and leaving barrier, steel rail connections and steel cap rail in place after contract completion.

158. Cable in Duct, 3-6 AWG, 1-8 AWG, Item SPV.0090.1000; Cable in Duct, 3-4 AWG, 1-8 AWG, Item SPV.0090.1001; Temporary Cable in Duct, 2-4 AWG, 1-8 AWG, Item 0090.1002.

A Description
This special provision describes Cable in Duct installation as shown on the plans.

B Materials
Conform to applicable portions of standard spec 655.2.1 and 655.2.6.

C Construction
Conform to applicable portions of standard spec 655.3.1, 655.3.2 and 655.3.7.

Temporary Cable in Duct as shown on temporary lighting plans will not be needed for final lighting. Any exposed temporary Cable in Duct shall be removed by contractor. Any removal of temporary Cable in Duct will be incidental to this pay item and it will become property of the contractor. The bid price for temporary Cable in Duct shall reflect the salvage value of the same.

Conform to standard spec 655.3.5.(9) for ground resistance testing.

D Measurement
The department will measure Cable in Duct items and Temporary Cable in Duct items conforming to standard spec 655.4.(1)

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.1000	Cable in Duct, 3-6 AWG, 1-8 AWG	LF
SPV.0090.1001	Cable in Duct, 3-4 AWG, 1-8 AWG	LF
SPV.0090.1002	Temporary Cable in Duct2-4 AWG, 1-8 AWG	LF

Payment for the Cable In Duct and temporary Cable in Duct bid items are full compensation for providing all materials, including cables and duct; for excavating trenches; for placing Cable in Duct and temporary Cable in Duct; for backfilling; for restoring disturbed or damaged areas, including seeding and sodding; for making connections and testing installed cable system; and for disposing of surplus material.

159. Temporary Overhead Cable Triplex 4 AWG, Item SPV.0090.1003.

A Description
This special provision describes the furnishing, installing and connection of overhead cable complete with all splicing, identifications, terminations and guy wires at wood poles.

B Materials
Overhead cable shall be aluminum conductors according to ASTM B 230 and shall be Class B stranded according to ASTM B 231, and shall conform to the values listed in the table below:

Phase Conductor				Messenger Wire	
Size AWG	Stranding	Avg. Insulation Thickness		Min. Size AWG	Stranding
		mm	mils		
6	7	1.1	45	6	6/1
4	7	1.1	45	4	6/1
2	7	1.5	45	2	6/1

The aerial cable shall be an assembly of insulated aluminum conductors and a steel messenger wire according to ANSI/ICEA S-76-474. The cable assembly may have the messenger wire intertwined with the insulated cables or lashed to the insulated cables by a factory wrap. The cable shall be assembled according to ANSI/ICEA S-76-474.

All cable shall be rated 600 V. The cable shall be rated 105 ºC dry and 90 ºC wet and shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals, and UV rated. The UL listing mark, cable voltage, insulation type and ratings, as well as the cable size shall all be clearly printed on the cable in a color contrasting with the insulation color. When specified, each cable installed shall be identified with its complete circuit number at each termination, splice, junction box or other location where the wire is accessible.

All electric cables installed shall be color coded. Neutral wires shall be color coded white. Single phase three wire runs of cable shall be color code one black, one red, and one white. Insulated ground wires, where applicable, shall be green. Color striping of cables will not be acceptable in lieu of the specified color coding means.

The luminaire connections to the aerial cable shall be made with listed parallel tap insulation piercing connectors. The connector shall be rated for 600 V and be listed under UL Standard 486B.

C Construction
Temporary overhead cable as shown on temporary lighting plans will not be needed for final lighting. Contractor shall remove temporary overhead cable. Removal of temporary overhead cable will be incidental to this pay item and it will become property of the contractor. The bid price shall reflect the salvage value of the temporary overhead cable.

Temporary overhead cable shall be installed such that the any location on cable span shall be minimum 20 feet above proposed or existing grade at that location. Ensure temporary overhead cable does not interfere with temporary or permanent traffic signal infrastructure.

Upon written request of the contractor, the engineer may permit to reuse removed temporary overhead cable of ampacity equivalent to the specified cable and of a type and condition approved by the engineer, if possible.

Guy wires shall be installed as necessary per WisDOT standard details for Spanwire Temporary Traffic Signal.

Conform to standard spec 655.3.5.(9) for ground resistance testing.

D Measurement

The department will measure Temporary Overhead Cable Triplex 4 AWG by the linear foot, acceptably completed in place, and will be taken as the length of the messenger wire. Measurement will be made in a straight line between changes in direction and to the centers of light standards and control cabinets. Sag of the aerial cable or vertical cable will not be measured for payment. The rewiring to facilitate relocation of the cable due to staging or other construction requirements will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.1003	Temporary Overhead Cable Triplex 4 AWG	LF

Payment for the overhead cable bid items is full compensation for providing electrical wire; for making all connections; for providing all connectors, including wire nuts, fuses, fuse holders, splices, tape, and insulators, for messenger wire, guy wires and also for the removal of temporary overhead cable.

160. Removing Overhead Lighting Cable, Item SPV.0090.1004.

A Description

The work under this item shall consist of removal and disposal of existing overhead lighting cable at the locations shown on the plans, and according to the pertinent provisions of standard spec 204 and as hereinafter provided. Cable shall not be removed until contractor has verified that any lighting circuits have been permanently disconnected and alternate power for lighting circuits, if needed, has been provided for.

B (Vacant)

C Construction

Dispose of all materials off site.

D Measurement

The department will measure Removing Overhead Lighting Cable by the linear foot of acceptably removed existing overhead lighting cable as shown on lighting removal plans. Temporary overhead lighting cable removal shall be included in Temporary overhead cable pay items.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.1004	Removing Overhead Lighting Cable	LF

Payment is full compensation for furnishing all work and disposal of materials. Bid price to reflect salvage value of cable.

161. Fence Decorative Bridge, Item SPV.0090.4300; Fence Decorative Wing, Item SPV.0090.4310.

A Description

This special provision describes fabricating, galvanizing, coating, delivering, and installing decorative fencing according to standard spec 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided. The color of all components in this fence system shall be the same and shall be as specified on the plans.

B Materials

B.1 General

All materials for this fence system shall be new stock, free from defects impairing strength, durability, and appearance. Place the vertical wires of the mesh on the inside face (pedestrian / traffic side) of the fence.

B.1.1 Railing Materials

Galvanize and coat railing assemblies with a two-coat system. Bubbles, blisters and flaking in any coating will be a basis for rejection.

B.1.2 Fabric Materials

Provide fence fabric of 8 gauge 2-inch by 2-inch welded wire mesh galvanized to ASTM A 123 and then covered with a polymer-coating. The minimum breaking strength of the wire shall be 1290 lbs. The color of polymer-coating shall conform to the requirements of ASTM F934.

B.2 Coating System

B2.1 Railing Galvanizing

Fabricate railings to meet the requirements of ASTM A385. After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Drill vent holes in members as required to facilitate galvanizing and drainage. Show location and size of vent holes on the shop drawings. Remove all burrs at component edges, corners and at holes, and chamfer sharp edges before galvanizing. 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 according to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when coated will produce unacceptable aesthetic and/or visual qualities, will not be permitted. Water quenching and chromate or other passivating treatments will not be permitted.

The decorative silhouette inset plates shall be fabricated as shown in the plans. The decorative silhouette shall be electro-galvanized according to ASTM A591-01 (0.08 oz/square foot/surface) and then painted with the Railing Two Coat System described in this special provision. The top coat shall be painted the same color as the rest of the decorative fencing. Electronic files of the decorative silhouette patterns are available from the Wisconsin department project manager as shown in the plans.

B2.2 Railing Two Coat System

After galvanizing, coat all exterior surfaces of steel railing assemblies and rail elements with a two coat system as hereinafter provided.

Clean all galvanized surfaces to be coated per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. Brush blast clean the cleaned surface per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation (1 mil minimum, 1.5 mils maximum) for adhesion of the tie coat. Remove wet storage stains prior to blasting per SSPC-SP16. Perform brush blasting at an angle of 30 to 60 degrees to the surface using air pressure no greater than 50 psi, and a soft abrasive such as Garnet. Steel shot and angular iron blasting grit will not be permitted. Brush blast the surface to produce a matte silver appearance. When brush blasting do not fracture the galvanized finish or remove any dry film thickness. Prior to application of the tie-coat, remove visible deposits of oil, grease and other contaminates from the surface per SSPC-SP1, and clean the brush blasted surface of dust, dirt and loose residue according to standard spec 517.

After cleaning and within 8 hours of blasting, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat per manufacturer's recommendations, matching the specified color shown on the plans. Use an approved top coat that is resistant to the effects of the sun and is suitable for a marine environment. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the coating manufacturer reviews the process to be used for surface preparation and application of the coating system with the coating applier. The review shall include a visit to the facility performing the work if requested by the coating manufacturer. Provide written confirmation, from the coating manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract. Coat the various decorative fence components with the tie and top coats before final assembly of the fence panels.

Use one of the qualified coating manufacturers and products given below. An equivalent system may be used with the written approval of the engineer.

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
Sherwin Williams 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Tie	Macropoxy 646		
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane 133 LH(satin)	4	NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA
PPG Protective and Marine Coatings P.O. Box 192610 Little Rock, AR 72219-2610 (414) 339-5084	Tie	Amercoat 399	3.0 to 5.0	3
	Top	Amercoat 450H	2.0 to 4.0	NA

[1] Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

B.3 Shop Drawings

Provide shop drawings according to the requirements of standard spec 506.3.2 and as follows. Provide the size and material type used for all components, 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. Also show the size and location of any vent or drainage holes provided.

Label the posts, rails, and bolts. State the polymer-coating type used on the fabric, framework and fittings and the Class of coating used on the fabric. State the color of polymer-coating to be used on the fence components. For the fabric, state the wire gauge, mesh size, and type of selvages used. For the framework, state the size and unit weight for the posts and rails. State the size and type of bolts. State the material type used for fabric, and framework. Also give the tensile and yield strength properties for the framework.

B.4 Specification Compliance

Submit certification of compliance with material specifications. Provide material certification and test documentation for fabric, framework, and hardware that shows that all materials meet or exceed the specifications of this contract and the tests in B5. This document shall provide the name, address and phone number of the manufacturer, and the name of a contact person.

B.5 Bolts

All bolts are to be supplied with lock washers and nuts. Use galvanized steel bolts, nuts and washers per plan details. All bolts, nuts, and washers shall be supplied as factory galvanized according to ASTM A 153.

B.6 Tests

B.6.1 Fabric

Breaking Strength:	ASTM A370
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM F668
Adhesion:	ASTM F668
Accelerated Aging Test:	ASTM F668, D1499
Mandrel Bend Test:	ASTM F668

B.6.2 Framework

Tensile and Yield Strength:	ASTM E8
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM E376
Adhesion:	ASTM F1043
Accelerated Aging Test:	ASTM F1043, D1499

B.7 Submittals

In addition to the engineer, send submittals listed in this section to the name below for informational purposes:

David Nelson
WisDOT (Bureau of Structures)
4802 Sheboygan Ave. (Room 601)
PO Box 7916
Madison, WI 53707

C Construction

C.1 Test Panel

Provide a full sized painted 6-foot tall by 10-foot long fence test panel. Deliver the test panel to the project within 60 days of the award of the contract. Unload and set up the test panel in an area designated by the engineer. Obtain test panel acceptance prior to beginning fabrication of fences.

C.2 Delivery, Storage and Handling

If damaged during handling, the fencing may be rejected by the engineer. Contractor shall repair or replace components as necessary to the approval of the engineer. Upon receipt at the job site, thoroughly inspect all materials to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. Handle coated railing according to standard spec 517. No field welding, field cutting or drilling will be permitted without the approval of the engineer. Carefully store material off the ground to ensure proper ventilation and drainage and to provide protection against damage caused by ground moisture. If damaged, the fencing may be rejected by the engineer. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

C.3 Touch-up and Repair

For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations and conforming to ASTM A780. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

C.4 Installation

Install the chain link fence according to ASTM F567 and the manufacturer's instructions. Heads of bolts shall be on the side of the fence adjacent to pedestrian traffic.

D Measurement

The department will measure Fence Decorative Bridge and Fence Decorative Wing 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.0090.4300	Fence Decorative Bridge	LF
SPV.0090.4310	Fence Decorative Wing	LF

Payment is full compensation for cleaning, galvanizing, welding, fabricating, coating, painting, assembling, furnishing, delivering and installing fence components, for providing the test panel; placing metal shims under the bases if required; for providing and placing the anchor bolts, and for preparing shop drawings

Repair or replace components at no additional cost to the department.

162. Piling Sleeves, Item SPV.0090.4320.

A Description

The work under this item consists of furnishing and installing a corrugated steel piling sleeve or pile wrap in the reinforced earth zone of mechanically stabilized earth (MSE) retaining walls and other locations shown in the plans. Perform work according to pertinent portions of standard spec 520 and 521, the plans, and as herein after provided.

B Materials

B.1 Pipe Sleeves

The piling sleeve must meet the requirements of standard spec 521.2.2 for corrugated steel pipe.

B.2 Pile Wrap

As an alternative to pipe sleeves and if accepted by the engineer, provide a pile wrap that completely encases the perimeter of the pile and separates the pile from the surrounding soil. The provided pile wrap product shall be specifically intended to reduce or eliminate down drag loads on driven piles. Submit proposed pile wrap product data sheets and installation requirements to the engineer for acceptance.

C Construction

Set the piling sleeve within 1 inch of the required position indicated on the plans prior to placing the reinforced earth. Brace sleeve to maintain position within 2 inches of required position as backfilling proceeds. Place soil reinforcing mats around sleeve.

Is using pile wrap in lieu of pipe sleeves, install the pile wrap on the top portion of the piles that will be in the MSE soil reinforced zone or other limits shown on the plans prior placing the reinforced earth backfill around the piles. Install the pile wrap and place backfill around the wrapped pile according to the pile wrap manufacturer’s installation requirements and recommendations.

Any damage that would hinder the installation of a HP pile must be corrected prior to placing any additional reinforced earth.

After completion of pile installation inside a piling sleeve, backfill the void space around the pile within the sleeve with sand or other approved materials.

D Measurement
The department will measure Piling Sleeves by the linear foot, acceptably installed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.4320	Piling Sleeves	LF

Payment is full compensation for furnishing and installing the piling sleeve or pile wrap; and for furnishing and placing backfill inside the sleeve after pile installation.

163. Survey Project 1030-20-85, Item SPV.0105.0001.

A Description
This special provision describes modifying standard spec 105.6 and 650 to define the requirements for construction staking for this contract. Conform to standard spec 105.6 and 650 except as modified in this special provision.

Replace standard spec 105.6.1(2) with the following:

The department will not perform any construction staking for this contract. Obtain engineer's approval before performing all survey required to lay out and construct the work under this contract.

Replace standard spec 650.1 with the following:

This section describes the contractor-performed construction staking required under individual contract bid items to establish the horizontal and vertical position for all aspects of construction including:

1) storm sewer
2) subgrade
3) base
4) curb
5) gutter
6) curb and gutter
7) pipe culverts
8) drainage structures
9) structure layout
10) bridges
11) all retaining wall layout
12) pavement
13) pavement markings (temporary and permanent)
14) barriers (temporary and permanent)
15) overhead signs
16) freeway and local street lighting

17) electrical installations
18) supplemental control
19) slope stakes
20) detention ponds
21) traffic signals
22) ITS
23) FTMS
24) parking lot
25) utilities
26) conduit
27) water main
28) landscaping elements
29) installation of community sensitive design elements
30) traffic control items
31) fencing

B (Vacant)

C Construction

Supplement standard spec 650.3.1 (5) with the following:

Confirm with engineer before using global positioning methods to establish the following:

1. Structure layout horizontal or vertical locations.
2. Concrete pavement vertical locations.
3. Curb, gutter, and curb and gutter vertical locations.
4. Concrete barrier vertical locations.
5. Storm Sewer layout horizontal or vertical locations, including structure centers, offsets, access openings, rim and invert elevations.

Replace standard spec 650.3.1 (6) with the following:

Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. This includes:

1. Raw data files
2. Digital stakeout reports
3. Control check reports
4. Supplemental control files (along with method used to establish coordinates and elevation)
5. Calibration report

Make the survey notes and computations available to the engineer within 24 hours as the work progresses unless a longer period is approved by the engineer.

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 spec 105.6 or standard spec 650 by having provided this additional information.

Supplement standard spec 650.3.3.3.6.2 with the following:

Record all subgrade elevation checks and submit a hard copy to the engineer within 24 hours or as requested by the engineer.

Supplement standard spec 650.3 with the following:

650.3.14 Water Main
Record all elevation data for the casing, grade breaks, water main pipe, bends, fittings, and all information necessary to accurately record the construction document. Submit a hard copy to the engineer within 24 hours or as requested by the engineer.

Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Locate all pipe, valves and bends to within 0.10 feet horizontal and establish the elevations to within 0.10 feet vertically.

Set construction stakes at all water main valves, fittings and bends and at maximum interval of 50 feet for water main piping.

Provide the as-built xyz coordinates and elevations, in the project horizontal and vertical datum, of all bends, fittings, valves and tie in locations for the as-built plan. Also provide the locations of the casing ends, the elevation of the top of casing and the size and material of all pipes.

D Measurement
Replace standard spec 650.4 with the following:

The department will measure Survey Project 1030-20-85 as a separate single lump sum unit, 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.0105.0001	Survey Project 1030-20-85	LS

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract. The department will not make final payment for this item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 24 hours of completing this work. Restaking due to construction disturbance and knock-outs will be performed at no additional cost to the department.
SEF Rev. 16_0330

164. Rootstock Protection 1030-26-72, Item SPV.0105.0002; 1030-20-85, SPV.0105.0004.

A Description
This special provision describes providing, maintaining, and removing Rootstock Protection for wetland plantings as the plans show, as provided in this special provision, and as directed by the engineer.

B (Vacant)

C Construction
Install Rootstock Protection before the rootstock plantings.

Attach bailing twine, used as cross members, to all posts as the engineer approves. Use knots or any other means approved by the engineer to ensure that no more than three cross members may be affected if any one cross member breaks or becomes unattached. Use means approved by the engineer when bailing twine is attached to all intermediate posts.

Maintain rootstock protection, as needed, for one calendar year or the life of the contract, whichever is longer, and within 24 hours of notification by the engineer. Check, secure, and reset posts and twine when broken, sagging or otherwise not protecting vegetation from predators.

Keep Rootstock Protection in place until the engineer requests removal.

D Measurement
The department will measure Rootstock Protection (project) completed and accepted according to the terms of the contract, in place as a single unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0002	Rootstock Protection 1030-26-72	LS
SPV.0105.0004	Rootstock Protection 1030-20-85	LS

Payment is full compensation for furnishing all materials, installing all posts, cross members, disposal of surplus materials; and for maintaining the Rootstock Protection through the life of the contract; including removal.

165. Concrete Pavement Joint Layout, Item SPV.0105.0003.

A Description
This special provision describes providing a concrete pavement joint layout design for intersections and marking the location of all joints in the field.

B (Vacant)

C Construction
Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete pavement to prevent uncontrolled cracking. Submit a joint layout design to the engineer before paving each intersection. Mark the location of all concrete pavement joints in the field. Follow the plan details for joints in concrete pavements making adjustments as required to fit field conditions.

D Measurement
The department will measure Concrete Pavement Joint Layout as a single lump sum unit of work for all joint layout designs and marking, acceptably completed under the contract.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0003	Concrete Pavement Joint Layout	LS

Payment is full compensation for providing the intersection joint layout designs and marking all joints in the field.

The department will adjust pay for crack repairs as specified in standard spec 415.5.3.

166. Lighting System Integrator, Item SPV.0105.1000.

A Description
These special provisions describe coordinating lighting with various parties; record keeping, and documentation. Where the department is responsible for freeway lighting operation, maintenance, or utility locates on existing systems or systems overlapping

project boundaries, the contractor's freeway lighting integrator will serve as the contractor's liaison to the department's electrical operations unit.

B Personnel Qualifications

Assign personnel experienced in underground utility construction and department lighting specifications and practices.

C Construction

At any one time during the project, the contractor shall assign one individual person as the freeway lighting integrator.

The freeway lighting integrator shall:

1. Familiarize himself with the location and nature of existing lighting circuits. This familiarity shall include the extent of any lighting system that overlaps project limits.
2. Maintain a file of applicable permits or licenses issued to the contractor, and convey copies to the engineer.
3. Keep with him at all times a contact list of affected lighting personnel.
4. Maintain a record of tagouts and the clearance of tagouts.
5. Interface with department electrical personnel to determine how contract limits might affect maintenance or operation of existing systems.
6. Maintain ongoing contact with the department's Diggers' Hotline Coordinator to ensure that each of the two persons knows that all requested utility locates are marked in the field by the appropriate party. The intent here is to assure coordination. This special provision does not transfer additional utility locating responsibilities to the contractor, beyond those responsibilities already assigned to him by other provisions of the contract.
7. Inform the department of any lighting outages, including outside the project limits where a lighting system crosses the project boundary.
8. Maintain in any format real-time records of existing, removed and new lighting facilities. Include utility service extensions. Additional required records will include temporary connections and their ultimate removal.
9. Maintain records of tests, including: "meg" tests, amperage draw per circuit leg, voltage reading at the disconnect, and voltage reading at the furthest pole per circuit leg. Convey these records at time of acceptance or partial acceptance.
10. At the time of acceptance or partial acceptance, convey as-built drawings in both the following formats: plan redlines and .dgn electronic. Include utility service extensions.
11. Secure copies of operator's manuals, tear sheets, etc. as may be provided by manufacturers of some lighting materials, and convey a minimum of three sets to the department.
12. Work with the engineer to notify department electrical personnel of acceptance or partial acceptance.
13. Perform related duties as may be needed to ensure continuity of freeway lighting during construction, and orderly transfer upon completion.

D Measurement
The department will measure Lighting System Integrator as a single lump sum unit for all services, acceptably completed under the contract.

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.0105.1000	Lighting System Integrator	LS

Payment is full compensation for providing specified expertise, assistance and documents, personnel costs.

167. Maintenance of Lighting Systems, Item SPV.0105.1002.

A Description
Maintain existing and proposed lighting system beginning on the date that the contractor's activities (electrical or otherwise) at the job site begin. Take responsibility 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. Condition issues found during contractor assessment can be discussed and addressed by contacting the SE Region Lighting Engineer (Eric Perea) prior to maintenance responsibility being transferred to the contractor.

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. Clear and replace any knockdowns or damage caused to the existing lighting system, regardless of who causes the damage. 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. Ensure engineer approval to isolate the affected circuits by means of in-line waterproof fuse holders as specified elsewhere.

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 are any temporary or final lighting systems or part of a lighting system to be constructed under this contract.

Maintain all items installed under this contract, including, 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.

Excluding damage due to contractor operations, the contractor will be reimbursed for replaced equipment, materials only, if the invoice paid for the individual piece of equipment is greater than $500. The cost of maintaining equipment installed under this contract, labor, mobilization, tools and incidentals along with repairs due to contractor operations are incidental to this bid item.

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. Reinstall the lighting unit (if salvageable), or install a new one.

Provide weekly night-time patrol of the lighting system, with patrol reports filed immediately with the engineer and copied to the region lighting coordinator with deficiencies corrected within timely fashion 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 (or based on material availability).

Incident or Problem	Service Response Time	Service Restoration Time	Permanent Repair Time
Control cabinet out	12 hour	24 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	12 hour	12 hours	na
Circuit out – Cable trouble	12 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	12 hour	24 hours	na
Outage of 75% of lights on one tower	12 hour	24 hours	na
Outage of light nearest RR crossing approach, Islands and gores	12 hour	24 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.

C.5 Operation of Lighting

Maintain operational lighting every night, dusk to dawn. Do not operate duplicate lighting systems (such as temporary lighting and proposed new lighting) simultaneously. Do not keep lighting systems in operation during long daytime periods. Ensure that the lighting system is

fully operational and approved by the engineer 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, 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.0105.1002	Maintenance of Lighting Systems	LS

Payment is full compensation for Maintenance of Lighting Systems, both existing and proposed, weekly night-time patrol of the lighting system, mobilization, and filed patrol reports. No payment will be considered for damage or repairs due to contractor operations.

168. Remove Traffic Signals IH 94 EB Ramps & STH 100, Item SPV.0105.3001; IH 94 WB Ramps & STH 100, Item SPV.0105.3002.

A Description
This special provision describes removing existing traffic signals according to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction
Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

The department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, emergency vehicle preemption heads (EVP), mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the

underground signal cable, internal wires and street lighting cable off the state right-of-way. Deliver the remaining materials to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, Milwaukee County. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

Department forces will remove the signal cabinet from the footing. The signal cabinet and associated signal cabinet equipment will be removed from the site by department forces and will remain the property of the department.

D Measurement
The department will measure Remove Traffic Signals (location) as a single lump sum unit of work for each intersection, 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.0105.3001	Remove Traffic Signals IH 94 EB Ramps & STH 100	LS
SPV.0105.3002	Remove Traffic Signals IH 94 WB Ramps & STH 100	LS

Payment is full compensation for removing, disassembling traffic signals, scrapping of some materials, disposing of scrap material, for delivering the requested materials to the department.

169. Remove Traffic Signals IH 94 EB Ramps & STH 100, Item SPV.0105.3001; IH 94 WB Ramps & STH 100, Item SPV.0105.3002.

A Description
This special provision describes removing existing traffic signals according to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction
Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

The department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not

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

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, emergency vehicle preemption heads (EVP), mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable off the state right-of-way. Neatly stockpile the remaining materials in a safe and secure area on-site for the department to pick-up. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to equipment pick-up to coordinate logistics.

DOT forces shall remove the signal cabinet from the footing. The signal cabinet and associated signal cabinet equipment will be removed from the site by DOT forces and will remain the property of the department.

D Measurement
The department will measure Remove Traffic Signals (location) as a single lump sum unit of work for each intersection, 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.0105.3001	Remove Traffic Signals IH 94 EB Ramps & STH 100	LS
SPV.0105.3002	Remove Traffic Signals IH 94 WB Ramps & STH 100	LS

Payment is full compensation for removing, disassembling traffic signals, scrapping of some materials, disposing of scrap material, and for stockpiling the requested materials for department pick-up.

170. Transport and Install State Furnished Traffic Signal Cabinet STH 100 & S. 20th Street, Item SPV.0105.3006; IH 94 Ramps & STH 100 CB1, Item SPV.0105.3007; IH 94 Ramps & STH 100 CB2, Item SPV.0105.3008.

A Description
This special provision describes the installing of the state furnished Traffic Signal Cabinet for traffic signals.

B Materials
Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at

(414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction

Perform work according to standard spec 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. The departments' Region Electrical personnel will perform the inspection.

Coordinate directly with the department's traffic signal cabinet vendor {TAPCO at (262) 814-7327 or rickk@tapconet.com / TCC at (651) 439-1737 or mallwood@trafficcontrolcorp} to schedule the cabinet acceptance testing. Coordinate with the department's Electrical Field Unit at (414) 266-1170 to participate in the acceptance testing. The department has final determination of the cabinet acceptance testing date and time.

D Measurement

The department will measure Transport and Install Traffic Signal Cabinet [Location] as a single lump sum unit of work, in place 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
SPV.0105.3006	Transport and Install State Furnished Traffic Signal Cabinet STH 100 & S. 20th Street	LS
SPV.0105.3007	Transport and Install State Furnished Traffic Signal Cabinet IH 94 Ramps & STH 100 CB1	LS
SPV.0105.3008	Transport and Install State Furnished Traffic Signal Cabinet IH 94 Ramps & STH 100 CB2	LS

Payment is full compensation for transporting and installing the traffic signal controller and the traffic signal cabinet; for furnishing and installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit and for clean-up and waste disposal.

171. Transporting Traffic Signal and Intersection Lighting Materials STH 100 & S. 20th Street, Item SPV.0105.3009; IH 94 Ramps & STH 100, Item SPV.0105.3010.

A Description

This special provision describes the transporting of department furnished materials for traffic signals and intersection lighting.

B Materials

Transport materials furnished by the department including: Anchor rods, monotube arms/poles and luminaire arms (to be installed on monotube assemblies).

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction

Perform work according to standard spec 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

D Measurement

The department will measure Transporting Traffic Signal and Intersection Lighting Materials [Location] as a single lump sum unit of work, in place 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
SPV.0105.3009	Transporting Traffic Signal and Intersection Lighting Materials STH 100 & S. 20th Street	LS
SPV.0105.3010	Transporting Traffic Signal and Intersection Lighting Materials IH 94 Ramps & STH 100	LS

Payment is full compensation for transporting the anchor rods, monotube poles/arms and luminaire arms (to be installed on monotubes). Installation of these materials is included under a separate pay item.

172. Transport and Install State Furnished Radar Detection System STH 100 & S. 20th Street, Item SPV.0105.3011.

A Description

This special provision describes the transporting and installing of department furnished Radar Detection System on monotube poles or arms.

B Materials

Pick up the department furnished Radar System at the department's electrical shop located at 935 South 60th Street, West Allis. Notify the department's electrical field unit (EFU) at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

C Construction

Install the department furnished pole/arm mounting brackets, extension arms (if required), and radar units per manufacturer recommendations in the locations determined by the department.

Install the power and communication cable to run continuously (without splices) from the traffic signal cabinet to the pole handhole plus an additional 16-feet in each pull box and an extra 10-feet in the pole handhole. Install the detector unit cable whip from the detector unit to the pole handhole. Splice the detector unit cable whip to the power and communication cable in the pole handhole using the provided junction box.

Mark each end of the lead in the traffic signal cabinet and each cable in the pole handhole to indicate the equipment label (i.e. RA1, RA2, etc.) on the plans. For a cabinet that is not operating the signal, the contractor will terminate the ends. If the cabinet is operating the signal, the cabinet wiring will be done by the department.

Notify department's Electrical Shop at (414) 266-1170 upon completion of the installation and aiming of the radar units.

The department will provide the vendor's contact information. Coordinate directly with the department's radar detection system vendor to arrange for the vendor to program the radar detection system on site. Notify the department and vendor at least five working days prior to the date of programming. Assist the department and vendor with fine adjusting of the radar units during the radar system programming, if necessary.

D Measurement

The department will measure Transporting and Installing State Furnished Radar Detection System as a single lump sum unit of work for each intersection 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.0105.3011	Transport and Install State Furnished Radar Detection System STH 100 & S. 20th Street	LS

Payment is full compensation for transporting and installing the radar detection system, cable, mounting hardware, and radar units; assisting the department and vendor during the radar system programming.

173. Transport and Install State Furnished Emergency Vehicle Preemption (EVP) Detector Heads STH 100 & S. 20th Street, Item SPV.0105.3012; IH 94 Ramps & STH 100, Item SPV.0105.3013.

A Description

This special provision describes the transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads and mounting brackets.

B Materials

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

C Construction

Install the EVP detector heads as shown on the plans. The department will determine the exact location to ensure that the installation does not create a sight obstruction. Mount the EVP detector heads and wire them per manufacturer instructions. For a cabinet that is not operating the signal, the contractor will terminate the ends and install the discriminators and card rack in the cabinet. If the cabinet is operating the signal, the cabinet wiring will be done by the department

Notify the department's Electrical shop at (414) 266-1170 upon completion of the installation of the Emergency Vehicle Preemption (EVP) Detector Heads.

D Measurement

The department will measure Transport and Install State Furnished Emergency Vehicle Preemption (EVP) Detector Heads as a single lump sum unit of work in place 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
SPV.0105.3012	Transport and Install State Furnished Emergency Vehicle Preemption (EVP) Detector Heads STH 100 & S. 20th Street	LS
SPV.0105.3013	Transport and Install State Furnished Emergency Vehicle Preemption (EVP) Detector Heads IH 94 Ramps & STH 100	LS

Payment is full compensation for transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads and mounting brackets.

174. Temporary EVP System STH 100 & S. 22nd Street, Item SPV.0105.3014; IH 94 EB Ramps & STH 100 Existing, Item SPV.0105.3015; IH 94 WB Ramps & STH 100 Existing, Item SPV.0105.3016; IH 94 EB Ramps & STH 100 Proposed, Item SPV.0105.3017; IH 94 WB Ramps & STH 100 Proposed, Item SPV.0105.3018; STH 100 & S. 13th Street, Item SPV.0105.3019.

A Description

This special provision describes furnishing, installing, and maintaining temporary EVP systems at the temporary signalized intersection as shown in the plans.

B Materials

Furnish an emergency vehicle preemption system compatible with the City of Oak Creek systems and users.

C Construction

The Temporary EVP System, as shown in the temporary traffic signal plans or as directed by the engineer, shall be complete in place, tested, and in full operation during each stage and sub-stage of construction.

Install the temporary EVP system as shown in the plans and according to the manufacturer's recommendations. Determine a suitable location for the temporary EVP detectors for each stage and sub-stage of construction. Detectors may be mounted on the temporary traffic signal span wire or wood poles. Relocate the temporary EVP detectors to a suitable location if construction activities and/or construction staging changes impede the detector operation. Arrange for testing of equipment prior to acceptance of the installation for each construction stage.

All cables associated with the temporary EVP system shall be routed to the cabinet. Each lead shall be appropriately marked as to which EVP channel it is associated.

Periodic adjustment and/or moving of the temporary EVP detectors may be required due to changes in traffic control, staging, or other construction operations.

Ensure that the temporary EVP system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

Remove the temporary EVP system upon project completion.

Provide the engineer records of all EVP settings used during construction.

D Measurement
The department will measure Temporary EVP System (Location), furnished, installed, and completely operational, as a single complete unit of work per intersection, complete in place 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
SPV.0105.3014	Temporary EVP System STH 100 & S. 22nd Street	LS
SPV.0105.3015	Temporary EVP System IH 94 EB Ramps & STH 100 Existing	LS
SPV.0105.3016	Temporary EVP System IH 94 WB Ramps & STH 100 Existing	LS
SPV.0105.3017	Temporary EVP System IH 94 EB Ramps & STH 100 Proposed	LS
SPV.0105.3018	Temporary EVP System IH 94 WB Ramps & STH 100 Proposed	LS
SPV.0105.3019	Temporary EVP System STH 100 & S. 13th Street	LS

Payment is full compensation for furnishing and installing all required equipment, materials, and supplies; for maintaining and changing the EVP detectors to match the plans, traffic control, and construction staging; for relocating the temporary EVP detectors due to construction activities, if required; for testing the EVP system for each stage and sub-stage of construction; for periodically cleaning all temporary EVP detectors; for removing the temporary EVP system; and for cleaning up and properly disposing of waste.

175. Temporary Vehicle Detection System for Intersections STH 100 & S. 22nd Street, Item SPV.0105.3020; IH 94 EB Ramps & STH 100 Existing, Item SPV.0105.3021; IH 94 WB Ramps & STH 100 Existing, Item SPV.0105.3022; IH 94 EB Ramps & STH 100 Proposed, Item SPV.0105.3023; IH 94 WB Ramps & STH 100 Proposed, Item SPV.0105.3024; STH 100 & S. 13th Street, Item SPV.0105.3025.

A Description
This work shall consist of furnishing, installing, maintaining and placing into operation a temporary non-intrusive vehicle detection system (NIVDS) as shown on the plans, and as directed by the engineer in the field.

B Materials

This specification sets forth the minimum requirements for a system that detects vehicles on a roadway and provides detection outputs to a traffic signal controller. The materials shall also include all brackets, mounting hardware, cable, terminations, interface panels, and all other incidentals for the installation of the non-intrusive vehicle detection equipment. This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications.

All detection equipment, components, and terminations supplied under this item shall be fully compatible with the temporary traffic signal controller supplied for the project. The system architecture shall fully support Ethernet networking of system components. All required interface equipment needed for transmitting and receiving data shall be provided with the NIVDS.

The NIVDS shall provide flexible detection zone placement anywhere and at any orientation. Preferred detector configurations shall be detection zones placed across lanes of traffic for optimal count accuracy, detection zones placed parallel to lanes of traffic for optimal presence detection accuracy of moving or stopped vehicles. Detection zones shall be able to be overlapped for optimal road coverage.

C Construction

The temporary NIVDS shall be installed by supplier factory-certified installers and as recommended by the supplier and documented in installation materials provided by the supplier.

In the event, at installation or turn on date, a noticeable obstruction is present in line with the detection zone(s), the contractor shall be obligated to advise the engineer before setting the zone.

The non-intrusive vehicle detection system, as shown in the traffic signal construction plans, shall be complete, in place, tested, and in full operation during each stage of construction.

Maintain all temporary vehicle detection zones as the plans show or as the engineer directs. The temporary vehicle detection zones shall be set near the vicinity and with approximate distance from the stop bar as shown on the plans. Check temporary vehicle detection zones every other week and at the opening of each stage of temporary traffic signal operation to ensure that they are working properly and aimed properly. Periodic adjustment of the detection zones and/or moving of the temporary vehicle detection sensors may be required due to changes in traffic control, staging, or other construction operations.

Ensure the non-intrusive vehicle detection system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

D Measurement

The department will measure Temporary Vehicle Detection System for Intersections (Location), furnished, installed, and completely operational, as a single complete unit of work per intersection, complete in place 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
SPV.0105.3020	Temporary Vehicle Detection System for Intersections STH 100 & S. 22nd Street	LS
SPV.0105.3021	Temporary Vehicle Detection System for Intersections IH 94 EB Ramps & STH 100 Existing	LS
SPV.0105.3022	Temporary Vehicle Detection System for Intersections IH 94 WB Ramps & STH 100 Existing	LS
SPV.0105.3023	Temporary Vehicle Detection System for Intersections IH 94 EB Ramps & STH 100 Proposed	LS
SPV.0105.3024	Temporary Vehicle Detection System for Intersections IH 94 WB Ramps & STH 100 Proposed	LS
SPV.0105.3025	Temporary Vehicle Detection System for Intersections STH 100 & S. 13th Street	LS

Payment is full compensation for furnishing and installing the temporary non-intrusive vehicle detection system including cabling, mounting brackets, mounting hardware, terminations, interface panels, testing and set up; for periodic checking and resetting of detection zones; for periodic cleaning for dirt and dust build-up; and for removing all equipment at the completion of the project.

176. Install Fiber Optic Communications in Cabinet STH 100 & STH 241, Item SPV.0105.3026; STH 100 & S. 22nd Street, Item SPV.0105.3027; STH 100 & S. 20th Street, Item SPV.0105.3028; IH 94 Ramps & STH 100, Item SPV.0105.3029; STH 100 & S. 13th Street, Item SPV.0105.3030.

A Description

This special provision describes installing fiber optic communications equipment in traffic signal cabinets.

B Materials

The department will furnish pre-terminated fiber optic patch panels and managed Ethernet switches. The materials will be provided with the traffic signal cabinet. The patch panels will have pre-terminated fiber optic cable pigtails. Provide two each 1-meter lengths of ST-ST single mode fiber jumper (2 fibers per jumper) from the patch panel to the Ethernet switch. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the controller. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the Interface Panel. CAT-5e patch cords shall have factory pre-terminated RJ45 / 8P8C

connectors on both ends per TIA/EIA T568B. Provide all patch panel, Ethernet switch, and Interface Panel attachment hardware.

Provide a 14 AWG XLP insulated, stranded, copper, 600 volt AC locate wire through the conduit run from the communication vault to the traffic signal cabinet. Connect the locate wire by using a silicone filled wire nut at each pull box, vault or other access point. Alternatively, use a single wire through the access points, leaving a 6 foot coil in each pull box, vault or other access point for splicing. All material under this item shall meet the requirements of standard spec 655.

C Construction

Install the patch panel and Ethernet switch on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. With approval by the engineer, the Ethernet switch may be placed on a shelf near the patch panel. Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in standard spec 678.3.1. Fiber optic cable ends shall be covered securely to protect open ends during installation in raceways. Leave the remainder of the fiber optic cable coiled in the communication vault.

Install the fiber jumpers and CAT-5e cable and provide a communications link from the communication vault to the controller. Install the CAT5-e cable from the Interface Panel to the Ethernet switch.

Connect the locate wire by using a wire nut at each access point. Alternatively, use a single wire through the access points.

D Measurement

The department will measure Install Fiber Optic Communications in Cabinet (Location) as a single lump sum unit of work in place, 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.0105.3026	Install Fiber Optic Communications in Cabinet STH 100 & STH 241	LS
SPV.0105.3027	Install Fiber Optic Communications in Cabinet STH 100 & S. 22nd Street	LS
SPV.0105.3028	Install Fiber Optic Communications in Cabinet STH 100 & S. 20th Street	LS
SPV.0105.3029	Install Fiber Optic Communications in Cabinet IH 94 Ramps & STH 100	LS
SPV.0105.3030	Install Fiber Optic Communications in Cabinet STH 100 & S. 13th Street	LS

Payment is full compensation for installing pre-terminated patch panels, Ethernet switches, and fiber optic cable in conduit; furnishing and installing attachment hardware, fiber jumpers, CAT-5e cable, and locate wire.

177. Longitudinal Grooving Bridge Deck, Item SPV.0165.4010.

A Description

Provide longitudinal deck grooves parallel to the centerline of the roadway prior to opening the bridge to traffic as directed by the engineer.

B Materials

Use a grooving machine containing blades mounted on a multi-blade arbor on a self-propelled machine built for grooving hardened concrete surfaces.

Use a grooving machine with a depth control device that detects variations in the deck surface and adjusts the cutting head height to maintain a specified depth of groove.

Equip the grooving machine with a guide device to control multi-pass alignment.

C Construction

Groove the pavement longitudinally without damaging the concrete deck surface.

Complete a longitudinal grooving operation that results in a uniformly grooved deck surface.

Cut grooves continuously across the deck width to within 18 inches of the barrier rail, curb line, or median divider. If metal floor drains extend more than 18 inches from the barrier rail, curb line, or median divider, all grooves on the bridge deck surface are to end within 6 inches of the floor drain perimeter.

At skewed metal edged expansion joints in the bridge deck surface, end all grooves on the bridge deck surface within 6 inches of the joint leaving no ungrooved surface adjacent to each side of the joint greater than 6 inches in width on the deck side of the expansion joints.

Produce grooves that are continuous across construction joints or other joints in the concrete deck surface less than ½-inch wide.

Construct longitudinal grooves with the following criteria:

Width (In)	Depth (In)	Spacing C-C (In)	Width Tolerance (In)	Depth Tolerance (In)	Spacing Tolerance (In)
1/8	3/16	3/4	0 to 1/16	± 1/16	± 1/16

Collect, remove and dispose of solid material residue and liquid waste resulting from grooving operations by vacuuming in a manner satisfactory to the engineer.

D Measurement
The department will measure Longitudinal Grooving Bridge Deck square foot, acceptably installed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4010	Longitudinal Grooving Bridge Deck	SF

Payment is full compensation for providing the required machinery and operators; for grooving, for collecting, removing and properly disposing of all waste materials.
SEF Rev. 13_0812

178. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, Item SPV.0165.4610.

A Description
This special provision describes designing, furnishing materials and erecting a permanent earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the mechanically stabilized earth (MSE) wall and all wall components shall be 75 years minimum.

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, compaction, 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 (Concrete Panel MSE Walls).

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 Concrete Panel Mechanically Stabilized Earth Wall systems. 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 according to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the 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 of the Concrete Panel MSE wall shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5th 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 according to Table11.5.6-1 LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting

panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the 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 according to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans. If the contractor utilizes an angle of internal friction greater than 30 degrees for the design, external stability checks at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks are required to be analyzed by the contractor.

The design of the Concrete Panel Mechanically Stabilized Earth Wall by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits.

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 times 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

between 6 inches and 18 inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement 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 according to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. 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 Section.

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 concrete for the panels shall be air entrained,

with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of Section 501 of the WisDOT Standard Specifications for Highway and Structure Construction. 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 according 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 standard spec 645.2.4 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.

When Alternate Wall Backfill Type B (Coarse Aggregate No.1) is used in the reinforced zone as backfill, as required for construction during freezing weather, a geotextile shall be placed to separate the Alternate Wall Backfill Type B from the retained soil. If the wall is constructed in stages where portions of wall backfill consist of Wall Backfill Type A and adjacent portions consist of Alternate Wall Backfill Type B (Coarse Aggregate No.1), a geotextile must also be placed at the interface of and between the two different backfill materials for the entire height of the backfill to prevent migration of finer soil. The geotextile shall also be placed on top of the Alternate Wall Backfill Type B to provide separation from the fill above the wall reinforced zone. Adjoining sections of geotextile should be overlapped by a minimum of 12 in. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B. Where geotextile is used it cannot be placed directly on top of wall reinforcement and it must be placed at one-half of the backfill lift thickness over the reinforcement.

Do not alternate wall backfill types along the height of the wall. Sloping of the Alternate Wall Backfill Type B from the top of the reinforced earth zone down to the leveling pad is acceptable as required for staging and as approved by the engineer. The section C.2 compaction requirements must be satisfied for this interim condition. Temporary shoring return walls, such as wire face MSE walls, are acceptable as approved by the engineer.

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.

For cast in place sections of cap and coping, use 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 standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

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 standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

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. The same backfill material must be used for the entire wall height, from the leveling pad to top of finished reinforced earth zone, for each stage of wall construction. For the purposes of this special provision, a stage is defined as constructing a full-height portion of wall along the wall alignment, not staging wall construction up the height of the wall. Horizontal changes in backfill strata up the height of the wall will not be allowed.

In addition to gradation requirements hereinafter provided, backfill material within the reinforced zone 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, or as modified by C.2.)

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

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM 5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1" material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification.

Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified reports of tests (except Angle of Internal Friction test), are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. All certified report of test results shall be less than 6 months old and performed by a certified independent laboratory.

B.3.2.1 Wall Backfill Type A

For typical wall backfill, 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. Provide the percent by weight, passing the #4 sieve.

B.3.2.2 Wall Backfill Type B

If the project schedule is such that the wall must be constructed during freezing weather, the engineer may allow use of alternate wall backfill materials. The alternate wall backfill materials will only be utilized when approved by the engineer. Alternate Wall Backfill, Type B shall comply with the requirements for Coarse Aggregate No.1 as given in standard spec 501.2.5.4.4. The alternate wall backfill must consist of crushed stone or crushed gravel.

For Alternate Wall Backfill, Type B, provide material conforming to the following gradation requirements as per WisDOT Standard Specifications for Highway and Structure Construction.

Sieve Size	Percentage by Weight Passing
	Size No. 1 Coarse Aggregate, Standard spec 501.2.5.4.4
1”	100
¾”	90-100
3/8”	20-55
#4	0-10
#8	0-5

C Construction

C.1 Excavation and Backfill

Excavation will encompass preparing the leveling pad foundation and the area below the reinforcing strips according to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

C.2 Compaction Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf), or as modified as follows. If the gradation of the granular backfill is such that the P-200 material is less than 7% and the P-40 is less than 30%, a one-point Proctor test can be conducted in place of the 5-point Proctor. To complete this one-point test, compact the sample at a moisture content of 6%, then compute the actual (as-tested) sample moisture after completion of the test. Use Method B or D, and perform this test without removing oversize particles and without correction for coarse particles, as per AASHTO T224. The one-point as-tested moisture content represents the optimum moisture, and the measured one-point density represents the maximum wet density of the material. From these values, the maximum dry density can be computed.

If the engineer allows and approves use of alternate wall backfill material, the compaction of Alternate Wall Backfill Type B (Coarse Aggregate No.1) should be performed with at least three passes of a vibratory compactor in two mutually perpendicular directions (at least 6 passes total), such that with additional compactive effort, no further densification is obtained as visually determined by the engineer. If additional densification is observed after three passes in the two directions, then the material must be re-compacted until no further visual densification is observed. The initial three passes of the compactor must be in the direction parallel to the wall alignment followed by the three passes in the direction perpendicular to the wall alignment. Density testing is not required for Alternate Wall Backfill Type B.

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels.

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 HTCP Level I Grading Technician, Level I Aggregate Technician, or Assistant Certified Aggregate Technician (ACT) present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Level I Nuclear Density Technician or Assistant Certified Nuclear Density Technician (ACT) perform field density and field moisture content testing. The HTCP Level I Grading Technician, Level I Aggregate Technician, or Assistant Certified Aggregate Technician (ACT) must also be present to document and confirm the required number of passes of the compaction equipment for the Alternate Wall Backfill Type B during wall backfill placement and compaction activities.

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. Conform to CMM 8.15 for testing and gauge monitoring methods. Conduct density testing at a minimum frequency of 1 test per 150 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. Density testing is not required for Alternate Wall Backfill Type B.

Perform 1 gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.2) every 2000 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

Observe the compaction and densification process for the Alternate Wall Backfill Type B. The material must be compacted using the minimum number of passes of the compaction equipment until no further densification is obtained as visually determined. Provide documentation that the compaction met the required number of passes of the compaction equipment for the Alternate Wall Backfill Type B.

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 two 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.4.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.

(3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for 10 business days.

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

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

(6) The department will also provide personnel to be onsite and confirm the required number of passes of the compaction equipment for the Alternate Wall Backfill Type B during wall backfill placement and compaction activities on a random basis. This work does not relieve the contractor of the responsibility to observe and document fill placement and compaction as required in C.4.2 and C.4.4.

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 Geotechnical Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP. The department will measure the quantity in square feet adequately installed. Wall area constructed above or below the limits in the plans will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4610	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP	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; constructing the retaining system including drainage system; providing backfill (Type A or Type B), backfilling, compacting, developing/completing/documenting the quality management program, performing compaction testing/observation. 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 temporary return walls, such as a wire face MSE wall, required to facilitate construction of a portion of wall with Backfill Type B is incidental to this bid item.

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.

179. Temporary Wall Wire Faced Mechanically Stabilized Earth LRFD/QMP, Item SPV.0165.4620.

A Description

This special provision describes designing, furnishing materials and erecting a temporary earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract.

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 Wire Faced Mechanically Stabilized Earth Wall Systems

The supplied wall system must be from the department's approved list of Wire Faced Mechanically Stabilized Earth Wall systems (Wire Faced MSE Walls).

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 Wire Faced Mechanically Stabilized Earth (Wire Faced MSE) Wall systems. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract.

To 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 according to the requirements of Chapter 14 of the department's current 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 of the Wire Faced MSE Walls shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5th 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 according to Table 11.5.6-1 LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. 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 according to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided in the wall plans.

The design of the Wire Faced MSE Walls by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits.

The minimum embedment of the Wire Faced MSE wall shall be 1 foot 6 inches, or as given on the contract plan. Frost depth shall not be considered. Additional embedment may be detailed by the contractor, but will not be measured for payment. The wall facings shall be designed according to AASHTO 11.10.2.3. A fine metallic screen and a geotextile filter fabric shall be used at the front face of the wall to retain the fines of the soil mass.

The nominal long term design strength to be used in steel reinforcement and connector design shall consider the corrosion losses and based upon conditions at the end of the design life. The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement shall be the same length from the bottom to the top of each wall section. All soil reinforcement layers shall be connected to facings. The soil reinforcement shall extend 3 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 24 inches. The uppermost layer of the reinforcement shall be located between 6” and 12” 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.

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 Section.

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 the 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 Steel Components

Provide steel reinforcement that meets the following requirements:

- B.3.1.1 Welded Wire Fabric Soil Reinforcement

Provide shop fabricated welded wire reinforcement from cold drawn steel wire that has a yield stress of 65,000 psi and conforming to the minimum requirements of ASTM A-82 and be welded into the finished configuration according to ASTM A-185. Replace welded wire fabric that has been damaged during handling, placing or backfilling at the direction of the engineer, at no expense to the department.

- B.3.1.2 Steel Reinforcing Strips and Tie Strips

As an alternate to Welded Wire Reinforcing mesh, provide Steel Reinforcing strips or ladder Reinforcing strips or equal, hot-rolled from bars, to the required shape and dimensions meeting the requirements of ASTM A-572 Grade 65 minimum. Tie strips shall be shop fabricated of hot-rolled steel meeting the requirements of ASTM A-1011 Grade 50.

- B.3.1.3 Welded Wire Fabric Facing Panels

Provide welded wire fabric that is used to fabricate the facings of the wire-Faced wall that has a yield stress of 65,000 psi. All steel shall be shop fabricated of cold drawn steel wire conforming to the minimum requirements of ASTM A-82 and be welded into the finished configuration according to ASTM A-185. Replace welded wire fabric that has been

damaged during handling, placing or backfilling at the direction of the engineer, at no expense to the department.

- B.3.1.4 Fasteners

High strength bolts meeting the requirements of AASHTO M164 or equivalent.

- B.3.1.5 Connector Pins and Mat Bars

Connector pins and mat bars fabricated from cold drawn steel wire meeting the requirements of ASTM A-82.

- B.3.1.6 Metallic Screen

Provide a steel metallic screen. The metallic screen should have an approximate opening of ¼" and be made of 0.025" (minimum) diameter welded wire.

B.3.2 Geotextile Filter Fabric

Geotextile filter fabric shall be used behind the metallic screen. Provide two layers of geotextile fabric when called for in the plans. Use geotextile as recommended by the wall manufacturer. If none is recommended, use Type DF (schedule B) as shown in standard spec 645 or as specified on the contract plans. Deliver geotextile fabric in a protective wrap and keep it protected from ultraviolet light until it is incorporated into the work.

B.3.3 Backfill

Furnish and place backfill for Wire- Faced MSE wall as shown on the plans and as herein provided.

Provide and use material that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain foundry sand, bottom ash, blast furnace slag, crushed/recycled concrete, crushed/milled asphaltic concrete or other potentially corrosive material.

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

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

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

In addition, backfill material shall meet the following requirements.

Test	Method	Value
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, or as modified by C.1)

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

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM 5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1" material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified report of tests (except Angle of Internal Friction test), are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. All certified report of these test results shall be less than 6 months old and performed by a certified independent laboratory.

C Construction

C.1 Methods

All excavation and preparation of the foundation for the Wire-Faced Mechanically Stabilized Earth wall shall be according to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the bottom of the wall 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 is should rain. Do not stockpile or store any materials or large equipment within 10 feet of the back of the wall.

Stagger vertical joints in the welded wire facing.

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf) or as modified as follows. If the gradation of the granular backfill is such that the P-200 material is less than 7% and the P-40 is less than 30%, a one-point Proctor test can be conducted in place of the 5-point Proctor. To complete this one-point test, compact the sample at a moisture content of 6%, then compute the actual (as-tested) sample moisture after completion of the test. Use Method B or D, and perform this test without removing oversize particles and without correction for coarse particles, as per AASHTO T224. The one-point as-tested moisture content represents the optimum moisture, and the measured one-point density represents the maximum wet density of the material. From these values, the maximum dry density can be computed.

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the wall face.

Erect welded wire facing and other associated elements according to the wall manufacturer's construction guide. Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. Place remaining courses in vertical or battered positions as shown on the contract plans.

The MSE reinforcement shall lay horizontally on 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 obstruction in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater skew angle is shown on the wall shop drawings. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

When the wall is considered temporary (but will have any geotextile material exposed to ultraviolet light for four months or more), or the installation of a permanent wall facing will not occur for four months or more after placement of any geotextile material, cover the exposed geotextile material in the wall as quickly as practical, to prevent damage caused by exposure to ultraviolet light.

C.2 Tolerances

- The overall vertical tolerance of the wall and the horizontal alignment tolerance shall not exceed 3 inches per 10 feet for temporary installations.

- For battered wire facing, the final deviation from the design batter shall be within ±1 inch for each 10 feet of battered wall height.

C.3 Quality Management Program

C.3.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.

C.3.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Level I Grading Technician, Level I Aggregate Technician, or Assistant Certified Aggregate Technician (ACT) present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Level I Nuclear Density Technician or Assistant Certified Nuclear Density Technician (ACT) 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.3.3 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.3.4 Quality Control (QC) Testing

Perform compaction testing on the backfill. Conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 150 cubic yards of backfill, or major portion thereof. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform 1 gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.1) every 2000 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.3.5 Department Testing

C.3.5.1 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 two business days after the department obtains the sample.

C.3.5.2 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.3.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.

(3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for ten business days.

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

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.3.5.3 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.3.5.4.

C.3.5.4 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.4 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Temporary Wire Faced Mechanically Stabilized Earth Wall LRFD/QMP Pilot by the square foot acceptably completed, measured as the vertical area within the pay limits the contract plans show. No other measurement of quantities shall be made in the field. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4620	Temporary Wall Wire Faced Mechanically Stabilized Earth LRFD/QMP	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 constructing the retaining system, including drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, performing compaction testing; and for covering the geotextile. 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.

180. Geogrid Reinforcement, Item SPV.0180.0001.

A Description

This special provision describes furnishing and installing geogrids for subgrade stabilization, base reinforcement, or pavement structure applications in accordance to the plans, standard spec 645, and as hereinafter provided.

B Materials

Provide geogrid that consists of either single or joined multiple layers of a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. Utilize an insect, rodent, mildew, and rot resistant polymer grid consisting of polyester, polypropylene, polyamide, or polyethylene that maintains dimensional stability during handling, placing, and installation. Install geogrid at least 6.0 feet wide.

Provide geogrid that complies with the following physical properties:

Test	Method	Value [1]
Tensile Strength at 5% Strain, Both Principal Directions (lb/ft)	ASTM D 4595 [2]	450 min.
Flexural Rigidity Both Principal Directions (mg-cm)	ASTM D 1388 [3]	150,000 min.
Aperture Area (in^2)	Inside Measurement [4]	5.0 max
Aperture Dimension (in)	Inside Measurement [4]	0.5 min.

- [1] All numerical values represent minimum/maximum average roll values, i.e. the average minimum test results on any roll in a lot should meet or exceed the minimum specified value.

- [2] The tensile strength (T) of a joined multi-layered geogrid shall be computed using the following equation:

$$T = n(f)t$$

where

n = the number of individual layers in the joined multi-layered geogrid,

t = the tensile strength of a single layer of geogrid as determined using testing method ASTM D4595, and

f = reduction factor based on the number of layers comprising the multi-layered system and determined by the equation f=1.00 - [0.04(n - 1)].

- [3] Values shall be determined by Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches ±0.04 inch long. Test specimen widths for differing geogrids shall be variable and equal to one element plus ½ the aperture width on both sides of that element. An element is defined as the minimum number of parallel strands that form a distinguishable repeating pattern.

- [4] Aperture Area and Aperture Dimension for joined multi-layer geogrids shall be determined based on measurement of a single layer of the geogrid.

Protect the geogrid from ultraviolet radiation and from damage due to shipping and handling. Keep the geogrid dry until it is installed. The geogrid rolls shall be clearly marked to identify the material contained.

Deliver a sample of the geogrid material to the engineer at least 10 days prior to its incorporation into the work. At the same time, furnish a manufacturer's Certified Report of Test or Analysis that verifies that the geogrid delivered for use on the work meets the above requirements. Samples of geogrid for test purposes will be obtained from the job site for each 10,000 square yards or portions thereof used on the contract.

C Construction

Prior to placement of the geogrid, bring the indicated placement surface to the required lines, grades, and dimensions as shown on the plans. Smooth and shape the surface to eliminate any rocks, clods, roots, or other items that may cause damage to the geogrid during placement or covering.

Place the geogrid on the prepared surface at the locations and to the limits as shown on the plans. After placement, pull the geogrid taut and secure it using pins, clips, staples, or other devices to prevent movement or displacement. Place parallel strips of geogrid with a

minimum overlap of 24 inches. Lap butt joints between roll ends a minimum of 12 inches. Fasten all lapped sections together by using ties, straps, clips, or other devices to develop a secure joint that meets the approval of the engineer. Do not operate vehicles or construction equipment directly on the geogrid.

Cover small rips, tears, or defects in the geogrid with an additional section of geogrid; secure the additional geogrid in place so it overlaps the damaged area by at least 3 feet in all directions. Remove and replace geogrid sections with large rips, tears, defects, or other damage at the direction of the engineer.
After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the special provisions. Placing, spreading, and compacting of this material shall comply with the applicable sections of the standard specifications or special provisions except that the initial lift of material placed on the geogrid must be at least 4 inches. Place, spread, and compact the required backfill material so the geogrid is not displaced or damaged. The engineer may require changes in equipment and operations to prevent such damage or displacement.

D Measurement
The department will measure Geogrid Reinforcement by the square yard of surface area upon which the geogrid has been placed 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
SPV.0180.0001	Geogrid Reinforcement	SY

Payment is full compensation for furnishing, transporting, and installing the geogrid and for furnishing and installing all devices and materials necessary to join or secure the geogrid in place.

Repair or replacement of damaged or defective geogrid is considered incidental to item.

SEF Rev. 14_1203

181. Seeding Special, Item SPV.0180.0002.

A Description
This work shall consist of storing, mixing, sowing and raking the seed mix provided under Seed Mix, Special, in the Streambank/Floodplain Zone shown on the plans or as directed by the engineer. All seeding shall be done according to the requirements hereinafter provided.

B (Vacant)

C Construction

C.1 General

Seed shall be mixed at the project site by the contractor according to the seeding schedules specified under the item of Seed Mix Special, or as directed by the engineer. Sowing shall be accomplished after April 1 and prior to July 1 for a spring seeding or between October 15th and November 15th for a dormant fall seeding. Seeding shall not take place in flooded areas or when conditions are otherwise unsatisfactory for seeding. The contractor shall give the engineer 5 working days' notice prior to any seeding activities.

Sowing

Seed shall be mixed and sown on the same day and shall be accomplished using Method A in the standard specifications and the following additional techniques, or as directed by the engineer. The seed shall be sown in a direction normal to the first pass. Any areas within the Streambank/Floodplain zone that are not accessible with mechanical equipment shall be hand seeded and hand raked.

Streambank /Floodplain Planting Zone

Native seed shall be sown at a rate of 12 pounds per acre. Cover crop shall be sown at a rate of 35 pounds per acre. Seed shall be mixed with moist sand or sawdust on site prior to seeding. The contractor shall provide water on site to moisten the sand or sawdust. A ratio of one part moist sand or moist sawdust to one part native seed mix by volume shall be used. After seeding, the area shall be lightly raked to cover the seed with approximately 1/2-inch of soil.

D Measurement

The department will measure Seeding, Special by the area seeded in square yards, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0002	Seeding Special	SY

Seeding, Special, measured as provided above, shall be full compensation for handling, on-site storage of seed, weighing, mixing, sowing and raking; for supplying water, sand, and/or sawdust for mixing seed.

182. Seed Bed Preparation, Item SPV.0180.0003.

A Description

Prepare the seed bed for planting in the Streambank/Floodplain, Wet Meadow, and Upland Planting Zones as shown on the plan and as hereinafter provided. Some seeding zones may contain areas that will not require seed bed preparation. Prior to Seed Bed Preparation, the engineer will identify these areas.

B (Vacant)

C Construction
Notify the engineer five working days' notice prior to any discing. The contractor shall work the upper 6 inches of topsoil at locations specified in the plan until the size of existing vegetation, stalks, leaves and other biomass does not exceed 6 inches in size, or as directed by the engineer. Discing shall be performed no more than seven days prior to the time of seeding or as directed by the engineer. If planting does not occur within seven days following discing, specified discing shall be repeated, to ensure a proper seeding surface. Once discing has been performed, driving over the disced area with equipment or vehicles prior to seeding activities shall be prohibited.

D Measurement
The department will measure Seed Bed Preparation in area by the square yard, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0003	Seed Bed Preparation	SY

Seed Bed Preparation, measured as provided above, shall be payment in full for discing the seed bed; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

183. Coarse Aggregate Mix for Stream Bed, Item SPV.0195.0001.

Work under this item shall be done according to standard spec 606, modified as follows.

A Description
Furnish and place the Coarse Aggregate Mix at the locations shown on the plans, or as directed by the engineer.

B Materials
Coarse Aggregate Mix material furnished and used in this work shall be natural, rounded, uncrushed coarse aggregate. The mix shall consist of roughly 75% number 2 stone and 25% 3/8-inch pea gravel, thoroughly mixed. The mix must be approved by the engineer prior to installation.

C Construction
Thoroughly compact the Coarse Aggregate Mix as construction progresses. The finished surface shall present an even, tight surface.

D Measurement

The department will measure the Coarse Aggregate Mix for Stream Bed by the tons in place and completed work, and the quantity thereof to be paid for shall be the summation of tons of such Coarse Aggregate Mix incorporated in the work, according to the contract. Only accepted work will be measured for payment and the computation of the quantity thereof will be based on the volume within the limiting dimensions designated on the plans, in the contract, or as established by the engineer.

E Payment

This item, measured as provided above, will be paid for at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.0001	Coarse Aggregate Mix for Stream Bed	TON

Payment is full compensation for furnishing and placing Coarse Aggregate Mix.

184. Excavation, Hauling, and Disposal of Creosote Contaminated Soil, Item SPV.0195.4000.

A Description

A.1 General

This special provision describes excavating, stockpiling for testing, loading, hauling, and disposing of creosote contaminated soil at a landfill. The closest landfills to the project would be the following:

Waste Management Orchard Ridge Landfill
N96W13503 County Line Road
Menomonee Falls, WI 53051
(262) 532-6200

Advanced Disposal Emerald Park Landfill
W124S10629 South 124th Street
Muskego, WI 53150
(414) 529-1360

Perform this work according to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2 Notice to the Contractor – Contaminated Soil Location(s)

The department assumes that soil in the immediate vicinity of pre-existing creosote treated wooden bridge piles is contaminated due to exposure to residual wood preservatives. Due to structural impediments, representative analytical testing of this soil is not practical prior to bridge demolition and subsequent structure excavation. As such, the soil located in the

following locations and as shown of the plans will require temporary stockpiling within the right-of-way and analytical testing for landfill acceptance:

1. Existing Bridge B-40-226: West Abutment. Soil at this location is contaminated with residual creosote-based wood preservatives. Approximately 453 cubic yards (approximately 770 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated from this location.

2. Existing Bridge B-40-226: Piers 1, 2, and 3. Soil at each of these locations is contaminated with residual creosote-based wood preservatives. Approximately 73 cubic yards (approximately 125 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated from each of these locations.

3. Existing Bridge B-40-226: East Abutment. Soil at this location is contaminated with residual creosote-based wood preservatives. Approximately 442 cubic yards (approximately 752 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated from this location.

4. Existing Bridge B-40-225: West Abutment. Soil at this location is contaminated with residual creosote-based wood preservatives. Approximately 453 cubic yards (approximately 770 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated from this location.

5. Existing Bridge B-40-225: Piers 1, 2, and 3. Soil at each of these locations is contaminated with residual creosote-based wood preservatives. Approximately 73 cubic yards (approximately 125 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated from each of these locations.

6. Existing Bridge B-40-225: East Abutment. Soil at this location is contaminated with residual creosote-based wood preservatives. Approximately 442 cubic yards (approximately 752 tons at an estimated 1.7 tons per cubic yard) of contaminated soil will be excavated from this location.

For further information regarding the handling and disposal of this contaminated soil material please contact:

Name:	Andrew Malsom
Address:	141 NW Barstow St. Waukesha, WI 53187
Phone:	(262) 548-6705
E-mail:	Andrew.Malsom@dot.wi.gov

A.3 Coordination
Coordinate work under this contract with the environment consultant:

Consultant:	TRC Environmental Corporation
Address:	150 N. Patrick Blvd. Ste. 180, Brookfield, WI 53045
Contact:	Bryan Bergmann, P.G.
Phone:	(262) 879-1212
Fax:	(262) 879-1220

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil as expressed on the project plans and described in the this special provisions;
2. Providing field support during excavation activities;
3. Coordinating lab testing for landfill acceptance;
4. Identifying contaminated soils to be hauled to the landfill;
5. Obtaining landfill permitting and documentation of proper landfill disposal; and
6. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of treated wood pilings to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in each of the contaminated areas.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the areas of treated wood pilings. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed.

Identify the landfill that will be used for disposal of contaminated soils, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.4 Health and Safety Requirements
Add the following to standard spec 107.1:

During excavation activities, expect to encounter soil contaminated with Polycyclic aromatic hydrocarbons (PAHs) and Semi-volatile organic compounds (SVOCs). Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health

and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction
Add the following to standard spec 205.3:

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated.

Excavate the contaminated soil in the areas shown in the plan. Stockpile the material within the project footprint on DOT right-of-way, pending lab results and landfill acceptance. Construct and maintain a temporary stockpile of the material according to NR 718.05(3), including, but not limited to, placement of the contaminated soil/fill material on an impervious surface and covering the stockpile with impervious material to prevent infiltration of precipitation.

The environmental consultant will coordinate analytical testing of contaminated soil for landfill acceptance. Five business days should be allowed for the laboratory to conduct this testing and issue results. In the event the laboratory analytical test results do not indicate contamination is present, the stockpiled material may be considered common excavation and can be handled according to the erosion control implementation plan (ECIP).

Once landfill acceptance permitting is complete, directly load and haul soils to the landfill as directed by the environmental consultant. Use loading and hauling practices that are appropriate to prevent any spills or releases of contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site bioremediation so as not to contain free liquids. Verify that the vehicles used to transport contaminated material are licensed for such activity according to applicable state and federal regulations.

When material is encountered outside the above-identified limits of assumed contamination that appears to have been impacted with petroleum or chemical products, or when other obvious potentially contaminated materials are encountered or material exhibits characteristics of industrial-type wastes, such as fly ash, foundry sand, and cinders, or when underground storage tanks are encountered, suspend excavation in that area and notify the engineer and the environmental consultant.

Groundwater may be present within the construction limits. Water generated during dewatering operations (if necessary) is expected to be permitted to discharge to the surface except in the contaminated areas. Contaminated groundwater generated from dewatering activities within the contaminated areas may exceed the surface water discharge limits for petroleum compounds specified in the DNR's "General Permit to Discharge under the Wisconsin Pollutant Discharge Elimination System" for "Contaminated Groundwater from Remedial Action Operations" (WPDES Permit No. WI-0046566-5), Table 3.1.

Employ construction methods and techniques in a manner that will minimize the need for dewatering, and if dewatering is required, minimize the volume of water generated. Take measures to limit groundwater, surface water, and precipitation from entering and exiting excavations in the areas of contamination. Such measures, which may include berming, ditching, or other means, shall be maintained until construction of utilities in the areas of contamination are complete.

Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities. Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statues, judiciary decisions, and regulations of the State of Wisconsin.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Creosote Contaminated Soil in tons of contaminated soil, accepted by the landfill as documented by weight tickets generated by the landfill.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.4000	Excavation, Hauling, and Disposal of Creosote Contaminated Soil	TON

Payment is full compensation for excavating, stockpiling, loading, and hauling the contaminated soil to a landfill; obtaining solid waste collection and transportation service operating licenses; and dewatering of soils prior to transport, if necessary.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 15 *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __8__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3

DISADVANTAGED BUSINESS ENTERPRISE [DBE] PROGRAM IMPLEMENTATION

1. Description

a. The federal DBE program requirements outlined in the Code of Federal Regulations at 49 CFR Part 26 apply to this Wisconsin Department of Transportation contract. WisDOT is a recipient of federal funds and this contract includes federal funds. United States Department of Transportation Federal DBE Program requires the following provisions:

(1) Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE regulations will be considered a material breach of contract. This is non-negotiable. If a contractor fails to carry out the DBE program and Title VI nondiscrimination requirements of its contracts, the following sanctions will be assessed depending upon the facts, reasoning, severity and remedial efforts of the contractor: termination of contract, withholding payment, assessment of monetary sanctions, assessment of liquidated damages and/or suspension/debarment proceedings that may result in the disqualification of the contractor from bidding for a designated period of time.

(2) The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the federal fund recipient's [DOT] written consent. Unless [WisDOT] consent is provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

b. The Wisconsin Department of Transportation [WisDOT] is committed to the compliant administration of the DBE Program. Each WisDOT Secretary affirms this commitment with his/her signed assurance. http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/policy-statement.pdf

(1) The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:
   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

(2) Wisconsin DOT identifies the assigned DBE goal in its contract advertisements and posts the contract DBE goal on the cover of the bidding proposal. The contractor can meet the assigned, specified contract DBE goal by subcontracting work to a DBE or by procuring services or materials from a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

(3) For more comprehensive information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

2. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

a. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.

b. **DBE:** A small business certified as disadvantaged business enterprise (DBE) under the federal DBE program and included on the Wisconsin UCP DBE Directory deemed ready, willing and able.

c. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.

d. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.

e. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.

f. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. The bid percentage should demonstrate the efforts of the prime contractor prior to bid. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. WisDOT Interpretation of Federal DBE Program Provision

Prime contractors must utilize the specific DBEs listed to perform the work and/or supply the materials for which each is listed on the Commitment to Subcontract to DBE Form [DT1506] and approved by WisDOT's DBE office to execute its contract. The approved Commitment to Subcontract to DBE Form [DT1506] becomes a contract document/record.

a. **Department's DBE Evaluation Process**
WisDOT evaluates DBE using the Commitment to Subcontract to DBE, payments to subcontractors and contract documentation. The prime contractor shall list the specific DBE certified firms and items of work s/he intends to use toward the fulfillment of the assigned DBE contract goal. The prime contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved Form DT1506.

b. **Documentation Submittal**
The contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506]. Effective January 1, 2017, the contractor will be required to submit the documentation within 5 business days after bid opening. All necessary supporting documentation including Attachment 'A' forms and/or Good Faith Efforts Form

[DT1202] must be submitted no later than 2 business days from contractor's initial submission of the DT 1506. The contractor must provide a signed Attachment 'A' form to the DBE office within the time limit in order to receive authorization for contract execution; the DBE office reserves the right accept alternate documentation in lieu of the signed form in extenuating circumstances. Documentation must be submitted to the DBE Office by email at DBE_Alert@dot.wi.gov (DBE_Alert@dot.wi.gov) or by postal mail ATTN: DBE Office, PO Box 7965, Madison, WI 53707-7965.

(1) **Bidder Meets DBE Goal**
If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage calculation. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

(2) **Bidder Does Not Meet DBE Goal**

i. If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Efforts Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith efforts submission.

ii. The department will evaluate the bidder's good faith effort request and notify the bidder of one of the following:

(a) If the department grants a good faith efforts, the bid is eligible for contract execution with respect to DBE commitment.

(b) If the department rejects the good faith efforts request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith efforts request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

c. **Bidder Fails to Submit Documentation**
If the contractor fails to furnish the Commitment to Subcontract to DBE Form [DT1506] within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

5. Department's Criteria for Good Faith Effort

Appendix A of 49 CFR Part 26, is the guiding regulation concerning good faith efforts. However, the federal regulations do not explicitly define "good faith" but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own practices to create a process for making a determination of adequate good faith. WisDOT evaluates good faith on a contract basis just as each contract award is evaluated individually.

The department will only approve a contractor's good faith efforts if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith efforts will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

a. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

b. Prime Contractors should:

(1) Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT- approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

(2) Prime contractors may request assistance with DBE outreach and follow-up by contacting the department's DBE Support Services Office by phone or email request at least 14 days prior to the bid letting date. Requesting assistance with outreach is not a decisive factor in the review Good faith effort evaluation. Phone numbers are 414-438-4584 and/or 414-659-0487; Fax: 414-438-5392; E-mail: DOTDBESupportServices@dot.wi.gov.

(3) Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, as required by federal rules. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

i. Solicit quotes from certified DBE firms who match 'possible items to subcontract' using all reasonable and available means. Additionally, forward copies of solicitations highlighting the work areas for which you are seeking quotes to DOTDBESupportServices@dot.wi.gov.

ii. SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.

(a) Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

(b) Solicit quotes at least 10 calendar days prior to the letting date, at least two Fridays before the letting, to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking if they need help organizing their quote, assistance confirming equipment needs, or other assistance supporting their submission of a competitive quote for their services.

(c) Second solicitation should take place within 5 calendar days. Email and SBN are the preferred delivery of the follow-up solicitation.

iii. Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

iv. When potential exists, the contractor should advise interested DBE firms on how to obtain bonding, line of credit or insurance if requested.

v. Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

(a) Email to all prospective DBE firms in relevant work areas.

(b) Phone call log to DBE firms who express interest via written response or call.

(c) Fax/letter confirmation

(d) Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

c. Evaluate DBE quotes Documentation is critical if a prime does not utilize the DBE firm's quote for any reason.

(1) Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE by phone and email regarding their ability to perform the work indicated in the UCP directory listed as their work area by NAICS code. Only the work area and/or NAICS code listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.

(2) In striving to meet an assigned DBE contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

(3) **Special Circumstance** - Evaluation of DBE quotes with tied bid items. “Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as ‘all or none’ quote to the prime.” When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms’ quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

i. Compare bid items common to both quotes, noting the reasonableness in the price comparison.
ii. Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

d. Immediately after notification of contract award, the prime submits all **'Commitment to Subcontract'** forms to the DBE Office. Prime contractor has 5 days to submit the completed form for the DBE firms it intends to use on the contract for DBE credit. If the goal is not met in full, the prime contractor must provide the following information along with WisDOT form DT1202: Certificate of Good Faith Efforts.

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact.
(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.
(3) Photocopies or electronic copies of all written solicitations to DBE's. A printed copy of SBN solicitation is acceptable.
(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.
(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

The prime contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved Commitment to Subcontract to DBE Form [DT1506]. If the prime contractor utilizes another contractor, including the use of its own workforce, to perform the work assigned to a DBE on the approved DT1506, the prime contractor will not be entitled to payment for that work. Any changes to DBE after the approval of the DT1506 must be reviewed and approved by the DBE office prior to the change.

6. Use of Joint Checks

The *use of joint checks is allowable if it is a commonly recognized business practice in* the material industry. A joint check is defined as a two-party check between a DBE, a prime contractor and the regular dealer of materials supplier who is neither the prime nor an affiliate of the prime. Typically, the prime contractor issues one check as payor to the DBE subcontractor and to the supplier jointly (to guarantee payment to the supplier) as payment for the material/supplies used by the DBE in cases where the prime has submitted the DBE and material for DBE credit. The DBE subcontractor gains the opportunity to establish a direct contracting relationship with the supplier to potentially facilitate a business rapport that results in a line of credit or increased partnering opportunities.

The cost of material and supplies purchased by the DBE is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE must be responsible for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and "paying for the material itself." See 49 CFR 26.55(c)(1).

The approval to use joint checks constitutes a commitment to provide further information to WisDOT, upon request by staff. WisDOT will allow the use of joint checks when the following conditions are met:

a. The Prime must request permission to use joint checks from the DBE Office by submitting the Application to Use Joint Checks.
   (1) Request should be made when the DBE Commitment form or Request to Sublet is submitted; the request will not be considered if submitted after the DBE Subcontractor starts its work.
   (2) Approval/Permission must be granted prior to the issuance of any joint checks.
   (3) The payment schedule for the supplier must be presented to the DBE office before the first check is issued.
   (4) The joint check for supplies must be strictly for the cost of supplies.

b. DBE subcontractor is responsible to furnish and/or install the material/work item. The DBE subcontractor shall not be an 'extra participant' in the transaction; the DBE's role in the transaction cannot be limited solely to signing the check(s) to release payment to the material supplier. At a minimum, the DBE subcontractor's tasks should include the following.
   (1) The DBE subcontractor (not the prime/payor) negotiates the quantities, price and delivery of materials;
   (2) The DBE subcontractor consents to sign/release the check to the supplier by signing the Application to Use Joint Checks after establishing the conditions and documentation of payment within the subcontract terms or in a separate written document.

c. The Prime contractor/payor acts solely as a guarantor,
   (1) The prime agrees to furnish the check used for the payment of materials/supplies under the contract.
   (2) The prime contractor/payor cannot require the subcontractor to use a specific supplier or the prime contractors negotiated unit price.

7. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith effort submission. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so requested. Failure to appeal within 7 calendar days after receiving the department's written denial notice of a good faith effort evaluation constitutes a forfeiture of the bidder's right of appeal. A contract cannot be executed without documentation that the DBE provisions have been fulfilled.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 5 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

8. Department's Criteria for DBE Participation

Directory of DBE firms

a. The only resource for DBE certified firms certified in the state of Wisconsin is the Wisconsin Unified Certification Program [UCP] DBE List. Wisconsin Department of Transportation maintains a current list of certified DBE firms titled Wisconsin UCP DBE Directory on the website at:
   http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx

b. The DBE office is also available to assist at 414-438-4583 or 608-267-3849.

9. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine whether the work that is committed and/or contracted to a DBE certified firm can be counted for DBE credit by referencing the work type and NAICS code listed for the DBE firm on the Wisconsin UCP DBE Directory.

g. It is the prime contractor’s responsibility to assess the DBE firm’s ability to perform the work for which s/he is committing/contracting the DBE to do. Note that the department encourages the prime contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

10. Commercially Useful Function

a. Commercially useful function is evaluated after the contract has been executed, while the DBE certified firm is performing its work items. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved.

b. The department uses Form DT1011: DBE Commercially Useful Function Review and Certification to evaluate whether the DBE is performing a commercially useful function. WisDOT counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

c. A DBE is performing a commercially useful function if the following conditions are met:
   (1) For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
   (2) For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

11. Credit Evaluation for Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

12. Credit Evaluation for Manufacturers, Suppliers, Brokers

The department will calculate the amount of DBE credit awarded to a prime using a DBE firm for the provisions of materials and supplies on a contract-by-contract basis. The department will count the material and supplies that a DBE provides under the contract for DBE credit based on whether the DBE is a manufacturer, supplier or broker. Generally, DBE crediting measures and evaluates the DBE owner's role, responsibility and contribution to the transaction: maximum DBE credit when the DBE manufactures materials or supplies; DBE credit decreases when the DBE solely supplies material and minimal credit is allotted when the DBE's role is administrative or transactional.

It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

a. Manufacturers
   (1) A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.
   (2) If the materials or supplies are obtained from a DBE manufacturer, count **100%** percent of the cost of the materials or supplies toward DBE goals.

b. Regular Dealers of Material and/or Supplies
   (1) A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.
   (2) If the materials or supplies are purchased from a DBE regular dealer, count **60%** percent of the cost of the materials or supplies toward DBE goals.
   (3) At a minimum, a regular dealer must meet the following criteria to be counted for DBE credit:
      i. The DBE firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
      ii. The DBE firm must both own and operate distribution equipment for the product--bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt. If some of the distribution equipment is leased, the lease agreement must accompany the DBE Commitment form for evaluation of the dealer's control before the DBE office approves the DBE credit.

c. Brokers, Transaction Expediters, Packagers, Manufacturers Representatives
   (1) No portion of the cost of the materials, supplies, services themselves will count for DBE credit; however, WisDOT will evaluate the fees or commissions charged when a prime purchases materials, supplies or services from a DBE certified firm which is neither a manufacturer nor a regular dealer, namely: brokers, packagers, manufacturers' representatives or other persons who arrange or expedite transactions.
   (2) Brokerage fees have historically been calculated as **10%** of the purchase amount.
   (3) WisDOT may count the amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site.
   (4) The evaluation will review the contract need for the item/service, review the sub-contract or invoice for the item/service, compare the fees customarily allowed for similar services to determine whether they are reasonable.

When DBE suppliers are contracted, additional documentation must accompany the DT1506 and Attachment 'A' forms. An invoice or bill-of-sale that includes the company names of the bidder and the DBE supplier and documentation of the calculations used as the basis for the purchase agreement, subcontract or invoice. *WisDOT recognizes that the amount on the Attachment 'A' form may be more or less than the amount on the invoice*. Please respond to the following questions and submit with your DBE Commitment Form.

1. What is the product or material?
2. Is this item in the prime's inventory or was the item purchased when contract was awarded?
3. Which contract line items were referenced to develop this quote?
4. What is the amount of material or product used on the project?

13. Credit Evaluation for DBE Primes

Wisconsin DOT calculates DBE credit based on the amount and type of work performed by DBE certified firms. If the prime contractor is a DBE certified firm, the department will only count the work that DBE prime contractor performs with its own forces for DBE credit. We will also calculate DBE credit for the work performed by any other DBE certified subcontractor, DBE certified supplier, DBE certified manufacturer on that contract in that DBE's approved work areas/NAICS code. Crediting for manufacturers and suppliers is calculated consistent with paragraph 12 of this document and 49 CFR Part 26.

14. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces for DBE credit.

15. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will count for credit the portion of the work performed by the DBE protégé firm.

b. DBE credit will be evaluated and confirmed by the DBE Office for any contracts on which the mentor protégé team identifies itself to the DBE Office as a current participant of the Mentor Protégé Program.

c. Refer to WisDOT's Mentor Protégé guidelines for guidance on the number of contracts and amount of DBE credit that can be counted on any WisDOT project.

16. DBE Replacement or Termination

Contractual Requirement

The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent from the Department's DBE Office. If the Department does not provide consent to replace or terminate a DBE firm, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

Contractor Considerations

a. A prime contractor cannot terminate and/or replace a DBE subcontractor listed on the approved Commitment to Subcontract to DBE Form [DT1506] without prior written consent from the DBE Office. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

b. If a prime contractor feels it is necessary to replace or terminate a DBE firm that has been approved for DBE credit toward its contract, s/he will be required to provide reasons and documentation to support why the prime cannot fulfill the contractual commitment that it made to the Department regarding the DBE utilization.

c. Prime contractor is required to make affirmative efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the assigned DBE contract goal.

d. In circumstances when a DBE subcontractor fails to complete its work on the contract for any reason or is terminated from a contract, the prime contractor is expected to make affirmative efforts to maintain its commitment to the assigned DBE goal.

e. The DBE firm should communicate with the prime contractor regarding its schedule and capacity in the context of the contract. If the DBE anticipates that it cannot fulfill its subcontract, s/he shall advise the prime contractor and suggest a DBE that may replace their services or provide written consent to be released from its subcontract.

(1) Before the prime contractor can request to terminate or substitute a DBE firm; s/he must:
   i. Make every effort to fulfill the DBE commitment by working with the listed DBE to ensure that they are fully knowledgeable of your expectations for successful performance on the contract. Document these efforts in writing.
   ii. If those efforts fail, provide written notice to the DBE subcontractor of your *intent to* request to terminate and/or replace the firm including the reason(s) you want to pursue this action.
   iii. Copy the DBE Office on all correspondence related to changing a DBE firm who has been approved for DBE credit on a contract including the preparation and coordination efforts with the DBE on the contract.
   iv. Clearly state the amount of time the DBE firm has to remedy and/or respond to your notice of intent to replace/terminate their firm from the contract. The DBE shall be allowed five days to respond, in writing. **EXCEPTION:** The prime contractor must provide a verifiable reason for a response period shorter than five days. For example a WisDOT project manager must verify that waiting 5 days for a DBE performing traffic control work to respond would affect the public safety.
   v. The DBE subcontractor must forward a written response to the prime contractor and copy the DBE Office. The written response must outline why it objects to the proposed termination of its subcontract and list the reasons that WisDOT should not approve the request for their firm to be replaced or removed from the contract.

The Request to Replace or Terminate a DBE

The prime contractor must provide a written request to replace or terminate a DBE firm that has been approved for DBE credit on a WisDOT contract. The written request can be an email or printed document delivered by email or fax; at minimum, the request must contain the following:

1. Contract ID number.
2. Wisconsin DOT Contract Project Manager name and contact information.
3. DBE name and work type and/or NAICS code.
4. Contract's progress schedule.
5. Reason(s) for requesting that the DBE be replaced or terminated.
6. Attach/include all communication with the DBE to deploy/address/resolve work completion,

WisDOT will review your request and any supporting documentation that you submit to evaluate whether the circumstance and the reasons constitute a good cause for replacing or terminating the DBE that was approved for DBE credit on that contract.

Examples of Good Causes to Replace a DBE according to the federal DBE program guidelines {49 CFR part 26.53}

- The listed DBE subcontractor fails or refuses to execute a written contract.
- The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor.
- The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements.
- The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness.
- The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- You have determined that the listed DBE subcontractor is not a responsible contractor.
- The listed DBE subcontractor voluntarily withdraws from the project and provides to you written notice of its withdrawal.
- The listed DBE is ineligible to receive DBE credit for the type of work required.
- A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract.

Evaluation and Response to the Request
If WisDOT determines that your reasons comply with the good cause standards; the DBE office will send the prime contractor and the WisDOT project manager an email stating that we concur with the reasons and approve the replacement or termination.

If WisDOT determines that your reasons do not comply with the good cause standards of the federal DBE program, the DBE Office will send the prime contractor an email that includes *the requirement* to utilize the committed DBE, *remedial actions* to support the completion of the contractual commitment, a list of available WisDOT support services *and administrative remedies that may be invoked* for failure to comply with federal DBE guidelines for DBE replacement.

The Wisconsin Department of transportation contact for all actions related to replacing a DBE is the DBE Program Chief and/or the DBE Program Engineer which can be reached at DBE_Alert@dot.wi.gov or by calling 608-267-3849.

17. DBE Utilization beyond the approved DBE Commitment Form DT1506

If the Prime/subcontractor increases the scope of work for a participating DBE or adds a DBE subcontractor that was not on the approved Form DT1506 at any time after contract award, s/he should follow these steps so that the participation can be accurately credited toward the DBE goal.

a. Send an email to the DBE Engineer at DBE_Alert@dot.wi.gov describing the work to be performed by the new DBE including the proposed schedule or duration, DBE name and contact information. You may also call the DBE Engineer at 414-659-0487 to notify him of the change verbally.
If the scope change added work for a participating DBE; list the date and reason for the scope change.

b. Forward a complete, signed Attachment 'A' form to the DBE Office at DBE_Alert@dot.wi.gov. A complete Attachment A includes DBE contact information, signature, subcontract value and proper description of the work areas to be performed by the DBE.
The DBE office will confirm the DBE participation and revise the DT1506 based on the email/discussion and attach the new/revised Attachment A to the Contract record/documentation.

18. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors that were committed to equal work items, in the original contract.

19. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO:	DBE FIRMS
FROM:	POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR
SUBJECT:	**REQUEST FOR DBE QUOTES** **LET DATE & TIME**
DATE:	MONTH DAY YEAR
CC:	DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternatives are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have someone contact me at this number

Prime Contractor 's Contact Person	DBE Contractor Contact Person
Phone:	Phone
Fax:	Fax
Email:	Email

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternatives are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance.
- Participate in speed networking and mosaic exercises as arranged by DBE office.
- Host information sessions not directly associated with a bid letting.
- Participate in a formal mentor protégé or joint venture with a DBE firm.
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings.
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods.
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you.
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs.
- Participate on advisory and mega-project committees.
- Sign up to receive the DBE Contracting Update.
- Consider membership in relevant industry or contractor organizations.
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities.
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively.
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal.
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract.
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities.
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a

contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription.
Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.

2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request.
    d. Add attachments to sub-quotes.

3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing.

4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses.
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively.
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency).

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.

2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes.
    c. Add attachments to a sub-quote.

3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.

4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on a per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder.
    c. Add attachments to a sub-quote.
    d. Add unsolicited work items to sub-quotes that you are responding to.

5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime.
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses.

6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588.

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISIONS 5

Fuel Cost Adjustment

A Description

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

B Categories of Work Items

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

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

C Fuel Index

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

The base Fuel Index (BFI) for this contract is $1.50 per gallon.

D Computing the Fuel Cost Adjustment

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

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

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

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

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

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

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

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

E Payment

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

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

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

109.1.1.2 Bid Items Designated as Pay Plan Quantity

Replace the entire text with the following effective with the June 2017 letting:

109.1.1.2.1 General

(1) If the schedule of items designates a bid item with a **P** in the item description, the department will use the plan quantity, the approximate quantity the schedule of items shows, for payment unless one or both of the following occurs:

- Scope changes regardless of the magnitude of the revised work.
- Errors and omissions that affect the plan quantity.

109.1.1.2.2 Scope Changes

(1) For engineer-directed quantity increases, the engineer will issue a contract change order for extra work, establish the cost of the added work as specified in 109.4, and measure the revised work. For engineer-directed quantity decreases, the engineer will issue a contract change order to adjust the plan quantity under the designated bid item.

109.1.1.2.3 Errors and Omissions

(1) The engineer may issue a change order under 105.4(5) to adjust the plan quantity for an error or omission and may revise the contract unit price as specified in 109.4.

305.2.1 General

Replace paragraph two with the following effective with the June 2017 letting:

(2) Where the contract specifies or allows 1 1/4-inch base, do not place reclaimed asphalt, reprocessed material, or blended materials below virgin aggregate materials unless the contract specifies or the engineer allows in writing.

310.2 Materials

Replace paragraph three with the following effective with the June 2017 letting:

(3) Do not place reclaimed asphalt, reprocessed material, or blended materials below open-graded base unless the contract specifies or the engineer allows in writing.

320.3.1.1 Consolidating, Finishing, and Curing

Replace paragraph two with the following effective with the June 2017 letting:

(2) Cure concrete base as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.9.

390.3.2 Concrete Patching

Replace paragraph two with the following effective with the June 2017 letting:

(2) Cure exposed patches as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.9. Protect as specified for concrete pavement in 415.3.14. Open to traffic as specified for concrete base in 320.3.

390.3.4 Special High Early Strength Concrete Patching

Replace the entire text with the following effective with the June 2017 letting:

(1) Construct as specified for special high early strength repairs under 416.3.8 except as follows:

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

(2) Cure exposed patches as specified for concrete pavement in 415.3.12. Use wax-based curing compound conforming to 501.2.9. Do not apply excess curing compound that could cause slippery pavement under traffic.

440.3.5.2 Corrective Actions for Localized Roughness

Replace paragraph two with the following effective with the September 2016 letting:

(2) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without physically riding that work. The engineer will not direct corrective action on bridges without authorization from the department's bureau of structures.

450.3.1.1.4 Recording Truck Loads

Replace the entire text with the following effective with the December 2016 letting:

(1) If not using automatic batch recording, install a digital recorder as part of the platform truck or storage silo scales. Ensure that the recorder can produce a printed digital record of at least the gross or net weights of delivery trucks. Provide gross, tare, net weights, load count, and the cumulative tonnage; the date, time, ticket number, WisDOT project ID, and mix 250 number; and the mix type including the traffic, binder, and mix designation codes specified in 460.3.1. Ensure that scales cannot be manually manipulated during the printing process. Provide an interlock to prevent printing until the scales come to rest. Size the scales and recorder to accurately weigh the heaviest loaded trucks or tractor-trailers hauling asphaltic mixture. Ensure that recorded weights are accurate to within 0.1 percent of the nominal capacity of the scale.

(2) Ensure that tickets identify additives not included in the mix design submittal. Indicate on the ticket if the mixture will be placed under a cold weather paving plan and identify the warm mix additive and dosage rate required under 450.3.2.1.2.2.

455.3.2.1 General

Replace paragraph one with the following effective with the December 2016 letting:

(1) Apply tack coat only when the air temperature is 32 F or more unless the engineer approves otherwise in writing. Before applying tack coat ensure that the surface is reasonably free of loose dirt, dust, or other foreign matter. Do not apply to surfaces with standing water. Do not apply if weather or surface conditions are unfavorable or before impending rains.

460.2.1 General

Replace the entire text with the following effective with the December 2016 letting:

(1) Furnish a homogeneous mixture of coarse aggregate, fine aggregate, mineral filler if required, SMA stabilizer if required, recycled material if used, warm mix asphalt additive or process if used, and asphaltic material. Design mixtures conforming to table 460-1 and table 460-2 to 4.0% air voids to establish the aggregate structure.

(2) Determine the target JMF asphalt binder content for production from the mix design data corresponding to 3.0% air voids (97% Gmm) target at the design the number of gyrations (Ndes). Add liquid asphalt to achieve the required air voids at Ndes.

(3) For SMA, determine the target JMF asphalt binder content for production from the mix design data corresponding to 4.0% air voids (96% Gmm) target at Ndes.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the December 2016 letting:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent[1]	+1.3/-1.0	+1.0/-0.7
VMA in percent[2]	- 0.5	- 0.2

[1] For SMA, JMF limits are +/-1.3 and warning limits are +/-1.0.

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

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace paragraph one with the following effective with the December 2016 letting:

(1) The contractor may request adjustment of the JMF according to CMM 8-36.6.13.1. Have an HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have a certified Hot Mix Asphalt, Mix Design, Report Submittals technician review the proposed adjustment and, if acceptable, issue a revised JMF.

460.2.8.3.1.6 Acceptable Verification Parameters

Replace paragraph one with the following effective with the December 2016 letting:

(1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:

- Va is within a range of 2.0 to 4.3 percent. For SMA, Va is within a range of 2.7 to 5.3 percent.
- VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.

460.3.3.1 Minimum Required Density

Replace paragraph one with the following effective with the December 2016 letting:

(1) Compact all layers of HMA mixture to the density table 460-3 shows for the applicable mixture, location, and layer.

TABLE 460-3 MINIMUM REQUIRED DENSITY[1]

LOCATION	LAYER	PERCENT OF TARGET MAXIMUM DENSITY		
		MIXTURE TYPE		
		LT and MT	HT	SMA[5]
TRAFFIC LANES[2]	LOWER	93.0[3]	93.0[4]	___
	UPPER	93.0	93.0	___
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	93.0[3]	93.0[4]	___
	UPPER	93.0	93.0	___
SHOULDERS & APPURTENANCES	LOWER	91.0	91.0	___
	UPPER	92.0	92.0	___

[1] The table values are for average lot density. If any individual density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer may investigate the acceptability of that material.

[2] Includes parking lanes as determined by the engineer.

[3] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[4] Minimum reduced by 1.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[5] The minimum required densities for SMA mixtures are determined according to CMM 8-15.

460.5.2.1 General

Replace paragraph six with the following effective with the December 2016 letting:

(6) If during a QV dispute resolution investigation the department discovers mixture with 1.5 > Va > 5.0 or VMA more than 1.0 below the minimum allowed in table 460-1, and the engineer allows that mixture to remain in place, the department will pay for the quantity of affected material at 50 percent of the contract price.

460.5.2.3 Incentive for HMA Pavement Density

Replace paragraph one with the following effective with the December 2016 letting:

(1) If the lot density is greater than the minimum specified in table 460-3 and all individual air voids test results for that mixture placed during the same day are within 2.5 - 4.0 percent, the department will adjust pay for that lot as follows:

INCENTIVE PAY ADJUSTMENT FOR HMA PAVEMENT DENSITY[1]

PERCENT LOT DENSITY ABOVE SPECIFIED MINIMUM	PAY ADJUSTMENT PER TON[2]
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

[1] SMA pavements are not eligible for density incentive.

[2] The department will prorate the pay adjustment for a partial lot.

501.2.6 Fly Ash

Replace the entire subsection with the following effective with the December 2016 letting:

501.2.6.1 General

(1) Fly ash is defined as a finely divided residue resulting from the combustion of coal in a base loaded electric generating plant, transported from the boiler by flue gases, and later collected, generally by precipitators. Use fly ash in concrete manufactured by facilities and processes known to provide satisfactory material.

(2) 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.

(3) Use only one source of fly ash for a bid item of work under the contract, unless the engineer directs or allows otherwise in writing.

(4) Prequalify any proposed fly ash source as follows: The contractor shall obtain a copy of the certified report of tests or analysis made by a qualified independent laboratory, recognized by the department under 501.2.2, showing full and complete compliance with the above specification from the fly ash manufacturer and furnish it to the engineer. Provide this report to the engineer at least 14 calendar days before using the fly ash.

(5) The manufacturer shall retain test records for at least 5 years after completing the work, and provide these records upon request.

501.2.6.2 Class C Ash

(1) Conform to ASTM C618 class C except limit the loss on ignition to a maximum of 2 percent.

501.2.6.3 Class F Ash

(2) Furnish a class F fly ash from a source listed on the department's approved product list, and conform to ASTM C618 class F except limit the loss on ignition to a maximum of 2 percent.

502.3.7.8 Floors

Replace paragraph sixteen with the following effective with the September 2016 letting:

(16) The finished bridge floor shall conform to the surface test specified in 415.3.10. The engineer will not direct corrective grinding without authorization from the department’s bureau of structures.

503.3.2.1.1 Tolerances

Increase the "length of beam" max tolerance for prestressed concrete I-type girders from 3/4" to 1 1/2" effective with the December 2016 letting:

PRESTRESSED CONCRETE I-TYPE GIRDERS

Length of beam..... +/- 1/8" per 10', up to a max of +/- 1 1/2"

Errata

Make the following corrections to the standard specifications:

104.2.2.5 Change Orders for Eliminated Work

Correct errata by changing "eliminated bid items" to "eliminated work."

104.2.2.5 Change Orders for Eliminated Work

(1) The department has the right to partially eliminate or completely eliminate work the project engineer finds to be unnecessary for the project. If the project engineer partially eliminates or completely eliminates work, the project engineer will issue a contract change order for a fair and equitable amount as specified in 109.5.

105.4 Coordination of the Contract Documents

Correct errata to change "apparent error or omission" to just "error or omission."

(5) Neither the contractor nor the department may take advantage of an error or omission in the contract. Notify the engineer immediately as specified in 104.3 upon discovering an error or omission. The engineer will offer an interpretation and make the necessary corrections.

105.13.4 Content of Claim

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) Include the following 5 items in the claim.

1. A concise description of the claim.
2. A clear contractual basis for the claim. This should include reference to 104.2 on revisions to the contract and as appropriate, specific reference to contract language regarding the bid items in question.
3. Other facts the contractor relies on to support the claim.
4. A concise statement of the circumstances surrounding the claim and reasons why the department should pay the claim. Explain how the claimed work is a change to the contract work.
5. A complete breakdown of the costs used to compile the claim. Include copies of all EquipmentWatch equipment rental rate sheets used, with the applicable number highlighted.

108.13 Terminating the Contract for Convenience of the Department

Correct errata by changing "eliminated bid items" to "eliminated work."

(4) If the department orders termination of the contract for convenience, the department will pay for all completed work as of that date at the contract price. The department will pay for partially completed work at agreed prices or by force account methods specified in 109.4.5 provided, however, that payment does not exceed the contract price for the bid item under which the work was performed. The department will pay for work eliminated by the termination only to the extent provided under 109.5. The department will pay for new work, if any, at agreed prices or paid for by force account methods specified in 109.4.5.

109.2 Scope of Payment

Correct errata to clarify that work under the contract is included in payment unless specifically excluded.

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the contract including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
   - The nature of the work.
   - The action of the elements.
   - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.4.5.5.1 General

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(2) The department will pay for use of contractor-owned equipment the engineer approves for force account work at published rates. The department will pay the contractor expense rates, as modified in 109.4.5.5, given in EquipmentWatch Cost Recovery (formerly Rental Rate Blue Book) . Base all rates on revisions effective on January 1 for all equipment used in that calendar year.

http://equipmentwatch.com/estimator/

109.4.5.5.2 Hourly Equipment Expense Rates (Without Operators)

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) The contractor shall determine, and the department will confirm, hourly equipment expense rates as follows:

HEER = [RAF x ARA x (R/176)] + HOC

Where:

HEER = Hourly equipment expense rate.
RAF = EquipmentWatch regional adjustment factor.
ARA = EquipmentWatch age rate adjustment factor.
R = Current EquipmentWatch monthly rate.
HOC = EquipmentWatch estimated hourly operating cost.

(2) The EquipmentWatch hourly operating cost represents all costs of equipment operation, including fuel and oil, lubrication, field repairs, tires, expendable parts, and supplies.

109.4.5.5.3 Hourly Equipment Stand-By Rate

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) For equipment that is in operational condition and is standing-by with the engineer's approval, the contractor shall determine, and the department will confirm, the hourly stand-by rate as follows:

HSBR = RAF x ARA x (R/176) x (1/2)

Where:

HSBR = Hourly stand-by rate.

RAF = EquipmentWatch regional adjustment factor.

ARA = EquipmentWatch age rate adjustment factor.

R = Current EquipmentWatch monthly rate.

(2) The department will limit payment for stand-by to 10 hours or less per day up to 40 hours per week. The department will not pay the contractor for equipment that is inoperable due to breakdown. The department will not pay for idle equipment if the contractor suspends work or if the contractor is maintaining or repairing the equipment.

109.4.5.5.4 Hourly Outside-Rented Equipment Rate

Correct errata to change references to the "Blue Book" rates to reference "EquipmentWatch" rates.

(1) If the contractor rents or leases equipment from a third party for force account work, the contractor shall determine, and the department will confirm, the hourly outside-rented equipment rate as follows:

HORER = HRI + HOC

Where:

HORER = Hourly outside-rented equipment rate

HRI = Hourly rental invoice costs prorated for the actual number of hours that rented equipment is operated solely on force account work

HOC = EquipmentWatch hourly operating cost.

109.5 Eliminated Work

Correct errata by changing "eliminated bid items" to "eliminated work."

109.5 Eliminated Work

(1) If the department partially eliminates or completely eliminates work as specified in 104.2.2.5, the department will pay contractor costs incurred due to that elimination. The department will pay a fair and equitable amount covering all costs incurred as of the date the work was deleted. Immediately submit a certified statement covering all money expended for the eliminated work.

(2) The department will execute a contract change order for the following costs related to eliminated work:

1. Preparation expenses defined as follows:
   - If preparation for the eliminated work has no value to other contract work, the department will reimburse the contractor in full for that preparation.
   - If preparation for the eliminated work is distributed over other contract work, the department will prorate reimbursement based on the value of the eliminated work compared to the total value of associated contract work.
2. All restocking and cancellation charges.
3. A markup for applicable overhead and other indirect costs paid as 7 percent of the contract price of the work actually eliminated.

(3) If the department partially eliminates or completely eliminates work, the department may pay for, and take ownership of, materials or supplies the contractor has already purchased.

201.3 Construction

Correct errata by changing the link from 201.3(14) to 201.3(15).

(16) Dispose of clearing and grubbing debris before proceeding with grading operations. If the contractor intends to burn debris but cannot secure burning permits on schedule, do not delay removing clearing debris from areas affected by other operations. While waiting to secure burning permits, pile clearing and grubbing debris beyond the limits affected by other work. Do not leave elm debris beyond the limits specified in 201.3(15).

204.3.2.2.1 General

Correct errata by removing the reference to 490 which was deleted effective with the 2017 spec.

(1) Under the Removing Pavement bid item, remove concrete pavements, concrete alleys, concrete driveways, or rigid base including all surfaces or other pavements superimposed on them.

440.1 Description

Correct errata to replace "150 feet of the points of curvature" with " entry and exit curves".

(2) Profile the final mainline riding surfaces greater than 1500 feet in continuous length. Include bridges, bridge approaches, and railroad crossings in the calculation of IRI. Exclude roundabouts and pavements within their entry and exit curves from the calculation of IRI.

460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater

Correct 460.2.8.2.1.3.1 (6) to change the reference from ASTM D4867 to AASHTO T283.

(6) Also conduct field tensile strength ratio tests according to AASHTO T283 on mixtures requiring an antistripping additive. Test each full 50,000 ton production increment, or fraction of an increment, after the first 5000 tons of production. Perform required increment testing in the first week of production of that increment. If field tensile strength ratio values are either below the spec limit or less than the mixture design JMF percentage value by 20 or more, notify the engineer. The engineer and contractor will jointly determine a corrective action.

506.2.8.3 Expansion Bearing Assemblies

Correct errata to update ASTMs and change the specified melting point from 622 +/- 3 to 621 +/- 18 F.

(6) Use PTFE materials that are virgin polytetrafluoroethylene fluorocarbon resin, unfilled conforming to ASTM D4894. The finished materials shall exhibit the following physical properties:

REQUIREMENT	TEST METHOD	UNFILLED VALUE
Hardness at 78 F	ASTM D2240 Shore "D"	50-65
Tensile strength, psi	ASTM D1708	2800 Min.
Elongation, percent	ASTM D1708	200 Min.
Specific gravity	ASTM D792	2.16 +/- 0.03
Melting point	ASTM D4591	621 +/- 18 F

514.3.2 Adjusting Floor Drains

Correct errata by clarifying priming and painting requirements for adjusted floor drains.

(1) If the plans show or contract specifies, provide new drain frames and inserts. Fabricate, blast clean, and apply a shop coat of primer. Touch up areas of damaged primer after installation with a department-approved organic zinc-rich primer.

657.2.2.1.1 General

Correct errata by eliminating the reference to department provided arms in the last sentence.

(1) Furnish shop drawings as specified in 506.3.2, except submit 5 copies with the materials list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the outside diameters of the pole at the butt, top, and splice locations the plans show. Show the width, depth, length, and thickness of all material, and list pertinent ASTM specification designations and metal alloy designations together with the tensile strength of metallic members. Provide tightening procedures for arm-to-pole connections on the shop drawings.

657.2.2.1.4 Poles Designed Under Legacy Standards

Correct errata by deleting the entire subsection to eliminate redundant language.

657.2.2.2 Trombone Arms

Correct errata by changing the reference from 657.2.2.1.3 to 657.2.2.1.2.

(1) Design aluminum trombone arms as specified in 657.2.2.1.2 based on the completed maximum loading configuration the plans show. Furnish shop drawings conforming to 657.2.2.1.1 that show the width, depth, length, and thickness of all members. Also list the ASTM alloy designation and strength of each aluminum member on the shop drawings.

715.3.1.2.2 Lots by Lane-Feet

Correct errata ride spec reference from "the special provisions" to "440.3.4.2."

(1) The contractor may designate slip-formed pavement lots and sublots conforming to the following:

- Lots and sublots are one paving pass wide and may include one or more travel lanes, integrally placed shoulders, integrally placed ancillary concrete, and pavement gaps regardless of mix design and placement method.
- Sublots are 1000 feet long for single-lane and 500 feet long for two-lane paving. Align sublot limits with ride segment limits defined in 440.3.4.2. Adjust terminal sublot lengths to match the project length or, for staged construction, the stage length. Ensure that sublot limits match for adjacent paving passes. Pavement gaps do not affect the location of sublot limits.
- Create lots by grouping 4 to 8 adjacent sublots matching lots created for adjacent paving passes.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Paul Ndon at (414) 438-4584 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator contact Paul Ndon. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

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

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

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

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Non-discrimination Provisions

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the contractor under the contract until the contractor complies; and/or
b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Effective August 2015 letting

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

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

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://wisconsindot.gov/hcciDocs/contracting-info/ws4567.doc

Effective February 2016 letting

Cargo Preference Act Requirement

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) *Agreement Clauses.* "Use of United States-flag vessels:"

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees—"

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Effective with February 2017 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. Prevailing Wage Rates, Hours of Labor, and Payment of Wages
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Wage Rate Distribution
V. Additional Classifications

I. PREVAILING WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) attached hereto and made a part hereof furnishes the prevailing wage rates pursuant to Section 84.062 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the 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 84.062, Stats. Apprentices shall be paid at rates not less than those prescribed in their apprenticeship contract.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 16.856 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 base rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half:

January 1
Last Monday in May
July 4
First Monday in September
Fourth Thursday in November
December 25
The day before if January 1, July 4 or December 25 falls on a Saturday, and

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, euclid 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.

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 84.062 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 and accessible place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 84.062 of the Wisconsin Statutes.

b. A copy of the U.S. Department of Labor (Davis-Bacon, Minimum Wage Rates).

c. A copy of the contractor's Equal Employment Opportunity Policy.

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. WAGE RATE REDISTRIBUTION

A contractor or subcontractor performing work subject to a Davis-Bacon wage determination may discharge its minimum wage obligations for the payment of both straight time wages and fringe benefits by (1) paying both in cash, (2) making payments or incurring costs for bona fide fringe benefits, or (3) by a combination thereof. Thus, under the Davis-Bacon a contractor may offset an amount of monetary wages paid in excess of the minimum wage required under the determination to satisfy its fringe benefit obligations. *See* 40 USC 3142(d) and 29 CFR 5.31.

V. ADDITIONAL CLASSIFICATIONS

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5(a)(1)(ii)). The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination.

The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

a. The work to be performed by the classification requested is not performed by a classification in the wage determination; and

b. The classification is utilized in the area by the construction industry; and

c. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

General Decision Number: WI170010 07/28/2017 WI10

Superseded General Decision Number: WI20160010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	02/03/2017
2	02/10/2017
3	02/24/2017
4	03/17/2017
5	03/31/2017
6	04/21/2017
7	04/28/2017
8	06/02/2017
9	06/23/2017
10	07/14/2017
11	07/21/2017
12	07/28/2017

BRWI0001-002 06/01/2016

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.84	20.95

BRWI0002-002 06/01/2016

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.04	19.70

BRWI0002-005 06/01/2016

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 35.07	20.51

BRWI0003-002 06/01/2016

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0004-002 06/01/2016

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.59	21.49

BRWI0006-002 06/01/2016

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.04	19.75

BRWI0007-002 06/01/2016

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.53	20.95

BRWI0008-002 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.98	20.62

BRWI0011-002 06/01/2016

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0019-002 06/01/2016

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.98	20.81

BRWI0034-002 06/01/2015

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.86	17.22

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON,

JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 33.56	18.00
MILLWRIGHT	$ 35.08	18.35
PILEDRIVER	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 33.56	18.00
Millwright	$ 35.08	18.35
Pile Driver	$ 34.12	18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0361-004 05/01/2016

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 34.57	18.16

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

ELEC0014-002 05/30/2016

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 32.00	19.28

ELEC0014-007 05/30/2016

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician	$ 24.35	13.15

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

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* ELEC0127-002 06/01/2017

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 38.50	30%+10.57

ELEC0158-002 05/30/2016

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
Electricians:	$ 30.50	29.50% + 9.57

ELEC0159-003 05/30/2016

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
Electricians:	$ 36.50	20.39

ELEC0219-004 06/01/2016

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 32.38	18.63
Electrical contracts under $180,000	$ 30.18	18.42

ELEC0242-005 06/04/2017

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 35.90	25.64

ELEC0388-002 05/30/2016

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 30.69	26.00% +10.05

ELEC0430-002 06/01/2017

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 37.32	21.07

ELEC0494-005 06/01/2017

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 37.51	24.42

ELEC0494-006 06/01/2017

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 32.06	21.88

ELEC0494-013 06/01/2015

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 16.47	14.84
Technician	$ 26.00	17.70

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

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ELEC0577-003 05/30/2016

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 30.68	17.28

ELEC0890-003 06/01/2016

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes

Electricians:.....$ 32.45 26.10% + $10.56

ELEC0953-001 07/01/2015

	Rates	Fringes
Line Construction:		
(1) Lineman.....	$ 42.14	32% + 5.00
(2) Heavy Equipment Operator.....	$ 40.03	32% + 5.00
(3) Equipment Operator.....	$ 33.71	32% + 5.00
(4) Heavy Groundman Driver..	$ 26.78	14.11
(5) Light Groundman Driver..	$ 24.86	13.45
(6) Groundsman.....	$ 23.18	32% + 5.00

ENGI0139-005 06/01/2016

	Rates	Fringes
Power Equipment Operator		
Group 1.....	$ 39.27	21.80
Group 2.....	$ 38.77	21.80
Group 3.....	$ 38.27	21.80
Group 4.....	$ 38.01	21.80
Group 5.....	$ 37.72	21.80
Group 6.....	$ 31.82	21.80

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, tower cranes, and derricks with or without attachments with a lifting capacity of over 100 tons; or cranes, tower cranes, and derricks with boom, leads and/or jib lengths measuring 176 feet or longer.

GROUP 2: Cranes, tower cranes and derricks with or without attachments with a lifting capacity of 100 tons or less; or cranes, tower cranes, and derricks with boom, leads, and/or jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminious paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader; hydraulic backhoe (tractor type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller over 5 tons; percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self- propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and

extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning plants; generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; Oiler, pump (over 3 inches); Drilling Machine Tender.

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2016

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 30.86	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 33.15	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2015

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 32.85	21.84

IRON0498-005 06/01/2016

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 36.29	30.77

IRON0512-008 05/01/2015

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.50	23.45

IRON0512-021 05/01/2015

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 31.04	23.45

LABO0113-002 06/05/2017

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.80	21.34
Group 2	$ 26.95	21.34
Group 3	$ 27.15	21.34
Group 4	$ 27.30	21.34
Group 5	$ 27.45	21.34
Group 6	$ 23.29	21.34

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/05/2017

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.05	21.34
Group 2	$ 26.15	21.34
Group 3	$ 26.20	21.34
Group 4	$ 26.40	21.34
Group 5	$ 26.25	21.34
Group 6	$ 23.14	21.34

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/05/2017

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 25.86	21.34
Group 2	$ 26.01	21.34
Group 3	$ 26.21	21.34
Group 4	$ 26.18	21.34
Group 5	$ 26.51	21.34
Group 6	$ 23.00	21.34

LABORERS CLASSIFICATIONS:

GROUP 1: General laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/05/2017

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 30.71	21.34
Group 2	$ 30.81	21.34
Group 3	$ 30.86	21.34
Group 4	$ 31.06	21.34
Group 5	$ 30.91	21.34
Group 6	$ 27.34	21.34

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/05/2017

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 30.99	21.34
Group 2	$ 31.09	21.34
Group 3	$ 31.14	21.34
Group 4	$ 31.34	21.34
Group 5	$ 31.19	21.34
Group 6	$ 27.34	21.34

LABORERS CLASSIFICATIONS:

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

PAIN0106-008 05/02/2016

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 29.86	16.35
Spray, Sandblast, Steel	$ 30.46	16.35
Repaint:		
Brush, Roller	$ 28.36	16.35
Spray, Sandblast, Steel	$ 28.96	16.35

PAIN0108-002 06/01/2016

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 32.74	18.70
Spray & Sandblast	$ 33.74	18.70

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2016

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 30.42	22.19
Brush	$ 30.07	22.19
Spray & Sandblast	$ 30.82	22.19

PAIN0802-002 06/01/2016

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND, ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 27.50	17.72

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2016

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 24.39	11.72

PAIN0934-001 06/01/2016

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 32.74	18.70
Spray	$ 33.74	18.70
Structural Steel	$ 32.89	18.70

PAIN1011-002 06/01/2016

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 24.56	11.93

PLAS0599-010 06/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2017

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 27.40	20.48
3 or more Axles; Euclids Dumptor & Articulated, Truck Mechanic	$ 27.55	20.48
WELL DRILLER	$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the

Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

March 2017

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Department of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Department of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omission of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate.

If a project includes multiple types of construction (highway, bridge over navigable water, sanitary sewer and water main, building) and there is not a separate wage determination for this type of work included in the proposal, use the wage determination that is in the proposal.

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	108.4400 CPM Progress Schedule	1.000 EACH	_____.____	_____.____
0004	201.0105 Clearing	90.000 STA	_____.____	_____.____
0006	201.0205 Grubbing	90.000 STA	_____.____	_____.____
0008	203.0200 Removing Old Structure (station) 0001. 248+02.00	LS	LUMP SUM	_____.____
0010	203.0200 Removing Old Structure (station) 0002. 248+62.00	LS	LUMP SUM	_____.____
0012	203.0210.S Abatement of Asbestos Containing Material (structure) 0001. B-40-0226	LS	LUMP SUM	_____.____
0014	203.0500.S Removing Old Structure Over Waterway (station) 0001. 282+34.12	LS	LUMP SUM	_____.____
0016	203.0500.S Removing Old Structure Over Waterway (station) 0002. 294+49.00	LS	LUMP SUM	_____.____
0018	203.0500.S Removing Old Structure Over Waterway (station) 0003. 385+19.39	LS	LUMP SUM	_____.____
0020	204.0100 Removing Pavement	60,497.000 SY	_____.____	_____.____
0022	204.0150 Removing Curb & Gutter	2,449.000 LF	_____.____	_____.____
0024	204.0155 Removing Concrete Sidewalk	780.000 SY	_____.____	_____.____
0026	204.0157 Removing Concrete Barrier	718.000 LF	_____.____	_____.____
0028	204.0165 Removing Guardrail	1,109.000 LF	_____.____	_____.____
0030	204.0170 Removing Fence	9,489.000 LF	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	204.0195 Removing Concrete Bases	47.000 EACH	_____.____	_____.____
0034	204.0210 Removing Manholes	15.000 EACH	_____.____	_____.____
0036	204.0220 Removing Inlets	61.000 EACH	_____.____	_____.____
0038	204.0245 Removing Storm Sewer (size) 0001. 12-Inch	3,220.000 LF	_____.____	_____.____
0040	204.0245 Removing Storm Sewer (size) 0002. 15-Inch	1,164.000 LF	_____.____	_____.____
0042	204.0245 Removing Storm Sewer (size) 0003. 18-Inch	574.000 LF	_____.____	_____.____
0044	204.0245 Removing Storm Sewer (size) 0005. 30-Inch	639.000 LF	_____.____	_____.____
0046	204.0245 Removing Storm Sewer (size) 0006. 48-Inch	516.000 LF	_____.____	_____.____
0048	204.0280 Sealing Pipes	2.000 EACH	_____.____	_____.____
0050	205.0100 Excavation Common	142,166.000 CY	_____.____	_____.____
0052	206.1000 Excavation for Structures Bridges (structure) 0001. B-40-809	LS	LUMP SUM	_____.____
0054	206.2000 Excavation for Structures Culverts (structure) 0001. C-40-31	LS	LUMP SUM	_____.____
0056	206.2000 Excavation for Structures Culverts (structure) 0002. C-40-32	LS	LUMP SUM	_____.____
0058	206.2000 Excavation for Structures Culverts (structure) 0003. C-40-33	LS	LUMP SUM	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0060	206.5000 Cofferdams (structure) 0001. C-40-31	LS	LUMP SUM	_____.____
0062	206.5000 Cofferdams (structure) 0002. C-40-32	LS	LUMP SUM	_____.____
0064	206.5000 Cofferdams (structure) 0003. C-40-33	LS	LUMP SUM	_____.____
0066	208.0100 Borrow	713.000 CY	_____.____	_____.____
0068	209.0200.S Backfill Controlled Low Strength	24.600 CY	_____.____	_____.____
0070	209.2100 Backfill Granular Grade 2	40.000 CY	_____.____	_____.____
0072	210.1500 Backfill Structure Type A	2,173.000 TON	_____.____	_____.____
0074	210.2500 Backfill Structure Type B	1,057.000 TON	_____.____	_____.____
0076	213.0100 Finishing Roadway (project) 0001. 1030-20-85	1.000 EACH	_____.____	_____.____
0078	213.0100 Finishing Roadway (project) 0002. 1030-26-72	1.000 EACH	_____.____	_____.____
0080	305.0110 Base Aggregate Dense 3/4-Inch	1,994.000 TON	_____.____	_____.____
0082	305.0120 Base Aggregate Dense 1 1/4-Inch	46,772.000 TON	_____.____	_____.____
0084	311.0110 Breaker Run	481.000 TON	_____.____	_____.____
0086	312.0110 Select Crushed Material	56,026.000 TON	_____.____	_____.____
0088	405.0100 Coloring Concrete WisDOT Red	56.000 CY	_____.____	_____.____
0090	415.0090 Concrete Pavement 9-Inch	5,130.000 SY	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0092	415.0105 Concrete Pavement 10 1/2-Inch	23,393.000 SY	_____.____	_____.____
0094	415.0120 Concrete Pavement 12-Inch	21,715.000 SY	_____.____	_____.____
0096	415.0410 Concrete Pavement Approach Slab	366.000 SY	_____.____	_____.____
0098	416.0170 Concrete Driveway 7-Inch	104.000 SY	_____.____	_____.____
0100	416.0512 Concrete Truck Apron 12-Inch	168.000 SY	_____.____	_____.____
0102	416.0620 Drilled Dowel Bars	203.000 EACH	_____.____	_____.____
0104	416.1010 Concrete Surface Drains	13.000 CY	_____.____	_____.____
0106	440.4410 Incentive IRI Ride	5,786.000 DOL	1.00000	5,786.00
0108	450.4000 HMA Cold Weather Paving	1,081.000 TON	_____.____	_____.____
0110	455.0605 Tack Coat	1,602.000 GAL	_____.____	_____.____
0112	460.2000 Incentive Density HMA Pavement	6,409.000 DOL	1.00000	6,409.00
0114	460.5223 HMA Pavement 3 LT 58-28 S	1,895.000 TON	_____.____	_____.____
0116	460.5224 HMA Pavement 4 LT 58-28 S	1,474.000 TON	_____.____	_____.____
0118	460.6222 HMA Pavement 2 MT 58-28 S	6,645.000 TON	_____.____	_____.____
0120	465.0125 Asphaltic Surface Temporary	2,935.000 TON	_____.____	_____.____
0122	495.1000.S Cold patch	10.000 TON	_____.____	_____.____
0124	501.1000.S Ice Hot Weather Concreting	147,750.000 LB	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0126	502.0100 Concrete Masonry Bridges **P**	573.000 CY	_____.____	_____.____
0128	502.3200 Protective Surface Treatment	3,692.000 SY	_____.____	_____.____
0130	502.4205 Adhesive Anchors No. 5 Bar	220.000 EACH	_____.____	_____.____
0132	503.0146 Prestressed Girder Type I 45W-Inch	2,434.000 LF	_____.____	_____.____
0134	504.0100 Concrete Masonry Culverts	331.000 CY	_____.____	_____.____
0136	505.0400 Bar Steel Reinforcement HS Structures	42,185.000 LB	_____.____	_____.____
0138	505.0600 Bar Steel Reinforcement HS Coated Structures	361,900.000 LB	_____.____	_____.____
0140	505.0800.S Bar Steel Reinforcement HS Stainless Structures	4,700.000 LB	_____.____	_____.____
0142	505.0904 Bar Couplers No. 4	143.000 EACH	_____.____	_____.____
0144	505.0905 Bar Couplers No. 5	135.000 EACH	_____.____	_____.____
0146	505.0906 Bar Couplers No. 6	156.000 EACH	_____.____	_____.____
0148	505.0908 Bar Couplers No. 8	24.000 EACH	_____.____	_____.____
0150	505.0909 Bar Couplers No. 9	11.000 EACH	_____.____	_____.____
0152	505.0910 Bar Couplers No. 10	9.000 EACH	_____.____	_____.____
0154	506.2605 Bearing Pads Elastomeric Non-Laminated	56.000 EACH	_____.____	_____.____
0156	506.4000 Steel Diaphragms (structure) 0001. B-40-809	52.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0158	509.1500 Concrete Surface Repair	15.000 SF	_____.____	_____.____
0160	511.1200 Temporary Shoring (structure) 0001. B-40-809	1,500.000 SF	_____.____	_____.____
0162	511.1200 Temporary Shoring (structure) 0002. C-40-31	727.000 SF	_____.____	_____.____
0164	511.1200 Temporary Shoring (structure) 0003. C-40-32	320.000 SF	_____.____	_____.____
0166	511.1200 Temporary Shoring (structure) 0004. C-40-33	567.000 SF	_____.____	_____.____
0168	516.0500 Rubberized Membrane Waterproofing	255.000 SY	_____.____	_____.____
0170	517.1010.S Concrete Staining (structure) 0001. B-40-809	12,120.000 SF	_____.____	_____.____
0172	517.1010.S Concrete Staining (structure) 0002. R-40-388	4,610.000 SF	_____.____	_____.____
0174	517.1010.S Concrete Staining (structure) 0003. R-40-391	4,930.000 SF	_____.____	_____.____
0176	520.8000 Concrete Collars for Pipe	7.000 EACH	_____.____	_____.____
0178	522.1015 Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	9.000 EACH	_____.____	_____.____
0180	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	2.000 EACH	_____.____	_____.____
0182	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	2.000 EACH	_____.____	_____.____
0184	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	3.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0186	522.1048 Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	5.000 EACH	_____.____	_____.____
0188	522.1054 Apron Endwalls for Culvert Pipe Reinforced Concrete 54-Inch	1.000 EACH	_____.____	_____.____
0190	523.0424 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	90.000 LF	_____.____	_____.____
0192	523.0429 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch	600.000 LF	_____.____	_____.____
0194	523.0524 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	1.000 EACH	_____.____	_____.____
0196	523.0529 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	4.000 EACH	_____.____	_____.____
0198	550.0010 Pre-Boring Unconsolidated Materials	152.000 LF	_____.____	_____.____
0200	550.2168 Piling CIP Concrete 16 X 0.50-Inch	8,210.000 LF	_____.____	_____.____
0202	601.0409 Concrete Curb & Gutter 30-Inch Type A	1,765.000 LF	_____.____	_____.____
0204	601.0411 Concrete Curb & Gutter 30-Inch Type D	2,144.000 LF	_____.____	_____.____
0206	601.0551 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	7,036.000 LF	_____.____	_____.____
0208	601.0600 Concrete Curb Pedestrian	14.000 LF	_____.____	_____.____
0210	602.0410 Concrete Sidewalk 5-Inch	36,044.000 SF	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0212	602.0505 Curb Ramp Detectable Warning Field Yellow	404.000 SF	_____.____	_____.____
0214	603.2132 Concrete Barrier Fixed Object Protection Type S32	48.000 LF	_____.____	_____.____
0216	603.8000 Concrete Barrier Temporary Precast Delivered	21,627.000 LF	_____.____	_____.____
0218	603.8125 Concrete Barrier Temporary Precast Installed	15,360.000 LF	_____.____	_____.____
0220	604.0400 Slope Paving Concrete	54.000 SY	_____.____	_____.____
0222	606.0100 Riprap Light	193.000 CY	_____.____	_____.____
0224	606.0200 Riprap Medium	462.000 CY	_____.____	_____.____
0226	606.0300 Riprap Heavy	93.000 CY	_____.____	_____.____
0228	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	134.000 LF	_____.____	_____.____
0230	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	1,756.000 LF	_____.____	_____.____
0232	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	777.000 LF	_____.____	_____.____
0234	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	142.000 LF	_____.____	_____.____
0236	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	280.000 LF	_____.____	_____.____
0238	608.0348 Storm Sewer Pipe Reinforced Concrete Class III 48-Inch	404.000 LF	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0240	608.0354 Storm Sewer Pipe Reinforced Concrete Class III 54-Inch	612.000 LF	_____.____	_____.____
0242	611.0535 Manhole Covers Type J-Special	3.000 EACH	_____.____	_____.____
0244	611.0624 Inlet Covers Type H	6.000 EACH	_____.____	_____.____
0246	611.0627 Inlet Covers Type HM	53.000 EACH	_____.____	_____.____
0248	611.0642 Inlet Covers Type MS	2.000 EACH	_____.____	_____.____
0250	611.0654 Inlet Covers Type V	2.000 EACH	_____.____	_____.____
0252	611.2005 Manholes 5-FT Diameter	5.000 EACH	_____.____	_____.____
0254	611.2007 Manholes 7-FT Diameter	5.000 EACH	_____.____	_____.____
0256	611.2008 Manholes 8-FT Diameter	1.000 EACH	_____.____	_____.____
0258	611.3003 Inlets 3-FT Diameter	2.000 EACH	_____.____	_____.____
0260	611.3004 Inlets 4-FT Diameter	24.000 EACH	_____.____	_____.____
0262	611.3230 Inlets 2x3-FT	31.000 EACH	_____.____	_____.____
0264	611.3902 Inlets Median 2 Grate	1.000 EACH	_____.____	_____.____
0266	611.8120.S Cover Plates Temporary	7.000 EACH	_____.____	_____.____
0268	611.9710 Salvaged Inlet Covers	2.000 EACH	_____.____	_____.____
0270	611.9800.S Pipe Grates	18.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0272	612.0206 Pipe Underdrain Unperforated 6-Inch	260.000 LF	_____.____	_____.____
0274	612.0406 Pipe Underdrain Wrapped 6-Inch	2,397.000 LF	_____.____	_____.____
0276	612.0806 Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	2.000 EACH	_____.____	_____.____
0278	614.0010 Barrier System Grading Shaping Finishing	2.000 EACH	_____.____	_____.____
0280	614.0150 Anchor Assemblies for Steel Plate Beam Guard	2.000 EACH	_____.____	_____.____
0282	614.0395 Guardrail Mow Strip Concrete	422.000 SY	_____.____	_____.____
0284	614.0396 Guardrail Mow Strip Asphalt	293.000 SY	_____.____	_____.____
0286	614.0805 Crash Cushions Permanent Low Maintenance	2.000 EACH	_____.____	_____.____
0288	614.0905 Crash Cushions Temporary	12.000 EACH	_____.____	_____.____
0290	614.2300 MGS Guardrail 3	1,029.750 LF	_____.____	_____.____
0292	614.2340 MGS Guardrail 3 L	211.000 LF	_____.____	_____.____
0294	614.2500 MGS Thrie Beam Transition	120.000 LF	_____.____	_____.____
0296	614.2610 MGS Guardrail Terminal EAT	9.000 EACH	_____.____	_____.____
0298	614.2620 MGS Guardrail Terminal Type 2	5.000 EACH	_____.____	_____.____
0300	616.0206 Fence Chain Link 6-FT	9,538.000 LF	_____.____	_____.____
0302	616.0329 Gates Chain Link (width) 0001. 12-FT	4.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0304	616.0700.S Fence Safety	400.000 LF	_____.____	_____.____
0306	618.0100 Maintenance And Repair of Haul Roads (project) 0001. 1030-20-85	1.000 EACH	_____.____	_____.____
0308	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0310	620.0300 Concrete Median Sloped Nose	633.000 SF	_____.____	_____.____
0312	621.0100 Landmark Reference Monuments	18.000 EACH	_____.____	_____.____
0314	623.0200 Dust Control Surface Treatment	19,393.000 SY	_____.____	_____.____
0316	624.0100 Water	387.000 MGAL	_____.____	_____.____
0318	625.0500 Salvaged Topsoil	182,742.000 SY	_____.____	_____.____
0320	627.0200 Mulching	7,771.000 SY	_____.____	_____.____
0322	628.1104 Erosion Bales	2,000.000 EACH	_____.____	_____.____
0324	628.1504 Silt Fence	14,997.000 LF	_____.____	_____.____
0326	628.1520 Silt Fence Maintenance	16,635.000 LF	_____.____	_____.____
0328	628.1905 Mobilizations Erosion Control	16.000 EACH	_____.____	_____.____
0330	628.1910 Mobilizations Emergency Erosion Control	16.000 EACH	_____.____	_____.____
0332	628.2008 Erosion Mat Urban Class I Type B	164,011.000 SY	_____.____	_____.____
0334	628.6505 Soil Stabilizer Type A	0.500 ACRE	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0336	628.7005 Inlet Protection Type A	57.000 EACH	_____.____	_____.____
0338	628.7015 Inlet Protection Type C	22.000 EACH	_____.____	_____.____
0340	628.7020 Inlet Protection Type D	161.000 EACH	_____.____	_____.____
0342	628.7504 Temporary Ditch Checks	1,063.000 LF	_____.____	_____.____
0344	628.7555 Culvert Pipe Checks	5.000 EACH	_____.____	_____.____
0346	628.7560 Tracking Pads	14.000 EACH	_____.____	_____.____
0348	628.7570 Rock Bags	200.000 EACH	_____.____	_____.____
0350	629.0210 Fertilizer Type B	83.900 CWT	_____.____	_____.____
0352	630.0120 Seeding Mixture No. 20	273.000 LB	_____.____	_____.____
0354	630.0175 Seeding Mixture No. 75	753.000 LB	_____.____	_____.____
0356	630.0200 Seeding Temporary	3,395.000 LB	_____.____	_____.____
0358	631.0300 Sod Water	307.000 MGAL	_____.____	_____.____
0360	631.1000 Sod Lawn	12,706.000 SY	_____.____	_____.____
0362	632.0101 Trees (species) (size) (root) 0001. Kentucky Coffeetree B&B 2.5-Inch Cal	3.000 EACH	_____.____	_____.____
0364	632.0101 Trees (species) (size) (root) 0002. Elm Homestead B&B 2.5-Inch Cal	3.000 EACH	_____.____	_____.____
0366	632.0101 Trees (species) (size) (root) 0003.Ginkgo - male only B&B 2.5-Inch Cal	1.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0368	632.0101 Trees (species) (size) (root) 0004. Hackberry Common B&B 2.5-Inch Cal	2.000 EACH	_____.____	_____.____
0370	632.0101 Trees (species) (size) (root) 0005. Honeylocust Imperial B&B 2.5-Inch Cal	3.000 EACH	_____.____	_____.____
0372	632.0101 Trees (species) (size) (root) 0006. Linden Redmond B&B 2.5-Inch Cal	4.000 EACH	_____.____	_____.____
0374	632.0101 Trees (species) (size) (root) 0007. Maple Freeman 'Autumn Blaze' B&B 2.5-Inch Cal	3.000 EACH	_____.____	_____.____
0376	632.0101 Trees (species) (size) (root) 0008. Oak Bur B&B 2.5-Inch Cal	2.000 EACH	_____.____	_____.____
0378	632.0101 Trees (species) (size) (root) 0009. Oak Red B&B 2.5-Inch Cal	5.000 EACH	_____.____	_____.____
0380	632.0101 Trees (species) (size) (root) 0010. Oak Swamp White B&B 2.5-Inch Cal	2.000 EACH	_____.____	_____.____
0382	632.0101 Trees (species) (size) (root) 0011. Crabapple Indian Magic B&B 2-Inch Cal	2.000 EACH	_____.____	_____.____
0384	632.0101 Trees (species) (size) (root) 0012. Lilac Japanese Tree Ivory Silk B&B 2-Inch Cal	6.000 EACH	_____.____	_____.____
0386	632.0101 Trees (species) (size) (root) 0013. Pear Autumn Blaze B&B 2-Inch Cal	3.000 EACH	_____.____	_____.____
0388	632.9101 Landscape Planting Surveillance and Care Cycles	16.000 EACH	_____.____	_____.____
0390	633.0100 Delineator Posts Steel	37.000 EACH	_____.____	_____.____
0392	633.0500 Delineator Reflectors	37.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0394	633.5200 Markers Culvert End	24.000 EACH	_____.____	_____.____
0396	634.0612 Posts Wood 4x6-Inch X 12-FT	18.000 EACH	_____.____	_____.____
0398	634.0618 Posts Wood 4x6-Inch X 18-FT	114.000 EACH	_____.____	_____.____
0400	634.0622 Posts Wood 4x6-Inch X 22-FT	15.000 EACH	_____.____	_____.____
0402	635.0200 Sign Supports Structural Steel HS	3,600.000 LB	_____.____	_____.____
0404	636.0100 Sign Supports Concrete Masonry	6.000 CY	_____.____	_____.____
0406	636.0500 Sign Supports Steel Reinforcement	362.000 LB	_____.____	_____.____
0408	637.1210 Signs Type I Reflective H	508.750 SF	_____.____	_____.____
0410	637.2210 Signs Type II Reflective H	1,343.095 SF	_____.____	_____.____
0412	637.2215 Signs Type II Reflective H Folding	181.740 SF	_____.____	_____.____
0414	637.2230 Signs Type II Reflective F	197.500 SF	_____.____	_____.____
0416	638.2101 Moving Signs Type I	3.000 EACH	_____.____	_____.____
0418	638.2102 Moving Signs Type II	12.000 EACH	_____.____	_____.____
0420	638.2602 Removing Signs Type II	140.000 EACH	_____.____	_____.____
0422	638.3000 Removing Small Sign Supports	104.000 EACH	_____.____	_____.____
0424	638.3100 Removing Structural Steel Sign Supports	4.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0426	641.8100 Overhead Sign Support (structure) 0001. S-40-763	LS	LUMP SUM	_____.____
0428	641.8100 Overhead Sign Support (structure) 0002. S-40-764	LS	LUMP SUM	_____.____
0430	641.8100 Overhead Sign Support (structure) 0003. S-40-765	LS	LUMP SUM	_____.____
0432	641.8100 Overhead Sign Support (structure) 0004. S-40-776	LS	LUMP SUM	_____.____
0434	641.8100 Overhead Sign Support (structure) 0005. S-40-777	LS	LUMP SUM	_____.____
0436	641.8100 Overhead Sign Support (structure) 0006. S-40-778	LS	LUMP SUM	_____.____
0438	643.0100 Traffic Control (project) 0002. 1030-26-72	1.000 EACH	_____.____	_____.____
0440	643.0200.S Traffic Control Surveillance and Maintenance (project) 0001. 1030-20-85	253.000 DAY	_____.____	_____.____
0442	643.0300 Traffic Control Drums	80,354.000 DAY	_____.____	_____.____
0444	643.0420 Traffic Control Barricades Type III	16,605.000 DAY	_____.____	_____.____
0446	643.0453 Traffic Control Barricades Permanent Type III	8.000 EACH	_____.____	_____.____
0448	643.0500 Traffic Control Flexible Tubular Marker Posts	240.000 EACH	_____.____	_____.____
0450	643.0600 Traffic Control Flexible Tubular Marker Bases	240.000 EACH	_____.____	_____.____
0452	643.0705 Traffic Control Warning Lights Type A	32,369.000 DAY	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0454	643.0715 Traffic Control Warning Lights Type C	31,627.000 DAY	_____.____	_____.____
0456	643.0800 Traffic Control Arrow Boards	1,230.000 DAY	_____.____	_____.____
0458	643.0900 Traffic Control Signs	28,766.000 DAY	_____.____	_____.____
0460	643.0910 Traffic Control Covering Signs Type I	2.000 EACH	_____.____	_____.____
0462	643.0920 Traffic Control Covering Signs Type II	31.000 EACH	_____.____	_____.____
0464	643.1000 Traffic Control Signs Fixed Message	220.000 SF	_____.____	_____.____
0466	643.1050 Traffic Control Signs PCMS	506.000 DAY	_____.____	_____.____
0468	643.2000 Traffic Control Detour (project) 0001. 1030-20-85	1.000 EACH	_____.____	_____.____
0470	643.3000 Traffic Control Detour Signs	2,373.000 DAY	_____.____	_____.____
0472	645.0105 Geotextile Type C	759.000 SY	_____.____	_____.____
0474	645.0120 Geotextile Type HR	867.000 SY	_____.____	_____.____
0476	645.0130 Geotextile Type R	347.000 SY	_____.____	_____.____
0478	646.0126 Pavement Marking Epoxy 8-Inch	560.000 LF	_____.____	_____.____
0480	646.0600 Removing Pavement Markings	82,816.000 LF	_____.____	_____.____
0482	646.0841.S Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	8,880.000 LF	_____.____	_____.____
0484	646.0842.S Pavement Marking Grooved Contrast Wet Reflective Epoxy 4-Inch	30,758.000 LF	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0486	646.0843.S Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	13,693.000 LF	_____.____	_____.____
0488	646.0844.S Pavement Marking Grooved Contrast Wet Reflective Epoxy 8-Inch	8,870.000 LF	_____.____	_____.____
0490	646.2304.S Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	28,196.000 LF	_____.____	_____.____
0492	647.0166 Pavement Marking Arrows Epoxy Type 2	67.000 EACH	_____.____	_____.____
0494	647.0176 Pavement Marking Arrows Epoxy Type 3	8.000 EACH	_____.____	_____.____
0496	647.0186 Pavement Marking Arrows Epoxy Type 4	3.000 EACH	_____.____	_____.____
0498	647.0256 Pavement Marking Symbols Epoxy	8.000 EACH	_____.____	_____.____
0500	647.0356 Pavement Marking Words Epoxy	70.000 EACH	_____.____	_____.____
0502	647.0456 Pavement Marking Curb Epoxy	433.000 LF	_____.____	_____.____
0504	647.0566 Pavement Marking Stop Line Epoxy 18-Inch	845.000 LF	_____.____	_____.____
0506	647.0606 Pavement Marking Island Nose Epoxy	19.000 EACH	_____.____	_____.____
0508	647.0656 Pavement Marking Parking Stall Epoxy	10,433.000 LF	_____.____	_____.____
0510	647.0726 Pavement Marking Diagonal Epoxy 12-Inch	380.000 LF	_____.____	_____.____
0512	647.0746 Pavement Marking Diagonal Epoxy 24-Inch	133.000 LF	_____.____	_____.____
0514	647.0766 Pavement Marking Crosswalk Epoxy 6-Inch	2,256.000 LF	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0516	647.0955 Removing Pavement Markings Arrows	34.000 EACH	_____._____	_____._____
0518	647.0965 Removing Pavement Markings Words	38.000 EACH	_____._____	_____._____
0520	649.0402 Temporary Pavement Marking Paint 4-Inch	91,152.000 LF	_____._____	_____._____
0522	649.0802 Temporary Pavement Marking Paint 8-Inch	11,292.000 LF	_____._____	_____._____
0524	649.1200 Temporary Pavement Marking Stop Line Removable Tape 18-Inch	1,268.000 LF	_____._____	_____._____
0526	649.2100 Temporary Raised Pavement Markers Type I	595.000 EACH	_____._____	_____._____
0528	650.6500 Construction Staking Structure Layout (structure) 0001. C-40-31	LS	LUMP SUM	_____._____
0530	650.6500 Construction Staking Structure Layout (structure) 0002. C-40-32	LS	LUMP SUM	_____._____
0532	650.6500 Construction Staking Structure Layout (structure) 0003. C-40-33	LS	LUMP SUM	_____._____
0534	650.8500 Construction Staking Electrical Installations (project) 0001. 1030-20-85	LS	LUMP SUM	_____._____
0536	650.9910 Construction Staking Supplemental Control (project) 0002. 1030-26-72	LS	LUMP SUM	_____._____
0538	652.0125 Conduit Rigid Metallic 2-Inch	85.000 LF	_____._____	_____._____
0540	652.0210 Conduit Rigid Nonmetallic Schedule 40 1-Inch	135.000 LF	_____._____	_____._____
0542	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	12,019.000 LF	_____._____	_____._____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0544	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	15,856.000 LF	_____.____	_____.____
0546	652.0335 Conduit Rigid Nonmetallic Schedule 80 3-Inch	5,225.000 LF	_____.____	_____.____
0548	652.0615 Conduit Special 3-Inch	1,561.000 LF	_____.____	_____.____
0550	652.0700.S Install Conduit into Existing Item	2.000 EACH	_____.____	_____.____
0552	652.0800 Conduit Loop Detector	4,652.000 LF	_____.____	_____.____
0554	653.0135 Pull Boxes Steel 24x36-Inch	22.000 EACH	_____.____	_____.____
0556	653.0140 Pull Boxes Steel 24x42-Inch	53.000 EACH	_____.____	_____.____
0558	653.0145 Pull Boxes Steel 24x48-Inch	2.000 EACH	_____.____	_____.____
0560	653.0222 Junction Boxes 18x12x6-Inch	4.000 EACH	_____.____	_____.____
0562	653.0905 Removing Pull Boxes	74.000 EACH	_____.____	_____.____
0564	654.0101 Concrete Bases Type 1	20.000 EACH	_____.____	_____.____
0566	654.0102 Concrete Bases Type 2	13.000 EACH	_____.____	_____.____
0568	654.0105 Concrete Bases Type 5	48.000 EACH	_____.____	_____.____
0570	654.0107 Concrete Bases Type 7	34.000 EACH	_____.____	_____.____
0572	654.0110 Concrete Bases Type 10	2.000 EACH	_____.____	_____.____
0574	654.0113 Concrete Bases Type 13	7.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0576	654.0217 Concrete Control Cabinet Bases Type 9 Special	2.000 EACH	_____.____	_____.____
0578	654.0230 Concrete Control Cabinet Bases Type L30	2.000 EACH	_____.____	_____.____
0580	655.0124 Cable In Duct 3-4 AWG	2,270.000 LF	_____.____	_____.____
0582	655.0126 Cable In Duct 3-6 AWG	2,065.000 LF	_____.____	_____.____
0584	655.0230 Cable Traffic Signal 5-14 AWG	3,045.000 LF	_____.____	_____.____
0586	655.0235 Cable Traffic Signal 7-12 AWG	1,974.000 LF	_____.____	_____.____
0588	655.0240 Cable Traffic Signal 7-14 AWG	5,659.000 LF	_____.____	_____.____
0590	655.0255 Cable Traffic Signal 12-12 AWG	3,672.000 LF	_____.____	_____.____
0592	655.0260 Cable Traffic Signal 12-14 AWG	3,049.000 LF	_____.____	_____.____
0594	655.0305 Cable Type UF 2-12 AWG Grounded	1,390.000 LF	_____.____	_____.____
0596	655.0320 Cable Type UF 2-10 AWG Grounded	5,253.000 LF	_____.____	_____.____
0598	655.0510 Electrical Wire Traffic Signals 12 AWG	7,025.000 LF	_____.____	_____.____
0600	655.0515 Electrical Wire Traffic Signals 10 AWG	5,391.000 LF	_____.____	_____.____
0602	655.0520 Electrical Wire Traffic Signals 8 AWG	5,290.000 LF	_____.____	_____.____
0604	655.0610 Electrical Wire Lighting 12 AWG	12,140.000 LF	_____.____	_____.____
0606	655.0615 Electrical Wire Lighting 10 AWG	2,772.000 LF	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0608	655.0620 Electrical Wire Lighting 8 AWG	29,470.000 LF	_____.____	_____.____
0610	655.0625 Electrical Wire Lighting 6 AWG	7,505.000 LF	_____.____	_____.____
0612	655.0635 Electrical Wire Lighting 2 AWG	7,900.000 LF	_____.____	_____.____
0614	655.0640 Electrical Wire Lighting 1 AWG	36.000 LF	_____.____	_____.____
0616	655.0700 Loop Detector Lead In Cable	38,888.000 LF	_____.____	_____.____
0618	655.0800 Loop Detector Wire	19,895.000 LF	_____.____	_____.____
0620	655.0900 Traffic Signal EVP Detector Cable	3,806.000 LF	_____.____	_____.____
0622	656.0200 Electrical Service Meter Breaker Pedestal (location) 3001. STH 100 & S. 20th Street	LS	LUMP SUM	_____.____
0624	656.0200 Electrical Service Meter Breaker Pedestal (location) 3002. IH 94 Ramps & STH 100	LS	LUMP SUM	_____.____
0626	656.0400 Electrical Service Main Lugs Only Meter Pedestal (location) 0001. HL-40-RY	LS	LUMP SUM	_____.____
0628	656.0400 Electrical Service Main Lugs Only Meter Pedestal (location) 0002. HL-40-YR	LS	LUMP SUM	_____.____
0630	656.0500 Electrical Service Breaker Disconnect Box (location) 2001. (CB-RM-40-0110)	LS	LUMP SUM	_____.____
0632	656.0500 Electrical Service Breaker Disconnect Box (location) 2002. (CB-RM-40-0070)	LS	LUMP SUM	_____.____
0634	657.0100 Pedestal Bases	15.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0636	657.0210 Transformer Bases Breakaway 15-17 Inch Bolt Circle	54.000 EACH	_____.____	_____.____
0638	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	18.000 EACH	_____.____	_____.____
0640	657.0305 Poles Type 2	2.000 EACH	_____.____	_____.____
0642	657.0310 Poles Type 3	11.000 EACH	_____.____	_____.____
0644	657.0322 Poles Type 5-Aluminum	5.000 EACH	_____.____	_____.____
0646	657.0330 Poles Type 7	54.000 EACH	_____.____	_____.____
0648	657.0405 Traffic Signal Standards Aluminum 3.5-FT	1.000 EACH	_____.____	_____.____
0650	657.0420 Traffic Signal Standards Aluminum 13-FT	5.000 EACH	_____.____	_____.____
0652	657.0425 Traffic Signal Standards Aluminum 15-FT	2.000 EACH	_____.____	_____.____
0654	657.0430 Traffic Signal Standards Aluminum 10-FT	7.000 EACH	_____.____	_____.____
0656	657.0609 Luminaire Arms Single Member 4-Inch Clamp 6-FT	17.000 EACH	_____.____	_____.____
0658	657.0610 Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	3.000 EACH	_____.____	_____.____
0660	657.0615 Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	8.000 EACH	_____.____	_____.____
0662	657.0635 Luminaire Arms Single Member 6-Inch Clamp 10-FT	16.000 EACH	_____.____	_____.____
0664	657.0640 Luminaire Arms Single Member 6-Inch Clamp 15-FT	40.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0666	657.1350 Install Poles Type 10	2.000 EACH	_____.____	_____.____
0668	657.1360 Install Poles Type 13	1.000 EACH	_____.____	_____.____
0670	657.1530 Install Monotube Arms 30-FT	2.000 EACH	_____.____	_____.____
0672	657.1545 Install Monotube Arms 45-FT	1.000 EACH	_____.____	_____.____
0674	657.1550 Install Monotube Arms 50-FT	4.000 EACH	_____.____	_____.____
0676	657.1555 Install Monotube Arms 55-FT	2.000 EACH	_____.____	_____.____
0678	657.1815 Install Luminaire Arms Steel 15-FT	3.000 EACH	_____.____	_____.____
0680	658.0110 Traffic Signal Face 3-12 Inch Vertical	40.000 EACH	_____.____	_____.____
0682	658.0115 Traffic Signal Face 4-12 Inch Vertical	6.000 EACH	_____.____	_____.____
0684	658.0215 Backplates Signal Face 3 Section 12-Inch	40.000 EACH	_____.____	_____.____
0686	658.0220 Backplates Signal Face 4 Section 12-Inch	6.000 EACH	_____.____	_____.____
0688	658.0416 Pedestrian Signal Face 16-Inch	24.000 EACH	_____.____	_____.____
0690	658.0500 Pedestrian Push Buttons	23.000 EACH	_____.____	_____.____
0692	658.0600 Led Modules 12-Inch Red Ball	36.000 EACH	_____.____	_____.____
0694	658.0605 Led Modules 12-Inch Yellow Ball	32.000 EACH	_____.____	_____.____
0696	658.0610 Led Modules 12-Inch Green Ball	32.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0698	658.0615 Led Modules 12-Inch Red Arrow	11.000 EACH	_____.____	_____.____
0700	658.0620 Led Modules 12-Inch Yellow Arrow	19.000 EACH	_____.____	_____.____
0702	658.0625 Led Modules 12-Inch Green Arrow	17.000 EACH	_____.____	_____.____
0704	658.0635 Led Modules Pedestrian Countdown Timer 16-Inch	24.000 EACH	_____.____	_____.____
0706	658.5069 Signal Mounting Hardware (location) 3001. STH 100 & S. 20th Street	LS	LUMP SUM	_____.____
0708	658.5069 Signal Mounting Hardware (location) 3002. IH 94 Ramps & STH 100	LS	LUMP SUM	_____.____
0710	659.1120 Luminaires Utility LED B	8.000 EACH	_____.____	_____.____
0712	659.1125 Luminaires Utility LED C	79.000 EACH	_____.____	_____.____
0714	659.2230 Lighting Control Cabinets 240/480 30-Inch	2.000 EACH	_____.____	_____.____
0716	661.0200 Temporary Traffic Signals for Intersections (location) 3001. STH 100 & S. 22nd Street	LS	LUMP SUM	_____.____
0718	661.0200 Temporary Traffic Signals for Intersections (location) 3002. IH 94 EB Ramps & STH 100 Existing	LS	LUMP SUM	_____.____
0720	661.0200 Temporary Traffic Signals for Intersections (location) 3003. IH 94 WB Ramps & STH 100 Existing	LS	LUMP SUM	_____.____
0722	661.0200 Temporary Traffic Signals for Intersections (location) 3004. STH 100 & S. 13th Street	LS	LUMP SUM	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0724	661.0200 Temporary Traffic Signals for Intersections (location) 3005. IH 94 EB Ramps & STH 100 Proposed	LS	LUMP SUM	_____.____
0726	661.0200 Temporary Traffic Signals for Intersections (location) 3006. IH 94 WB Ramps & STH 100 Proposed	LS	LUMP SUM	_____.____
0728	661.0300 Generators	12.000 DAY	_____.____	_____.____
0730	662.1024.S Ramp Closure Gates Hardwired 24-FT	2.000 EACH	_____.____	_____.____
0732	662.1028.S Ramp Closure Gates Hardwired 28-FT	1.000 EACH	_____.____	_____.____
0734	662.1037.S Ramp Closure Gates Hardwired 37-FT	3.000 EACH	_____.____	_____.____
0736	662.6020.S Ramp Closure Barricade Rack 2-Unit	2.000 EACH	_____.____	_____.____
0738	670.0100 Field System Integrator 2001. FTMS	LS	LUMP SUM	_____.____
0740	670.0100 Field System Integrator 3001. STH 100 INTERCONNECT	LS	LUMP SUM	_____.____
0742	670.0200 ITS Documentation 2001. FTMS	LS	LUMP SUM	_____.____
0744	670.0200 ITS Documentation 3001. STH 100 INTERCONNECT	LS	LUMP SUM	_____.____
0746	671.0122 Conduit HDPE 2-Duct 2-Inch	2,054.000 LF	_____.____	_____.____
0748	672.0100 Base ITS Controller Cabinet	2.000 EACH	_____.____	_____.____
0750	672.0250 Base Camera Pole 50-FT	1.000 EACH	_____.____	_____.____
0752	673.0105 Communication Vault Type 1	7.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0754	673.0200.S Install ITS Field Cabinet	2.000 EACH	_____.____	_____.____
0756	674.0200 Cable Microwave Detector	7,530.000 LF	_____.____	_____.____
0758	674.0300 Remove Cable	6,374.000 LF	_____.____	_____.____
0760	675.0100 Install Controller Ramp Meter Processor Assembly	2.000 EACH	_____.____	_____.____
0762	675.0300 Install Mounted Controller Microwave Detector Assembly	5.000 EACH	_____.____	_____.____
0764	675.0400.S Install Ethernet Switch	2.000 EACH	_____.____	_____.____
0766	676.0100 Signal Assembly Ramp Control Sidemount	2.000 EACH	_____.____	_____.____
0768	676.0105 Signal Assembly Ramp Control Overhead	4.000 EACH	_____.____	_____.____
0770	676.0300 Signal Assembly Advance Flasher Type 1	3.000 EACH	_____.____	_____.____
0772	676.0305 Signal Assembly Advance Flasher Type 2	1.000 EACH	_____.____	_____.____
0774	676.9001.S Removing Advance Flasher Assemblies Type 1	5.000 EACH	_____.____	_____.____
0776	677.0150 Install Camera Pole 50-FT	1.000 EACH	_____.____	_____.____
0778	677.0200 Install Camera Assembly	1.000 EACH	_____.____	_____.____
0780	677.9051.S Removing 50-FT Camera Pole	1.000 EACH	_____.____	_____.____
0782	677.9200.S Removing CCTV Camera	1.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0784	678.0006 Install Fiber Optic Cable Outdoor Plant 6-CT	1,845.000 LF	_____._____	_____._____
0786	678.0072 Install Fiber Optic Cable Outdoor Plant 72-CT	12,795.000 LF	_____._____	_____._____
0788	678.0300 Fiber Optic Splice	103.000 EACH	_____._____	_____._____
0790	678.0400 Fiber Optic Termination	18.000 EACH	_____._____	_____._____
0792	678.0500 Communication System Testing 2001. FTMS	LS	LUMP SUM	_____._____
0794	678.0500 Communication System Testing 3001. STH 100 INTERCONNECT	LS	LUMP SUM	_____._____
0796	690.0250 Sawing Concrete	9,810.000 LF	_____._____	_____._____
0798	715.0415 Incentive Strength Concrete Pavement	5,000.000 DOL	1.00000	5,000.00
0800	715.0502 Incentive Strength Concrete Structures	13,092.000 DOL	5.00000	65,460.00
0802	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	6,800.000 HRS	5.00000	34,000.00
0804	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	11,000.000 HRS	5.00000	55,000.00
0806	SPV.0035 Special 0001. BIOFILTRATION DEVICE HARDWOOD MULCH	18.000 CY	_____._____	_____._____
0808	SPV.0035 Special 0002. BIOFILTRATION DEVICE ENGINEERED SOIL	90.000 CY	_____._____	_____._____
0810	SPV.0035 Special 0003. BIOFILTRATION DEVICE SAND SEAM	17.000 CY	_____._____	_____._____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0812	SPV.0035 Special 0004. NO. 2 AGGREGATE	100.000 CY	_____.____	_____.____
0814	SPV.0035 Special 0005. Topsoil Special	43.000 CY	_____.____	_____.____
0816	SPV.0035 Special 0006. Riprap Medium Special	14.000 CY	_____.____	_____.____
0818	SPV.0035 Special 4000. HPC MASONRY STRUCTURES **P**	1,609.000 CY	_____.____	_____.____
0820	SPV.0035 Special 8001. Detention Basin Clay Lining	2,291.000 CY	_____.____	_____.____
0822	SPV.0060 Special 0001. WATERING BAGS	39.000 EACH	_____.____	_____.____
0824	SPV.0060 Special 0002. BIOFILTRATION DEVICE OBSERVATION WELL	1.000 EACH	_____.____	_____.____
0826	SPV.0060 Special 0003. BIOFILTRATION DEVICE CURB OPENING CASTING	2.000 EACH	_____.____	_____.____
0828	SPV.0060 Special 0004. Rootstock Vegetation	1,256.000 EACH	_____.____	_____.____
0830	SPV.0060 Special 0005. Silt Fence Drainage Outlet, Erosion Control Filter Bags	3.000 EACH	_____.____	_____.____
0832	SPV.0060 Special 0006. BIOFILTRATION DEVICE RESTORATION	1.000 EACH	_____.____	_____.____
0834	SPV.0060 Special 0007. Permanent Stone Ditch Check	6.000 EACH	_____.____	_____.____
0836	SPV.0060 Special 0014. MAINTAIN CRASH CUSHION TEMPORARY LEFT IN PLACE	3.000 EACH	_____.____	_____.____
0838	SPV.0060 Special 0020. Field Facilities Office Space	1.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0840	SPV.0060 Special 0022. Traffic Control Interim Freeway Lane Closure	9.000 EACH	_____.____	_____.____
0842	SPV.0060 Special 0023. Traffic Control Close-Open Freeway Entrance Ramp	3.000 EACH	_____.____	_____.____
0844	SPV.0060 Special 0024. Sand Bags	50.000 EACH	_____.____	_____.____
0846	SPV.0060 Special 0025. Removing Sanitary Manhole	1.000 EACH	_____.____	_____.____
0848	SPV.0060 Special 0026. Sanitary Sewer Manhole Precast Concrete 48-Inch W/ Casting	1.000 EACH	_____.____	_____.____
0850	SPV.0060 Special 1000. Removing High Mast Tower Concrete Bases	2.000 EACH	_____.____	_____.____
0852	SPV.0060 Special 1002. Concrete Bases Type 7 Special	20.000 EACH	_____.____	_____.____
0854	SPV.0060 Special 1004. Removing Distribution Centers	2.000 EACH	_____.____	_____.____
0856	SPV.0060 Special 1005. Removing High Mast Lighting Towers	2.000 EACH	_____.____	_____.____
0858	SPV.0060 Special 1006. Removing Lighting Units	21.000 EACH	_____.____	_____.____
0860	SPV.0060 Special 1007. Removing Wood Pole Lighting Units	1.000 EACH	_____.____	_____.____
0862	SPV.0060 Special 1008. Poles Aluminum City of Oak Creek Nominal Height 30 FT Bronze	27.000 EACH	_____.____	_____.____
0864	SPV.0060 Special 1009. Temporary Wood Pole Lighting Units	31.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0866	SPV.0060 Special 1010. Luminaires LED City of Oak Creek GARDCO P21 Bronze	35.000 EACH	_____.____	_____.____
0868	SPV.0060 Special 1013. Lamp Disposal High Intensity Discharge	17.000 EACH	_____.____	_____.____
0870	SPV.0060 Special 1014. Trnsfrmer Bases Breakaway 11 1/2-Inch Bolt Circle City of Oak Creek Bronze	37.000 EACH	_____.____	_____.____
0872	SPV.0060 Special 2001. Ground Rod	10.000 EACH	_____.____	_____.____
0874	SPV.0060 Special 2002. Removing Ramp Control Signal Assembly Sidemount	5.000 EACH	_____.____	_____.____
0876	SPV.0060 Special 2003. Removing Controller Ramp Meter Processor Assembly	2.000 EACH	_____.____	_____.____
0878	SPV.0060 Special 2004. Removing Controller Cabinet	3.000 EACH	_____.____	_____.____
0880	SPV.0060 Special 2005. Removing Controller Cabinet Base	3.000 EACH	_____.____	_____.____
0882	SPV.0060 Special 2006. Removing Electrical Service Meter Breaker Pedestal	3.000 EACH	_____.____	_____.____
0884	SPV.0060 Special 2008. Installing Portable Video Surveillance System	1.000 EACH	_____.____	_____.____
0886	SPV.0060 Special 2009. Relocating Portable Video Surveillance System	2.000 EACH	_____.____	_____.____
0888	SPV.0060 Special 2010. Installing Temporary Vehicle Detector Assembly	1.000 EACH	_____.____	_____.____
0890	SPV.0060 Special 2011. Refocusing Temporary Vehicle Detector Assembly	2.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0892	SPV.0060 Special 2012. Removing Communication Vault	3.000 EACH	_____.____	_____.____
0894	SPV.0060 Special 2013. Pull Box Non-Conductive 24X42-Inch	28.000 EACH	_____.____	_____.____
0896	SPV.0060 Special 2014. Solar Powered Vehicle Detector Assembly	1.000 EACH	_____.____	_____.____
0898	SPV.0060 Special 3001. Concrete Control Cabinet Bases Type 9 Special (Mod.)	1.000 EACH	_____.____	_____.____
0900	SPV.0060 Special 3002. Install Poles Over Height Type 12	6.000 EACH	_____.____	_____.____
0902	SPV.0060 Special 4010. PILE DYNAMIC ANALYZER (PDA) TESTING	11.000 EACH	_____.____	_____.____
0904	SPV.0060 Special 4020. PILE DYNAMIC ANALYZER (PDA) RESTRIKES	11.000 EACH	_____.____	_____.____
0906	SPV.0060 Special 4030. Case Pile Wave Analysis Program (CAPWAP) Evaluation	3.000 EACH	_____.____	_____.____
0908	SPV.0060 Special 4120. CONCRETE BASE SLEEVES	6.000 EACH	_____.____	_____.____
0910	SPV.0060 Special 6001. MMSD SANITARY MANHOLE RECONSTRUCT	2.000 EACH	_____.____	_____.____
0912	SPV.0060 Special 8004. INLET COVERS TYPE 57	6.000 EACH	_____.____	_____.____
0914	SPV.0060 Special 8015. Pipe Connection to Existing Structure	6.000 EACH	_____.____	_____.____
0916	SPV.0060 Special 8018. Removing Bulkhead	2.000 EACH	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0918	SPV.0060 Special 8061. Remove and Cap Existing Drainage Storm Sewer Structure	2.000 EACH	_____.____	_____.____
0920	SPV.0075 Special 0001. PAVEMENT CLEANUP PROJECT 1030-20-85	272.000 HRS	_____.____	_____.____
0922	SPV.0085 Special 0001. Seed Mix Special	10.750 LB	_____.____	_____.____
0924	SPV.0090 Special 0001. CONCRETE CURB AND GUTTER 4-INCH SLOPED 12 Inch Depth 60-INCH TYPE A	2,603.000 LF	_____.____	_____.____
0926	SPV.0090 Special 0002. Heavy Duty Silt Fence	5,064.000 LF	_____.____	_____.____
0928	SPV.0090 Special 0003. Coconut Fiber Rolls Delivered	200.000 LF	_____.____	_____.____
0930	SPV.0090 Special 0004. Coconut Fiber Rolls Installed	200.000 LF	_____.____	_____.____
0932	SPV.0090 Special 0006. MAINTAIN CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE	2,491.000 LF	_____.____	_____.____
0934	SPV.0090 Special 0007. Removing Sanitary Sewer Pipe 15-Inch	32.000 LF	_____.____	_____.____
0936	SPV.0090 Special 0008. Sanitary Sewer 15-Inch SDR 35 Class "C" Bedding	4.000 LF	_____.____	_____.____
0938	SPV.0090 Special 0502. CONCRETE BARRIER TEMPORARY PRECAST DELIVERED SPECIAL	716.000 LF	_____.____	_____.____
0940	SPV.0090 Special 1000. Cable in Duct, 3-6 AWG 1-8 AWG	1,600.000 LF	_____.____	_____.____
0942	SPV.0090 Special 1001. Cable in Duct 3-4, AWG 1-8 AWG	1,020.000 LF	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0944	SPV.0090 Special 1002. Temporary Cable in Duct, 2-4 AWG 1-8 AWG	415.000 LF	_____.____	_____.____
0946	SPV.0090 Special 1003. Temporary Overhead Cable Triplex 4 AWG	5,840.000 LF	_____.____	_____.____
0948	SPV.0090 Special 1004. Removing Overhead Lighting Cable	225.000 LF	_____.____	_____.____
0950	SPV.0090 Special 4300. FENCE DECORATIVE BRIDGE	350.000 LF	_____.____	_____.____
0952	SPV.0090 Special 4310. FENCE DECORATIVE WING	197.000 LF	_____.____	_____.____
0954	SPV.0090 Special 4320. PILING SLEEVES	1,068.000 LF	_____.____	_____.____
0956	SPV.0105 Special 0001. SURVEY PROJECT ID 1030-20-85	LS	LUMP SUM	_____.____
0958	SPV.0105 Special 0002. Rootstock Protection Project 1030-26-72	LS	LUMP SUM	_____.____
0960	SPV.0105 Special 0003. Concrete Pavement Joint Layout	LS	LUMP SUM	_____.____
0962	SPV.0105 Special 0004. Rootstock Protection Project 1030-20-85	LS	LUMP SUM	_____.____
0964	SPV.0105 Special 0005. Survey Project ID 1030-26-72	LS	LUMP SUM	_____.____
0966	SPV.0105 Special 1000. Lighting System Integrator	LS	LUMP SUM	_____.____
0968	SPV.0105 Special 1002. Maintenance of Lighting Systems	LS	LUMP SUM	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0970	SPV.0105 Special 3001. Remove Traffic Signals IH 94 EB Ramps & STH 100	LS	LUMP SUM	_____.____
0972	SPV.0105 Special 3002. Remove Traffic Signals IH 94 WB Ramps & STH 100	LS	LUMP SUM	_____.____
0974	SPV.0105 Special 3003. Remove Loop Detector Wire and Lead-in Cable IH 94 EB Ramps & STH 100	LS	LUMP SUM	_____.____
0976	SPV.0105 Special 3004. Remove Loop Detector Wire and Lead-in Cable IH 94 WB Ramps & STH 100	LS	LUMP SUM	_____.____
0978	SPV.0105 Special 3005. Remove Loop Detector Wire and Lead-in Cable STH 100 & S. 13th Street	LS	LUMP SUM	_____.____
0980	SPV.0105 Special 3006. Trnsport & Install State Furn Traffic Signal Cabinet STH 100 & S. 20th St.	LS	LUMP SUM	_____.____
0982	SPV.0105 Special 3007. Trnsport & Install St Furn Traffc Signal Cabinet IH 94 Ramps & STH 100 CB1	LS	LUMP SUM	_____.____
0984	SPV.0105 Special 3008. Trnsport & Install St Furn Traffc Signal Cabinet IH 94 Ramps & STH 100 CB2	LS	LUMP SUM	_____.____
0986	SPV.0105 Special 3009. Trnsport Traffic Signal & Intersection Lighting Matrls STH 100 & S 20th St	LS	LUMP SUM	_____.____
0988	SPV.0105 Special 3010. Transporting Signal and Lighting Materials IH 94 Ramps & STH 100	LS	LUMP SUM	_____.____
0990	SPV.0105 Special 3011. Transport & Install State Furn Radar Detection System STH 100 & S. 20th St	LS	LUMP SUM	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0992	SPV.0105 Special 3012. Tnspt & Instl St Furn Em Vhcle Premption EVP Detctr Head STH 100 & S 20th	LS	LUMP SUM	_____.____
0994	SPV.0105 Special 3013. Tnspt & Instl St Furn Em Vhcl Prempt EVP Detctr Head IH 94 Rmp & STH 100	LS	LUMP SUM	_____.____
0996	SPV.0105 Special 3014. Temporary EVP System STH 100 & S. 22nd Street	LS	LUMP SUM	_____.____
0998	SPV.0105 Special 3015. Temporary EVP System IH 94 EB Ramps & STH 100 Existing	LS	LUMP SUM	_____.____
1000	SPV.0105 Special 3016. Temporary EVP System IH 94 WB Ramps & STH 100 Existing	LS	LUMP SUM	_____.____
1002	SPV.0105 Special 3017. Temporary EVP System IH 94 EB Ramps & STH 100 Proposed	LS	LUMP SUM	_____.____
1004	SPV.0105 Special 3018. Temporary EVP System IH 94 WB Ramps & STH 100 Proposed	LS	LUMP SUM	_____.____
1006	SPV.0105 Special 3019. Temporary EVP System STH 100 & S. 13th Street	LS	LUMP SUM	_____.____
1008	SPV.0105 Special 3020. Temporary Vehicle Detection System for Intersections STH 100 & S. 22nd St	LS	LUMP SUM	_____.____
1010	SPV.0105 Special 3021. Temp Vhcle Detect Systm for Intrsect IH 94 EB Rmps & STH 100 Exist	LS	LUMP SUM	_____.____
1012	SPV.0105 Special 3022. Temp Vhcle Detect Systm for Intrsect IH 94 WB Rmps & STH 100 Exist	LS	LUMP SUM	_____.____
1014	SPV.0105 Special 3023. Temp Vhcle Detect Systm for Intrsect IH 94 EB Rmps & STH 100 Proposed	LS	LUMP SUM	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1016	SPV.0105 Special 3024. Temp Vhcle Detect Systm for Intrsect IH 94 WB Rmps & STH 100 Proposed	LS	LUMP SUM	_____.____
1018	SPV.0105 Special 3025. Temporary Vehicle Detection System for Intersections STH 100 & S. 13th St	LS	LUMP SUM	_____.____
1020	SPV.0105 Special 3026. Install Fiber Optic Communications in Cabinet STH 100 & STH 241	LS	LUMP SUM	_____.____
1022	SPV.0105 Special 3027. Install Fiber Optic Communications in Cabinet STH 100 & S. 22nd Street	LS	LUMP SUM	_____.____
1024	SPV.0105 Special 3028. Install Fiber Optic Communications in Cabinet STH 100 & S. 20th Street	LS	LUMP SUM	_____.____
1026	SPV.0105 Special 3029. Install Fiber Optic Communications in Cabinet IH 94 Ramps & STH 100	LS	LUMP SUM	_____.____
1028	SPV.0105 Special 3030. Install Fiber Optic Communications in Cabinet STH 100 & S. 13th Street	LS	LUMP SUM	_____.____
1030	SPV.0165 Special 4010. LONGITUDINAL GROOVING BRIDGE DECK	27,154.000 SF	_____.____	_____.____
1032	SPV.0165 Special 4610. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LFRD / QMP	9,920.000 SF	_____.____	_____.____
1034	SPV.0165 Special 4620. TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD / QMP	870.000 SF	_____.____	_____.____
1036	SPV.0180 Special 0001. Geogrid Reinforcement	489.000 SY	_____.____	_____.____

Proposal ID: 20170912011 Project(s): 1030-20-85, 1030-26-72

Federal ID(s): N/A, WISC 2017485

SECTION: 0001 Roadway Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1038	SPV.0180 Special 0002. Seeding Special	60.000 SY	_____.____	_____.____
1040	SPV.0180 Special 0003. Seed Bed Preparation	60.000 SY	_____.____	_____.____
1042	SPV.0195 Special 0001. Coarse Aggregate Mix For Streambed	74.000 TON	_____.____	_____.____
1044	SPV.0195 Special 4000. Excavation, Hauling, and Disposal of Creosote Contaminated Soil	3,790.000 TON	_____.____	_____.____
	Section: 0001		Total:	_____.____

Total Bid: _____.____

PLEASE ATTACH SCHEDULE OF ITEMS HERE