HIGHWAY WORK PROPOSAL

Proposal Number: Ø 3

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Dane	1206-07-84	WISC 2014 260	Mount Horeb-Madison Verona Road to Seminole Highway	USH 18
Dane	1206-07-85		Mount Horeb-Madison Madison Beltline (Phase 3)	USH 18

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, $ 1,000,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: July 8, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time November 17, 2016	
Assigned Disadvantaged Business Enterprise Goal 3%	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 Earthwork, base course, concrete pavement, HMA pavement, concrete curb and gutter, concrete barrier wall, concrete sidewalk, MGS guardrail, storm sewer, pavement marking, erosion control, lighting, traffic signals, landscaping, and Structures (B-13-651, -652, -653, -654, R-13-194, -197, -232, -238, -241, N-13-2, S-13-368, -369, -370, -371, -372, -373, -374, -375, -385, -386, -387, -423).	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2007 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

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

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

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

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

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

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

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

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(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.

Table of Contents

Article	Description	Page #
1.	General.	9
2.	Scope of Work.	9
3.	Prosecution and Progress.	9
4.	Contract Award and Execution.	17
5.	Traffic.	22
6.	General Requirements for Incident Management.	44
7.	Holiday and Special Event Work Restrictions.	45
8.	Utilities.	47
9.	General Provisions for City of Madison Municipal Utilities (Water Main).	56
10.	General Provisions for City of Madison Water Main.	56
11.	Other Contracts.	57
12.	Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.	58
13.	Environmental Protection, Dewatering and Wetlands.	59
14.	Erosion Control.	59
15.	Hauling Restrictions.	60
16.	Project Communication Enhancement Effort.	60
17.	Coordination with Businesses.	61
18.	Notice to Contractor.	61
19.	Clearing and Grubbing.	64
20.	Debris Containment Structure B-13-64, Item 203.0225.S.001; B-13-305, Item 203.0225.S.002.	64
21.	Removing Building.	65
22.	Removing Overhead Sign Support, Item 204.9060.S.001.	65
23.	Removing Inlet Covers, Item 204.9060.S.002.	66
24.	Removing Apron Endwalls, Item 204.9060.S.003.	66
25.	Removing Barricades Permanent Type III, Item 204.9060.S.004.	67
26.	Removing Permanent Traffic Barrier, Item 204.9060.S.005.	67
27.	Removing Modular Block Retaining Wall Station 1098+88 to Station 1100+38, Item 204.9090.S.001; Station 1102+94 to Station 1105+95, Item 204.9090.S.002; Station 140+10 A to Station 142+01 A, Item 204.9090.S.003.	68
28.	Removing Timber Retaining Wall, Item 204.9090.S.004.	68
29.	Removing Sheet Pile Retaining Wall, Item 204.9090.S.005.	69
30.	Temporary Shoring, Item 206.6000.S.	69
31.	QMP Base Aggregate.	70
32.	Base Aggregate Dense 1 1/4-Inch.	78
33.	Concrete Pavement.	79
34.	QMP Ride; Incentive IRI Ride, Item 440.4410.S.	81
35.	QMP HMA Pavement Nuclear Density.	88
36.	HMA Pavement.	96
37.	Sealing Cracks and Joints with Hot-Applied Sealant, Item 492.2010.S.	97

38. Expansion Device, B-13-651; B-13-652; B-13-653. 99
39. Concrete Staining B-13-651, Item 517.1010.S.001; B-13-652, Item 517.1010.S.002; B-13-653, Item 517.1010.S.003; B-13-654, Item 517.1010.S.004; R-13-194, Item 517.1010.S.005; R-13-197, Item 517.1010.S.006; R-13-232, Item 517.1010.S.007; R-13-238, Item 517.1010.S.008; R-13-241, Item 517.1010.S.009; S-13-368, Item 517.1010.S.010; S-13-369, Item 517.1010.S.011; S-13-370, Item 517.1010.S.012; S-13-371, Item 517.1010.S.013; S-13-372, Item 517.1010.S.014; S-13-373, Item 517.1010.S.015; S-13-374, Item 517.1010.S.016; S-13-375, Item 517.1010.S.017; S-13-385, Item 517.1010.S.018; S-13-386, Item 517.1010.S.019; S-13-423, Item 517.1010.S.020; Barrier Wall, Item 517.1010.S.021; Mosaic Wall, Item 517.1010.S.022..... 100
40. Architectural Surface Treatment B-13-651, Item 517.1050.S.001; B-13-652, Item 517.1050.S.002; B-13-653, Item 517.1050.S.003; R-13-194, Item 517.1050.S.004; R-13-197, Item 517.1050.S.005; R-13-232, Item 517.1050.S.006; R-13-238, Item 517.1050.S.007; R-13-241, Item 517.1050.S.008; S-13-368, Item 517.1050.S.009; S-13-369, Item 517.1050.S.010; S-13-370, Item 517.1050.S.011; S-13-371, Item 517.1050.S.012; S-13-372, Item 517.1050.S.013; S-13-373, Item 517.1050.S.014; S-13-374, Item 517.1050.S.015; S-13-375, Item 517.1050.S.016; S-13-385, Item 517.1050.S.017; S-13-386, Item 517.1050.S.018; S-13-423, Item 517.1050.S.019..... 103
41. Temporary Wall Wire Faced Mechanically Stabilized Earth, Item 532.0750.S. 105
42. Concrete Barrier Temporary Precast Delivered..... 109
43. Concrete Barrier Temporary Precast Installed..... 109
44. Permanent Barrier. 109
45. Riprap..... 110
46. General Provisions for Storm Sewer..... 110
47. Adjusting Manhole Covers. 111
48. Cover Plates Temporary, Item 611.8120.S. 112
49. General Requirements for Storm Sewer Manholes. 112
50. Crash Cushions Permanent Low Maintenance. 113
51. Fence Safety, Item 616.0700.S. 113
52. General Requirements for Planting..... 114
53. Seeding..... 114
54. Furnishing and Planting Plant Materials..... 114
55. Landscape Planting Surveillance and Care Cycles. 119
56. Signs Reflective. 119
57. Removing Signs (Type); Removing Small Sign Supports. 120
58. Blue Specific Service Signs. 120
59. Sign Bridge Cantilevered S-13-371, Item 641.1200.S.400; S-13-374, Item 641.1200.S.401; Sign Bridge Structure S-13-368, Item 641.6600.400; S-13-369, Item 641.6600.401; S-13-370, Item 641.6600.402; S-13-372, Item 641.6600.403; S-13-373, Item 641.6600.404; S-13-375, Item 641.6600.405; S-13-385, Item 641.6600.406; S-13-423, Item 641.6600.407; Overhead Sign Support, S-13-386, Item 641.8100.400; S-13-387, Item 641.8100.401..... 120
60. Field Facilities..... 128
61. Nighttime Work Lighting-Stationary..... 129

62. Traffic Control Surveillance and Maintenance. 131
63. Removing Pavement Markings. 132
64. Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch, Item 646.0841.S; 8-Inch, Item 646.0843.S. 132
65. Pavement Marking Grooved Wet Reflective Tape 4-Inch, Item 646.0881.S; 8-Inch, Item 646.0883.S. 134
66. Temporary Pavement Marking. 137
67. Install Conduit Into Existing Item, Item 652.0700.S. 137
68. Electrical Service Meter Breaker Pedestal, Item 656.0200. 138
69. General Provisions for Intelligent Transportation Systems (ITS)-Control of Materials. 138
70. General Provisions for Intelligent Transportation Systems. 139
71. General Provisions for Electrical Conduit. 144
72. Traffic Signal Face (no., size, orientation) and Pedestrian Signal Face 12-Inch. 145
73. Install Poles Type 9, Item 657.1345; Install Poles Type 12, Item 657.1355; Install Poles Type 13, Item 657.1360; Install Monotube Arms 30-FT, Item 657.1530; Install Monotube Arms 40-FT, Item 657.1540; Install Monotube Arms 45-FT, Item 657.1545; Install Luminaire Arms Steel 8-FT, Item 657.1808. 145
74. Temporary Traffic Signals for Intersections Midvale Boulevard and Nakoma Road, Item 661.0200.001. 147
75. Install ITS Field Cabinet, Item 673.0200.S. 149
76. Install Pole Mounted Cabinet, Item 673.0225.S. 150
77. Install Ethernet Switch, Item 675.0400.S. 151
78. Install Video Encoder, Item 677.0300.S. 151
79. Removing 50-Foot Camera Pole, Item 677.9051.S. 152
80. Fiber Optic Splice Enclosure. 153
81. High Performance Concrete (HPC) Masonry Structures, Item SPV.0035.300. 153
82. Planting Mixture, Item SPV.0035.500. 159
83. Topsoil Special, Item SPV.0035.501. 160
84. Abandon Sanitary Sewer - Slurry, Item SPV.0035.600. 161
85. PCMS Remote Communications, SPV.0045.700. 162
86. Work Zone Access Assistance Vehicle, Item SPV.0045.701. 163
87. Utility Line Opening (ULO), Item SPV.0060.001. 164
88. Construction Staking Curb Ramp, Item SPV.0060.002. 165
89. Construction Staking Sign Structure, Item SPV.0060.003. 166
90. Concrete Barrier Transition NJ32DF-S36 Special, Item SPV.0060.004; S36-S42 Special, Item SPV.0060.005; S42-S56 Special, Type A, Item SPV.0060.006; S42-S56 Special, Type B, Item SPV.0060.007; S42-S56 Special, Type C, Item SPV.0060.008; S42-S56 Special, Type D, Item SPV.0060.009; S42C-S56C, Item SPV.0060.010; S56-56Vertical Special, Type A, Item SPV.0060.011; S56-56Vertical Special, Type B, Item SPV.0060.012; S56-56Vertical Special, Type C, Item SPV.0060.013; S56-56 Vertical Special, Type D, Item SPV.0060.014; P32-S42 Special, Item SPV.0060.015. 166
91. Inlets 1.75x2-FT, Item SPV.0060.016; 6x6-FT, Item SPV.0060.017. 167
92. Fiber Tracer Marker Post, Item SPV.0060.018. 168
93. Connect Pipe Underdrain to Existing Structure, Item SPV.0060.019. 169

94. Slotted Vane Drain Type A 6-FT, Item SPV.0060.020. 169
95. Concrete Cut Off Wall, Item SPV.0060.021. 170
96. Inlet Protection Type FLI, Item SPV.0060.022. 171
97. Storm Sewer Tap, Item SPV.0060.023. 171
98. Inlet ML640, SPV.0060.024. 172
99. Remove Existing City-Owned Light Pole Assembly, Item SPV.0060.100. 173
100. Remove Existing WisDOT-Owned Light Pole Assembly, Item SPV.0060.101. 174
101. Luminaires Underdeck LED, Item SPV.0060.102. 175
102. Lighting Control Cabinet, Item SPV.0060.103. 176
103. Concrete Control Cabinet Bases Special, Item SPV.0060.104. 176
104. Wood Pole, 65-FT with Service, Item SPV.0060.105. 177
105. Lighting Control Cabinet-City of Madison, Item SPV.0060.106. 179
106. Relocating Existing Light Pole Assembly, Item SPV.0060.107. 180
107. Install IP Wireless 5.8 GHz Radio/Antenna, Item SPV.0060.108. 181
108. Remove Existing Traffic Signal Faces, Item SPV.0060.109. 182
109. Loop Detector Splice, Item SPV.0060.110. 183
110. Relocate Solar-Powered Bluetooth Sensor, Item SPV.0060.111. 184
111. Repair Loop Detector Slot, Item SPV.0060.112. 184
112. Posts Round Tubular Steel 2-Inch 10-FT, Item SPV.0060.200; 12-FT, Item SPV.0060.201; 14-FT, Item SPV.0060.202; Reflective 10-FT, Item SPV.0060.203; Reflective 12-FT, Item SPV.0060.204; Reflective 14-FT, Item SPV.0060.205. 185
113. Precast Sign Post Base, Item SPV.0060.206. 186
114. Temporary Street Light Unit, Item SPV.0060.207. 188
115. Maintenance and Salvaging of Crash Cushions Temporary Left In Place By Others, Item SPV.0060.300. 190
116. Relocate Crash Cushion Temporary Left In Place By Others, Item SPV.0060.301. 191
117. Traffic Control, Vertical Panels, 8-Inch, Double, Item SPV.0060.302. 191
118. Inlet Covers, Flat, Temporary, Item SPV.0060.303. 192
119. Inlets Temporary, Item SPV.0060.304. 193
120. Temporary Curb Ramp, Item SPV.0060.305. 194
121. Pre-Engineered Skylight System, Item SPV.0060.306. 196
122. Perennials, Autumn Moor Grass, CG, 1 Gal., Item SPV.0060.500; Perennials, Beardtongue, 'Husker Red', CG, 1 Gal., Item SPV.0060.501; Perennials, Bee Balm, 'Grand Marshall', CG, 1 Gal., Item SPV.0060.502; Perennials, Bee Balm, 'Jacob Cline', CG, 1 Gal., Item SPV.0060.503; Perennials, Black-Eyed Susan, 'Goldsturm', CG, 1 Gal., Item SPV.0060.504; Perennials, Blue Moor Grass, CG, 1 Gal., Item SPV.0060.505; Perennials, Butterflyweed, CG, 1 Gal., Item SPV.0060.506; Perennials, Calamint, Lesser, 'Montrose White', CG, 1 Gal., Item SPV.0060.507; Perennials, Catmint, 'Walker's Low', CG, 1 Gal., Item SPV.0060.508; Perennials, Coneflower, Pale Purple, CG, 1 Gal., Item SPV.0060.509; Perennials, Coneflower, 'PowWow Wildberry', CG, 1 Gal., Item SPV.0060.510; Perennials, Coneflower, 'White Swan', CG, 1 Gal., Item SPV.0060.511; Perennials, Crested Hair Grass, CG, 1 Gal., Item SPV.0060.512; Perennials, Gayfeather, Spiked, 'Kobold', CG, 1 Gal., Item SPV.0060.513; Perennials, Gayfeather, White, CG, 1 Gal., Item SPV.0060.514; Perennials,

Ironweed, ‘Iron Beauty’, CG, 1 Gal., Item SPV.0060.515; Perennials, Knautia, CG, 1 Gal., Item SPV.0060.516; Perennials, Little Bluestem, ‘Blue Heaven’, CG, 1 Gal., Item SPV.0060.517; Perennials, Little Bluestem, ‘The Blues’, CG, 1 Gal., Item SPV.0060.518; Perennials, Northern Sea Oats, CG, 1 Gal., Item SPV.0060.519; Perennials, Ornamental Chives, ‘Globemaster’, CG, 1 Gal., Item SPV.0060.520; Perennials, Ornamental Chives, ‘Summer Beauty’, CG, 1 Gal., Item SPV.0060.521; Perennials, Prairie Clover, Purple, CG, 1 Gal., Item SPV.0060.522; Perennials, Purple Love Grass, CG, 1 Gal., Item SPV.0060.523; Perennials, Prairie Dropseed, CG, 1 Gal., Item SPV.0060.524; Perennials, Prairie Dropseed, ‘Tara’, CG, 1 Gal., Item SPV.0060.525; Perennials, Reed Grass, ‘Karl Foerster’, CG, 1 Gal., Item SPV.0060.526; Perennials, Reed Grass, ‘Overdam’, CG, 1 Gal., Item SPV.0060.527; Perennials, Russian Sage, ‘Little Spire’, CG, 1 Gal., Item SPV.0060.528; Perennials, Salvia, ‘May Night’, CG, 1 Gal., Item SPV.0060.529; Perennials, Sedum, ‘Autumn Fire’, CG, 1 Gal., Item SPV.0060.530; Perennials, Snowdrop Windflower, CG, 1 Gal., Item SPV.0060.531; Perennials, Switch Grass, ‘Northwind’, CG, 1 Gal., Item SPV.0060.532; Perennials, Switch Grass, ‘Rotstrahlbusch’, CG, 1 Gal., Item SPV.0060.533; Perennials, Tickseed, Threadleaf ‘Zagreb’, CG, 1 Gal., Item SPV.0060.534; Perennials, White False Indigo, CG, 1 Gal., Item SPV.0060.535; Perennials, Wild Indigo, ‘Purple Smoke’, CG, 1 Gal., Item SPV.0060.536; Perennials, Yarrow, ‘SummerWine’, CG, 1 Gal., Item SPV.0060.537. 205

123. Light Box, Item SPV.0060.550. 208
124. Hydrants, Item SPV.0060.600. 211
125. Water Valve, 4-Inch, Item SPV.0060.601; 6-Inch, Item SPV.0060.602; 8-Inch, Item SPV.0060.603; 12-Inch, Item SPV.0060.604; 16-Inch, Item SPV.0060.605. 211
126. Cut-In Connection, Item SPV.0060.606. 212
127. Adjust Water Valve Box, Item SPV.0060.607. 213
128. Cut-Off Existing Water Main, Item SPV.0060. 608. 213
129. Abandon Water Valve Box, Item SPV.0060.609. 214
130. Remove and Salvage Hydrant, Item SPV.0060.610. 215
131. Temporary Water Main Connection, Item SPV.0060.611. 216
132. Excavate Trench for Live Tap, SPV.0060.612. 217
133. Disconnect and Reconnect Existing Service Lateral - 1-Inch, Item SPV.0060.613; 1.5-Inch, Item SPV.0060.614; 2-Inch, Item SPV.0060.615. 217
134. Adjust Water Service Box, Item SPV.0060.616. 218
135. Adjust SAS Special, Item SPV.0060.617. 219
136. Sanitary Sewer Access Structure (4-Foot Diameter), Item SPV.0060.618. 219
137. Manhole Covers Type MAD, Item SPV.0060.619. 220
138. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.620. 221
139. Sanitary Sewer Tap, Item SPV.0060.621. 222
140. Remove Sanitary Sewer Structure, Item SPV.0060.622. 223
141. Abandon Sanitary Sewer - Pipe Plug, Item SPV.0060.623. 224
142. Temporary Sanitary Sewer Connection, Item SPV.0060.624. 224
143. Baseline CPM Progress Schedule, Item SPV.0060.700; CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.701. 226
144. Street Sweeping, Item SPV.0075.001. 236

145. Bar Steel Reinforcement HS Stainless Bridges, Item SPV.0085.300..... 237
146. Concrete Curb and Gutter 24-Inch Type A, Item SPV.0090.001; 24-Inch Type D, Item SPV.0090.002; 32-Inch Special, Item SPV.0090.003; 30-Inch Type A Full Depth, Item SPV.0090.004; 4-Inch Sloped 36-Inch Type A Full Depth. Item SPV.0090.005; Concrete Gutter 18-Inch, Item SPV.0090.006. 241
147. Concrete Barrier Special, Type A, Item SPV.0090.007; Type B, Item SPV.0090.008; Type C, Item SPV.0090.009; Type D, Item SPV.0090.010; Type E, Item SPV.0090.011; Type F, Item SPV.0090.012; Type G, Item SPV.0090.13. 241
148. Pavement Marking Grooved Wet Reflective Contrast Epoxy, 8-Inch, Item SPV.0090.014. 242
149. Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate, Item SPV.0090.015. 244
150. Concrete Curb and Gutter HES 24-Inch Type A, Item SPV.0090.016; 30-Inch Type A, Item SPV.0090.017; 24-Inch Type D, Item SPV.0090.018; 30-Inch Type D, Item SPV.0090.019. 245
151. Storm Sewer Pipe 8-Inch, Item SPV.0090.020..... 246
152. Construction Fence Temporary, Item SPV.0090.021. 247
153. Temporary Street Lighting Aerial Cable, Item SPV.0090.200..... 248
154. Salvage Concrete Barrier Precast, Item SPV.0090.301. 250
155. Pedestrian Safety Fence, Item SPV.0090.302. 251
156. Pedestrian Overhead Protection, Item SPV.0090.303. 252
157. Storm Sewer Pipe Temporary, 12-Inch, Item SPV.0090.304. 253
158. Glare Screens Temporary, Item SPV.0090.305. 253
159. Integrated Concrete Barrier, Item SPV.0090.306. 254
160. Shovel Cut Edging, Item SPV.0090.500. 255
161. Water Main Insulation, Item SPV.0090.600..... 256
162. Water Main, 4-Inch, Item SPV.0090.601; 6-Inch, Item SPV.0090.602; 8-Inch, Item SPV.0090.603; 12-Inch, Item SPV.0090.604; 16-Inch, Item SPV.0090.605. 257
163. Extend and Reconnect Service Lateral – 1-Inch, Item SPV.0090.606; 1.5-Inch, Item SPV.0090.607; 2-Inch, Item SPV.0090.608..... 258
164. HDPE Pipe, Horizontally Directionally Drilled, 10-Inch, Item SPV.0090.609. 259
165. Select Fill for Water Main, Item SPV.0090.610..... 262
166. Sanitary Sewer Pipe, 8-Inch, Item SPV.0090.611. 262
167. Select Fill for Sanitary Sewer, Item SPV.0090.612..... 264
168. Construction Staking Structure, R-13-194, Item SPV.0105.001; R-13-197, Item SPV.0105.002; R-13-232, Item SPV.0105.003; R-13-238, Item SPV.0105.004; R-13-241, Item SPV.0105.005; N-13-2, Item SPV.0105.006..... 265
169. Research and Locate Existing Property Monuments, Item SPV.0105.007. 266
170. Verify and Replace Existing Property Monuments, Item SPV.0105.008..... 267
171. Concrete Pavement Joint Layout, Item SPV.0105.009..... 268
172. Sealing Culvert Box, SPV.0105.010..... 269
173. Remove, Salvage and Deliver ITS Wireless Components, Gammon Road/Whitney Way, Item SPV.0105.100; Existing CCTV-13-002, Item SPV.0105.101; Whenona Drive Repeater Site, Item SPV.0105.102; Raymond Road, Item SPV.0105.103; Verona Road/Atticus Way, Item SPV.0105.104. 269

174. Remove and Transport Traffic Signals, Westbound Ramp Terminal, Item SPV.0105.105; Eastbound Ramp Terminal, Item SPV.0105.106. 270
175. Remove and Transport City of Madison Traffic Signals, S. Midvale Boulevard and Nakoma Road, Item SPV.0105.107. 271
176. Temporary Traffic Signals for Intersections USH 18-151 and USH 12-14 Interchange (All Stages), Item SPV.0105.201. 272
177. Temporary Street Lighting System, (Midvale Boulevard/Nakoma Road/Mohawk Drive), Item SPV.0105.202. 278
178. Galvanized Ladder, B-13-651, Item SPV.0105.298; B-13-652, Item SPV.0105.299. 280
179. Prefabricated Steel Truss Pedestrian Bridge B-13-653 LRFD, Item SPV.0105.300..... 282
180. Painting Epoxy System Pedestrian Bridge B-13-653, Item SPV.0105.301. 286
181. Railing Steel Type C1 Galvanized Pedestrian, B-13-653, Item SPV.0105.302; R-13-194, Item SPV.0105.303; R-13-197, Item SPV.0105.304; R-13-238, Item SPV.0105.305; R-13-241, Item SPV.0105.306; B-13-651, Item SPV.0105.307; B-13-652, Item SPV.0105.308; R-13-232, Item SPV.0105.400. 287
182. Bioretention Area Maintenance, Item SPV.0105.500. 291
183. Construction Staking Water Main, Item SPV.0105.600. 297
184. Construction Staking Sanitary Sewer, Item SPV.0105.601..... 297
185. Wastewater Control 200 GPM, Item SPV.0105.602; 500 GMP, Item SPV.0105.603. 298
186. Dewatering for Sanitary Sewer Construction, Item SPV.0105.604..... 299
187. Water for Seeded Areas, Item SPV.0120.001..... 301
188. Concrete Sidewalk HES 7-Inch, Item SPV.0165.001..... 302
189. Concrete Median Sloped Nose HES, Item SPV.0165.002; Blunt Nose HES, Item 0165.003..... 303
190. Grouted Joint Staining B-13-651, Item SPV.0165.100; B-13-652, Item SPV.0165.101; R-13-194, Item SPV.0165.102; R-13-197, Item SPV.0165.103; R-13-232, Item SPV.0165.104; S-13-371, Item SPV.0165.105; S-13-372, Item SPV.0165.106; S-13-385, Item SPV.0165.107; S-13-386, Item SPV.0165.108; N-13-2, Item SPV.0165.109..... 303
191. Noise Barriers Double-Sided Sound Absorptive N-13-2, Item SPV.0165.300. 305
192. Longitudinal Grooving Bridge Deck, Item SPV.0165.301..... 315
193. Wall Concrete Panel Mechanically Stabilized Earth LRFD, R-13-194, Item SPV.0165.302; R-13-197, SPV.0165.303; R-13-238, SPV.0165.304; R-13-241, SPV.0165.305; R-13-232, Item SPV.0165.400. 316
194. Colored and Stamped Concrete, 5-Inch, Item SPV.0165.500; B-13-654, Item SPV.0165.501. 324
195. Mosaic Tile Installation, Item SPV.0165.550. 328
196. High Early Strength Concrete Pavement 11-Inch, Item SPV.0180.001; 9-Inch, Item SPV.0180.002. 332
197. Temporary Pedestrian/Bicycle Access, Item SPV.0180.300. 333
198. Concrete Approach Slab, 6-Inch, Item SPV.0180.301. 334
199. Shredded Hardwood Bark Mulch, Item SPV.0180.500..... 335
200. Excavation, Hauling, and Disposal of Contaminated Soil and Management of Contaminated Groundwater, Item SPV.0195.100. 336

201. Landscape Boulders, Item SPV.0195.500..... 342
202. Aggregate Fines, Item SPV.0195.501..... 344
203. Cold Patch, Item SPV.0195.700. 345

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1206-07-84, Mount Horeb-Madison, Raymond Road to Seminole Highway, USH 18, Dane County, Wisconsin; Project 1206-07-85, Mount Horeb-Madison, Madison Beltline Phase 3, USH 18, Dane County,Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2014 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 (20130615)

2. Scope of Work.

The work under this contract shall consist of earthwork base course, concrete pavement, HMA pavement, concrete curb and gutter, concrete barrier wall, concrete sidewalk, MGS guardrail, storm sewer, pavement marking, erosion control, lighting, traffic signals, landscaping, structures (B-13-651, B-13-652, B-13-653, B-13-654, N-13-2, R-13-194, R-13-197, R-13-232, R-13-238, R-13-241, S-13-368, S-13-369, S-13-370, S-13-371, S-13-372, S-13-373, S-13-374, S-13-375, S-13-385, S-13-386, S-13-387, S-13-423) and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

A General
Begin work within 10 calendar days after the engineer issues a written notice to proceed.

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

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

The contract time for completion, as well as the interim completion dates, are based on an expedited work schedule and may require extra work hours, forces, equipment and coordination. The expedited work schedule may also require cold weather or hot weather concreting which requires additional efforts as required within the standard specifications and these special provisions. Included in this Prosecution and Progress article are interim and final completion dates. These dates indicate that work efforts will require multiple or concurrent controlling operations to occur at the same time. This information is included to assist the contractor and its subcontractors; do not interpret this information as a demonstration of specified means and methods or work periods other than interim and final completion dates.

Conform the schedule of operations for the construction staging as shown in the plan. Do not move operations ahead within the proposed construction staging unless modifications to the staging and schedule are approved in writing by the engineer.

The established construction schedule for the contract will involve coordination of construction activities with other projects and included in the article entitled Other Contracts as part of these special provisions.

B Construction Schedule of Operations

Prepare a CPM schedule in accordance to standard spec 108.4 and these special provisions.

Address all major activities, components, and milestones of the Intelligent Transportation System (ITS) installation in the CPM Schedule, and include at minimum the following:

- Major construction events.
- Contractor submissions.
- Equipment deliveries.
- System element installation by unit location.
- Installation of conduit and installation of poles.
- Installation of Portable Changeable Message Signs (PCMS).
- Installation of processors and cabinets.
- Installation of camera assemblies.
- Detector assemblies.
- Communication equipment.
- Other equipment as required by this contract.
- Testing and acceptance schedule

C Contractor Coordination

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

Conduct weekly progress meetings. The contractor's superintendent or representative, designated materials representative, subcontractor's representatives for ongoing

subcontract work or subcontract work expected to begin within the next three weeks shall attend. Provide and discuss the schedule and updates as required by Section B. of this article at the weekly progress meetings. Agenda items at the meeting shall include, but not be limited to, the following:

- Review of the contractor's and subcontractors' schedule. Indicate if the project is on, ahead or behind schedule. If behind indiate why, how much behind and how the project will get back on schedule.
- Utility conflicts and relocation schedule.
- Evaluation of progress to date.
- Outstanding Requests for Information (RFI's) or issues that may cause contract modifications.
- Shop drawing submittal status.
- Materials submittal status.
- Materials sampling and testing activities and results.
- Lane, road, ramp, shoulder and rolling closure schedules.
- Impacts to businesses and private properties.
- Impacts to bus routes, emergency services, postal services.
- Shop drawing submittals.
- Equipment status of orders and deliveries.
- Plans and specifications for upcoming work to prevent potential conflicts between contractors.

During the weekly progress meetings submit written requests for traffic control closures, switches and detours (vehicular and pedestrian) to the engineer for approval as follows:

- Shoulder Closure: 5 working days prior to closure.
- Local Street Closure: 14 working days prior to closure.
- Lane Closure: 14 working days prior to closure.
- Ramp Closure: 14 working days prior closure.
- Road Closure: 14 working days prior closure.
- Rolling Closure: 14 working days prior closure.
- Traffic Switch: 14 working days prior to anticipated switch.
- Detours (vehicular and pedestrian): 14 working days prior to use.

Place portable changeable message signs for all closures noted above a minimum of 5 working days in advance of the closure, switch or detour (including pedestrian detours). Place portable changeable message signs a minimum of 10 working days prior to starting work on the Beltline or Verona Road and a minimum of 5 working days prior to starting work elsewhere. These timeframes may be adjusted by the engineer.

Closure and traffic switch requests will be reviewed by department personnel and final weekly schedule information will be forwarded to the local media on each Friday by 9:00 AM by department personnel.

Based on the weekly progress meeting, if the engineer requests a new revised schedule, submit it in accordance to standard spec 108.4. Failure to submit a revised schedule shall result in the engineer holding pay requests in accordance to standard spec 108.4.

In addition to weekly progress meetings, conduct monthly project ITS coordination meetings at an agreed upon location. Include the contractor and subcontractors; field system integrator; department project personnel, engineer, and other contractors requiring coordination in the monthly project ITS coordination meetings. Facilitate discussion at the monthly project ITS coordination meetings with assistance from the Field System Integrator as noted in these special provisions under the item Field System Integrator. To change a meeting date, request in writing to the engineer no less than seven calendar days prior to the scheduled meeting. The engineer will indicate the acceptance or rejection of the requested change. Prepare and distribute agendas and meeting notifications to attendees a minimum of three days prior to the meetings. Agenda items at the meeting shall include, but not be limited to, the following:

- The work completed since the last meeting.
- Anticipated work until the next meeting.
- Schedule adherence, schedule revisions and potential conflicts with other subcontractors.
- RFI status.
- Shop drawing submittal status.
- Material submittals.
- Materials testing and acceptance.
- Subcontractor status and coordination efforts.
- Equipment order and delivery status.
- Utility coordination.

Prepare and distribute a weekly progress meeting summary for invitees and attendees within one week following each meeting. Provide the meeting summary to the engineer for review and approval within 3 calendar days following the meeting and prior to distribution.

Operation and maintenance responsibility by the contractor for the temporary signals at the Beltline and Verona Road interchange previously installed as part of project 1206-07-78 will begin immediately upon the start of work under this contract 1206-07-84 or as directed by the engineer.

D Work Restrictions

Where a closure(s) has been permitted by the engineer in conjunction with the contractor's work schedule, make a continuous effort to complete the work within the said closure(s) in a timely manner. If, in the engineer's judgment, the contractor's operations fail to meet the approved schedule, permission for a full-time or rolling closures may be rescinded.

Do not utilize lane closures on the USH 12/14/18/151 (Beltline) prior to September 8, 2014.

Do no conduct construction operations in the median area and adjacent outside shoulder area of any roadway at the same time without the written permission of the engineer.

Do not close traffic lanes prior to or after the specified time periods in the Traffic article.

Keep USH 12/14/18/151, Verona Road and Midvale Blvd open to traffic at all times. Deliver, park and store equipment and material outside of the existing roadways clear zones or at a distance from existing edges of pavement as approved by the engineer. Provide ingress and egress locations to the engineer five working days in advance of anticipated use. Do not use the ingress or egress locations until approved by the engineer. Sign and/or use flag persons at the ingress and egress locations as directed by the engineer.

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

Maintain pedestrian facilities in accordance to Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements at all times.

E Interim and Final Completion of Work
This project begins with Stage 4. Stages 1 through 3 were completed as part of a previous project 1206-07-78.

Mosaic Tile Installations
Complete the mosaic tile installations at retaining wall R-13-202 (constructed as part of project 1206-07-78) in accordance to the contract documents prior to 12:01 AM, October 10, 2014.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the mosaic tile installations at retaining wall R-13-202 prior to 12:01 AM, October 10, 2014, the department will assess the contractor $2,000 in interim liquidated damages for each calendar day the mosaic tile installation remains incomplete after 12:01 AM, October 10, 2014. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

Complete the mosaic tile installations approaching the pedestrian overpass (B-13-653) in accordance to the contract documents prior to 12:01 AM, September 4, 2015.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the mosaic tile installations approaching the pedestrian overpass (B-13-653) prior to 12:01 AM, September 4, 2015, the department will assess the

contractor $2,000 in interim liquidated damages for each calendar day the mosaic tile installation remains incomplete after 12:01 AM, September 4, 2015. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

Home Health United/Upper Iowa University Parking Lot
Complete the improvements to the Home Health United/Upper Iowa University Parking Lot including all sawing, removals, curb, curb and gutter, base aggregate, HMA, storm sewer and restoration in accordance to the contract documents within 21 consecutive calendar days and prior to 12:01 AM, October 17, 2014.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the improvements to the Home Health United/Upper Iowa University parking lot including all sawing, removals, curb, curb and gutter, base aggregate, HMA, storm sewer and restoration within 21 consecutive calendar days and prior to 12:01 AM, October 17, 2014, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the parking lot remains incomplete after 21 consecutive calendar days and 12:01 AM, October 17, 2014. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 21 consecutive calendar days and 12:01 AM October 17, 2014.

Stage 4, All Phases Complete - Winter Shutdown 2014
Complete all removals, grading, base aggregate dense, concrete pavement, asphalt pavement, curb and gutter, beamguard, pavement marking, signing, placement of traffic control devices, permanent and temporary concrete barrier walls and restoration necessary for Stage 4, All Phases as shown in the plans prior to 12:01 AM, November 21, 2014.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all removals, grading, base aggregate dense, concrete pavement, asphalt pavement, curb and gutter, beamguard, pavement marking, signing, placement of traffic control devices, permanent and temporary concrete barrier walls and restoration necessary to complete Stage 4, Phase 2 prior to 12:01 AM, November 21, 2014 the department will assess the contractor $30,000 in interim liquidated damages for each calendar day that Stage 4, Phase 2 work remains incomplete after 12:01 AM, November 21, 2014. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

West Beltline Frontage Road (East) Sidewalk
Do not remove the existing pedestrian overpass structure at Whenona Drive (B-13-305) until the completion and opening of the sidewalk to pedestrian traffic along the West Beltline Frontage Road (East) between Whenona Drive and Seminole Highway and the establishment of the pedestrian detour utilizing the West Beltline Frontage Road (East), Seminole Highway and Warwick Way as shown in the plans. Do not begin the removal of the existing pedestrian overpass structure at Whenona Drive until after May 1, 2015.

Complete all removals, grading, base course, sidewalk, drainage establishment, restoration, temporary precast concrete barrier and traffic control necessary for opening the West Beltline Frontage Road (East) sidewalk and the Whenona Drive overpass pedestrian detour to pedestrian traffic prior to 12:01 AM, May 1, 2015.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all removals, grading, base course, sidewalk, drainage establishment, restoration, temporary precast concrete barrier and traffic control necessary for opening the West Beltline Frontage Road (East) sidewalk and the Whenona Drive overpass pedestrian detour to pedestrian traffic prior to 12:01 AM, May 1, 2015, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the sidewalk and pedestrian detour remain closed after 12:01 AM, May 1, 2015. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

Proposed Whenona Drive Pedestrian Overpass
Complete all removals, grading, base course, storm sewer, sidewalks, curb ramps, detectable warning fields, pavement marking, signing, drainage establishment, bridge B-13-653, retaining walls R-13-238 and R-13-241, all landscaping items, mosaic walls and restoration necessary for opening the proposed Whenona Drive pedestrian overpass to pedestrian traffic prior to 12:01 AM, September 4, 2015.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all removals, grading, base course, storm sewer, sidewalks, curb ramps, detectable warning fields, pavement marking, signing, drainage establishment, bridge B-13-653, retaining walls R-13-238 and R-13-241, all landscaping items, mosaic walls and restoration necessary for opening the proposed Whenona Drive pedestrian overpass to pedestrian traffic prior to 12:01 AM, September 4, 2015, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, September 4, 2015. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

Light Box
Complete the light box in accordance to the contract documents prior to 12:01 AM September 4, 2015.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the light box prior to 12:01 AM, September 4, 2015, the department will assess the contractor $2,000 in interim liquidated damages for each calendar day the light box installation remains incomplete after 12:01 AM, September 4, 2015. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

B-13-651 Pier Construction
Complete all removals, temporary concrete barrier wall, shoring, excavation, pier construction, backfill, base course, drainage establishment, temporary pavement, temporary pavement marking, signing, and restoration necessary to open the Verona Road westbound and eastbound exclusive left turn lanes between the Beltline ramp terminals to traffic within 21 calendar days.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all removals, temporary concrete barrier wall, shoring, excavation, pier construction, backfill, base course, drainage establishment, temporary pavement, temporary pavement marking, signing, and restoration necessary to open the Verona Road westbound and eastbound exclusive left turn lanes between the Beltline ramp terminals to traffic within 21 calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the exclusive left turn lanes remains closed or the work remains incomplete after 21 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the turn lane remains closed or work remains incomplete beyond 21 calendar days.

Stage 5, All Phases Complete - Winter Shutdown 2015
Complete all removals, grading, base course, storm sewer, HMA and concrete pavements, curb and gutter, guardrail, fencing, concrete barrier wall, crash cushions, pavement marking, permanent and temporary signing, lighting, traffic signals, sign bridges necessary for the eastbound Beltline and adjacent ramps, retaining walls necessary for the eastbound Beltline and adjacent ramps, placement of traffic control devices, drainage establishment and restoration necessary to complete Stage 5, All Phases, as shown in the plans prior to 12:01 AM, November 20, 2015.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all removals, grading, base course, storm sewer, HMA and concrete pavements, curb and gutter, guardrail, fencing, concrete barrier wall, crash cushions, pavement marking, permanent and temporary signing, lighting, traffic signals, sign bridges necessary for the eastbound Beltline and adjacent ramps, retaining walls necessary for the eastbound Beltline and adjacent ramps, placement of traffic control devices, drainage establishment and restoration necessary to complete Stage 5, all phases, as shown in the plans prior to 12:01 AM, November 20, 2015, the department will assess the contractor $30,000 in interim liquidated damages for each calendar day that Stage 5 work remains incomplete after 12:01 AM, November 20, 2015. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

B-13-654 Skylight Construction
Do not close the existing pedestrian underpass structure (B-13-654) at Verona Road and the Beltline until the establishment of the pedestrian detour utilizing Verona Road, Midvale Boulevard and Hammersely Road/Nakoma Road intersection as shown in the plans. Once the pedestrian detour is established and the pedestrian underpass B-13-654 is closed, re-open the underpass within 21 calendar days.

Complete all removals, debris clean up, skylight construction and concrete staining repairs necessary to open the pedestrian underpass to traffic within 21 calendar days.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all removals, debris clean up, skylight construction and concrete staining repairs necessary to open the pedestrian underpass to traffic within 21 calendar days, the department will assess the contractor $2,000 in interim liquidated damages for each calendar day that the pedestrian underpass remains closed or the work remains incomplete after 21 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the turn lane remains closed or work remains incomplete beyond 21 calendar days.

Project Completion Date
Complete all work specified in the contract prior to 12:01 AM, November 18, 2016.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all work specified in the contract prior to 12:01 AM, November 18, 2016, the department will assess the contractor $30,000 in liquidated damages for each calendar day that the work remains incomplete after 12:01 AM, November 18, 2016. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

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

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

4. Contract Award and Execution.

Supplement standard spec 103 as follows:

103.9 Mobilization Workshops
103.9.1 Workshop Schedule
After contract award and prior to Notice To Proceed (NTP), attend the following workshops. Each workshop is described below and will include but not be limited to the following topics.

1. Project Kickoff and Initial Work Plan
2. Cost Reduction Incentives
3. Utility Coordination
4. Submittals
5. Baseline CPM
6. Work Force Opportunities

The workshop dates will be scheduled by the engineer after contract award. Workshops may be combined depending on the complexity and requirements of the project.

If necessary, the engineer may modify the workshop schedule to ensure attendance by the necessary department and contractor personnel; however, all workshops will be completed prior to issuing the Notice to Proceed.

103.9.2 Workshops
103.9.2.1 Project Kickoff and Initial Work Plan
103.9.2.1.1 General
The Project Kickoff and Initial Work Plan Workshop will provide a forum to discuss and answer questions relative to the proposal, bid schedule, and other questions in the Project Questionnaire described in standard spec 103.9.2.1.2. The Initial Work Plan Workshop will include:

- Contractor responses to the attached Project Questionnaire.

- Department presentation of the use of Critical Path Method (CPM) scheduling on the project and presentation of the department's Master Program Schedule to the contractor.

- Contractor presentation of its conceptual work plan for the project.

- Department and contractor discussion of the level of detail and features in the Initial Work Plan and the Baseline CPM Progress Schedule.

103.9.2.1.2 Project Questionnaire
Provide the following information in the order shown below. This information will constitute the "Project Questionnaire."

General Information
If a Joint Venture, provide information for each member of the Joint Venture.

1. Provide the following information about the company:
   - Firm Name
   - Address
   - Telephone and facsimile numbers; e-mail address
   - Contracting Specialties
   - Years performing work in contracting specialties

- Geographic areas served
- Total Management Employees and years of service
- Project Managers
- General Superintendents
- Craft Superintendents
- Engineers
- Estimators
- CPM Schedulers

Construction Engineering

- Provide/attach a copy of your Construction Project Manager's resume indicating the manager's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).
- Provide (if applicable) your third-party construction engineering firms
- Provide plan for Construction surveying

Subcontractors

- Attach the list of all subcontractors that are intended for this Project and the items of work they shall perform.

Permanent Material Suppliers

Attach the list of all permanent material suppliers that are intended for the project.

Quality Control (where applicable)

Provide the name of your Construction Quality Control firm and qualifications indicating the firms' experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).

- Provide/attach a copy of your Construction Quality Control Manager's resume indicating the manager's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).
- List the major elements and/or Table of Contents of your Construction Quality Management Program.
- Provide the name of your Independent Quality Control Testing firm (Construction Quality Control Lab) and qualifications indicating the firm's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).

Organization Chart

- Provide a functional and personnel Organization Chart showing the authority and responsibilities of each individual identified.

Work Rules

- Provide the plan for hours per day, days per week, and number of shifts for key elements of work; i.e. sewer tunnels, retaining wall construction, roadway excavation, bridge structures, and roadway structural section activities.

Maintenance of Traffic

- Provide the name of your Traffic Control Manager and qualifications indicating the firm's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).
- Attach a copy of your Preliminary Schedule indicating your approach to achieving the substantial completion schedule.
- Include an outline of your approach to the maintenance of traffic and how you shall stage the construction to meet the substantial completion schedule including planned locations for local street and freeway access into and out of the work zones for each stage of construction.

Construction

Provide the approach (resources, equipment, suppliers, number of crews, and where required ground support systems) for the following activities:

- Retaining wall construction by type of work
- Bridge demolition
- Roadway structural section
- Roadway excavation
- Underground construction
- Office and yard facilities

103.9.2.2 Cost Reduction Incentives

The Cost Reduction workshop will identify value enhancing opportunities and consider modifications to the plans and specifications that will reduce either the total cost, time of construction or traffic congestion, without impairing, in any manner, the essential functions or characteristics of the project, including, but not limited to, service life, economy of operation, ease of maintenance, benefits to the traveling public, desired appearance, or design and safety standards.

Submit recommendations resulting from the workshop for approval by the engineer as cost reduction incentive proposals in conformance with the provisions in standard spec 104.10 "Cost Reduction Incentive," (CRI) of the standard specifications.

The department and the contractor may be able to complete the CRI Concept process, as specified in 104.10.2, during the CRI workshop.

Submit CRIs after the CRI workshops that were not introduced at the CRI workshop.

103.9.2.3 Utility Coordination

The Utility Coordination Workshop will define the scope and schedule of utility relocation work and the respective roles and responsibilities of the project team.

1. At a minimum, the following key personnel will attend the Utility Coordination Meeting.
   - Department's Utility Coordinator
   - Contractor's Project Manager, Foreman, Supervisor
   - Designer Team's Utility Coordinator
   - Key Utility Company Representative(s)

2. At a minimum, the Utility Coordination Meeting will include a review of the following:
   - Summary of all required utility relocations on the project
   - Special provisions addressing utility work.
   - Sharing of contact information.
   - Scheduling of work for utility relocation(s) including critical milestones and staging for the work.
   - Contractor's work schedule and anticipated conflicts with the utility's construction schedule.

103.9.2.4 Submittals

The Submittal Workshop will identify the key required submittals for the project, categorize submittals into functional areas, and develop a schedule for submittals and submittal reviews. The Workshop participants will at a minimum:

- Review the project special provisions.

- Categorize submittals into functional areas including but not limited to:
  2.1 Mechanically Stabilized Earth (MSE) Retaining Walls
  2.2 Temporary Shoring
  2.3 Falsework and Formwork
  2.4 Girder Shop Drawings
  2.5 Steel Transportation, Delivery and Erection
  2.6 Structure Demolition Plans
  2.7 Pile Hammers and High Capacity Piling
  2.8 Concrete/ Asphalt
  2.9 Materials
  2.10 Intelligent Transportation Systems (ITS) and Lighting
  2.11 Traffic Signals
  2.12 Sanitary Sewer and Water
  2.13 Permits

- Develop a schedule for submittals.

103.9.2.5 Baseline CPM
See article for Baseline CPM Progress Schedule, Item SPV.0060.700 and CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.70.

103.9.2.6 Work Force Opportunities
The Work Force Opportunities workshop will provide a venue for contractors to have meaningful dialogue with TrANS providers regarding the hiring of TrANS graduates. For the prime contractor and the subcontractors, provide staff with hiring authority to participate in a job-matching session during this workshop. The workshop will take place on the same day and in the same location as the pre-construction meeting. The workshop participants will at a minimum:

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

103.9.2.7 Notice to Proceed
After all workshops are completed, the Notice to Proceed may be issued if all other contract requirements are met.

5. Traffic.

A General
The work under this item shall conform to the requirements of standard spec 643, the Manual on Uniform Traffic Control Devices (MUTCD) and as hereinafter provided.

Replace standard spec 643.2.1 (1) sentences two and three with the following:

Replace devices the ATSSA guide defines as marginal. Maintain traffic control devices on the project at the quality the ATSSA guide defines as acceptable by doing the following:

Replace standard spec 104.6.1 (2) with the following:

The contractor shall maintain, at no cost to the department, only those facilities or portions of facilities, including the roadbed surfaces, on which construction has begun or been completed, or has been damaged by the contractor's operations or has been damaged due to the contractor's negligence or noncompliance with the requirements of the contract. The contractor shall maintain the pavement structure, pavement markings, and traffic signs for the entire project once construction operations begin. The department will pay for materials that engineer deems necessary to maintain these items at contract unit prices, or as extra work.

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore devices such as, but not limited to, temporary barrier (maintain a barrier clamp on site at all times), crash cushions, pavement marking, lights, signs, drums, barricades, arrow boards or other traffic control devices that are damaged or disturbed. Provide equipment and forces on site within 1 hour of being notified by the engineer of a disturbed or damaged device. The department will pay for materials that engineer deems necessary to maintain these items at contract unit prices, or as extra work, if the disturbance or damage is not the result of the contractor's operations, negligence or noncompliance with the requirements of the contract. Payment for maintaining a clamp on site at all times for temporary barrier is incidental to pay item concrete barrier temporary.

Provide the State Patrol, Dane County Sheriff's Office, City of Fitchburg Police Department, City of Fitchburg Fire Department, City of Madison Police Department, City of Madison Fire Department, City of Verona Police Department, City of Verona Fire Department, Fitch-Rona EMS, and the engineer a current telephone number for at least three individuals which the contractor or his representatives can be contacted 24 hours-a-day in the event a safety hazard develops. Also contact the above listed parties, as well as local emergency services, local school districts and Madison Metro (to discuss bus routes), and the post office, prior to starting work and at critical times; such as traffic switches, detours and road closures to inform them of traffic modifications.

Supply three contact names and numbers as noted above before starting any work.

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

Do not perform construction operations until all traffic control devices for such work are in the proper location including the Glare Screens Temporary.

Cover existing signs which conflict with traffic control as directed by the engineer.

When required, close sidewalks in accordance to Standard Detail Drawing "Traffic Control, Sidewalk Closure" and provide the engineer a written request to close the sidewalk five calendar days in advance of the closure.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators, beam guard or temporary concrete barriers in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

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

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

- Do not park or store any vehicle, piece of equipment, or construction materials within the clear zone without approval of the engineer.
- All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic, bicyclists and pedestrians.
- All construction vehicles and equipment entering or leaving live traffic lanes along the Beltline shall utilize acceleration or deceleration lanes of sufficient length to allow merge speeds of 45 MPH prior to merging with the Beltline traffic. Provide and utilize temporary deceleration and acceleration lanes to/from the work zones. Construction of the temporary lanes shall be incidental to other items of work. All construction access is subject to approval of the engineer and shall be in accordance to section C of this special provision entitled Work Zone Access Times.
- Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.
- Maintain vehicle and pedestrian access at all times to buildings within the limits of construction. Provide temporary sidewalk, crosswalk, bicycle access and bus access as described in the special provisions under bid item Temporary Pedestrian/Bicycle Access and as detailed in the plans. Provide temporary sidewalk, crosswalk, bicycle access and bus access in accordance to the current Americans with Disabilities Act Accessibility Guidelines (ADAAG), which are free from mud, sand, and other construction debris. Provide temporary curb ramps throughout construction operations as described in the special provisions under bid item Temporary Curb Ramp, in accordance to the ADAAG.
- Additional intermediate construction staging or staging gaps, not shown on the plans, may be necessary to maintain continuous access. If the contractor coordinates the closure of any access to a business or private property with the owner(s), provide written documentation of coordination with the owner(s) to the engineer 48 hours in advance of the closure.
- Do not deliver and store materials and equipment within open travel lanes, open side roads, bike paths, pedestrian paths, or sidewalks during any stage of construction. Temporary lane closures and/or halting of traffic within open roadways and pedestrian paths require flaggers and will not be permitted outside the lane closure hours defined within this article. Flagging operations shall be incidental to the work item being performed.
- Do not use any existing median maintenance crossovers for construction activities unless approved by the engineer.

Upon switching traffic to any permanent or temporary roadways or combination thereof, designate a representative to monitor the condition of the traffic and roadways for a period of not less than eight hours after traffic is switched and prior to beginning

any work on the next stage or phase. Monitoring the switched traffic is incidental to bid item Traffic Control Surveillance and Maintenance. Should the permanent or temporary roadways or combination thereof show any signs of distress, failure, or lack of drainage immediately notify the engineer. Following a traffic switch, should traffic begin to utilize lanes or intersections incorrectly from that shown on the plans immediately notify the engineer.

Do not use flag persons to direct, control, or stop USH 12/14/18/151 (Beltline), USH 18/151 (Verona Road) or Midvale Blvd traffic, unless provided written approval from the engineer.

Provide flag persons and associated advanced signing in accordance to the MUTCD and the plans for temporary halting of traffic on the side roads. All flagging operations shall be incidental to the work item being performed.

Mount all traffic control signs at a minimum height of 5 feet, measured from the bottom of the sign, above the edge of pavement.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency, local event or significant traffic delays.

General traffic operations during all stages

Maintain two lanes of traffic in each direction at all times on the Beltline and Verona Road except as described in Section B of this article.

Maintain a minimum lane width of 11 foot lanes on the Beltline, Verona Road and the service ramps at all times during construction. When restricted to one lane maintain a minimum clear width to traffic control devices of 13 feet.

Maintain one lane of traffic from northbound Verona Road to the eastbound Beltline entrance ramp.

Maintain two lanes of traffic from the eastbound Beltline off ramp to southbound Verona Road.

Maintain the existing westbound Verona Road ramps to their existing lane configurations during daytime hours.

Shoulder closures on the Beltline are allowed to complete construction for various stages of the project. Perform shoulder closures in accordance to Section B of this article.

Maintain two-way traffic in each direction on the Verona Road West Frontage Road, Verona Road East Frontage Road and West Beltline Frontage Road (east and west). Provide a 22 foot minimum roadway width.

During daytime construction operations on the local side roads maintain at least one lane open to local traffic through the use of flaggers. Maintain a minimum width of 11 feet and a drivable surface utilizing a minimum of base aggregate dense for open lane(s). Open the roadway to 22 feet when flaggers and work operations are not present on the local side roads.

During deck removal and form/false-work removal operations, maintain a minimum 6-foot offset from removal operations to live lanes of traffic.

B Specified Lane Closure Times and Lane Closure Assessments

A summary of allowable lane closure times by location/direction are as follows:

Beltline East of Verona Road Interchange (six lane section)						
Description			**Direction**	**Lanes**	**Start**	**End**
Monday Night	to	Friday Morning	Eastbound/ Westbound	Single	8:00 PM	5:00 AM
			Eastbound/ Westbound	Dual	10:00 PM	5:00 AM
Friday Night	to	Saturday Morning	Eastbound/ Westbound	Single	9:00 PM	8:00 AM
			Eastbound/ Westbound	Dual	11:00 PM	6:00 AM
Saturday Night	to	Sunday Morning	Eastbound/ Westbound	Single	8:00 PM	10:00 AM
			Eastbound/ Westbound	Dual	11:00 PM	9:00 AM
Sunday Night	to	Monday Morning	Eastbound/ Westbound	Single	7:00 PM	5:00 AM
			Eastbound/ Westbound	Dual	10:00 PM	5:00 AM
Monday	to	Thursday	Eastbound/ Westbound	Shldr	9:00 AM	3:00 PM
Friday			Eastbound/ Westbound	Shldr	9:00 AM	12:00 PM

Beltline West of Verona Road Interchange (four lane section)						
Description			**Direction**	**Lanes**	**Start**	**End**
Monday Night	to	Friday Morning	Eastbound/ Westbound	Single	8:00 PM	5:00 AM
Friday Night	to	Saturday Morning	Eastbound/ Westbound	Single	9:00 PM	8:00 AM
Saturday Night	to	Sunday Morning	Eastbound/ Westbound	Single	8:00 PM	10:00 AM
Sunday Night	to	Monday Morning	Eastbound/ Westbound	Single	7:00 PM	5:00 AM
Monday	to	Thursday	Eastbound/ Westbound	Shldr	9:00 AM	3:00 PM
Friday			Eastbound/ Westbound	Shldr	9:00 AM	12:00 PM

Verona Road/Midvale Blvd

Description			Direction	Lanes	Start	End
Sunday Night	to	Friday Morning	Northbound/ Southbound	Single and Dual	10:00 PM	5:00 AM
Friday Night	to	Saturday Morning	Northbound/ Southbound	Single and Dual	10:00 PM	7:00 AM
Saturday Night	to	Sunday Morning	Northbound/ Southbound	Single and Dual	10:00 PM	8:00 AM

Whitney Way						
Description			**Direction**	**Lanes**	**Start**	**End**
Sunday Night	to	Friday Morning	Eastbound/ Westbound	Single and Dual	10:00 PM	5:00 AM
Friday Night	to	Saturday Morning	Eastbound/ Westbound	Single and Dual	10:00 PM	7:00 AM
Saturday Night	to	Sunday Morning	Eastbound/ Westbound	Single and Dual	10:00 PM	8:00 AM

Summary of Rolling Closures by Location/Direction:

Beltline Rolling Closures (15 Minutes Maximum)						
Description			**Direction**	**Lanes**	**Start**	**End**
Monday Night	to	Friday Morning	Eastbound/ Westbound	Dual	11:00 PM	5:00 AM
Friday Night	to	Saturday Morning	Eastbound/ Westbound	Dual	11:00 PM	6:00 AM
Saturday Night	to	Sunday Morning	Eastbound/ Westbound	Dual	11:00 PM	9:00 AM
Sunday Night	to	Monday Morning	Eastbound/ Westbound	Dual	11:00 PM	5:00 AM

Verona Road/Midvale Blvd Rolling Closures (15 Minutes Maximum)						
Description			**Direction**	**Lanes**	**Start**	**End**
Sunday Night	to	Friday Morning	Northbound/ Southbound	Single and Dual	11:00 PM	5:00 AM
Friday Night	to	Saturday Morning	Northbound/ Southbound	Single and Dual	11:00 PM	6:00 AM
Saturday Night	to	Sunday Morning	Northbound/ Southbound	Single and Dual	11:00 PM	8:00 AM

Summary of Service Ramp Closures by Location/Direction:

Service Ramp Closures				
Description	**Direction**	**Lanes**	**Start**	**End**
All Ramps at Verona Road	Eastbound/ Westbound	Ramp	10:00 PM	5:00 AM
All Ramps at Whitney Way	Eastbound/ Westbound	Ramp	10:00 PM	5:00 AM

Do not close lanes prior to or after the specified times provided in this article. If the contractor closes lanes of traffic prior to or fails to open lanes of traffic by the specified times, reductions will begin immediately upon exceeding the specified closure and will be based upon 15 minute increments for assessments to the contractor. The total reductions assessed to the contractor will be cumulative based on an escalating scale of 15 minute increments and will be the summation of separate reductions for each traffic lane and each direction of traffic in violation.

USH 12/14/18/151 (Beltline) and Service Ramps

Time Period in excess of specified time	Reduction per lane of traffic and per direction of traffic	Cumulative reduction per lane of traffic and per direction of traffic
0 to 15 minutes	$1,500	$1,500
15 to 30 minutes	$3,000	$4,500
30 to 45 minutes	$4,500	$9,000
45 to 60 minutes	$6,000	$15,000

If the contractor fails to open lanes of traffic after 60 minutes from the specified times, a constant reduction of $6,000 for each additional 15 minute increment, for each lane and each direction of traffic, will be assessed until lanes are open to traffic.

USH 18/151 (Verona Road)/Midvale Blvd/Whitney Way

Time Period in excess of specified time	Reduction per lane of traffic and per direction of traffic	Cumulative reduction per lane of traffic and per direction of traffic
0 to 15 minutes	$750	$750
15 to 30 minutes	$1,500	$2,250
30 to 45 minutes	$2,250	$4,500
45 to 60 minutes	$3,000	$7,500

If the contractor fails to open lanes of traffic after 60 minutes from the specified times, a constant reduction of $3,000 for each additional 15 minute increment, for each lane and each direction of traffic, will be assessed until lanes are open to traffic.

The total reduction from monies due to the contractor will be the summation of the separate reductions for each work restriction violation. The department will administer reduction assessments for the road not being open to traffic under the Failing to Open Road to Traffic administrative item.

The eastbound and westbound West Beltline Highway (USH 12/14/18/151) may be fully closed between approximately Verona Road and Seminole Highway for a maximum of one night for each work operation noted below. The closure hours shall be in accordance to the lane closure table above for the Beltline East of Verona Road Interchange (six lane section) Monday night to Friday morning dual lane closure hours. Place portable changeable message signs indicating the closure 10 working days prior to the closure, operating continuously.

- Demolition and removal of the existing Whenona Drive Pedestrian overpass (B-13-305). This work cannot take place prior to May 1, 2015 and is anticipated to occur during Stage 5, Phase 1.
- Placement of prefabricated trusses for B-13-653. This work is anticipated to occur during Stage 5, Phase 2.

Northbound and Southbound Verona Road may be fully closed between the Beltline ramp terminals for work operations noted below during the times noted below. Place portable changeable message signs indicating the closure 10 working days prior to the closure, operating continuously.

- For a maximum of two weekends for setting girders for B-13-651. Closure hours shall be Friday night to Saturday morning and Saturday night to Sunday morning 10:00 PM to 9:00 AM each night. This work is anticipated to occur during Stage 5, Phase 2.
- For a total of six consecutive nights for the removal of the existing Beltline Bridge (B-13-64). Closure hours shall be 9:00 PM to 5:00 AM each night. This work is anticipated to occur during Stage 6, Phase 1.
- For a maximum of two weekends for setting girders for B-13-652. Closure hours shall be Friday night to Saturday morning and Saturday night to Sunday morning 10:00 PM to 9:00 AM each night. This work is anticipated to occur during Stage 6, Phase 1 and Phase 2.

The eastbound Whitney Way on ramp may be closed for a maximum of one night to install staged storm sewer crossings in the vicinity of the on ramp. This closure is anticipated to take place during Stage 4, Phase 1 during the hours noted in the lane closure table above for Service Ramp Closures. Place portable changeable message signs indicating the closure 5 working days prior to the closure, operating continuously.

The westbound Verona Road on ramp may be closed for a maximum of two nights to install staged storm sewer crossings in the vicinity of the on ramp. This closure is anticipated to take place during Stage 4, Phase 1 during the hours noted in the lane closure table above for Service Ramp Closures. Place portable changeable message signs indicating the closure 5 working days prior to the closure, operating continuously.

The westbound Verona Road on ramp and Whitney Way off ramp may be closed for a maximum of one night for butt joint milling and asphalt paving operations. These closures are anticipated to take place during Stage 4, Phase 1 during the hours noted in the lane closure table above for Service Ramp Closures. Place portable changeable message signs indicating the closure 5 working days prior to the closure, operating continuously.

The eastbound Verona Road off ramp may be closed for a maximum of one night to install overhead sign Structure S-13-371. The closure is anticipated to take place during Stage 5, Phase 1 during the hours as noted in the lane closure table above for Service Ramp Closures. Place portable changeable message signs indicating the closure 5 working days prior to the closure, operating continuously.

The westbound Verona Road off ramp may be closed for a maximum of one night to install overhead sign Structure S-13-372. The closure is anticipated to take place during Stage 6, Phase 2 during the hours as noted in the lane closure table above for Service Ramp Closures. Place portable changeable message signs indicating the closure 5 working days prior to the closure, operating continuously.

Installation of four overhead sign structures in the westbound direction (S-13-368/369/373/375) and two overhead sign structures in the eastbound direction (S-13-370/423) may be completed at night utilizing a rolling closure of the eastbound or westbound lanes. The rolling closures will occur in 15 minute increments and will continue until the overhead sign structures have been installed in accordance to the hours in the lane closure table above. Utilize one night of rolling closures in each direction to install all the sign structures. Coordinate the rolling closures with the department for securing State Patrol assistance 14 working days in advance of the rolling closures.

The Verona Road/Beltline interchange will be switched from a diamond interchange with temporary signals and lighting to a permanent single point interchange utilizing the permanent signals and lighting during one night utilizing State Patrol assistance in accordance to the hours in the lane closure table above. Coordinate the interchange switch with the department for securing State Patrol assistance 14 working days in advance of the switch.

C Work Zone Access Times

Work zone access to the eastbound and westbound West Beltline Highway (USH 12/14/18/151), including the service ramps, not protected by concrete barrier is prohibited outside of the specified lane closure times within Section B above.

Work zone access to the eastbound and westbound West Beltline Highway (USH 12/14/18/151), including the service ramps, protected by concrete barrier is restricted as follows:

- No access to the work zone from live traffic lanes is allowed at the following times Monday through Friday:
- AM Peak: 5:00 AM – 9:00 AM
- PM Peak: 3:00 PM – 8:00 PM
- Access for contractor and department administration personnel entering/exiting the work zone from a live traffic lane is permitted from 9:00 AM – 3:00 PM Monday through Friday with the support of a dedicated Work Zone Access Assistance Vehicle as specified in these special provisions article Work Zone Access Assistance Vehicle.
- Access for material and equipment delivery or removal is prohibited outside of the specified lane closure times within Section B above.
- Access for contractor personnel entering/exiting the work zone from a live traffic lane is permitted on the weekends at times specified by the department, with the support of a dedicated Work Zone Access Assistance Vehicle as specified in these special provisions article Work Zone Access Assistance Vehicle.

Conduct operations in a manner that will cause the least interference to traffic movements.

D Rolling Closures

Rolling closures may be utilized for operations as noted in section A and in accordance to section B of this article. Rolling closures will involve slowing traffic for a brief period and then allowing traffic to proceed behind a line of law enforcement vehicles that will coordinate the procession through the work site.

Conduct operations requiring law enforcement vehicles, to limit the stop or slowing of USH 12/14/18/151 traffic, to less than 15 minutes for the rolling closures. The necessary advanced signing, traffic control personnel, department personnel, and law enforcement personnel are required to be on site prior to and during these operations.

Arrange the implementation of the rolling closures in accordance to the notification required in the prosecution and progress of these special provisions and through the engineer and Jeff Gustafson with the Southwest Region Office, (608) 516-6400. Provide final confirmation of the scheduled rolling closure to the engineer 72 hours in advance of the closure.

E Advance Notification

Notify the State Patrol, Dane County Sheriff's Office, City of Fitchburg Police Department, City of Fitchburg Fire Department, City of Madison Police Department, City of Madison Fire Department, City of Verona Police Department, City of Verona Fire Department, Fitch-Rona EMS, Dane County 911 Center, Engineer, School District, Madison Metro and the Post Office two weeks in advance of all traffic switches, lane closures, ramp closures, road Closures and detours. Notifications should be confirmed with all parties one week prior to implementation. Notify parties if a closure is cancelled.

F Pedestrian/Bicycle Access

Maintain pedestrian access, in accordance to current ADAAG, along Verona Road and all local side roads by means of existing sidewalk, Temporary Pedestrian/Bicycle Access bid item, Temporary Curb Ramp bid item, or new sidewalk at a minimum width of 5 feet, for all abutting businesses and properties. Keep a minimum width of 5 feet of existing sidewalk as long as practicable to maintain pedestrian access. Place Pedestrian Safety Fence along the sidewalks or bus stops as shown in the plans and as directed by the engineer. Provide bus stop locations as shown in the plans, as directed by the engineer or as requested by the City of Madison Transit Department.

Maintain two-way pedestrian access on the Southwest Commuter Bike Path at all times.

Maintain pedestrian traffic on the existing Whenona Drive pedestrian overpass B-13-305, proposed pedestrian overpass B-13-653 and the pedestrian underpass B-13-654 at all times, except as described in these special provisions. If any of these pedestrian crossings are closed establish a pedestrian detour route as shown in the plans, in accordance to the ADAAG, prior to closure of the crossings.

When required close sidewalks in accordance to the standard detail drawing "Traffic Control, Sidewalk Closure." Provide temporary pedestrian, bicycle and bus access as detailed in the plans or as directed by the engineer. Maintain pedestrian, bicycle and bus access at all times utilizing a hard surface approved by the engineer, of either asphalt or concrete, and be constructed to match the width of the existing facility being maintained. The bid items Temporary Pedestrian/Bicycle access and Temporary Curb Ramp have been provided to complete this work.

G Property Access

Maintain access to properties along the project for local residents, businesses, and emergency vehicles. Maintain access to all driveways and parking lots where alternative access is not available at all times. Keep business entrances open by partial driveway construction or by closing only one access at a time for properties with multiple driveways. Inform property owners five working days prior to closing access(es). Confirm the closure with the property owner two days prior to use. If the contractor coordinates the closure of any access to a business or private property with the owner(s), provide written documentation of coordination with the owner(s) to the engineer.

H Clear Zone Working Restrictions

Do not leave any slopes steeper than 3:1 within the clear zone or any drop offs at the edge of the traveled way greater than 2 inches.

Store materials and equipment a minimum of 30-feet from the edge of the USH 12/14/18/151 traveled way. Equipment may be parked and materials stored closer than 30 feet on USH 12/14/18/151 if it is protected by a concrete barrier.

Store materials and equipment a minimum of 18-feet from the edge of the USH 12/14/18/151 service ramps traveled way. Equipment may be parked and materials stored closer than 18 feet on service ramps if it is protected by a concrete barrier.

Maintain a minimum of 4 feet clearance behind all concrete barrier to any stored equipment or materials that extend above the concrete barrier.

Store materials and equipment a minimum of 10-feet from the edge of the Verona Road traveled way. Equipment may be parked and materials stored closer than 10 feet on Verona Road if it is protected by a concrete barrier.

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

I Snowplowing, Winter Work Operations and Winter Maintenance

The established construction schedule for the contract may involve construction activities or traffic control devices to be utilized in the winter months. Clean all traffic control devices of dirt and debris including, but not limited to, signs, drums, message boards and barrier wall reflectors once every month, after each occurrence when county or city

maintenance crews have completed winter plowing operations, or as directed by the engineer.

During winter months, park equipment at a safe distance (a minimum of 30 feet from the edge of the traveled way) to prevent damage to equipment from snow plowing operations. Do not store equipment or materials within the work zone which may interfere with sight distances along USH 12/14/18/151.

Dane County and the local municipality will perform snow removal operations for freeway and local roads that are open to through traffic during construction. Coordinate temporarily moving traffic control devices to allow for winter plowing in and around the devices as requested by the maintaining authority or as directed by the engineer. Re-install or adjust any traffic control devices that may be damaged, removed, or shifted as part of normal winter maintenance operations. This work is included in the cost of Traffic Control Surveillance and Maintenance.

Snow may be plowed from the traveled roadway into the work site by the maintaining authority. The contractor is responsible for any snow removal from the work site that may be required to continue work operations. Dane County or the local maintaining authority will not provide snow plowing operations in areas outside of the active traveled lanes. Provide for snow removal in those areas closed to through traffic as required to facilitate safe construction activities and to provide access to properties within the work area.

The contractor is responsible for plowing any areas which may need to be cleared of snow or ice to accommodate changes in traffic control and to facilitate construction staging during winter months.

Anticipated locations of traffic control devices are shown in the plans. Review the work site with the engineer for locations where additional area may be available to maximize lane and shoulder widths over winter months to aid in winter maintenance operations and to maximize snow storage area. Adjust traffic control devices in these areas.

Snow plowing, snow removal, ice removal including any road salt which may be required, maintenance and cleaning of traffic control devices, and other winter maintenance activities are incidental to other items of work under this contract.

J Freeway Service Team (FST)

As part of a traffic mitigation program called Freeway Service Team (FST), the department has contracted with a private towing vendor to patrol parts of USH 12/14/18/151 during peak hours, holidays and special events. To improve safety and minimize delay, contact 911 immediately for breakdowns or incidents in or near the construction work zone. FST will be dispatched directly to the scene to aid the vehicles.

K Roadside Hazard Protection During Construction

Conduct existing hazard protection removals including but not limited to concrete barrier walls and beamguard in several phases to allow timely installation of temporary or

permanent hazard protection. Bridge pier columns, parapets, concrete barrier walls and sign bridge footings are to remain protected at all times throughout construction. Remove existing hazard protection concurrently with the placement of the temporary concrete barrier or temporary barrier left in place so that the bridge pier columns, parapets, concrete barrier walls and sign bridge footings remain protected at all times. Complete placement of new beamguard to a point to provide protection for the bridge pier columns, parapets, concrete barrier walls and sign bridge footings before the temporary or permanent concrete barrier is placed.

Railings connecting to structure parapet or MSE walls should be in place prior to opening the lanes, pedestrian paths and sidewalks to traffic.

L Traffic Control Operations

This information is included to assist the contractor and its subcontractors; do not interpret this information as a demonstration of specified means and methods. Coordinate the schedule of operations for the construction staging as shown in the plans and as noted in these special provisions. Do not move operations ahead within the proposed construction staging unless modifications to the staging and schedule are approved in writing by the engineer. Address traffic, construction and pedestrians as part of any staging modifications.

STAGE 4 PHASE 1 - 2014

Traffic

- Maintain eastbound Beltline traffic on existing lanes. The eastbound Beltline between Whitney Way and the SW Commuter Bike Path overpass (B-13-497) will be reduced to 11 feet and shifted south on the existing lanes.
- Maintain westbound Beltline traffic on existing lanes. The westbound Beltline between Whitney Way and the SW Commuter Bike Path overpass (B-13-497) will be reduced to 11 feet and shifted north on the existing lanes.
- Maintain Verona Road eastbound ramp terminal intersection in the temporary configuration established in project 1206-07-78.
- Maintain Verona Road eastbound off ramp on existing lanes and outside shoulder.
- Maintain Verona Road eastbound on ramp on existing lanes.
- Maintain Verona Road westbound ramp terminal intersection configuration.
- Maintain Verona Road westbound off ramp on existing lanes.
- Maintain 2 existing receiving lanes on the Verona Road westbound on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Maintain Whitney Way eastbound on ramp and eastbound auxiliary lane to Verona Road on the existing lanes and outside shoulder.
- Maintain Whitney Way westbound off ramp and westbound auxiliary lane from Verona Road on the existing lanes and outside shoulder.
- The Whitney Way westbound off ramp may be closed for one night to complete the temporary asphaltic surface overlay work.
- The Verona Road westbound on ramp may be closed for two nights to complete the permanent storm sewer crossings and one night for the temporary asphaltic surface overlay work.

- Maintain eastbound and westbound Whitney Way to one lane of traffic each direction during the specified closure times to complete pavement repairs, curb repairs, and pavement marking.

Construction
- Construct the permanent and temporary storm sewer crossings between Whitney Way and Verona Road along the westbound and eastbound Beltline.
- Construct the temporary asphaltic surface overlay between Whitney Way and Verona Road along the westbound Beltline, Verona Road on ramp, and Whitney Way off ramp.
- Construct temporary pavement in median areas along the westbound Beltline between the SW Commuter Bike Path overpass (B-13-497) and approximately Todd Drive.
- Construct temporary pavement between the Verona Road eastbound off ramp and the eastbound Beltline.
- Construct temporary and permanent pavement in various locations along the outside of the Verona Road westbound on ramp.
- Begin construction of the permanent median concrete barrier, median shoulder and one through lane in both the eastbound and westbound directions of the Beltline Highway between Whitney Way and the SW Commuter Bike Path overpass (B-13-497).
- Complete concrete pavement repairs, curb repairs, and pavement marking along eastbound and westbound Whitney Way.

Pedestrians
- Maintain Whenona Drive pedestrian bridge.
- Maintain sidewalks on the east and west sides of Verona Road underneath the Beltline overpass.
- Maintain the sidewalks along Whitney Way.

Stage 4 Phase 1 is anticipated to be completed in approximately 5 weeks from September to October 2014.

STAGE 4 PHASE 2 - 2014

Traffic
- Maintain eastbound Beltline traffic on existing lanes. The eastbound Beltline between Whitney Way and the SW Commuter Bike Path overpass (B-13-497) will be reduced to 11 feet and remain shifted south on the existing lanes.
- Shift westbound Beltline between traffic onto median temporary pavement between the SW Commuter Path overpass (B-13-497) and approximately Todd Drive. The westbound Beltline between Whitney Way and the SW Commuter Bike Path overpass (B-13-497) will be reduced to 11 feet and remain shifted north on the existing lanes.
- Maintain Verona Road eastbound ramp terminal intersection in the temporary configuration established in project 1206-07-78/82.
- Maintain Verona Road eastbound off ramp on existing lanes and outside shoulder.
- Maintain Verona Road eastbound on ramp on existing lanes.
- Maintain Verona Road westbound ramp terminal intersection configuration.

- Maintain Verona Road westbound off ramp on existing lanes.
- Maintain 2 existing receiving lanes on the Verona Road westbound on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Maintain Whitney Way eastbound on ramp and eastbound auxiliary lane to Verona Road on existing lanes and outside shoulder.
- Maintain Whitney Way westbound off ramp and westbound auxiliary lane from Verona Road on existing lanes and outside shoulder.

Construction
- Construct temporary pavement along the outside of the westbound Beltline between approximately Seminole Highway and Verona Road.
- Complete construction of the permanent median concrete barrier, median shoulder, one through lane and temporary pavement in both the eastbound and westbound directions of the Beltline Highway between Whitney Way and the SW Commuter Bike Path overpass (B-13-497).

Pedestrians
- Maintain Whenona Drive pedestrian bridge.
- Maintain sidewalks on the east and west sides of Verona Road between the Beltline ramp terminals.

Stage 4 Phase 2 is anticipated to be completed in approximately 4 weeks from October to November 2014.

STAGE 4 PHASE 3 - 2015

Traffic
- Maintain eastbound Beltline traffic on a combination of the existing lanes and outside shoulders from Whitney Way through the Verona Road interchange to approximately Seminole Highway.
- Shift westbound Beltline traffic onto outside temporary pavement from the east project limits to the Verona Road Overpass and from the Verona Road Overpass to the SW Commuter Bike Path overpass (B-13-497).
- Maintain westbound Beltline traffic on a combination of the existing lanes and outside shoulder between the SW Commuter Bike Path overpass (B-13-497) to Whitney Way.
- Maintain Verona Road eastbound ramp terminal intersection in the temporary configuration established in project 1206-07-78/82.
- Maintain Verona Road eastbound off ramp on existing lanes and outside shoulder.
- Maintain Verona Road eastbound on ramp on existing lanes.
- Maintain Verona Road westbound ramp terminal intersection configuration.
- Maintain Verona Road westbound off ramp on existing lanes.
- Maintain 2 existing receiving lanes on the Verona Road westbound on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Maintain Whitney Way eastbound on ramp and eastbound auxiliary lane to Verona Road on existing lanes and outside shoulder.

- Maintain Whitney Way westbound off ramp and westbound auxiliary lane from Verona Road on existing lanes and outside shoulder.

Construction
- Remove existing median barrier and construct temporary pavement at three locations in the median to be used as crossovers. Install temporary precast concrete barrier.
- Place temporary pavement markings in the median between Whitney Way and Verona Road.

Pedestrians
- Maintain Whenona Drive pedestrian bridge.
- Maintain sidewalks on the east and west sides of Verona Road underneath the Beltline overpass.

Stage 4 Phase 3 is anticipated to be completed in approximately 3 weeks. Winter shutdown will occur upon completion of this stage. Eastbound Beltline traffic is on existing pavement and outside shoulders on the eastbound roadway and westbound Beltline traffic is on existing pavement and outside shoulders on the westbound roadway during the winter shutdown period.

STAGE 5 PHASE 1 - 2015

Traffic
- Shift eastbound Beltline traffic to the westbound roadway using the crossovers previously constructed.
- Eastbound and westbound Beltline traffic are on the westbound roadway.
- Shift eastbound Verona Road off ramp onto a combination of existing and permanent eastbound through lanes.
- A nighttime closure of the eastbound Verona Road off ramp and Whitney Way eastbound entrance ramp during one night will be permitted to install an overhead sign Structure S-13-423.
- Shift eastbound Verona Road on ramp onto existing eastbound through lanes.
- Eastbound Verona Road ramp terminal intersection is in a temporary configuration.
- Maintain Verona Road westbound ramp terminal intersection configuration.
- Maintain Verona Road westbound off ramp on existing lanes.
- Maintain 2 existing receiving lanes on the Verona Road westbound on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Close carpool lane at the Whitney Way eastbound on ramp.
- Shift eastbound Whitney Way on ramp.
- Maintain Whitney Way westbound off ramp on existing pavement.
- Demolition of the Whenona Drive Pedestrian Bridge (B-13-305) deck and removal of the existing girders will be completed utilizing a full closure and detour for eastbound and westbound Beltline traffic for one night.

Construction

- Construct permanent and temporary pavement for the eastbound Beltline from Whitney Way through the SW Commuter Bike Path overpass (B-13-497).
- Construct permanent concrete barrier and curb and gutter along the eastbound Beltline outside shoulder between the Whitney Way eastbound on ramp and the Verona Road eastbound off ramp.
- Construct permanent and temporary pavement for the Verona Road eastbound off ramp.
- Construct permanent and temporary pavement for the Verona Road eastbound on ramp.
- Construct West Beltline Frontage Road (east) and Whenona Drive intersection.
- Demolish Whenona Drive pedestrian bridge beginning after May 1, 2015.
- Begin construction of Structure B-13-653.
- Construct R-13-238.
- Construct R-13-241.
- Begin construction of R-13-197.

Pedestrians

- Whenona Drive pedestrian bridge is closed. A signed pedestrian detour will be provided via the Seminole Highway bridge.
- Maintain sidewalks on the east and west sides of Verona Road underneath the Beltline overpass.

Stage 5 Phase 1 is anticipated to be completed in approximately 8 weeks in approximately April and May 2015.

STAGE 5 PHASE 2 - 2015

Traffic

- Eastbound and westbound Beltline traffic remain on the westbound roadway.
- Shift eastbound Verona Road off ramp onto permanent pavement.
- Shift eastbound Verona Road on ramp onto permanent pavement.
- Eastbound Verona Road ramp terminal intersection is in a temporary configuration.
- Maintain westbound Verona Road ramp terminal intersection configuration.
- Maintain westbound Verona Road off ramp on existing lanes.
- Maintain 2 existing receiving lanes on the westbound Verona Road on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Maintain closure of the carpool lane at the Whitney Way eastbound on ramp.
- Shift eastbound Whitney Way on ramp onto Beltline through lanes.
- Maintain Whitney Way westbound off ramp on existing pavement.
- Phase 2A:
    - Northbound and southbound Verona Road inside left turn lanes between the Beltline ramp terminals can be closed for 21 calendar days to construct the center pier of B-13-651.
    - Maintain closure of the carpool lane at the Whitney Way eastbound on ramp.

    - Shift eastbound Whitney Way on ramp back to configuration in Stage 5 Phase 1 and on permanent pavement.
    - Shift eastbound Verona Road off ramp onto permanent pavement.
- The eastbound and westbound Beltline may be closed and detours implemented for the placement of trusses for B-13-653.
- Northbound and southbound Verona Road may be closed and detours implemented for the setting of girders for B-13-651.
- The Whitney Way westbound on ramp and eastbound on ramp may be closed for one night for crack sealing, milling and the HMA overlay.

Construction
- Construct eastbound Beltline lanes.
- Construct Verona Road eastbound off ramp terminal.
- Construct Verona Road eastbound on ramp terminal.
- Construct permanent pavement not constructed in the previous phase for the ramp and Beltline in the vicinity of the Whitney Way eastbound on ramp.
- Phase 2A
    - Construct permanent pavement not constructed in the previous phase for the ramp and Beltline mainline in the vicinity of the Verona Road eastbound off ramp.
- Complete construction of Structure B-13-653 prior to September 4, 2015.
- Construct B-13-651.
- Begin construction of R-13-194.
- Continue construction of Structure R-13-197.
- Crack seal the Whitney Way westbound on ramp.
- Crack seal, mill and overlay the Whitney Way eastbound on ramp.

Pedestrians
- Whenona Drive pedestrian bridge is closed. A signed pedestrian detour will be provided via the Seminole Highway bridge.
- The new Whenona Drive pedestrian bridge (B-13-653) is open by September 4, 2015.
- Close sidewalk on the east side of Verona Road between the Beltline ramp terminals, detour to the west side of Verona Road.
- Maintain sidewalk on the west side of Verona Road between the Beltline ramp terminals, provide overhead protection in the B-13-651 construction area.

Stage 5 Phase 2 is anticipated to be completed in approximately 5 months from June 2015 to November 2015.

<u>STAGE 5 PHASE 3 - 2015</u>

Traffic
- Shift eastbound Beltline traffic to permanent pavement on the eastbound roadway.
- Westbound Beltline traffic is on the westbound roadway.
- Maintain eastbound Verona Road off ramp on permanent pavement.
- Maintain eastbound Verona Road on ramp on permanent pavement.
- Eastbound Verona Road ramp terminal intersection is in a temporary configuration.

- Maintain westbound Verona Road ramp terminal intersection configuration.
- Maintain westbound Verona Road off ramp on existing lanes.
- Maintain 2 existing receiving lanes on the westbound Verona Road on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Shift the Whitney Way eastbound on ramp onto permanent pavement.
- Utilize the eastbound Beltline permanent outside shoulder from the Whitney Way eastbound on ramp to the Verona Road eastbound off ramp for auxiliary lane traffic.
- Maintain Whitney Way westbound off ramp on existing pavement.

Construction
- Construct permanent and temporary pavement in the median east of Verona Road.

Pedestrians
- The new Whenona Drive pedestrian bridge (B-13-653) is open.
- Sidewalk on east side of Verona Road between the Beltline ramp terminals remains closed, detour to the west side of Verona Road.
- Maintain sidewalk on the west side of Verona Road between the Beltline ramp terminals, provide overhead protection in the B-13-651 construction area.

Stage 5 Phase 3 is anticipated to be completed in approximately 2 weeks in November 2015. Winter shutdown will occur upon completion of this stage. Eastbound Beltline traffic is on permanent pavement on the eastbound roadway and westbound Beltline traffic is on existing pavement on the westbound roadway during the winter shutdown period. Sidewalk on the east side of Verona Road underneath the Beltline overpass will be restored and the overhead protection on the west side of Verona Road underneath the Beltline overpass will be removed.

STAGE 6 PHASE 1 - 2016

Traffic
- Eastbound Beltline traffic is on permanent pavement on the eastbound roadway.
- Shift westbound Beltline traffic to the eastbound roadway on a combination of permanent, existing and temporary pavement.
- Maintain Verona Road eastbound off ramp on permanent pavement.
- Maintain Verona Road eastbound on ramp on permanent pavement.
- Eastbound Verona Road ramp terminal intersection is in a temporary configuration.
- Maintain Verona Road westbound off ramp on existing and temporary lanes.
- Maintain 2 receiving lanes on the Verona Road westbound on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Westbound Verona Road off ramp will be constructed under traffic. Maintain 2 right turn lanes and 3 left turn lanes during daytime hours.
- Maintain the Whitney Way eastbound on ramp on permanent pavement.
- Continue to utilize the eastbound Beltline outside shoulder from the Whitney Way eastbound on ramp to the Verona Road eastbound off ramp for auxiliary lane traffic.
- Shift Whitney Way westbound off ramp onto a combination of existing, temporary and permanent pavement.

- Nakoma Road will be constructed under traffic. Maintain 2-way traffic at all times.
- Hammersley Road will be constructed under traffic. Maintain 2-way traffic at all times.
- Northbound and southbound Verona Road may be closed and a detour implemented for demolition of the existing Beltline bridge.
- Northbound and southbound Verona Road may be closed and detours implemented for setting the girders for B-13-652.
- Maintain Whitney Way westbound off ramp traffic to one lane of traffic during the specified closure times for the Beltline west of the Verona Road Interchange to complete pavement repairs, curb repairs and pavement marking.

Construction
- Construct westbound Beltline lanes.
- Construct permanent concrete barrier along the westbound Beltline outside shoulder between the Verona Road westbound on ramp and the Whitney Way westbound off ramp.
- Construct temporary and permanent pavement for the westbound Verona Road off ramp.
- Construct temporary and permanent pavement for the westbound Verona Road on ramp.
- Construct temporary pavement in the median of Midvale Boulevard north of Nakoma Road.
    - Complete concrete pavement repairs, curb repairs and pavement marking along the Whitney Way westbound exit ramp.
- Construct Verona Road/Midvale Boulevard northbound lanes.
- Construct Nakoma Road and intersection.
- Construct Hammersley Road.
- Begin construction of Structure B-13-652.
- Continue construction of R-13-194.
- Continue construction of R-13-197.

Pedestrians
- The new Whenona Drive pedestrian bridge (B-13-653) is open.
- Sidewalk on east side of Verona Road between the Beltline ramp terminals is closed, detour to the west side of Verona Road.
- Maintain sidewalk on the west side of Verona Road between the Beltline ramp terminals, provide overhead protection in the B-13-652 construction area.

Stage 6 Phase 1 is anticipated to be completed in approximately 4 months from April 2016 through July 2016.

<u>STAGE 6 PHASE 2 - 2016</u>

Traffic
- Eastbound Beltline traffic is on permanent pavement on the eastbound roadway.
- Maintain westbound traffic on the eastbound roadway.
- Maintain eastbound Verona Road off ramp on permanent pavement.

- Maintain eastbound Verona Road on ramp on permanent pavement.
- Eastbound Verona Road ramp terminal intersection is in a temporary configuration.
- Shift westbound Verona Road off ramp onto a combination of temporary and permanent pavement.
- A nighttime closure of the westbound Verona Road off ramp during one night may be used to install an overhead sign structure.
- Maintain 2 receiving lanes on the Verona Road westbound on ramp for 325 feet from the ramp terminal intersection, then merge into 1 lane.
- Westbound Verona Road ramp terminal intersection is in a temporary configuration.
- Maintain the Whitney Way eastbound on ramp on permanent pavement.
- Continue to utilize the eastbound Beltline outside shoulder from the Whitney Way eastbound on ramp to the Verona Road eastbound off ramp for auxiliary lane traffic.
- Shift Whitney Way westbound off ramp on a combination of temporary and permanent pavement.
- Shift northbound Verona Road/Midvale Boulevard onto permanent pavement.
- Shift westbound Verona Road on ramp onto a combination of existing, temporary and permanent pavement.

Construction
- Construct permanent pavement and concrete barrier not constructed in the previous phase for the westbound on ramp and Beltline.
- Complete construction of Verona Road westbound off ramp.
- Complete construction of Verona Road westbound on ramp.
- Construct permanent pavement not constructed in the previous stage for the ramp and Beltline in the vicinity of the Whitney Way westbound off ramp.
- Construct permanent and temporary pavement in the median of Verona Road/Midvale Boulevard.
- Complete construction of Structure B-13-652.
- Construct N-13-2.

Pedestrians
- Whenona Drive pedestrian bridge (B-13-653) is open.
- Sidewalk on east side of Verona Road between the Beltline ramp terminals remains closed, detour to the west side of Verona Road.
- Maintain sidewalk on the west side of Verona Road between the Beltline ramp terminals, provide overhead protection in the B-13-652 construction area.

Stage 6 Phase 2 is anticipated to be completed in approximately 6 weeks from August 2016 through mid-September 2016.

STAGE 6 PHASE 3 - 2016

Traffic
- Eastbound Beltline traffic is on permanent pavement on the eastbound roadway.
- Continue to utilize the eastbound Beltline outside shoulder from the Whitney Way eastbound on ramp to the Verona Road eastbound off ramp for auxiliary lane traffic.

- Westbound Beltline traffic is on permanent pavement on the westbound roadway.
- Utilize the westbound Beltline outside shoulder from the Verona Road westbound on ramp to the Whitney Way westbound off ramp for auxiliary lane traffic.
- Eastbound Verona Road off ramp is on permanent pavement.
- Eastbound Verona Road on ramp is on permanent pavement.
- Eastbound Verona Road ramp terminal intersection is in a temporary configuration.
- Westbound Verona Road on ramp is on temporary and permanent pavement.
- Westbound Verona Road off ramp is on temporary and permanent pavement.
- Westbound Verona Road ramp terminal intersection is in a temporary configuration.
- Northbound Verona Road/Midvale Boulevard is on permanent pavement.
- Whitney Way eastbound on ramp is on permanent pavement.
- Whitney Way westbound off ramp is on permanent pavement.
- Shift southbound Verona Road/Midvale Boulevard onto a combination of temporary and permanent pavement.
- Hammersley Road intersection will be constructed under traffic. Maintain 2-way traffic at all times.
- Installation of four overhead sign structures in the westbound direction and two overhead sign structures in the eastbound direction will be completed at night utilizing a rolling closure on the eastbound or westbound lanes.

Construction
- Construct southbound Verona Road/Midvale Boulevard.
- Remove temporary crossover west of Whitney Way.
- Construct any remaining median concrete barrier and lanes on the Beltline.
- Construct Hammersley Road intersection.
- Complete median construction on Midvale Boulevard north of Nakoma Road.

Pedestrians
- Whenona Drive pedestrian bridge (B-13-653) is open.
- Close sidewalk on west side of Verona Road between the Beltline ramp terminals, detour to the east side of Verona Road.
- Maintain sidewalk on the east side of Verona Road between the Beltline ramp terminals.

Stage 6 Phase 3 is anticipated to be completed in approximately 4 weeks from mid-September 2016 through mid-October 2016.

STAGE 7 - 2016

Traffic
- The Beltline, Verona Road and ramps are on their permanent configuration utilizing permanent signals.
- The Verona Road/Midvale Blvd. intersection for the Single Point Urban Interchange (SPUI) is placed in its final configuration using temporary traffic control devices. Flaggers and State Patrol will be utilized for 1 night to switch traffic from temporary to final configuration.

Construction

- Remaining work in the Verona Road/Midvale Blvd. intersection for the SPUI will be completed using nighttime closures and lane shifts.
- Complete medians and barrier walls on the Beltline.
- Remove temporary pavement and crossovers on the Beltline.
- The skylight will be installed in the pedestrian underpass (B-13-654).
- Complete punchlists and project clean up.

Pedestrians

- Whenona Drive pedestrian bridge (B-13-653) is open.
- Periodic closures of pedestrian facilities on the east and west sides of Verona Road between the Beltline ramp terminals will be permitted to complete the work on the intersection islands. This work shall be staged to keep one side of the pedestrian facilities open at all times.
- The pedestrian underpass (B-13-654) may be closed for 3 weeks while the skylight is installed. A signed pedestrian detour will be provided via Verona Road, Midvale Blvd. and Nakoma Road/Hammersley Road.

Stage 7 is anticipated to be completed in approximately 4 weeks from mid-October to the contract completion date.

6. General Requirements for Incident Management.

Provide 24-hour contact information, including three current telephone number(s), to the engineer, Dane County Sherriff's Department, local City of Fitchburg first responders, and local City of Madison first responders in the event a safety hazard develops.

Repair, replace, or restore the damaged or disturbed traffic control devices within two hours from the time notified.

Incidents within the construction work zone will be handled by the City of Fitchburg or the City of Madison, whichever has jurisdiction, according to standard operating protocol. Invite the following agencies or individuals to the preconstruction and bi-weekly construction informational meetings:

City of Madison Police Department, Interim Chief Randy Gaber	(608) 266-4022
City of Madison Fire/EMS Department, Steven Davis	(608) 266-4420
City of Madison Engineering, Rob Phillips	(608) 266-4751
Dane County Department of Public Works, Pamela Dunphy	(608) 266-4036
State Patrol, Captain Charles R. Teasdale	(608) 846-8500
Wisconsin Department of Transportation, Jeff Gustafson	(608) 516-6400

7. Holiday and Special Event Work Restrictions.

Holidays
Work is permitted however lane closures and delivery of materials will not be permitted on any portion of the highway carrying USH 12/14/18/151 (Beltline) and associated ramps, USH 18/151 (Verona Road), during the following holiday periods:

2014

- Labor Day Holiday – From noon Friday, August 29, 2014 to 5:00 AM Tuesday, September 2, 2014;
- Thanksgiving Day Holiday – From noon Wednesday, November 26, 2014 to 5:00 AM Monday, December 1, 2014;
- Christmas Day Holiday – From noon Wednesday, December 24, 2014 to 5:00 AM Monday, December 29, 2014.

2015

- Easter Holiday – From noon Friday, April 3, 2015 to 5:00 AM Monday, April 6, 2015;
- Memorial Day Holiday – From noon Friday, May 22, 2015 to 5:00 AM Tuesday, May 26, 2015 (this duration includes the Bratfest event);
- Independence Day Holiday – From noon Thursday, July 2, 2015 to 5:00 AM Monday, July 6, 2015;
- Labor Day Holiday – From noon Friday, September 4, 2015 to 5:00 AM Tuesday, September 8, 2015;
- Thanksgiving Day Holiday – From noon Wednesday, November 25, 2015 to 5:00 AM Monday, November 30, 2015;
- Christmas Day Holiday – From noon Thursday, December 24, 2015 to 5:00 AM Monday, December 28, 2015.

2016

- Easter Holiday – From noon Friday, March 25, 2016 to 5:00 AM Monday, March 28, 2016;
- Memorial Day Holiday – From noon Friday May 27, 2016 to 5:00 AM Tuesday, May 31, 2016;
- Independence Day Holiday – From noon Friday, July 1, 2016 to 5:00 AM Tuesday, July 5, 2016;
- Labor Day Holiday – From noon Friday, September 2, 2016 to 5:00 AM Tuesday, September 6, 2016;
- Thanksgiving Day Holiday – From noon Wednesday, November 23, 2016 to 5:00 AM Monday, November 28, 2016;
- Christmas Day Holiday – From noon Friday, December 23, 2016 to 5:00 AM Tuesday, December 27, 2016.

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

Special Events
Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying USH 12/14/18/151 and associated ramps, USH 18/151, and all local roads included in the contract, and entirely clear the traveled way and shoulders of such portions of the roadways of equipment, barricades, signs, lights and any other material that might impede the free flow of traffic during the following holiday and special event periods:

2014

- Rhythm and Booms – From 9:00 PM to 12:00 AM, 2014 date pending
- Epic's Users Group Meeting, September 15-18, 2014 – From 5:00 AM to 10:00 AM Monday through Thursday

2015

- Midwest Horse Fair, April 17-19, 2015 – From 5:00 AM to 10:00 AM Friday and Saturday
- Rhythm and Booms – From 9:00 PM to 12:00 AM, 2015 date pending
- Epic's Users Group Meeting, August 31-September 3, 2015 – From 5:00 AM to 10:00 AM Monday through Thursday

2016

- Midwest Horse Fair, April 15-17, 2016 – From 5:00 AM to 10:00 AM Friday and Saturday
- Rhythm and Booms – From 9:00 PM to 12:00 AM, 2016 date pending
- Epic's Users Group Meeting, September 19-22, 2016 – From 5:00 AM to 10:00 AM Monday through Thursday

Wisconsin Badgers Football Home Games – From a maximum of four hours prior to scheduled kickoff time to three hours immediately after the end of the game, at the discretion of the engineer – the engineer, in coordination with the traffic engineer, will have the ability to allow work activities based upon changes to game day schedule and game day traffic. Home games in 2014, 2015 and 2016 are scheduled on the following dates:

2014

- Saturday, August 30, 2014 - Pending
- Saturday, September 6, 2014
- Saturday, September 13, 2014 - Pending
- Saturday, September 20, 2014
- Saturday, September 27, 2014
- Saturday, October 4, 2014
- Saturday, October 25, 2014

- Saturday, November 1, 2014
- Saturday, November 22, 2014

2015

- Saturday, September 12, 2015 – Pending
- Saturday, September 19, 2015 – Pending
- Saturday, September 26, 2015 – Pending
- Saturday, October 3, 2015
- Saturday, October 17, 2015
- Saturday, October 31, 2015
- Saturday, November 21, 2015

2016

- Saturday, September 3, 2016 – Pending
- Saturday, September 17, 2016 – Pending
- Saturday, September 24, 2016 – Pending
- Saturday, October 15, 2016
- Saturday, October 29, 2016
- Saturday, November 12, 2016
- Saturday, November 26, 2016

For events identified that have dates listed as pending, the dates must be confirmed with the engineer as soon as possible. The department will determine the dates and times for work restrictions associated with these events. The restrictions are not anticipated to exceed three working days and may overlap with other identified events above. Dates above for special events may also be revised, at which time the engineer will provide revised restrictions which are not more restrictive than the restrictions provided.

8. Utilities.

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

Some of the utility work described below is dependent on prior work being performed at a specific site. In such situations provide the project engineer and the affected utility a good faith notice of when the utility is to start work at the site. The notice shall be given a minimum of 14 calendar days in advance of when the work is to be completed and when the site will be available to the utility to begin work. Notify the affected utility 3 working days prior to the start of construction to coordinate the adjustments.

Additional detailed information regarding the location of the relocated utility facilities is available on the permits issued to the utility companies. View these permits at the SW Regional Office during normal working hours. Contact the Regional Utility Permit Coordinator, Mark Goggin at (608) 792-1366.

American Transmission Company (ATC) (electric) has overhead and underground facilities within the project area. Existing facility locations are as follows:

Existing overhead facilities occur along USH 12/14 (Beltline Highway) through the project limits but no direct conflicts are anticipated with the project. The existing overhead 345 kV facilities are anticipated to be energized during construction. Use caution when operating around ATC foundations.

Existing underground 69 kV oil cooled facilities occur crossing USH 12/14 (Beltline Highway) at approximately Station 1125+65 but no direct conflicts are anticipated with the project. When construction equipment of substantial size and weight is positioned over the underground electric line the entire area under the equipment shall be reinforced using appropriate construction matting to equalize the weight. Take any and all precautions to avoid soil compaction, undermining, and any other circumstances that would cause damage to the ATC underground electric line.

Coordination with ATC

ATC's 345 kV overhead power line along the West Beltline Frontage Road will be in service through the project duration. Contact ATC operations at (800) 937-3762 a minimum of 10 business days prior to work occurring within 50 feet horizontally or vertically of the ATC 345 kV line. Follow all OSHA and ATC requirements when working around the 345 kV facility.

Line outages for the 345 kV overhead line have been pre-scheduled with ATC for the removal of existing structure B-13-305 and for setting the trusses for structure B-13-653 as follows:

- Existing Structure removal/demolition of the existing pedestrian overpass B-13-305 (2015): Friday May 1 from 8:00 PM to Sunday May 3, at 6:00 PM.

- Truss Setting for the proposed structure B-13-653 (2015): Friday July 24 from 8:00 PM to Sunday July 26 at 6:00 PM.

The pre-scheduled outages provided above must be confirmed with David Kielty of ATC (608) 877-8252 a minimum of three months prior to the outages. Contact Dave once per month after the initial contact to confirm the outages and again two weeks and one week prior to the outages.

Additional line outages for ATC's 345 kV overhead line may be requested. ATC line outages will be limited to those work activities that cannot be completed without encroaching on OSHA clearance requirements. Submit a work plan to the engineer and ATC indicating the activities that cannot be completed without encroaching on OSHA clearance requirements. Requests for line outages must be made a minimum of four months in advance of the requested outage date. The maximum duration of any line outage is 7 consecutive calendar days. Additional line outages may be requested for work prior to June 1 and after October 1. Line outage requests may not be granted by ATC and the work

should not be bid anticipating line outages will be granted. If a line outage is granted by ATC, schedule work to minimize the duration of the outage and comply with all ATC requirements for outage coordination prior to the start of work activities and upon completion of work activities.

Work near ATC's 345 kV Overhead Electric Line
WisDOT is aware of possible induced voltage from the 345kV overhead electric line on metal objects. WisDOT's staff are utilizing personal protective equipment (PPE) in the form of insulated gloves when inspecting or working on metal objects in the vicinity of the line. Please use PPE in accordance with your company policies, OSHA requirements, and ATC requirements when working around these overhead lines.

For questions about working around ATC's 345 kV overhead lines contact ATC operations at (800) 937-3762 a minimum of 10 business days prior to work occurring within 50 feet horizontally or vertically of the ATC 345 kV line.

Contact ATC 2 weeks prior to working near ATC facilities. Coordinate operations with ATC. Contact Matt Dopp (608) 225-5983.

AT&T (communication) has underground and overhead communication facilities within the project area. AT&T anticipates that their facility relocation work will be completed prior to construction. The anticipated proposed relocations are as follows:

The existing underground facilities northwest of USH 18/151 (Verona Road) from approximately Station 996+00 VR LT to Station 1008+82 VR RT will be abandoned in place. AT&T manholes along the underground facilities will have the top section of the manhole removed and will be filled with a sand/gravel mixture.

The existing underground facilities north of Britta Parkway from approximately Station 19+00 BP to Whenona Drive will be abandoned in place and relocated to existing conduit under the north side of Britta Parkway.

The existing underground facilities crossing the West Beltline Frontage Road at approximately Station 151+00 B RT will be cut south of the existing noise wall. The existing underground facilities north of the existing noise wall will be abandoned in place.

The existing underground crossing of USH 12/14/18/151 (Beltline Highway) at approximately Station 1157+70 will be abandoned in place and relocated by boring under USH 12/14/18/151 (Beltline Highway) with US Signal at approximately Station 1157+40. New underground facilities are proposed along the east side of Whenona Drive from approximately Station 11+00 WD to the south. New underground facilities are proposed along the south side of the West Beltline Frontage Road from approximately Station 130+15 EE RT to Station 131+41 EE RT.

The existing underground facilities along the south side of Hammersley Road, crossing S. Midvale Boulevard, crossing Mohawk Drive, and crossing Nakoma Road will be abandoned in place. New underground facilities are proposed along the west side of Mohawk Drive with a manhole at approximately Station 11+36 NA RT. From the manhole, new facilities are proposed to run to the west, crossing S. Midvale Boulevard at approximately Station 1009+05 VR and continuing west under the proposed sidewalk along the south side of Hammersley Road. From the manhole at approximately Station 11+36 NA RT, new underground facilities are proposed crossing Nakoma Road at approximately Station 11+95 NA. MG&E Electric, TDS, and US Signal will run jointly with AT&T along this route.

From the proposed manhole at approximately Station 11+36 NA RT, new underground facilities are proposed to cross Nakoma Road at approximately Station 11+11 NA. From the underground crossing of Nakoma Road the proposed facilities will continue to the west along the back of sidewalk and cross S. Midvale Boulevard at approximately Station 1010+18 VR. From the crossing of S. Midvale Boulevard the proposed facilities will continue to the west along the back of sidewalk along the north side of Hammersley Road.

The existing overhead facilities attached to MG&E Electric poles north of the USH 12/14/18/151 (Beltline Highway) westbound off-ramp to USH 18/151 (Verona Road) from approximately Station 149+74 C LT to Station 156+70 C LT will be removed.

The existing underground facilities south of USH 12/14/18/151 (Beltline Highway) from approximately Station 1161+50 RT to Station 1165+50 RT will be shifted approximately 5 feet south.

The existing manhole structure south of USH 12/14/18/151 (Beltline Highway) at approximately Station 1163+56 RT will remain. Avoid damaging and maintain access to the manhole structure throughout the project. Contact AT&T 14 days prior to working near the manhole. See Construction Detail - AT&T Manhole to Remain for additional information.

Other existing facilities are anticipated to remain in place but no direct conflicts are anticipated with the project.

Contact AT&T 10 days prior to the need for manhole adjustments. Each adjustment is anticipated to require 1 working day.

Maintain access to all AT&T structures during construction. Coordinate operations with AT&T. Contact Carol Anason (608) 252-2385.

CenturyLink (communication) has overhead and underground facilities within the project area. CenturyLink anticipates their facility relocation work will be completed prior to construction. The anticipated proposed relocations are as follows:

The existing underground facilities along the south side of the West Beltline Frontage Road from approximately Station 1128+00 to Station 1141+00, the crossing of USH 18/151 (Verona Road) and the existing facilities south of the West Beltline Frontage Road from USH 18/151 (Verona Road) to Danbury Street will be removed or abandoned in place.

The existing underground facilities east of S. Midvale Boulevard from approximately Station 997+81 VR RT to Station 1004+94 VR RT, the crossing of S. Midvale Boulevard at approximately Station 1004+94 VR and the existing facilities west of S. Midvale Boulevard from approximately Station 1004+94 VR LT to Station 1010+05 VR LT will be abandoned in place.

New underground facilities are proposed under the sidewalk along the south side of the West Beltline Frontage Road from Seminole Highway to Danbury Street. An existing manhole in the southwest quadrant of the West Beltline Highway and Seminole Highway will require adjustment. Contact CenturyLink 14 days prior to the need for the manhole adjustment. The adjustment is anticipated to take 1 working day to complete.

New underground facilities are proposed to run under the back of walk along the north side of Hammersley Road from an existing manhole at approximately Station 99+42 HM LT to the west out of the project limits.

New underground facilities are proposed in a joint bore with MG&E Electric, Charter Communications, TDS Telecom, and US Signal crossing USH 12/14 (Beltline Highway) at approximately Station 1131+32.

Coordinate operations with CenturyLink. Contact Kyle Tostenson, (318) 417-2768.

Charter Communications (communication) has overhead and underground facilities within the project area. Charter Communications anticipates their facility relocation work will be completed prior to construction. The anticipated proposed relocations are as follows:

New underground facilities are proposed in a joint bore with MG&E Electric, CenturyLink, TDS Telecom, and US Signal crossing USH 12/14 (Beltline Highway) at approximately Station 1131+32.

The existing overhead facilities north of Britta Parkway between Axel Avenue and Whenona Drive will be relocated to the new proposed MG&E Electric poles as described elsewhere in this special provision.

The existing overhead facilities attached to MG&E Electric poles north of USH 12/14/181/151 (Beltline Highway) westbound off-ramp to USH 18/151 from approximately Station 149+74 C LT to Station 156+70 C LT will be removed and relocated underground along the east side of Warwick Way, under the sidewalk along the north side of Doncaster Drive, and connect to its existing underground facilities at

approximately Station 148+20 C RT. The existing underground facilities from approximately Station 1003+76 VR RT to Station 1004+93 VR RT are anticipated to remain in place.

The existing overhead facilities attached to MG&E Electric poles south of Hammersley Road and crossing S. Midvale Boulevard, Mohawk Drive and Nakoma Road will be removed and relocated underground along the north side of Hammersley Road and Nakoma Road under the proposed sidewalk from approximately Station 97+88 HM LT to Station 12+12 NA LT with crossings of S. Midvale Boulevard at approximately Station 1009+85 VR and Nakoma Road at approximately Station 12+17 NA. US Signal will run jointly with Charter along this route.

Charter is proposing to run jointly with MG&E Electric along the west side of S. Midvale Boulevard from approximately Station 1009+00 VR to Station 1003+80 VR.

Coordinate operations with Charter Communications. Contact Glen Jakusz (608) 274-3822 ext. 6657.

City of Madison (sanitary sewer) has underground facilities located within the project. Relocation of the underground facilities will be accomplished as part of contract 1206-07-85.

Coordinate operations with the City of Madison. Contact Mark Moder (608) 261-9250.

City of Madison (Street Lights) has existing light poles and underground electric facilities located within the project area. The existing light poles and underground electric facilities will be removed and relocated as part of contract 1206-07-84.

Coordinate operations with the City of Madison. Contact Brian Smith, (608) 261-9625.

Madison Gas and Electric (electric) has overhead and underground facilities located within the project limits. Madison Gas and Electric anticipates their facility relocation work will be completed prior to construction. The anticipated proposed relocations are as follows:

The existing overhead facilities west of USH 18/151 (Verona Road)/ S. Midvale Boulevard from approximately Station 996+00 VR LT to Station 1009+35 VR LT with a crossing of USH 12/14 (Beltline Highway) at approximately Station 1142+86 are anticipated to be removed prior to construction.

The existing overhead facilities north of Britta Parkway from approximately Axel Road to Whenona Drive will be removed and relocated to the south side of Britta Parkway.

The existing overhead facilities crossing USH 12/14 (Beltline Highway) at approximately Station 1131+00 will be removed and relocated underground with Charter Communications, TDS Telecom, and US Signal crossing USH 12/14 (Beltline Highway)

at approximately Station 1131+32. The existing overhead facilities north of USH 12/14 (Beltline Highway) from approximately Station 1131+09 LT to Station 1128+95 LT will be removed prior to construction.

The existing overhead facilities crossing USH 12/14 (Beltline Highway) at approximately Station 1128+40 will be removed.

The existing overhead facilities south of Hammersley Road and crossing S. Midvale Boulevard, Mohawk Drive and Nakoma Road will be removed and relocated underground jointly with AT&T as described elsewhere in these special provisions. MG&E Electric will perform a bore under Mohawk Drive along the south side of Nakoma Road from approximately Station 11+21 NA RT to Station 11+89 NA RT.

Existing power poles at approximately Station 97+88 HM LT, Station 12+29 NA LT and Station 13+80 NA LT will be removed and replaced with new power poles at approximately Station 97+88 HM LT, Station 12+32 NA LT and Station 13+80 NA LT. New guy poles are proposed at approximately Station 12+22 NA RT and Station 13+74 NA RT. Contact MG&E Electric 14 days prior to beginning work in these areas to coordinate work operations near MG&E Electric facilities.

MG&E Electric is proposing to construct underground electric facilities to the east and west of S. Midvale Boulevard from approximately Station 1009+00 VR to Station 1003+80 VR. Charter will run jointly along the west side of S. Midvale Boulevard.

The existing overhead facilities north of USH 12/14/181/151 (Beltline Highway) westbound off-ramp to USH 18/151 from approximately Station 149+74 C LT to Station 156+70 C LT will be removed and relocated along the south side of Doncaster Road.

The existing overhead facilities crossing USH 12/14/18/151 (Beltline Highway) at approximately Station 1162+73 will be removed prior to construction.

Other existing facilities are anticipated to remain in place but no direct conflicts are anticipated with the project.

Coordinate operations with Madison Gas and Electric. Contact Rich Parker, (608) 252-7379.

Madison Gas and Electric (gas) has existing underground facilities within the project area. Madison Gas and Electric anticipates their facility relocation work will be completed prior to construction. The anticipated proposed relocations are as follows.

MG&E Gas will adjust its existing underground facilities as they are exposed at the storm sewer crossings at approximately Station 98+43 HM RT if necessary and it is anticipated to take 2 working days to complete. Contact MG&E Gas 10 days prior to construction.

The existing underground facilities north of the USH 18/151 (Verona Road) eastbound on-ramp from approximately Station 147+40 B RT to Station 150+93 B RT will be abandoned in place.

The existing underground facilities under S. Midvale Boulevard from approximately Station 1004+00 VR RT to Station 1006+00 VR will be abandoned in place. The existing underground facilities east of S. Midvale Boulevard are anticipated to remain in place from approximately Station 1004+00 VR RT to 1005+25 VR RT.

The existing underground facilities located from approximately Station 132+44 EE RT to Station 134+74 EE RT have been relocated to the south under the proposed sidewalk.

The existing facilities crossing USH 12/14 (Beltline Highway) at approximately Station 1129+62 will be abandoned in place and relocated with a bore approximately 5 feet to the east of the abandoned facility.

Other existing facilities are anticipated to remain in place but no direct conflicts are anticipated with the project.

MG&E Gas has an abandoned 12-inch steel casing pipe crossing USH 12/14 at approximately station 1125+92. This abandoned steel casing pipe is approximately 10 to 15 feet deep. The location and depth of this abandoned steel casing pipe were provided by MG&E.

Coordinate operations with MG&E Gas. Contact Don McClain, (608) 252-5618.

Madison Water Utility (water) has existing underground facilities located within the project area. Relocation of the underground facilities will be accomplished as part of contract 1206-07-85.

Coordinate operations with Madison Water Utility. Contact Adam Weiderhoeft, (608) 266-9121.

TDS Telecom (communication) has existing overhead and underground facilities located within the project area. TDS Telecom anticipates their facility relocation work will be completed prior to construction. The anticipated proposed relocations are as follows:

The existing overhead facilities attached to MG&E Electric poles crossing USH 12/14 (Beltline Highway) at approximately Station 1131+04 will be removed and relocated underground jointly at approximately Station 1131+32 with MG&E Electric, Charter Communications, US Signal, and CenturyLink as described elsewhere in these special provisions.

The existing overhead facilities attached to MG&E Electric poles along the south side of Hammersley Road and crossing S. Midvale Boulevard and Mohawk Drive will be removed and relocated underground jointly with AT&T as described elsewhere in these special provisions.

Other existing facilities are anticipated to remain in place.

Coordinate operations with TDS Telecom. Contact Erik Borgen, (608) 664-4438.

US Signal (communication) has existing overhead facilities located within the project area. US Signal anticipates their facility relocation work will be completed prior to construction. The anticipated proposed relocations are as follows:

The existing overhead facilities attached to MG&E Electric poles crossing of USH 12/14 (Beltline Highway) at approximately Station 1131+04 will be removed and relocated underground jointly at approximately Station 1131+32 with MG&E Electric, Charter Communication, TDS Telecom, and CenturyLink as described elsewhere in these special provisions. The existing overhead crossing of USH 12/14 (Beltline Highway) at approximately Station 1128+40 will be removed prior to construction.

The existing overhead facilities attached to MG&E Electric poles crossing USH 12/14 (Beltline Highway) at approximately Station 1162+73 will be removed and bored jointly with AT&T under USH 12/14/18/151 (Beltline Highway) as described elsewhere in these special provisions.

The existing overhead facilities attached to MG&E Electric poles along the south side of Hammersley Road and crossing S. Midvale Boulevard, Mohawk Drive, and Nakoma Road will be removed and relocated underground jointly with Charter as described elsewhere in these special provisions.

Coordinate operations with US Signal. Contact Rick Andricks, (614) 483-6350.

Windstream (communication) has existing overhead facilities attached to MG&E Electric poles crossing USH 12/14 (Beltline Highway) at approximately Station 1125+60 but no direct conflicts are anticipated with the project.

Coordinate operations with Windstream. Contact Jim Kostuch, (262) 792-7938.

WisDOT ITS has existing facilities within the project area. Relocation of these facilities will be accomplished as part of contract 1206-07-84.

Contact WisDOT Southwest Region ITS Engineer, Kyle Hemp, (608) 246-5367 or kyle.hemp@dot.wi.gov, to confirm that the new ITS fiber system along the USH 12/14 (Beltline Highway) is operational at least 14 calendar days prior to removing any existing ITS components.

9. General Provisions for City of Madison Municipal Utilities (Water Main).

Perform work in accordance to these special provisions, the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and City of Madison Standard Specifications for Public Works Construction-Latest Edition. In the event of a conflict, the documents listed above are in precedence order.

The city of Madison Standard Specifications for Public Works Construction, Latest Edition are available on the city website at **http://www.cityofmadison.com/business/pw/documents/stdspecs/2014/completespecbook.pdf**

10. General Provisions for City of Madison Water Main.

Utility Standard Specifications
Perform work in accordance to these provisions and City of Madison Standard Specifications for Public Works Construction-Latest Edition.

Work Sequence
Contact the identified person below 10 working days prior to starting work on the water main and provide a schedule of operations.

Construct water main and laterals in stages in accordance to the traffic control plans and in proper coordination with construction activities adjacent to the water main.

As construction staging and sequence allows, disinfect the new water mains. The City of Madison Water Utility will flush and test all newly installed water mains. Coordinate as necessary with the City of Madison Water Utility for these operations. After the water main has passed bacteriological and pressure testing, install replacement water services and make connections to the existing water system.

Keep valves at connections of the new water main to the existing water main closed until the new water main has passed all testing. Where new valves need to be opened to fill the new water main for testing and flushing, sequence construction to preclude backflow of any water from the new water main to the existing water main.

Following the installation of replacement water services and the connection of replacement water main to the existing water main at locations noted on the plans, the existing water main shall be cut off, drained, open ends plugged or bulkheaded with concrete, and the pipe abandoned in place. This work is considered incidental to the new water main.

Determine the location of the curb line, sidewalk limits, and existing utilities in the area prior to hydrant installation to assure the proper location of the hydrant relative to the curb line. This work is considered incidental to the new water main.

Existing Water Service Laterals
The horizontal location and size of all water laterals indicated on the plans is taken from surveys, approximate measurements, and the City of Madison's available records. These records are not guaranteed to be accurate in all cases and do not indicate at what depths these lateral are located. As such, determine the location and size of the existing laterals before making a tap into the new water main. Follow the plans to determine which services are to be abandoned, reconnected, extended, or replaced to the property line.

Location of Existing Facilities
The horizontal and vertical location and size of all existing water mains indicated on the plans is taken partially from surveys, approximate measurements, and the City of Madison's available records. These records are not guaranteed to be accurate in all cases. Due to the unverified depth and location of existing pipelines, alteration of the lines and grades shown on the plans for new pipelines where connections are to be made to existing pipelines may be necessary. Notify the engineer of locations where alterations of the lines and grades shown are necessary so that an acceptable solution can be determined.

Testing and Acceptance
Submit testing results as required by the City of Madison Standard Specifications for Public Works Construction-Latest Edition or as required by the city engineer or city engineer's Representative. Final acceptance of water main, backfill materials, bedding, and concrete for plugs will come from the city engineer or city engineer's Representative.

Allow the city of Madison to sample/test materials as requested.

Provide complete copies of required submittals as follows:

Shop Drawings:	Six copies
Sampling/Testing Results:	Three copies

Deliver required copies of submittals and testing results to Adam Wiederhoeft, City of Madison Water Utility, 119 East Olin Avenue, Madison, WI 53713.

The city engineer or city engineer's representative will review and return shop drawings to the contractor within one week of date of receipt.

In accordance to the City of Madison Standard Specifications for Public Works Construction – Latest Addition, "Pipe to be removed that is in the same trench as a new pipe shall not be compensated as remove pipe and shall be considered to be incidental to the new pipe installation."

11. Other Contracts.

The following projects will require coordination with the work under this contract:

Project 1206-07-78, Mount Horeb-Madison, Raymond Road to Seminole Highway; Project 1206-07-82, Mount Horeb-Madison, Verona Road Phase 2. These projects were

part of a single bid letting that took place in November 2013. Complete work in conjunction with these projects 1206-07-84/85.

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

James Gondek, License Number All-108099, inspected Structure B-13-0064 and B-13-0305 for asbestos on July 14, 2011. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Mark Vesperman, P.E., (608) 246-7548.

In accordance to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Wayne Chase, P.E., (608) 246-3859 and DOT BTS-ESS attn: Hazardous Materials Specialist PO Box 7965, Madison, WI, 53707-7965. In addition, comply with all local or municipal asbestos requirements.

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

- Site Name: Structure B-13-0064, USH 12/14 (Beltline) Eastbound/Westbound over Midvale Boulevard
- Site Address: 0.3M E JCT USH 18 TO W
- Ownership Information: WisDOT Transportation Southwest Region, 2101 Wright Street, Madison, WI 53704-2583
- Contact: Wayne Chase, P.E.
- Phone: (608) 246-3859
- Age: 57 years old. This structure was constructed in 1957.
- Area: 14,709 SF of deck.

- Site Name: Structure B-13-0305, Whenona Street Pedestrian Bridge over USH 12/14/18/151 (Beltline)
- Site Address: AT USH 12/14/18/151
- Ownership Information: WisDOT Transportation Southwest Region, 2101 Wright Street, Madison, WI 53704-2583
- Contact: Wayne Chase, P.E.
- Phone: (608) 246-3859
- Age: 42 years old. This structure was constructed in 1972.
- Area: 5,415 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 in accordance to standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

107-125 (20120615)

13. Environmental Protection, Dewatering and Wetlands.

Supplement standard spec 107.18 as follows:

If dewatering is required, treat the water to remove suspended solids before allowing it to enter any waterway or wetland. Provide a sedimentation basin with sufficient capacity and size to provide an efficient means to filter the water from the dewatering operation before it is discharged back into the waterway or wetland as provided in the standard specifications and these special provisions. As part of the Erosion Control Implementation Plan (ECIP) submittal, supply all pertinent information and calculations used to determine the best management practice for dewatering at each location.

Refer to the dewatering guidelines of WisDNR Storm Water Management Technical Standards, Code #1061, "Dewatering". This document can be found at the WisDNR website: http://dnr.wi.gov/topic/stormwater/documents/Dewatering_1061.pdf

Supplement standard spec 107.18 as follows:

The project includes work along the Whitney Way westbound off ramp that is adjacent to a delineated wetland near the Odana Hills Pond. Take all necessary precautions to prevent pollution of the wetland with sediment, fuels, oils, bitumens, calcium chloride, magnesium chloride, paint, or other harmful materials. Conduct and schedule work operations to avoid siltation. As part of the Erosion Control Implementation Plan (ECIP) submittal, supply all pertinent information used to determine the best management practices for this location. Avoid the wetland. If the wetland cannot be avoided by the proposed construction means and methods obtain permits from the United States Army Corps of Engineers and the Wisconsin Department of Natural Resources in accordance to standard spec 107.3.

14. Erosion Control.

Supplement standard spec 107.20 with the following:

Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial topsoil removal operation through the subsequent grading and re-topsoiling to minimize the period of exposure to possible erosion. Utilize temporary and permanent erosion control measures as noted in the plans or as directed by the engineer.

Re-topsoil graded areas, as designated by the engineer, immediately after grading is completed within those areas. Seed, fertilize, mulch and place erosion mat within 10 calendar days after placement of topsoil in all areas.

Implement best management practices for both temporary and permanent erosion control measures outlined in the plans or as directed by the engineer.

Construct sediment basins, ditch checks, rip rap, silt fence, and erosion mat, as shown on the plans, to store run off flows, limit runoff, and limit the discharge of pollutants.

Limit the amount of erodible surface area exposed to construction operations to less than one third of the individual work areas at all times.

Interim completion dates include completion of all permanent erosion control measures such as seed, fertilizer, mulch, erosion mat and rip rap.

Store material stockpiles upland and away from any drainage way. Protect these stockpiles with silt fence. Temporary seed any soil pile if the pile remains undisturbed for 14 calendar days or more. Temporary seed and silt fence required to protect stored material are included in other items of work.

Prior to initial construction operations, place temporary erosion control measures as shown on the plans, and remove them after the permanent erosion control devices are in place unless directed otherwise by the engineer.

15. Hauling Restrictions.

Conduct operations in such a manner that will cause a minimum of inconvenience to the free flow of vehicles on roadways carrying side road traffic. Do not haul on local roads without prior approval from the appropriate jurisdiction.

Provide the necessary flagging and signing to control construction equipment movements when hauling across public roads. Do not impede traffic flow on the public roads during flagging operations.

Equip all vehicles traveling on public roads that are hauling materials that are subject to spillage, by either wind or vibration, with tailgates and adequate sideboards. Use canvas covers and other protective devices to prevent spillage as determined necessary by the engineer. Comply with all local ordinances.

16. Project Communication Enhancement Effort.

Use the Project Communication Enhancement Effort (PCEE) tools on this contract. Coordinate with the department to modify the various published tools as necessary to meet the particular project needs and determine how to implement those tools under the contract. Ensure the full participation of the contractor and its principal subcontractors throughout the term of the contract.

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

http://roadwaystandards.dot.wi.gov/standards/admin/pcee-user-manual.doc

105-005 (20090901)

17. Coordination with Businesses.

The contractor shall 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 prior to the start of work under this contract and hold two meetings per month thereafter.

108-060 (20030820)

18. Notice to Contractor.

Coordination with other Projects

Construction for this contract is anticipated to be concurrent with other contracts in the vicinity of this project area:

- Projects 1206-07-78 and 1206-07-82 the USH 18/151 (Verona Road) construction. This is the 2014-2015 Verona Road/Beltline project. See Other Contracts article within these special provisions for additional contractual coordination with this project.

Coordinate construction activities, traffic control sign placement and traffic control operations with these projects.

Stages 1, 2, and 3 are completed under projects 1206-07-78 and 1206-07-82. Staging for this project begins with Stage 4.

Local/Frontage Road Signing

Street Name signs are to remain in place for as long as possible. When the signs need to be relocated to temporary sign posts to accommodate construction activities, coordinate the timing and placement of the street name signs with the City of Madison and the engineer. Contact Phil Nehmer, City of Madison Traffic Engineering, at (608) 267-1960 10 working days prior to relocating the street name signs.

The City of Madison will be removing and re-installing permanent signs, bases, and posts for the no parking and local street name signing along the local roads and frontage roads. These new permanent signs are denoted 'By Others' in the permanent signing plan. The City of Madison requests 10 business days notification for the sign removals. Provide 10 business days notification prior to completing final grading for sod placement to the City of Madison for their permanent sign installations. Contact Phil Nehmer, City of Madison Traffic Engineering, at (608) 267-1960.

Madison Metro Coordination
Madison Metro Transit will be moving, removing and re-installing bus route signs, bases, and posts along the local roads and frontage roads. Notify Tim Sobota, Madison Metro Transit at (608) 261-4289 a minimum of 10 business days prior to impacting Metro Transit signing and bus stops.

Madison Metro Transit will remove and reinstall bus shelters within the project limits. Contact Jim Fink, Madison Metro Transit, at (608) 267-4951 a minimum of 10 business days prior to requiring removal of Madison Metro Transit bus shelters within the project limits and within 10 business days of the bus pads being available for bus shelter installment.

Commercial and Residential Parking Lots
Contact the owner of the parcel 10 business days prior to work taking place within the parking lots. Conduct construction operations within commercial and residential parking lots in a manner that will cause the least interference and inconvenience to existing parking stalls and parking lot circulation. Do not store equipment or stockpile materials within the temporary limited easement. Additional intermediate construction staging of the parking lots, not shown on the plans, may be necessary to maintain continuous parking and parking lot circulation. Maintain a minimum driving surface of base aggregate dense within parking lots.

Equipment, Stockpiles, and Materials
Avoid parking equipment and stockpiling materials in areas of business or rental signing so as not to obstruct business or rental signing. Do not store equipment, vehicles or materials outside the project limits or on adjacent city streets without the approval of the engineer. Do not store equipment or materials on USH 12/14/18/151 (Beltline) closer than 30 feet to the edge of the traveled way unless the equipment and materials are protected by concrete barrier wall. If equipment and materials are stored behind concrete barrier wall, maintain a minimum of 2 feet clearance behind the concrete barrier wall to any equipment or materials that extend above the concrete barrier wall (not including glare screen if applicable).

Right-of-Way Access
Prior to entry onto any parcel shown in Transportation Project Plat (TPP) 1206-07-26 contact Mary Heiser, WisDOT Real Estate at (608) 242-8037 to verify that the parcel is available for entry.

Project Aesthetics
Several retaining walls, noise walls and bridges utilize the same concrete formliner and concrete staining color scheme as shown in the plans. Coordinate the concrete formliners and concrete stain colors for these structures to ensure a similar and consistent appearance. Inconsistent appearance of concrete formliners and concrete staining colors shall be removed.

Project Wetlands
Wetlands exist within the project limits near the westbound USH 12/14 (Beltline) off-ramp to Whitney Way. If the contractor anticipates affecting the wetlands, delineated as shown in the plans, notify the engineer and obtain all necessary permits to work within the wetlands.

Concrete Sidewalk
Construct concrete sidewalk with a maximum cross slope of 2 percent. Remove and replace concrete sidewalk constructed under this contract with a cross slope greater than 2 percent, as directed by the engineer, at no cost to the department.

Department-Owned Concrete Barrier Temporary Precast
Department-owned concrete barrier temporary precast is located on the project site as part of a previous project 1206-07-78. Approximately 1,900 feet is located along westbound USH 18/151 (Verona Road) and approximately 400 feet is located on the Freeport Connection. This on-site concrete barrier temporary precast will become available for use as the staging progresses and should be utilized in lieu of furnishing contractor owned concrete barrier temporary precast whenever possible.

Sealing Pipes
The plan contains several locations of Sealing Pipes were a larger storm sewer pipe is being replaced by a smaller storm sewer pipe. In this instance, the Sealing Pipes bid item accounts for filling in the large gap between the structure wall and new, smaller storm sewer pipe.

Removing Buildings
Habitat for Humanity Restore has expressed interest in salvaging building materials that the contractor is not interested in salvaging. They have indicated that they are insured and that their salvage activities would typically take about two days for each building. The contact person for Habitat for Humanity Restore is Frank Byrne at (608) 712-0737 and byrnerestoredane.org. Liability insurance must be provided by Habitat for Humanity Restore two days prior to any work being done by Habitat for Humanity Restore affiliated individuals.

Retaining Wall and Railing Coordination
The plans provide dimensions for the mechanically stabilized earth retaining wall panels. The panel dimensions provided in the plans include the manufacturer specified gaps that will be provided for the retaining wall panels. The retaining wall and railing manufacturers shall coordinate their designs to ensure that the railing properly aligns with the panels, including all expansion joints.

Excavation Adjacent to Trees
Avoid excavating within 5 feet of the face of a tree, when practicable, due to the potential of damaging the root system.

Construction Fence Temporary
Place Construction Fence Temporary within two weeks upon receiving notice to start work as shown on within the construction details for Construction Fence Temporary.

American Transmission Company (ATC) (electric) has overhead and underground facilities within the project area. The existing overhead 345 kV facilities are anticipated to be energized during construction. Use caution when operating around ATC foundations. See the Utilities article for information on requesting a line outage of ATC's 345 kV facilities.

19. Clearing and Grubbing.

Replace standard spec 201.3 (10) as follows:

Dispose of stumps, roots, brush, waste logs and limbs, timber tops and debris resulting from clearing and grubbing or occurring within the clearing and grubbing limits by removing them from the right-of-way.

Replace standard spec 201.4.2 (1) with the following:

The department will measure Clearing and Grubbing by the full 100-foot station acceptably completed, measured along the roadway centerline or reference line with each full 100-foot station starting and ending at a +00 station. If 2 or more roadways occur, the department will measure along a single centerline or reference line of the roadway shown in the miscellaneous quantities. For divided highways, the department will extend measurement units for each roadway, in width, from 5 feet outside the grading limit of that roadway to a line mid-way between the reference lines or centerlines for each roadway.

20. Debris Containment Structure B-13-64, Item 203.0225.S.001; B-13-305, Item 203.0225.S.002.

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

B (Vacant)

C Construction
Prior to starting work, submit a debris containment plan to the engineer for review. Incorporate engineer-requested modifications. Do not start work over USH 18/151 (Verona Road) or USH 12/14/18/151 (Beltline) until the engineer approves the debris containment plan.

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

At least 15 working days before conducting potential debris generating operations, contact the following owners or lessees:

1. Wayne Chase, (608) 246-3859

D Measurement

The department will measure Debris Containment Structure (structure number) as a single lump sum unit of work for each structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
203.0225.S.001	Debris Containment Structure B-13-64	LS
203.0225.S.002	Debris Containment Structure B-13-305	LS

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

203-010 (20080902)

21. Removing Building.

Conform to the requirements of standard spec 204 and as hereinafter specified.

The department has investigated the buildings to be removed for the presence of asbestos. If any additional friable asbestos is found during the building removal, cease building removal and contact the engineer to arrange for friable asbestos removal by others.

Contact the SW Region Madison Environmental Coordinator (currently Jennifer Grimes) at (608) 246-3823 to obtain a copy of the asbestos report prior to building removal.

22. Removing Overhead Sign Support, Item 204.9060.S.001.

A Description

This special provision describes Removing Overhead Sign Support in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction

Remove all structural steel supports and remove concrete footings or bases. The structural steel becomes the contractor's property, unless otherwise specified. Dispose of the structural

steel off of the right-of-way. Remove concrete footings or bases as specified for restoration of site in standard spec 638.3.9.

D Measurement
The department will measure Removing Overhead Sign Support as each individual sign structure, acceptably removed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.001 204-025 (20041005)	Removing Overhead Sign Support	Each

23. Removing Inlet Covers, Item 204.9060.S.002.

A Description
This special provision describes removing inlet covers in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Inlet Covers as each individual removed inlet cover, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.002 204-025 (20041005)	Removing Inlet Covers	Each

24. Removing Apron Endwalls, Item 204.9060.S.003.

A Description
This special provision describes removing apron endwalls in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Apron Endwalls as each individual removed apron endwall, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.003 204-025 (20041005)	Removing Apron Endwalls	Each

25. Removing Barricades Permanent Type III, Item 204.9060.S.004.

A Description
This special provision describes removing Barricades Permanent Type III in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Barricades Permanent Type III as each individual removed barricades permanent type III, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.004 204-025 (20041005)	Removing Barricades Permanent Type III	Each

26. Removing Permanent Traffic Barrier, Item 204.9060.S.005.

A Description
This special provision describes removing permanent traffic barriers in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Permanent Traffic Barrier as each individual removed permanent traffic barrier, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.005	Removing Permanent Traffic Barrier	Each

204-025 (20041005)

27. Removing Modular Block Retaining Wall Station 1098+88 to Station 1100+38, Item 204.9090.S.001; Station 1102+94 to Station 1105+95, Item 204.9090.S.002; Station 140+10 A to Station 142+01 A, Item 204.9090.S.003.

A Description
This special provision describes removing modular block retaining wall (location) in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Modular Block Retaining Wall (location) in length by the linear foot, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.001	Removing Modular Block Retaining Wall Station 1098+88 to Station 1100+38	LF
204.9090.S.002	Removing Modular Block Retaining Wall Station 1102+94 to Station 1105+95	LF
204.9090.S.003	Removing Modular Block Retaining Wall Station 140+10 A to Station 142+01 A	LF

204-025 (20041005)

28. Removing Timber Retaining Wall, Item 204.9090.S.004.

A Description
This special provision describes removing timber retaining wall in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Timber Retaining Wall in length by the linear foot, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.004	Removing Timber Retaining Wall	LF

204-025 (20041005)

29. Removing Sheet Pile Retaining Wall, Item 204.9090.S.005.

A Description
This special provision describes removing sheet pile retaining wall in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Sheet Pile Retaining Wall in length by the linear foot, acceptably complted.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.005	Removing Sheet Pile Retaining Wall	LF

204-025 (20041005)

30. Temporary Shoring, Item 206.6000.S.

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

B Materials
B.1 Shoring Design
Provide a shoring design for each location where the plan requires temporary shoring. Have a professional engineer, registered in the State of Wisconsin and knowledgeable of the specific site conditions and requirements verify the adequacy of the design. Submit one copy of each shoring design, signed and sealed by the same professional engineer verifying the design, to the engineer for incorporation into the permanent project record.

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
206.6000.S	Temporary Shoring	SF

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

The department will not pay for temporary shoring, installed for contractor convenience that is not required in the plans.
206-005 (20110615)

31. QMP Base Aggregate.

A Description
A.1 General

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

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

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

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

(5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

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

A.2 Contractor Testing for Small Quantities

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

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

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

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

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

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

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

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

B Materials

B.1 Quality Control Plan

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

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

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

B.2 Personnel

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

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

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

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

B.3 Laboratory

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

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

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

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

B.4.3 Control Charts

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

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

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

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

B.5 Contractor Testing

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

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

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

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

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

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

B.6 Test Methods

B.6.1 Gradation

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

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

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

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

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

B.6.2 Fracture

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

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

B.6.3 Liquid Limit and Plasticity

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

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

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

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

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

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

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

(5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:
   1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
   2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
   3. The fracture control limit is exceeded by more than 10.0 percent.

B.8 Department Testing

B.8.1 General

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

B.8.2 Verification Testing

B.8.2.1 General

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

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

(3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV

samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates, the department will collect samples from the stockpile at load-out. The department will split each sample, test half for QV, and retain half.

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

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

B.8.3 Independent Assurance

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

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

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

B.9 Dispute Resolution

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

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

(3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The

engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C (Vacant)

D (Vacant)

E Payment

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

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

301-010 (20100709)

32. Base Aggregate Dense 1 1/4-Inch.

Revise standard spec 305.2.2.1 as follows:

Use 1 1/4-Inch base aggregate that conforms to the following gradation requirements:

Percentage by weight passing:

Sieve Size	Percentage of Mass Passing
1 1/4 inch	95 - 100
1 inch	---
3/4 inch	70 - 90
3/8 inch	45 - 75
No. 4	30 - 60
No. 10	20 - 40
No. 40	7 - 25
No. 200	2 - 12 *[1],[2]*

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

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

33. Concrete Pavement.

Supplement standard spec 415.2.1 with the following:

General
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.

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

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

[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.

Physical Properties
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 no exceed 40, the weighted soundness must not exceed 9 percent, and the weighted freeze-thaw average loss must not exceed 12 percent.

Add standard spec 415.3.3 (3) as follows:

(3) Place multiple layers of polyethylene sheets over the entire area where concrete pavements contact the concrete masonry associated with and MSE wall. Payment for the sheets is incidental to the concrete pavement bid item.

Add standard spec 415.3.7.1 (7) as follows:

(7) Treat sawed surfaces of transverse and longitudinal joints with a silane concrete sealer found on the department approved products list for Concrete Protective Surface Treatments. Prepare surface by pressure washing all saw slurry from sawed joints and

allow to dry thoroughly prior to application of silane sealer. Apply the product directly to the interior of the sawed joint. Do not use the broadcast spray method of application.

Supplement standard spec 415.3.14 with the following:

Provide a minimum of one concrete finisher to remain on the project site each day after final finishing of all concrete surfaces until such time as the concrete has hardened sufficiently to resist surface scarring caused by footprints, handprints, or any other type of imprint, malicious or otherwise. Actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above.

Add standard spec **415.3.20 Hot Weather Concreting**

(1) The contractor is responsible for the quality of the concrete placed in hot weather. For concrete placed under this bid item, submit a written temperature control plan 10 business days prior to the pre-pour meeting. In that plan, outline the actions the contractor will take to control concrete temperature if the concrete temperature at the point of placement exceeds 80 F. If the temperature control plan includes watering concrete aggregates or adding ice, ensure the concrete mix design accounts for the additional water. Do not place concrete under this bid item without the engineer's written acceptance of that temperature control plan. Perform work as outlined in the temperature control plan.

(2) If the air temperature exceeds 80 F, ensure that the base material is in a moist condition during concrete placement. If the base material dries, moisten it by sprinkling water before placing the concrete. Sprinkle the water to avoid forming pools.

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

(4) If the concrete temperature at the point of placement exceeds 90 F, do not place concrete under this bid item.

Supplement standard spec 415.5.1 (2) with the following:

Payment includes preparation of a temperature control plan, all actions taken to control the temperature of the concrete including the addition of ice, and water used to control the moisture of the base material.

34. QMP Ride; Incentive IRI Ride, Item 440.4410.S.

A Description

(1) This special provision describes profiling pavements with a non-contact profiler, locating areas of localized roughness, and determining the International Roughness Index (IRI) for each wheel path segment.

(2) Profile the final riding surface of all mainline pavements**.** Include auxiliary lanes in Category I and II segments; crossroads with county, state or U.S. highway designations greater than 1500 feet in continuous length; bridges, bridge approaches; and railroad crossings. Exclude roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections.

(3) The engineer may direct straightedging under standard spec 415.3.10 for pavement excluded from localized roughness under C.5.2 (1); for bridges; and for roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections. Other surfaces being tested under this provision are exempt from straightedging requirements.

B (Vacant)

C Construction

C.1 Quality Control Plan

(1) Submit a written quality control plan to the engineer at or before the pre-pave meeting. 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 all quality control personnel.
2. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. The methods and timing used for monitoring and/or testing ride quality throughout the paving process. Also indicate the approximate timing of acceptance testing in relation to the paving operations.
4. The segment locations of each profile run used for acceptance testing.
5. Traffic Control Plan

C.2 Personnel

(1) Have a profiler operator, certified under the department's highway technician certification program (HTCP), operate the equipment, collect the required data, and analyze the results using the methods taught in the HTCP profiling course. Ensure that an HTCP-certified profiler operator supervises data entry into the material records system (MRS).

C.3 Equipment

(1) Furnish a profile-measuring device capable of measuring IRI from the list of department-approved devices published on the department's web site:

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

(2) Unless the engineer and contractor mutually agree otherwise, arrange to have a calibrated profiler available when paving the final riding surface.

(3) Perform daily calibration verification of the profiler using test methods according to the manufacturer's recommendations. Notify the engineer before performing the calibration verification. If the engineer requests, arrange to have the engineer observe the calibration verification and operation. Maintain records of the calibration verification activities, and provide the records to the engineer upon request.

C.4 Testing

C.4.1 Run and Reduction Parameters

(1) Enter the equipment-specific department-approved filter settings and parameters given in the approved profilers list on the department's QMP ride web site.

http://roadwaystandards.dot.wi.gov/standards/qmp/profilers.pdf

C.4.2 Contractor Testing

(1) Operate profilers within the manufacturer's recommended speed tolerances. Perform all profile runs in the direction of travel. Measure the longitudinal profile of each wheel track of each lane. The wheel tracks are 6.0 feet apart and centered in the traveled way of the lane.

(2) Coordinate with the engineer to schedule profile runs for acceptance. The department may require testing to accommodate staged construction or if corrective action may be required.

(3) Measure the profiles of each standard or partial segment. Define primary segments starting at a project terminus and running contiguously along the mainline to the other project terminus. Field-locate the beginning and ending points for each profile run. When applicable, align segment limits with the sublot limits used for testing under the QMP Concrete Pavement specification. Define segments one wheel path wide and distinguished by length as follows:

1. Standard segments are 500 feet long.
2. Partial segments are less than 500 feet long.

(4) Treat partial segments as independent segments.

The department will categorize each standard or partial segment as follows:

Segments with a Posted Speed Limit of 55 MPH or Greater	
Category	**Description**
HMA I	Asphalt pavement with multiple opportunities to achieve a smooth ride. The following operations performed under this contract are considered as opportunities: a layer of HMA, a leveling or wedging layer of HMA, and diamond grinding or partial depth milling of the underlying pavement surface.
HMA II	Asphalt pavement with a single opportunity to achieve a smooth ride.
HMA III	Asphalt pavement segments containing any portion of a bridge, bridge approach, railroad crossing, or intersection. An intersection is defined as the area within the points of curvature of the intersection radii.
PCC II	Concrete pavement.
PCC III	Concrete pavement segments containing any portion of a bridge, bridge approach, railroad crossing, intersection or gap. An intersection is defined as the area within the points of curvature of the intersection radii.

Segments with Any Portion Having a Posted Speed Limit Less Than 55 MPH	
Category	**Description**
HMA IV	Asphalt pavement including intersections, bridges, approaches, and railroad crossings.
PCC IV	Concrete pavement including gaps, intersections, bridges, approaches, and railroad crossings.

C.4.3 Verification Testing

(1) The department may conduct verification testing (QV) to validate the quality of the product. A HTCP certified profiler operator will perform the QV testing. The department will provide the contractor with a listing of the names and telephone numbers of all verification personnel for the project.

(2) The department will notify the contractor before testing so the contractor can observe the QV testing. Verification testing will be performed independent of the contractor's QC work using separate equipment from the contractor's QC tests. The department will provide test results to the contractor within 1 business day after the department completes the testing.

(3) 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 testing procedures and equipment. Both parties will document all investigative work.

(4) If the contractor does not respond to an engineer request to resolve a testing discrepancy, the engineer may suspend production until action is taken. Resolve disputes as specified in C.6.

C.4.4 Documenting Profile Runs

(1) Compute the IRI for each segment and analyze areas of localized roughness using the ProVAL software. Also, the contractor shall prepare the ProVAL Ride Quality Module Reports, showing the IRI for each segment and the areas of localized roughness exceeding an IRI of 200 in/mile. Use ride quality module report as follows:

	Fixed Interval	Continuous (Localized Roughness)
Base-length	500’	25’
Threshold	140”/Mile	200”/Mile

The ProVAL software is available for download at:
http://www.roadprofile.com.

(2) As part of the profiler software outputs and ProVAL reports, document the areas of localized roughness. Field-locate the areas of localized roughness prior to the engineer’s assessment for corrective actions. Document the reasons for areas excluded and submit to the engineer.

(3) Within 5 business days after completing profiling of the pavement covered under this special provision, unless the engineer and contractor mutually agree to a different timeline, submit the electronic ProVAL project file containing the .ppf files for each profiler acceptance run data and Ride Quality Module Reports, in .pdf format using the department’s Materials Reporting System (MRS) software available on the department’s web site:
http://www.atwoodsystems.com/mrs

Notify the engineer when the Profiler Acceptance Run data and the Ride Quality Report have been submitted to the MRS system.

C.5 Corrective Actions

C.5.1 General

(1) Analyze the data from the PROVAL reports and make corrective action recommendations to the department. The department will independently assess whether a repair will help or hurt the long-term pavement performance before deciding on corrective action. Correct the ride as the engineer directs in writing.

C.5.2 Corrective Actions for Localized Roughness

(1) Apply localized roughness requirements to all pavements, including HMA III, PCC III, HMA IV, and PCC IV; except localized roughness requirements will not be applied to pavements within 25 feet of the following surfaces if they are not constructed under this contract: bridges, bridge approaches, or railroad crossings. The department may direct the contractor to make corrections to the pavement within the 25-foot exclusionary zones.

(2) The engineer will review each individual wheel track for areas of localized roughness. The engineer will assess areas of localized roughness within 5 business days of receiving notification that the reports were uploaded. The engineer will analyze the report documenting areas that exceed an IRI of 200 in/mile and do one of the following for each location:

1. Direct the contractor to correct the area to minimize the effect on the ride.
2. Leave the area of localized roughness in place with no pay reduction.
3. Except for HMA IV and PCC IV segments, assess a pay reduction as follows for each location in each wheel path:

Localized Roughness IRI (in/mile)	**Pay Reduction[1] (dollars)**
> 200	(Length in Feet) x (IRI –200)

[1] A maximum $250 pay reduction may be assessed for locations of localized roughness that are less than or equal to 25 feet long. Locations longer than 25 feet may be assessed a maximum pay reduction of $10 per foot.

(3) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without independent identification of that area as determined by physically riding the pavement. For corrections, use only techniques the engineer approves.

(4) Re-profile corrected areas to verify that the IRI is less than 140 in/mile after correction. Submit a revised ProVAL ride quality module report to the reference documents section of the MRS for the corrected areas to validate the results.

C.5.3 Corrective Actions for Excessive IRI

(1) If an individual segment IRI exceeds 140 in/mile for HMA I, HMA II, and PCC II pavements after correction for localized roughness, the engineer may require the contractor to correct that segment. Correct the segment final surface as follows:

HMA I:	Correct to an IRI of 60 in/mile using whichever of the following methods as approved by the engineer: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Continuous diamond grinding or fine-tooth milling the full lane width, if required, of the riding surface including adjustment of the paved shoulders.
HMA II:	Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Continuous diamond grinding or fine-tooth milling of the full lane width, if required, of the riding surface including adjustment of the paved shoulders
PCC II:	Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer: Continuous diamond grinding of the full lane width, if required, of the riding surface including adjustment of the paved shoulders. Conform to sections C.1 through C.4 of Concrete Pavement Continuous Diamond Grinding Special provision contained elsewhere in the contract. Remove and replace the full lane width of the riding surface.

(2) Re-profile corrected segments to verify that the final IRI meets the above correction limits and there are no areas of localized roughness. Enter a revised ProVAL ride quality module report for the corrected areas to the reference documents section of the MRS. Segments failing these criteria after correction are subject to the engineer's right to adjust pay for non-conforming work under standard spec 105.3.

C.6 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 testing procedures, and perform additional testing.

(2) If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming pavement, the department will use third party testing to resolve the dispute. The department's Quality Assurance Unit, or a mutually agreed on independent testing company, 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 tester. The department may use third party tests to evaluate the quality of questionable pavement and determine the appropriate payment.

D Measurement

(1) The department will measure Incentive IRI Ride by the dollar, adjusted as specified in E.2.

E Payment

E.1 Payment for Profiling

(1) Costs for furnishing and operating the profiler, documenting profile results, and correcting the final pavement surface are incidental to the contract. The department will pay separately for engineer-directed corrective action performed within the 25-foot exclusionary zones under C.5.2 as extra work.

E.2 Pay Adjustment

(1) The department will pay incentive for ride under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
440.4410.S	Incentive IRI Ride	DOL

(2) Incentive payment is not limited, either up or down, to the amount the schedule of items shows.

(3) The department will administer disincentives for ride under the Disincentive IRI Ride administrative item.

(4) The department will not assess disincentive on HMA III or PCC III segments. Incentive pay for HMA III and PCC III segments will be according to the requirements for the category of the adjoining segments.

(5) The department will adjust pay for each segment based on the initial IRI for that segment. If corrective action is required, the department will base disincentives on the IRI after correction for pavement meeting the following conditions:

All Pavement:	The corrective work is performed in a contiguous, full lane width section 500 feet long, or a length as agreed with the engineer.
HMA Pavements:	The corrective work is a mill and inlay or full depth replacement and the inlay or replacement layer thickness conforms to standard spec 460.3.2.
Concrete Pavements:	The corrective work is a full depth replacement and conforms to standard spec 415.

(6) The department will adjust pay for 500-foot long standard segments nominally one wheel path wide using equation “QMP 1.04” as follows:

HMA I	
Initial IRI (inches/mile)	**Pay Adjustment[1] (dollars per standard segment)**
< 30	250
≥ 30 to <35	1750 – (50 x IRI)
≥ 35 to < 60	0
≥ 60 to < 75	1000 – (50/3 x IRI)
≥ 75	-250

HMA II and PCC II	
Initial IRI (inches/mile)	**Pay Adjustment[1] [2] (dollars per standard segment)**
< 50	250
≥ 50 to < 55	2750 – (50 x IRI)
≥ 55 to < 85	0
≥ 85 to < 100	(4250/3) – (50/3 x IRI)
≥ 100	-250

HMA IV and PCC IV	
Initial IRI (inches/mile)	**Pay Adjustment[1] [2] (dollars per standard segment)**
< 35	250
≥ 35 to < 45	1125-(25xIRI)
≥ 45	0

[1] If the engineer directs placing upper layer asphaltic mixtures between October 15 and May 1 for department convenience as specified in standard spec 450.3.2.1(5), the department will not adjust pay for ride on pavement the department orders the contractor to place when the temperature, as defined in standard spec 450.3.2.1(2), is less than 36 F.

[2] If the engineer directs placing concrete pavement for department convenience, the department will not adjust pay for ride on pavement the department orders the contractor to place when the air temperature falls below 35 F.

(7) The department will prorate the pay adjustment for partial segments based on their length.

440-010 (20130615)

35. QMP HMA Pavement Nuclear Density.

A Description

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

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

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

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

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

B Materials

B.1 Personnel

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

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

B.2 Testing

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

B.3 Equipment

B.3.1 General

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

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

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

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

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

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

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

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

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

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

B.3.2.2 Correlation Monitoring

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

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

(3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft^3 of its reference

value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft^3 of its reference value established in B.3.2.2(2).

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

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

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

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

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

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

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

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

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

Table 1

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

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

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

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

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

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

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

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

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

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

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

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

B.4.2.2.2 Width of 5 Feet or Less

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

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

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

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

B.4.2.4 Documentation

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

B.4.3 Corrective Action

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

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

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

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

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

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

B.5 Department Testing

B.5.1 Verification Testing

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

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

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

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

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

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

B.5.2 Independent Assurance Testing

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

B.6 Dispute Resolution

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

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

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

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

B.7 Acceptance

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

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

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

E.2 Disincentive for HMA Pavement Density

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

E.3 Incentive for HMA Pavement Density

(1) Delete standard spec 460.5.2.3.

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

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

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

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

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

460-020 (20100709)

36. HMA Pavement.

Replace Table 460-2 Mixture Requirements of the standard specifications with the following:

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	40	40	40	40	40	40	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	12	12	12	12	12	12	12
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 /	65 /	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat and Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	---
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	---
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	70-80 [4] [5]	65-78 [4]	65-75 [4]	65-75 [3] [4]	65-75 [3] [4]	65-75 [3] [4]	70-80
Tensile Strength Ratio (TSR) (ASTM 4867)	0.70	0.70	0.70	0.70	0.70	0.70	0.70
no antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
with antistripping additive							
Draindown at Production Temperature (%)	-- --	-- --	-- --	-- --	-- --	-- --	0.30

[1] The percent maximum density at initial compaction is only a guideline.

[2] For a gradation that passes below the boundaries of the caution zone(ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

[3] For 9.5mm nominal maximum size mixtures, the specified VFB range is 73 - 76%.

[4] For 37.5mm nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For 25.0mm nominal maximum size mixes, the specified VFB lower limit is 67%.

37. Sealing Cracks and Joints with Hot-Applied Sealant, Item 492.2010.S.

A Description

This special provision describes sealing primary crack and joints along their entire length of HMA and Portland cement concrete pavements, at locations shown in the contract documents or as directed by the engineer.

Primary cracks are defined as those cracks greater than or equal to 0.25-inches (6-mm) wide.

B Materials

B.1 Sealant Material

Use a sealant material meeting the requirements of ASTM D6690 Type II: Joint and Crack Sealants, Hot Applied, for Asphalt and Concrete Pavements. Deliver the sealant in the manufacturer's original sealed container legibly marked with the following information:

- Manufacturer's name.
- Trade name of sealant.
- Manufacturer's batch or lot number.
- ASTM D6690, Type II.
- Minimum application temperature.
- Maximum (or safe) heating temperature.

Prior to commencing work, provide the engineer with a certificate of compliance along with a copy of the manufacturer's recommendations pertaining to heating and application of the sealant.

B.2 Equipment

Equipment used in the performance of this work is subject to the engineer's approval.

- **Air Compressor** shall be portable and have a minimum rated capacity of 100 ft^3 of air per minute at 90-psi pressure at the nozzle, and have sufficient hose to maintain a continuing operation without interruption. The unit shall also be equipped with traps that will maintain the compressed air free of oil and water.
- **High Pressure Air Lance or Hot Air Lance** shall be designed specifically for use in cleaning highway pavement and to remove debris, dirt, and dust from the cracks.
- **Hand tools** shall consist of brooms, shovels, metal bars with chisel shaped ends, and any other tools that may be satisfactorily used to accomplish this work.
- **Squeegees** shall be of a flexible rubber type, in the shape of a "vee" (V), and capable of contacting materials up to 450º F without damage to it or materials.
- **Pouring Pots** shall be equipped with mobile carriage, and have a flow control valve that allows all cracks to be filled to refusal so as to eliminate all voids or entrapped air and not leave unnecessary surplus crack sealer on pavement surfaces.
- **Melting Kettle** shall be constructed as a double lined boiler with space between the inner and outer shells filled with oil or other material for heat transfer. The material for transferring heat shall have a flash point of not less than 600º F. Positive temperature control and mechanical agitation will be provided. Direct

heating shall not be used. When using, maintain the temperature of the sealing compound within the range specified by the manufacturer. The kettle shall be equipped with thermostatic controls calibrated between 200º F and 550º F.

C Construction

C.1 General

Prior to commencing work, complete all pavement repairs that are included in the contract and are adjacent to pavement cracks.

Furnish all equipment that is necessary for cleaning and sealing the pavement cracks. Use equipment meeting the description and performance requirements described herein and approved by the engineer.

Replace pavement markings that become covered or obliterated with the sealant, or both, at no additional cost to the department. Place the centerline marking, including no-passing zones on the same day that existing marking are obliterated, if the road is open to all traffic and if the surface is capable of retaining markings. Re-mark lane lines and edge lines within a timely manner.

C.2 Crack Preparation

Prepare cracks for sealing on the same day that they are to be sealed.

Use a high-pressure air lance or hot air lance to thoroughly clean cracks to a minimum depth of ½-inch (13-mm) of dust, dirt, foreign material, sand, and any other extraneous materials immediately prior to sealing. Do not burn, scorch, or ignite the adjoining pavement when using a hot air lance.

Install suitable traps or devices on the compressed air equipment to prevent moisture and oil from contaminating the crack surfaces. Maintain these devices and ensure that they are functioning properly.

Protect the public from potentially objectionable and/or hazardous airborne debris.

C.3 Sealant Melting

Heat and melt the sealant in a melter specified in B.2 Equipment.

Do not apply direct heat to the sealant. If and when using the heating kettle on concrete or asphaltic pavement, properly insulate the heating kettle to ensure that heat is not radiated to the pavement surface.

Do not use sealant material heated beyond the safe heating temperature.

If the manufacturer’s recommendations allow the sealant to be reheated or heated in excess of six hours, recharge the melter with fresh material amounting to at least 20 percent of the volume of the material remaining in the melter.

C.4 Sealing
Perform sealing when ambient air temperature is at or above 40º F (5º C).

Seal the crack by placing the applicator wand in or directly over the crack opening and carefully discharge the sealant. Strike-off the sealant flush with the pavement surface using a squeegee or using a sealing shoe pressed firmly against the pavement. Only a narrow thin film of material measuring from 1.0 inches to 3.0 inches (25 mm to 75 mm) wide is allowed on the pavement surface after sealing the crack.

A low pressure, light spray of water may be used to accelerate cooling of the sealant. Blotting the sealant with fine aggregate is not allowed. Remove and dispose of sealant in excess of the specified thin "film" dimensions or that has not bonded to both sides of the crack.

Do not allow traffic on the sealed cracks until the seal has cured so as not to track. Clean sealed cracks damaged from traffic with high pressure air and reseal them to meet the specified thin film amount at no additional cost to the department.

The finished work shall produce a watertight crack sealed flush with the pavement surface.

D Measurement
The department will measure Sealing Cracks and Joints with Hot-Applied Sealant by the number of gallons of sealant used to properly seal cracks.

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

ITEM NUMBER	DESCRIPTION	UNIT
492.2010.S	Sealing Cracks and Joints with Hot-Applied Sealant	Gal

Payment is full compensation for furnishing and placing the sealant; preparing the pavement surface; and replacing pavement markings.
492-005 (20090901)

38. Expansion Device, B-13-651; B-13-652; B-13-653.

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

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

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

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

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

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

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

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

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

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

39. Concrete Staining B-13-651, Item 517.1010.S.001; B-13-652, Item 517.1010.S.002; B-13-653, Item 517.1010.S.003; B-13-654, Item 517.1010.S.004; R-13-194, Item 517.1010.S.005; R-13-197, Item 517.1010.S.006; R-13-232, Item 517.1010.S.007; R-13-238, Item 517.1010.S.008; R-13-241, Item 517.1010.S.009; S-13-368, Item 517.1010.S.010; S-13-369, Item 517.1010.S.011; S-13-370, Item 517.1010.S.012; S-13-371, Item 517.1010.S.013; S-13-372, Item

517.1010.S.014; S-13-373, Item 517.1010.S.015; S-13-374, Item 517.1010.S.016; S-13-375, Item 517.1010.S.017; S-13-385, Item 517.1010.S.018; S-13-386, Item 517.1010.S.019; S-13-423, Item 517.1010.S.020; Barrier Wall, Item 517.1010.S.021; Mosaic Wall, Item 517.1010.S.022.

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 in accordance to manufacturer's recommendations:

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

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, 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 and Seal EPX by Chem Masters
H + C Shield Plus by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces
Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

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

C.3 Staining Concrete Surfaces
Apply the concrete stain in accordance to the manufacturer's recommendations.

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

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the 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 in accordance to the plan.

D Measurement
The department will not measure Concrete Staining (structure). The department will use pay plan quantity according to standard spec 109.1.1.2.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.001	Concrete Staining B-13-651	SF
517.1010.S.002	Concrete Staining B-13-652	SF
517.1010.S.003	Concrete Staining B-13-653	SF
517.1010.S.004	Concrete Staining B-13-654	SF
517.1010.S.005	Concrete Staining R-13-194	SF
517.1010.S.006	Concrete Staining R-13-197	SF
517.1010.S.007	Concrete Staining R-13-232	SF
517.1010.S.008	Concrete Staining R-13-238	SF
517.1010.S.009	Concrete Staining R-13-241	SF
517.1010.S.010	Concrete Staining S-13-368	SF
517.1010.S.011	Concrete Staining S-13-369	SF
517.1010.S.012	Concrete Staining S-13-370	SF
517.1010.S.013	Concrete Staining S-13-371	SF
517.1010.S.014	Concrete Staining S-13-372	SF
517.1010.S.015	Concrete Staining S-13-373	SF
517.1010.S.016	Concrete Staining S-13-374	SF
517.1010.S.017	Concrete Staining S-13-375	SF
517.1010.S.018	Concrete Staining S-13-385	SF
517.1010.S.019	Concrete Staining S-13-386	SF
517.1010.S.020	Concrete Staining S-13-423	SF
517.1010.S.021	Concrete Staining Barrier Wall	SF
517.1010.S.022	Concrete Staining Mosaic Wall	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.

40. Architectural Surface Treatment B-13-651, Item 517.1050.S.001; B-13-652, Item 517.1050.S.002; B-13-653, Item 517.1050.S.003; R-13-194, Item 517.1050.S.004; R-13-197, Item 517.1050.S.005; R-13-232, Item 517.1050.S.006; R-13-238, Item 517.1050.S.007; R-13-241, Item 517.1050.S.008; S-13-368, Item 517.1050.S.009; S-13-369, Item 517.1050.S.010; S-13-370, Item 517.1050.S.011; S-13-371, Item 517.1050.S.012; S-13-372, Item 517.1050.S.013; S-13-373, Item 517.1050.S.014; S-13-374, Item 517.1050.S.015; S-13-375, Item 517.1050.S.016; S-13-385, Item 517.1050.S.017; S-13-386, Item 517.1050.S.018; S-13-423, Item 517.1050.S.019.

A Description

Construct a concrete masonry architectural surface treatment on the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

Use form liners that attach easily to the forming system, and do not compress more than ¼-inch when poured at a rate of 10 vertical feet/hour.

Use a release agent that is compatible with the form liner and coloring materials.

Wall ties shall have set "break-backs" at a minimum of ¾-inches from the finished concrete surface.

C Construction

C.1 Equipment

Equipment and tools necessary for performing all parts of the work shall be satisfactory as to design, capacity, and mechanical condition for the purposes intended. Repair, improve, replace, or supplement all equipment that is not maintained in full working order, or which is proven inadequate to obtain the results prescribed.

C.2 Form Liner Preparation

Clean the form liner prior to each pour and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer's recommendations.

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

Place adjacent liners less than ¼-inch from each other, attach liner securely to forms in accordance to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

C.4 Surface Finishing

Ensure that the textured surface is free of laitance; sandblasting is not permitted.

Grind or fill pouring blemishes.

D Measurement

The department will not measure Architectural Surface Treatment (Structure). The department will use pay plan quantity according to standard spec 109.1.1.2.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.001	Architectural Surface Treatment B-13-651	SF
517.1050.S.002	Architectural Surface Treatment B-13-652	SF
517.1050.S.003	Architectural Surface Treatment B-13-653	SF
517.1050.S.004	Architectural Surface Treatment R-13-194	SF
517.1050.S.005	Architectural Surface Treatment R-13-197	SF
517.1050.S.006	Architectural Surface Treatment R-13-232	SF
517.1050.S.007	Architectural Surface Treatment R-13-238	SF
517.1050.S.008	Architectural Surface Treatment R-13-241	SF
517.1050.S.009	Architectural Surface Treatment S-13-368	SF
517.1050.S.010	Architectural Surface Treatment S-13-369	SF
517.1050.S.011	Architectural Surface Treatment S-13-370	SF
517.1050.S.012	Architectural Surface Treatment S-13-371	SF
517.1050.S.013	Architectural Surface Treatment S-13-372	SF
517.1050.S.014	Architectural Surface Treatment S-13-373	SF
517.1050.S.015	Architectural Surface Treatment S-13-374	SF
517.1050.S.016	Architectural Surface Treatment S-13-375	SF
517.1050.S.017	Architectural Surface Treatment S-13-385	SF
517.1050.S.018	Architectural Surface Treatment S-13-386	SF
517.1050.S.019	Architectural Surface Treatment S-13-423	SF

Payment is full compensation for producing the proposed architectural surface treatment including: preparing the foundation; finishing and protecting the surface treatment; and for properly disposing of surplus material.

41. Temporary Wall Wire Faced Mechanically Stabilized Earth, Item 532.0750.S.

A Description

This special provision describes designing, furnishing materials and erecting a temporary earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract.

B Materials

B.1 Proprietary Mechanically Stabilized Earth Wire Faced Wall Systems

The department specifies approved temporary wire faced mechanically stabilized earth wall products on the department's approved product list.

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 Development Section. The name of the companies supplying pre-approved material shall be furnished within 25 days after the award of contract. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system requiring pre-approval must have been pre-approved and added to that list prior to the bid opening date.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of chapter 14 of the department's Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Development 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 design/shop plans 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 and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the Mechanically Stabilized Earth Wire Faced Wall shall be in compliance with the latest AASHTO Standard Specification for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the department.

The design life shall be three years, or the length of time the temporary wall will be in service, whichever is greater. A fine metallic screen or geotextile filter fabric shall be used at the front face of the wall to retain the fines of the soil mass. The maximum allowable stress in the reduced section of wire-faced walls after sacrificial steel has been removed at the end of the design life is 0.47. F_y, where F_y is the yield strength of the soil reinforcement. The minimum embedment of the MSE wire faced wall shall be 1 foot 6 inches, or as given in the plan, or as stated in AASHTO 5.8.1, whichever is greater. Frost depth shall not be considered. The overall vertical tolerance of the wall and the horizontal alignment tolerance shall not exceed 3 inches per 10 feet. For systems with separate components for soil reinforcement and wall panels, the force in the soil reinforcement at the face of the panel shall not exceed 0.5 of the connection strength failure load as determined by tests.

The design of the MSE Wire Faced Wall shall consider the internal stability of the wall mass, including reinforcement pullout resistance. The design shall be in compliance with the current AASHTO specifications for Mechanically Stabilized Earth Walls, except that the 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. Design the walls for the heights shown on the plans, and include the effects of highway surcharge loading. If a traffic rail or parapet is detailed within 3 feet of the top of the wall, the soil reinforcement at the top of the wall shall be designed for an additional horizontal traffic load as given in AASHTO. If the wall is installed in front of a bridge abutment, it shall also be designed to resist the applied abutment/bridge lateral forces. 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 6 feet. The soil reinforcement shall extend 3 feet beyond the theoretical failure plane in all cases.

B.3 Wall System Components

B.3.1 Welded Wire Fabric

Provide welded wire fabric that is used to fabricate 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 in accordance 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. Any geotextiles used in the construction of the wall and finally exposed to the sun shall be resistant to ultraviolet radiation for the design life of the wall.

B.3.2 Backfill

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 or other potentially corrosive material.

Provide material that conforms to the following gradation requirements.

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

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90.

In addition, backfill material shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	4.5 – 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.
Angle of Internal Friction	AASHTO T-236	30 degrees min.

Prior to placement of the backfill, obtain and furnish to the engineer current certified report of test results that the backfill material complies with the requirements of this specification. Tests will be performed by a certified independent laboratory. When backfill characteristics and/or sources change, a certified report of tests will be provided for the new backfill material.

C Construction

C.1 Methods

All excavation and preparation of the foundation for the reinforcing fabric shall be in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the 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 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. For walls with a maximum height greater than 6 feet, compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Perform compaction testing on the backfill. When performing nuclear testing, use a nuclear gauge from the department's approved list, ensure that the operator is a HTCP certified Nuclear Density Technician I, and conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 2-foot layer per 200 feet of wall, or major portion thereof. A minimum of one test for every 2-foot layer is required. Test sites shall be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing. The cost of compaction testing shall be considered incidental to the cost of the wall.

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 top of the most recently placed and compacted layer of MSE backfill.

C.2 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. The allowable soil bearing capacity is given on the plan. After completing the excavation of the entire reinforced zone, the department's Regional Soils Engineer shall inspect the site and determine if the foundation is adequate for the intended loads. Allow the Regional Soils Engineer two working days to perform the inspection.

D Measurement

The department will measure Temporary Wall Wire Faced Mechanically Stabilized Earth in area by the square foot of face on a vertical plane between a line 1 foot 6 inches below the finished grade in front of the wall shown on the plan, and a line indicating the top of wall including wall cap or copings as required and shown on the plans. Unless ordered by

the engineer, wall area constructed above or below these lines 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
532.0750.S	Temporary Wall Wire Faced Mechanically Stabilized Earth	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; providing backfill, backfilling and compacting; and performing compaction testing. Parapets, railings, abutment bodies and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.
532-037 (20110615)

42. Concrete Barrier Temporary Precast Delivered.

Replace standard spec 603.3.2.2 (1) with the following:

(1) Under the Concrete Barrier Temporary Precast Delivered bid item, furnish and deliver temporary barrier and on-site State-owned concrete precast barrier to worksites within the project and remove temporary barrier upon project completion. Remove and stockpile existing temporary precast barrier in accordance to the Salvage Precast Concrete Barrier bid item.

43. Concrete Barrier Temporary Precast Installed.

Replace standard spec 603.3.2.3 (1) with the following:

(1) Under the Concrete Barrier Temporary Precast Installed bid item, install temporary barrier and on-site State-owned concrete precast barrier in contract identified locations or as the engineer directs. Also make contract-identified or engineer-directed moves that do not require trucking and reinstall at those new locations.

44. Permanent Barrier.

Replace standard spec 603.5.2 (1) with the following:

(1) Payment for the permanent barrier, fixed object protection, and transition bid items is full compensation for providing barrier or the specified transition; for excavating and backfilling for all types except roadside retaining wall; for all sawcuts as

shown in SDD Concrete Barrier Single Slope (CBSS); and for disposing of excess material; for restoring the grade.

Replace standard spec 603.5.2 (3) with the following:

(3) The department will pay separately for associated work as follows:

- Excavation and backfilling required for roadside retaining wall barrier, Concrete Barrier Type S(size)C bid items, under the Excavation bide items as specified in standard spec 205.5 and under the Backfill Granular bid item as specified in standard spec 209.5.

- Providing delineators for permanent barrier under the Delineator Brackets and Delineator Reflectors bid items as specified in standard spec 633.5.

45. Riprap.

Replace standard spec 606.2.1 (3) with the following:

The contractor may not substitute waste concrete slabs for stone.

Replace standard spec 606.2.2 with the following:

Grouting rip rap by any means will not be allowed.

46. General Provisions for Storm Sewer.

Construct all storm sewer in accordance to the pertinent provisions of standard specs 607, 608, 610 and 611 as shown on the plans and as follows.

Prior to ordering drainage pipes and structures, verify related drainage information in the plan with the engineer. This includes all information obtained from the bid item Utility Line Opening (ULO).

Seal the joints for reinforced concrete pipe with either mastic or internal rubber gaskets as described in standard spec 607.2. The use of mortar as a pipe joint method is prohibited.

Lay all storm sewer on a 6-inch minimum thick bed of Base Aggregate Dense 1 ¼-Inch in accordance to standard spec 305.2.1 or when water is encountered, size No. 1 coarse concrete aggregate in accordance to standard spec 501.2.5.4. Bedding for pipe is included with the installation costs of the round or elliptical pipe.

Dewatering is incidental to all storm sewer pipe installation.

Construct all structures using reinforced concrete. Concrete brick and block options are prohibited.

Construct all structures (manholes and inlets) on a 12-inch minimum thick bed of Base Aggregate Dense 1 ¼-Inch in accordance to standard spec 305.2.1 or when water is encountered, size No. 1 coarse concrete aggregate in accordance to standard spec 501.2.5.4. Bedding for structures is included with the installation costs of the structure.

Do not use station and offset for inlet structures, as given on the storm plans, exclusively for final layout of the structure. Determine the curb line in the area of the inlet prior to pouring the inlet structure to assure proper location of the inlet relative to the curb line.

Center all castings on the structure unless otherwise noted.

Steps are not required in storm sewer structures.

The costs to connect storm sewer to existing structures or pipes and the costs to plug pipes for future use including tapping the hole, placing the pipe and sealing the joint, furnishing and installing a plugging device will be paid for separately by bid items Storm Sewer Tap, Covering Storm Sewer and Concrete Collars for Pipe, where shown on the plans or directed by the engineer.

Carefully remove and stockpile all existing inlet, manhole, and catch basin covers that are not being adjusted and reused on the project at a location on the right-of-way outside the construction limits for pickup by City of Madison personnel. Contact Jim Martinson, City of Madison Department of Public Works at (608) 267-1973 to schedule pickup.

Remove from the right-of-way and properly dispose of all frames or grates and all other material that the City of Madison does not pickup.

47. Adjusting Manhole Covers.

This work shall be according to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this

average is greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.
611-005 (20030820)

48. 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 units, acceptably completed in place.

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 (20030820)

49. General Requirements for Storm Sewer Manholes.

Replace standard spec 611.3.4 with the following:

Steps in storm sewer manholes are not required in accordance to City of Madison guidance. Center the storm sewer structure casting on the structure unless otherwise noted in the plans.

50. Crash Cushions Permanent Low Maintenance.

Complete work in accordance to standard spec. 614.

Replace standard spec 614.2.7 with the following:

Use Model SCI 100GM Crash Attenuator from Smart Cushion Innovations (SCI) Products for permanent crash cushions.

51. 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
Service Temperature:	-60° F to 200° (ASTM D648)
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 (20070510)

52. General Requirements for Planting.

Contact City of Madison Forestry at (608) 266-4891 or (608) 266-4816 at least two weeks prior to planting trees to approve staking for tree planting locations in street terraces and to schedule a time for City Forestry to inspect the nursery stock. Obtain approval of all nursery stock (plant material) from the City of Madison Forestry Department and the engineer prior to planting.

Follow American Transmission Company (ATC) requirements when working near the underground transmission system:

- Comply with the ATC Construction Specification (CU 2500 – Section 31 23 01) for excavation around ATC underground high pressure fluid filled (HPFF) cable systems.
- All work near ATC underground HPFF cable must be supervised by an ATC representative. Three day prior notification is required to arrange for ATC presence on site during the construction. Contact Doug Vosbert at (608) 877-7158 to arrange for supervision.
- Care must be taken during any excavation around the pipe. If it is necessary to expose the HPFF pipe cable, it must be exposed using small hand tools or vacuum excavation. The HPFF pipe cable must be inspected for defects in the coating while it is exposed.
- If disturbed, backfill must be replaced with approved material as stated in ATC Construction Specification CU2500 v01. Backfill material is incidental to the cost of the plantings.

53. Seeding.

Supplement standard spec 630.2.1.4 with the following:

Store seed as specified until 24 hours before the seed is to be placed on the project.

54. Furnishing and Planting Plant Materials.

Supplement standard spec 632.2.1 with the following:

Ensure all plants are grown within the states of Wisconsin, Minnesota, Michigan, or parts of northern Illinois, Indiana or Ohio located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January, 1990, unless otherwise approved by the engineer.

Replace standard spec 632.2.2.8 (1) with the following:

Furnish a list of the sources from which plant materials will be obtained to the engineer. Furnish the list within 15 days of the award of the contract for fall-planted plants and before March 15 for spring-planted plants. Do not alter these lists without the engineer's approval.

Supplement standard spec 632.2.3.4 with the following:

Obtain review and approval of Planting Mixture by the engineer before use on project. The engineer reserves the right to reject planting mixture that does not conform to the specifications and/or does not come with the appropriate material certificates. The engineer may require samples (for USDA soil texture classification, pH, % organic matter, nutrient content, caution exchange capacity, soluble salts, and the presence of any materials deleterious to plant growth). Provide testing through a qualified testing laboratory approved by the State of Wisconsin to confirm that topsoil meets the requirements outlined in Standard spec 625.

Salvage Planting Mixture from the plant hole excavation if it conforms to the requirements outlined in Standard spec 625 and as approved by the engineer. Dispose of any salvaged Planting Mixture from the project or as previously placed in other contracts that cannot be re-used on site.

Replace standard spec 632.2.4.2 with the following:

For fertilizer in plant holes, provide water soluble fertilizer contained in a micropore slow release polyethylene packet with a three-year release. Ensure each packet contains two ounces of fertilizer. A single 2-ounce packet is considered one unit. Ensure the fertilizer conforms to the following minimum requirements:

Nitrogen, not less than ----- 16%
Phosphoric Acid, not less than ----- 8%
Potash, not less than -----8%

For trees: Use a minimum of two units and provide two units per caliper inch of tree trunk diameter. For one-half caliper measurements, round up to the next unit.

For shrubs: Use a minimum of two units and provide one unit per 12 inches of plant height or spread.

For perennials: Use a single unit per plant.

Replace standard spec 632.2.6 with the following:

Provide mulch as specified by bid item Shredded Hardwood Bark Mulch.

If Shredded Hardwood Bark Mulch has been placed as part of a previous contract, ensure it meets the depth standards outlined in bid item Shredded Hardwood Bark Mulch. If it is in conformance, it can be left in place. If it is not in conformance additional Shredded Hardwood Bark mulch that conforms to the Special provisions of this contract.

Replace standard spec 632.2.7 with the following:

Do not use wrapping on plant material.

Replace standard spec 632.2.9 with the following:

Provide rodent protection for trees designated on plans and as directed by the engineer.

Provide rodent protection for single-stem trees of rigid plastic mesh made of recycled HDPE with an open mesh matrix ¾" by ¾" with each strand approximately 1/8" x 1/8" x 1/8". Ensure the product is UV treated with a life expectancy of up to five years. Ensure product is at least 48 inches high. Supply source of rodent protection to the engineer. All sources will be subject to verification and approval by the engineer. Install rodent protection for single-stem trees according to manufacturer's written instructions, burying the bottom of the rodent protection 2-3 inches into the adjacent soil grades.

Provide rodent protection for multi-stemmed trees of chicken wire or other similarly rigid, matrix-material with an open mesh matrix ¾" by ¾" or less, 48 inches high. Install rodent protection for multi-stemmed trees such that the entire base of the tree is protected; circumference of rodent protection may vary based on specific characteristics of each tree. Ensure that the bottom 2-3 inches of the rodent protection is buried into the adjacent soil grades.

Use granular or similar rodent bait for shrub and perennial beds as needed and only as directed by the engineer.

Replace standard spec 632.2.10 with the following:

Use 18-inch soft polymer webbing strap with grommets at each of the two ends to secure wire or twine to tree. Supply source of webbing straps to the engineer. All sources will be subject to verification and approval by the engineer.

Provide tree stabilization (staking and guying) for all trees unless directed otherwise by the engineer or the City of Madison Parks or Forestry.

Replace standard spec 632.3.1 (1) with the following:

The normal spring planting season for all plants extends to June 15. The normal fall planting season is September 15 to November 15 or until the ground is frozen. Complete the planting of evergreen trees and shrubs, and perennials in the fall prior to October 15. Obtain approval

from the engineer for any plantings between June 15 and September 15. All additional care and maintenance associated with approved plantings occurring within this timeframe, will be at no cost to the department including, but not limited to, supplemental watering above and beyond the typical, specified landscape maintenance and care cycle schedule.

Supplement standard spec 632.3.1with the following:

Take care not to damage or disturb adjacent finished landscape and be responsible for seeding, sodding or placing Shredded Hardwood Bark Mulch to repair any and all damage caused to adjacent landscape materials. Repair or replace any landscape boulders with like materials if damaged as part of the landscape installation activities of this contract.

Replace standard spec 632.3.3 with the following:

Stake out locations of all plant holes and obtain approval of staked location from the engineer and the City of Madison Forestry before planting.

Supplement 632.3.4 with the following:

Ensure that the bottom of the hole is adequately compacted to guard against settling. Tamp or water in as necessary to create a condition by which plants will not settle in the planting beds. Ensure the bottom of the rootball is in direct contact with the bottom of the hole.

Replace standard spec 632.3.4 (2) with the following:

Excavate the plant hole to the minimum horizontal dimensions indicated in the Plant Data Table included in the plans or as the engineer directs. The minimum horizontal measurement of the plant hole is to be no less than 24 inches greater than the diameter of the ball, container, or root mass for the full depth of the planting hole for trees.

Replace standard spec 632.3.7 (2) with the following:

Place the plant in the plant hole with its more desirable face towards the most prominent view and hold in a vertical position. Remove the burlap and other wrapping materials including, but not limited to, twine, wire baskets, and plastic ribbon, from the entire root ball of B&B plants unless the engineer determines that removal of said material will be detrimental to plant stability and/or establishment. At a minimum, the wire basket must be completely removed from the top and sides of the rootball. Move and handle only by the ball or container. Set the plant so that, after settling, the plant root collar is at or 2 inches above the surrounding ground level, as specified above in standard spec 632.3.4.

Replace standard specs 632.3.18.1.1 and 632.3.18.1.2 with the following:

The plant establishment period begins on the date of substantial landscape completion for each of the two separate planting phases. Each separate establishment period ends two years from the phase's substantial landscape completion date.

Replace standard spec 632.3.19.1 (9) with the following:

Remove all staking, bracing wire material, nursery tags and other plant stabilization or non-biodegradable material at the end of the required two-year establishment period.
Review all rodent protection measures at the end of the required two-year establishment period with the engineer and City of Madison Forestry Department.

Supplement standard spec 632.3.19.1 with the following:

The interval for a care cycle is 10-14 days between April 15 and October 31. There will be 13 required care cycles in a growing season.

Perform a complete and thorough spring clean-out of all planting beds that contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Perform Spring clean-out during the first care cycle of the year (between April 15 and May 1) or as soon as weather and growing season conditions permit. Do not perform spring clean-out until the ground is no longer saturated from the spring thaw; walking on saturated soil will result in compaction. Ensure that Spring clean-out includes removal of past-season herbaceous material that was left standing over winter, cutting back ornamental grasses to within 3-inches of the mulched surface, removing any material damaged over the winter by pruning according to the language outlined in standard spec 632, removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, weeding, and any and all other clean-out and maintenance operations as directed by the engineer or City of Madison Parks Department.

Perform a complete and thorough fall clean-out of all planting beds that contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Perform fall clean-out during the last care cycle of the year (between October 15 and October 31). Do not perform fall clean-out if the soil is saturated from rain event; wait until the soil moisture levels have gone down before performing the final bed clean-out. Ensure that fall clean-out includes coordination with the engineer and the City of Madison Forestry Department to determine which herbaceous perennial and ornamental grass material to leave standing through the winter and which to cut back to the ground, removing any material damaged during the growing season by pruning according to the language outlined in standard spec 632, removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, weeding, and any and all other clean-out and maintenance operations as directed by the engineer or City of Madison Parks Department.

Provide supplemental water during the April 15 to October 31 maintenance period as often as necessary to ensure healthy, growing, and established plant material. Coordinate supplemental water directly with the municipality to ensure that the plant material is not being overwatered or under-watered. The contractor will remain solely responsible for plant health and watering maintenance.

Apply an additional 1-2 inches of Shredded Hardwood Bark mulch and re-cut the shovel cut edging immediately prior to the end of the two-year proving period for all planting beds. Work and materials are incidental to Landscape Planting Surveillance and Care Cycles bid item.

55. Landscape Planting Surveillance and Care Cycles.

Begin Phase 1 Landscape Planting Surveillance and Care Cycles at the time of substantial completion of Phase 1 plant installation. Estimated date of substantial completion of Phase 1 planting is April or May 2015 with Phase 1 Care Cycles then ending in April or May 2017.

Begin Phase 2 Landscape Planting Surveillance and Care Cycles at the time of substantial completion of Phase 2 plant installation. Estimated date of substantial completion of Phase 2 planting is April or May 2017 with Phase 2 Care Cycles then ending in April or May 2019.

If the care specialist fails to perform any of the required care cycles for Phase 1 or Phase 2 as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $2,500 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.
632-005 (20070510)

56. Signs Reflective.

Supplement standard spec 637 as follows:

In urban areas, where signs overhang a pedestrian or bike path area, provide a minimum mounting height of 8 feet to the bottom of the sign. Where secondary signs are used in urban areas, provide a minimum mounting height of 7 feet to the bottom of the secondary sign when pedestrian or parking movements occur adjacent to the sign.

R4-7 Keep Right signs are to be installed in the median island nose areas and should be located as close as practical to the beginning of the median nose.

One foot lateral offset from the edge of sign to the face of curb will be allowed at locations designated by the engineer.

Supplement standard spec 638.3.4 as follows:

Return signs that are the property of the City of Madison, to the City of Madison Engineering Operations Facility or to a location as specified by the City of Madison. Stockpile, store, and palletize the signs before delivering them to the City of Madison. Contact Phil Nehmer, City of Madison Traffic Engineering, at (608) 267-1960 at least three business days in advance to coordinate the shipment.

57. Removing Signs (Type); Removing Small Sign Supports.

Perform this work in accordance to the pertinent requirements of standard spec 638 and as hereinafter provided.

Existing signs removed under bid item Removing Signs (type) and existing sign supports removed under bid item Removing Small Sign Supports, owned by the City of Madison, become the property of the City of Madison.

Store the disassembled materials, including signs, sign posts, and hardware (brackets, nuts, washers, bolts and other appurtenances) on the right-of-way, outside the limits of construction at a location approved by the engineer. Store the disassembled materials as follows:

- Signs – Banded and neatly stacked on pallets.
- Posts - Banded and neatly stacked on pallets.
- Hardware – In 5-gallon pails or burlap sacks.

Upon completion of the removal and storage of the signing materials, contact the City of Madison Traffic Engineering Division Field Operations at (608) 266-4767 to schedule material pick up.

58. Blue Specific Service Signs.

Supplement standard spec 638.3.4 with the following:

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.
638-010 (20120615)

59. Sign Bridge Cantilevered S-13-371, Item 641.1200.S.400; S-13-374, Item 641.1200.S.401; Sign Bridge Structure S-13-368, Item 641.6600.400; S-13-369, Item 641.6600.401; S-13-370, Item 641.6600.402; S-13-372, Item 641.6600.403; S-13-373, Item 641.6600.404; S-13-375, Item 641.6600.405; S-13-385, Item 641.6600.406; S-13-423, Item 641.6600.407; Overhead Sign Support, S-13-386, Item 641.8100.400; S-13-387, Item 641.8100.401.

A Description

(1) This section describes providing steel sign bridges and steel overhead sign supports and supersedes standard spec 641 requirements for the specified bid items.

B Materials

B.1 High-Strength Bolt/Nut/Washer Assemblies

(1) Furnish zinc-coated bolt/nut/washer assemblies for field tensioning consisting of high-strength type 1 galvanized bolts conforming to ASTM A325, type 1 galvanized grade DH or DH3 nuts conforming to ASTM A563, and galvanized flat washers conforming to ASTM F436. Also conform to the following:

- Use the size, number, type, and configuration of hardened flat washers the DTI manufacturer recommends for bolt diameters greater than 1 1/8 inches.
- Ensure that the supplier pre-assembles each bolt/nut/washer assembly before shipping.
- Ensure that bolt/nut/washer assemblies are accompanied by a certified report of test or analysis giving the results of the supplier's rotational-capacity testing. No field rotational capacity testing is required.
- Ensure that bolt/nut/washer assemblies are shipped in sealed and labeled containers.
- Furnish 3 or more additional bolt/nut/washer assemblies of each rotational-capacity lot for pre-installation testing.
- Submit 2 or more additional bolts and 3 or more additional nuts and washers from each lot and heat for department mechanical testing. The contractor need not submit components from a lot and heat the department previously approved.

(2) Hot-dip zinc-coat according to ASTM A153 supplemented by ASTM F2329 or mechanically zinc-coat according to ASTM B695, class 50. Remove excess hot-dip zinc coating on threads by centrifuging or air blasting immediately after withdrawal. Do not flame-chase. Ensure that the same zinc-coating process is used for bolts and nuts within a bolt/nut/washer assembly.

(3) Ensure that the manufacturer provides identification marks for high-strength bolts and nuts according to ASTM A325.

B.1.1 High-Strength Bolts

(1) The required bolt length is the grip, total thickness of the connected material, plus the tabulated amount for each bolt size as follows:

BOLT SIZE	AMOUNT ADDED TO THE GRIP
5/8-inch	1 1/16 inches
3/4-inch	1 3/16 inches
7/8-inch	1 5/16 inches
1-inch	1 9/16 inches
1 1/8 to 1 1/4-inch	1 13/16 inches
1 3/8 to 1 1/2-inch	2 1/16 inches

(2) The above values are generalized, with allowance for manufacturing tolerances, to provide for a washer and using a heavy nut, with adequate stick-through at the end of the bolt. For each required beveled washer, add 5/16 inch; for any additional washer, add 3/16 inch; and for a load-indicating washer, add 1/8 inch. Adjust the length determined from the above table increment and allowances for additional washers to the next 1/4 inch length increment for bolts up to 5 inches length and to the next ½ inch length increment for lengths over 5 inches.

(3) The full thread may extend into the grip not more than 3/8 inch for lengths of 5 inches or less, and not more than 5/8 inch for lengths over 5 inches.

(4) Ensure that bolts conform to the following:

HARDNESS NUMBER		
BOLT SIZE	BRINELL min / max	ROCKWELL C min / max
1/2 through 1-inch	253 / 319	25 / 33
greater than 1-inch	223 / 286	19 / 30

B.1.2 High-Strength Nuts

(1) Ensure that the supplier lubricates zinc coated nuts with a lubricant containing dye that contrasts with the color of the zinc coating according to ASTM A563 supplementary requirements S1 and S2.

B.1.3 High-Strength Flat Washers

(1) Install bolts with a washer under the nut or bolt head, whichever is turned to tighten. If clearance is necessary, the contractor may clip washers on one side to a point not closer than 7/8 of the bolt diameter from center of washer.

B.1.4 Direct Tension Indicating Washers

(1) Furnish zinc-coated direct tension indicating (DTI) washers conforming to ASTM F959 type 325. Ensure that DTIs have identifying marks applied by the manufacturer. Provide the engineer with 2 copies of the DTI manufacturer's instructions showing acceptable installation configurations. Provide 3 or more additional DTI washers as required for pre-installation testing. Also provide the engineer with at least two 0.005-inch metal feeler gauges.

B.1.5 Testing and Reporting

(1) Ensure that supplier-performed rotational capacity testing conforms to Report No. FHWA SA-91-031 "High-Strength Bolts for Bridges". Furnish 2 copies of a certified report of test or analysis indicating the results of required manufacturer/supplier tests.

B.2 Anchor Bolts

(1) Furnish anchor bolts conforming to ASTM F1554, grade 55 and Supplementary Specification S4, ASTM A563A heavy hex nuts, and ASTM F436 washers all hot-dip galvanized according to ASTM A153 supplemented by ASTM F2329. Over-tap galvanized nuts according to ASTM F2329.

(2) Use only nuts and anchor bolts manufactured with sufficient clearance to allow the nuts to run freely on the bolts after coating the threads and nuts with a wax-based lubricant.

B.3 Stainless Steel Bolts and Nuts

(1) Provide stainless steel set screws, bolts, nuts, and washers for hardware and U bolts as specified for bolts and nuts in standard spec 513.2.2.5.

B.4 Certification

(1) Submit a certified report of test or analysis to the engineer for columns, truss members, pipes, anchor bolts, high-strength bolts, nuts, and washers, and structural sections. The engineer must approve the material before the contractor may install in the work.

(2) The engineer may retest materials delivered to the job site; furnish the specimens for this testing at no expense to the department.

B.5 Steel Sign Bridges

(1) Furnish materials conforming to the following:

Structural Steel and Miscellaneous Metals 506.2

(2) If using steel pipe for chords and columns for sign bridges, conform to the American Petroleum Institute's Specification for Line Pipe API-5L and the grade the plans show. For all other pipe used for sign bridges, conform to ASTM A53, grade B of type E or S. If using structural steel for columns and in trusses for sign bridges, conform to ASTM A709 grade 36.

(3) Furnish sign bridge trusses, columns, and steel accessories zinc coated according to ASTM A123, the zinc coating must withstand 8 one-minute dips in the Preece test solution, ASTM A239.

B.6 Steel Overhead Sign Supports

(1) Provide commercially fabricated overhead sign supports conforming to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years with a wind importance factor of 1.00. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the methods of appendix C of those AASHTO standards.

(2) Design structures, listed as applicable structure types in the AASHTO standards, to the fatigue category criteria as follows:

- Structures carrying variable message signs:
    - Category I criteria for structures over all roadway types.

- Structures carrying type II or III signs:
    - Category I criteria for structures used over highways and free flow ramps.
    - Category II criteria for structures with arms greater than 30 feet used over local roads and city streets.
    - Category III criteria for structures with arms 30 feet or less used over local roads and city streets.

(3) Use the posted speed limit of the roadway beneath the structure for truck-induced gusts.

(4) Submit shop drawings identified by structure number, design computations, and material specifications, to the engineer before erecting sign supports. Provide tightening procedures for mast arm or luminaire arm to pole shaft connections on the shop drawings. Have a professional engineer registered in the state of Wisconsin sign, seal, and date the shop drawings and certify that the design conforms to AASHTO standards and the contract.

(5) Provide steel pole shafts and mast arms zinc coated according to ASTM A123. Provide tapered pole and arm shafts with a minimum taper of 0.14 inch per foot for single-member vertical and single-member horizontal structure components.

C Construction

C.1 General

C.1.1 Methods

(1) Use construction methods for this work, including fabrication, inspection, erection, mill test reports, and shop drawings, conforming to standard spec 506.3. Construct concrete footings conforming to standard spec 636. Cure exposed portions of concrete footings as specified in standard spec 502.3.8.1. Wait until the concrete has attained 3500 psi compressive strength or 7 equivalent days as specified in standard spec 502.3.10 before erecting any portion of the structure on the footing.

C.1.2 High-Strength Bolts

C.1.2.1 Handling and Storage

(1) Store bolts/nut/washer assemblies and DTI washers in closed containers in a protected shelter to protect them from dirt and moisture until used. Maintain fastener system components as nearly as possible in the as-manufactured condition until installed. Remove from storage only as needed and promptly return unused components to storage.

C.1.2.2 Pre-installation Testing

(1) Notify the engineer before performing the required field pre-installation testing.

(2) Lubricate high-strength bolt threads with a wax-based lubricant before testing. Test bolt/nut/washer assemblies with DTI washers in all the configurations used for installation.

(3) Perform pre-installation testing in the field conforming to the procedures enumerated in department form DT2322 for bolt/nut/washer assemblies of each rotational-capacity lot with DTI washers in each installation configuration. Provide the engineer with the test results by submitting 2 copies of department form DT2322.

C.1.2.3 Bolt Installation

(1) Do not begin bolt installation without the engineer's approval.

(2) Lubricate high-strength bolt threads with a wax-based lubricant before installation.

(3) Tension high-strength bolts using direct tension indicating (DTI) washers. Install the DTI on the bolt with the protrusions facing away from the connected materials. Install bolt/nut/washer assemblies with DTI washers in the same configuration used for pre-installation testing.

(4) Tighten conforming to department form DT2322 to provide the correct installation tension. During the operation, ensure no rotation of the part not turned by the wrench. Snug systematically from the most rigid part of the connection to the free edges. Repeat until the full connection is in a snug condition and the faying surfaces are in firm contact. Systematically tighten the connection required number of refusals is achieved. If the gaps on the DTI washer are completely closed, discontinue tightening.

C.1.2.4 Contractor QC Testing

(1) In addition to contractor QC testing the engineer may verify bolt installation by periodically testing with a feeler gauge.

(2) Use a 0.005-inch metal feeler gauge to perform QC testing for each completed bolted connection in the presence of the engineer. Test a minimum of 10 percent of the bolts, but not less than 2 bolts, selected randomly in each connection. After observing at the initial QC testing frequency, the engineer may decide to observe QC testing at a reduced frequency.

(3) If the number of refusals required on department form DT2322 is achieved, the engineer will accept the connection as properly tightened. If for any bolt the required number of refusals is not achieved, tighten all bolts in the connection.

C.1.3 Anchor Assembly

(1) Install structures on anchor bolts 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.

C.1.4 Sign Installation

(1) Install permanent signs as soon as support structures are erected. If permanent signing is not available, install sign-blanks to control vibration. Fasten to the supporting structure conforming to standard spec 637.3.3.3.

(2) For overhead sign supports, ensure that sign-blanks are the same sizes and at the same locations as the permanent signs.

(3) For sign bridges, attach sign-blanks to a minimum of 1/4 the truss length near its center. Use sign-blanks that are at a minimum 24 inches larger than the truss depth and project an equal distance beyond the top and bottom chord members.

(4) Install structure identification plaques on overhead sign supports and sign bridges in the locations the plan details show.

C.2 Steel Sign Bridges

(1) Perform all shop welding for steel sign bridges and supports as the plans show and conforming to AWS D 1.1, Structural Welding Code - Steel.

(2) Do not weld in the field without the engineer's written approval. The engineer will only allow field welding for repairs in noncritical locations and when a department-approved individual competent to perform inspections is present during the welding. Perform field welding using personnel qualified under AWS D 1.5, Bridge Welding Code.

(3) Inspect all welds visually, additionally, if the engineer determines, test all butt welds in main, stress-carrying members subject to tension or stress reversal by radiographic or ultrasonic methods over the entire length of the weld. Test other butt welds in these members by the same methods, except the engineer will determine the length of weld to test. Use either the dye penetrant method, or the magnetic particle method to test the fillet welds connecting columns to bases and main chord members, including the associated flanges, gussets, or main load carrying brackets or members, and on fillet welds connecting flanges to the main truss chord members. Perform the dye penetrant test according to according to ASTM E165, visual dye solvent removable. Perform the magnetic particle method according to the applicable requirements of ASTM E709. Furnish all materials, equipment, and personnel to perform this inspection at no expense to the department.

(4) Blast clean and then zinc coat the fabricated sign bridge trusses, columns, and their steel accessories after completing all cutting, punching, drilling, and welding.

(5) After zinc coating, assemble the individual members making up the truss sections, unless fabricated and zinc coated in one piece in the shop, adjust to the proper shape and alignment, and tighten the high-strength bolts to the required tension. Provide a certificate of compliance certifying that high-strength bolts within truss sections are tensioned conforming to standard spec 506.3.12. Then, assemble the truss sections that

make up any one sign bridge in the shop, and adjust to proper alignment and camber as the plans show. Matchmark all truss sections and shims before disassembling for shipment.

(6) Assemble the sections making up the truss, together as a single unit, before attaching to the columns.

(7) Protect zinc coated members from damage to the zinc coating during transportation, storage, and erection. Paint areas of damaged zinc coating with 2 coats of zinc dust/zinc oxide paint. Clean damaged and adjacent areas by sanding, scraping, chipping, or wire brushing. Apply a profile to the bare metal surface using a needle gun before painting. For areas of damage larger than 10 square inches metalize according to AASHTO M36 or, for field repairs, using an engineer-approved high-temperature application of zinc powder and flux in paste or stick form.

C.3 Steel Overhead Sign Supports

(1) Under the Overhead Sign Support bid item, furnish and erect commercially designed sign supports, fabricated from steel, consisting of pole shafts, mast arms, anchor bolts, hardware, concrete supports and all other items necessary to complete the work.

(2) Construct the sign supports according to the manufacturer's instructions.

D Measurement

(1) The department will measure the Sign Bridge Single Pole Sign Support One Sign, Sign Bridge Single Pole Sign Support Two Signs, Sign Bridge Cantilevered, Sign Bridge Structure Mounted, and Sign Bridge bid items as a single lump sum unit for each sign bridge, acceptably completed.

(2) The department will measure the Overhead Sign Support bid items as a single lump sum unit for each overhead sign support, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
641.1200.400	Sign Bridge Cantilevered S-13-371	LS
641.6600.400	Sign Bridge S-13-368	LS
641.6600.401	Sign Bridge S-13-369	LS
641.6600.402	Sign Bridge S-13-370	LS
641.6600.403	Sign Bridge S-13-372	LS
641.6600.404	Sign Bridge S-13-373	LS
641.6600.405	Sign Bridge S-13-375	LS
641.6600.406	Sign Bridge S-13-385	LS
641.6600.407	Sign Bridge S-13-423	LS
641.8100.400	Sign Bridge S-13-386	LS
641.8100.401	Sign Bridge S-13-387	LS

(2) Payment for the Sign Bridge Single Pole Sign Support One Sign, Sign Bridge Single Pole Sign Support Two Signs, Sign Bridge Cantilevered, Sign Bridge Structure Mounted, and Sign Bridge bid items is full compensation for providing all materials; for anchor bolts; for high-strength bolt/nut/washer assemblies and DTI washers including those required for testing; for dampeners if required in the structure plans; for fabricating, including all cutting, preparing, welding, and zinc coating; for transporting and erecting; for structure identification plaques; and for sign blanks if required. Concrete footings are paid for separately as specified in standard spec 636.5. Signs and the sign mounting system are paid for separately as specified in standard spec 637.5.

(3) Payment for the Overhead Sign Support bid items is full compensation for designing the sign support structure; for excavating; for providing all materials, including anchor bolts, pole shafts, mast arms, required reinforcing steel, and concrete; for high-strength bolt/nut/washer assemblies and DTI washers including those required for testing; for fabricating, including all cutting, preparing, welding, and zinc coating; for placing and curing concrete footings; for transporting and erecting; for structure identification plaques; and for sign blanks if required. Sign lighting, when required, is paid for separately as specified in standard spec 659.5. Signs and the sign mounting system are paid for separately as specified in standard spec 637.5.

60. Field Facilities.

Supplement standard spec 642.2.1 (4) with the following:

Maintain the interior sanitary facilities to State and local health requirements with a weekly cleaning service.

Supplement standard spec 642.2.2.1 (2) with the following:

Provide CAT 5 services with a minimum of six (6) CAT 5 receptacles.

Supplement standard spec 642.2.2.1 (3) with the following:

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

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

Add standard spec 642.2.2.1 (6) as follows:

Provide a field office having an adjacent hard surface parking facility with a minimum capacity of 16 passenger vehicles.

Replace standard spec 642.2.2.4 with the following:

Under bid item Field Office Type D, furnish a facility with a minimum interior space of 1,500 square feet including a meeting room that is at least 20 feet by 20 feet; furnish indoor bathroom facilities that is housed within, or directly adjacent to, the field office; clean, maintain, and supply the field office and bathroom facilities weekly; and equipped as specified in standard spec 642.2.2.1(5); and equipped with the following:

- Ten suitable office desks with drawers and locks.
- Six additional office chairs for a total of eight.
- Two four-drawer file cabinets.
- Two four-shelf bookcases.
- Four 2.5 x 5 foot (minimum) tables.
- Four 4 x 8 foot (minimum) tables for the meeting room.
- Twenty, or more, folding chairs.

Add standard spec 642.3 (7) as follows:

(7) Locate the field office to be within ½ mile of the Verona Road-Beltline Interchange.

Add standard spec 642.5 (4) as follows:

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

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. Traffic Control Surveillance and Maintenance.

Add standard spec 643.3.2 (9) as follows:

Provide sufficient personnel to accommodate all flagging and guidance services for the road and ramp closures, detours, and traffic switches provided within the Traffic section of the special provisions and any additional closures, detours and traffic switches as requested by the contractor to facilitate work operations and the project schedule. Attend meetings with the department prior to the work to determine the personnel and traffic control devices necessary for the specific closure, detour, and traffic switch.

Replace standard spec 643.5.3 (1) with the following:

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; and for supplying and performing flagging and guidance services associated with all road and ramp closures, detours, and traffic switches including providing, installing, reviewing, maintaining, and removing signs associated with the guidance services; and for monitoring switched traffic for a period of not less than

eight hours after a traffic switch. 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.

63. Removing Pavement Markings.

Perform work in accordance to standard specs 646 and 647 except as hereinafter modified:

Use blast cleaning operations to remove pavement markings on the final pavement surface. Do not remove pavement markings on the final pavement surface by grinding or other methods which may damage the final pavement surface.

64. 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)

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

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

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

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

C Construction

C.1 General

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

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

C.2 Groove Depth

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

C.3 Groove Width – Longitudinal Markings

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

C.4 Groove Position

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

C.5 Groove Cleaning

C.5.1 Concrete

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

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

C.5.2 New Asphalt

Groove pavement five or more days after paving.

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

C.5.3 Existing Asphalt
Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

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

C.6 Tape Application
Apply the wet reflective pavement marking tape when both the air and surface temperature are 40 degrees F and rising.

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

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

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

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

2) For the remainder counties:

    - Apply either adhesive.

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

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

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

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

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

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

66. Temporary Pavement Marking.

Supplement standard spec 649.3.1 (1) with the following:

Apply temporary pavement markings that are sharp, well defined, uniformly reflectorized and within a horizontal alignment as shown on the plans or as the engineer directs. Apply temporary pavement markings within 1 inch per 50 feet of a true line or curve. Remove and replace markings with excessive variation, curvature, wiggle, or non-uniform applications, as directed by the engineer, at no cost to the department.

67. 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

Furnish conduit and fittings 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)

68. Electrical Service Meter Breaker Pedestal, Item 656.0200.

Supplement standard spec 656.3.1 with the following:

(3) Before submittal to the electrical utility, contact Dena Dramm, dena.dramm@dot.wi.gov, (608) 246-5360, for review and approval of all applications for new electrical service installations.

69. General Provisions for Intelligent Transportation Systems (ITS)-Control of Materials.

Standard spec 106.2 – Supply Source and Quality

Supplement standard spec 106.2 with the following:

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

Department-furnished Items
Mounted Cabinet
Fiber Optic Cable
Fiber Optic Termination Panels
IP 5.8 GHz Radio and Antenna
Ethernet Switches and Terminal Servers
Ethernet Video Codec
Dome Camera Assembly
80-FT Camera Pole with Lowering Mechanism
Cellular Modem
Microwave Detector Assembly
Field Cabinet

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

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

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

Standard Spec 106.3 – Approval of Materials

Supplement standard spec 106.3 with the following:

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

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

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.

70. General Provisions for Intelligent Transportation Systems.

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:

- The project includes working on cables and equipment that are carrying data between roadside equipment and the department's Statewide Traffic Operations Center (STOC) and the City of Madison's Traffic Engineering Department. Interruption of this service is not expected, while performing 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 and the City of Madison's Traffic Engineering Department at least 48 hours in advance of the planned interruption.

- 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. Clearly and permanently label all controls, indicators, and connectors in a manner approved by the engineer. Provide equipment of each type that is identical.

Provide electrical equipment conforming 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. 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 for all materials and workmanship. Conform all system wiring, conduit, grounding hardware and circuit breakers with the requirements of the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference is considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

B.2 Outdoor Equipment

Provide gold plated conductive connectors, pins (except pins connected by soldering), and socket contacts. Protect each circuit board side that has conductive traces with an acrylic conformal coating. Soldered all components to the printed circuit board, except for integrated circuits containing custom firmware.

Incorporate a means of keeping moisture out of all connections of dissimilar metals in order to prevent galvanic corrosion. 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

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

- Where practical, electronics provide modular plug-in assemblies to facilitate maintenance. Key such assemblies to prevent incorrect insertion of modules into sockets.
- Make all components 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.
- Use light-emitting diodes for lamps used for indicator purposes.
- Provide printed circuit boards composed of "two-ounce" copper on 1/16-inch thick fiberglass epoxy or equivalent type construction. Completely plate holes that carry electrical connections from one side of the boards to the other. Do not use multilayer printed circuit boards. Permanently affix the name or reference number used for the board in the drawings and maintenance manuals supplied to the department to each board.

- Mount all components so that the identifying markings are visible without moving or removing any part, if practical.

B.3 Environmental Conditions

Continually operate equipment 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 structure will 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 will not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment will not radiate signals that adversely affect other equipment.

4. **Electrical Power:**
    a. **Operating power:** The equipment will operate on 120-volts, 60-Hz, single-phase unless otherwise specified and 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 will 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 will be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Provide equipment in the field meeting 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:** Provide equipment in the field meeting the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays will remain undamaged by temperatures as high as 165 degrees F, and produce a usable display at temperatures up to 120 degrees F.
    b. **Equipment in Controlled Environments:** Provide equipment operating normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.4 Patch Cables and Wiring

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

B.5 Surge Protection

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

- The protectors shall suppress a peak surge current of up to 10k amps.
- The protectors shall have a response time less than one nanosecond.
- 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.
- The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.

- The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
- There shall be no more than two pairs per protector.
- It shall be possible to replace the protector without using tools.

Protect cables carrying power to curve signs 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.

C.6 Staking
Notify Kyle Hemp at (608) 246-5367 a minimum of three working days prior to any construction to field verify construction staking electrical locations.

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.

71. General Provisions for Electrical Conduit.

Modify standard spec 652.3.1.1 with the following:

Install a 12 AWG. XLP insulated, stranded copper, 600 volt AC, pull wire, green in color, in at least one conduit for each run of conduit, unless the contract provides for the installation of wire or cable. Provide a pull wire that is approximately 4 feet longer than the run of the conduit, which is doubled back at least two feet at each raceway access point. Anchor the pull wire at each access point in a manner acceptable to the engineer.

For all other conduits in the run, furnish and install woven pull tape. The woven pull tape shall have documentation as duct cutting resistant, tensile strength of greater than 1100 pounds, nominal width of 1/2 inch, and maximum allowable elongation under pulling tension of 10 percent. All spare conduits shall have woven pull tape installed in the duct. Tie the pull line or rope off at each raceway point in an acceptable manner. Labor and materials associated with this work shall be incidental to the Conduit bid items.

72. Traffic Signal Face (no., size, orientation) and Pedestrian Signal Face 12-Inch.

Furnish and install pedestrian LED modules with Pedestrian Signal Face 12-Inch bid item.

For each Pedestrian Signal Face 12-Inch bid item, furnish and install an additional separate 12-inch pedestrian head to house the LED Modules Countdown Timer. The Countdown LED Modules are paid for under bid item, LED Modules Countdown Timer 12-Inch.

73. Install Poles Type 9, Item 657.1345; Install Poles Type 12, Item 657.1355; Install Poles Type 13, Item 657.1360; Install Monotube Arms 30-FT, Item 657.1530; Install Monotube Arms 40-FT, Item 657.1540; Install Monotube Arms 45-FT, Item 657.1545; Install Luminaire Arms Steel 8-FT, Item 657.1808.

A Description

(1) This special provision describes installing poles, monotube arms, and steel luminaire arms and supercedes standard spec 657 requirements for the specified bid items.

B Materials

(1) The department will furnish the following:

- Type 9, 12, and 13 poles and associated mounting hardware, hand hole covers, and pole caps.
- Monotube arms and associated high-strength connecting bolts.
- Steel luminaire arms and associated connecting bolts. Tighten luminaire arm to pole shaft connections in accordance to department form DT2322.

(2) Provide fittings, either aluminum or galvanized steel shims, hardware, and other components the department does not furnish but that are required to complete the installation as the plans show.

C Construction

C.1 General

(1) Install the department-furnished components indicated in the bid item names. Install a grounding lug either inside the base or pole as required to connect equipment grounding conductors.

C.2 Poles

(1) Clean each pole before installation.

(2) Secure type 9, 12, and 13 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.

(3) After completing erection using normal pole shaft raking techniques, ensure that the centerline of the shaft is vertical.

(4) Install identification plaques as the plans show.

C.3 Arms

C.3.1 General

(1) Install monotube and steel luminaire arms to supporting structures at the height and alignment the plans show.

C.3.1 High-Strength Bolts for Monotube Arms

C.3.1.1 Handling and Storage

(1) Store bolts/nut/washer assemblies and direct tension indicating (DTI) washers in closed containers in a protected shelter to protect them from dirt and moisture until used. Maintain fastener system components as nearly as possible in the as-manufactured condition until installed. Remove from storage only as needed and promptly return unused components to storage.

C.3.1.2 Bolt Installation

(1) Do not begin bolt installation without the engineer's approval. The engineer will provide the results of pre-installation testing and designate the configuration required for installing the bolt/nut/washer assembly with DTI washer.

(2) Lubricate high-strength bolt threads with a wax-based lubricant before installation.

(3) Tension high-strength bolts using DTI washers. Install the DTI on the bolt with the protrusions facing away from the connected materials. Install bolt/nut/washer assemblies with DTI washers in the department-designated configuration.

(4) Tighten conforming to department form DT2322 to provide the correct installation tension. During the operation, ensure no rotation of the part not turned by the wrench. Snug systematically from the most rigid part of the connection to the free edges. Repeat until the full connection is in a snug condition and the faying surfaces are in firm contact. Systematically tighten the connection required number of refusals is achieved. If the gaps on the DTI washer are completely closed, discontinue tightening.

C.3.1.3 Contractor QC Testing

(1) Do not begin bolt installation without the engineer's approval. The engineer may verify bolt installation by periodically testing with a feeler gauge.

(2) Use a 0.005-inch metal feeler gauge to perform QC testing for each completed bolted connection in the presence of the engineer. Test a minimum of 10 percent of the bolts, but not less than 2 bolts, selected randomly in each connection.

(3) If the number of refusals required on department form DT2322 is achieved, the engineer will accept the connection as properly tightened. If for any bolt the required number of refusals is not achieved, tighten all bolts in the connection.

D Measurement

(1) The department will measure the bid items under this section as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
657.1345	Install Poles Type 9	Each
657.1355	Install Poles Type 12	Each
657.1360	Install Poles Type 13	Each
657.1530	Install Monotube Arms 30-FT	Each
657.1540	Install Monotube Arms 40-FT	Each
657.1545	Install Monotube Arms 45-FT	Each
657.1808	Install Luminaire Arms Steel 8-FT	Each

(2) Payment for the Install Poles bid items 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.

(3) Payment for the Install Monotube Arms and Install Luminaire Arms Steel bid items is full compensation for installing department-furnished arms; and for providing related mounting hardware, leveling shims, and other required components the department does not furnish.

(4) The department will pay separately for concrete foundations under the Concrete Bases bid items and provide anchor assemblies for monotube bases under standard spec 654.

74. Temporary Traffic Signals for Intersections Midvale Boulevard and Nakoma Road, Item 661.0200.001.

A Description

This special provision describes furnishing, installing, operating, maintaining an removing temporary traffic signals for intersections in accordance to the plans and standard spec 661.1; and describes vehicle detection systems for use in conjunction with temporary traffic signals at intersections.

This item applies only to intersections with temporary traffic signal cabinets furnished under this contract; intersections with department maintained traffic signal cabinets do not apply.

B Materials

In accordance to the plans, standard spec 661.2, and as hereinafter provided:

B.1 Street Lighting
Furnish street lighting equipment including poles, arms, luminaires, cable mounting hardware, wiring and incidentals necessary to provide lighting as shown on the temporary traffic signal plans. Furnish aerial cables rated to maintain acceptable voltage drop and span tension.

B.2 Incidental Materials
Furnish incidental materials required to install and maintain the temporary signal during all stages as shown on the plans. Incidental materials include, but are not limited to:

- Sheeting for obscuring (bagging) unused signals

B.3 Temporary Vehicle Detection
Furnish all materials and equipment as required to operate and maintain a fully functioning temporary traffic signal vehicle detection system. Methods of temporary traffic signal vehicle detections shall be classified in the following four categories:

- Inductive loop detection
- Video detection
- Microwave detection
- Combination of multiple options listed above

Furnish materials and equipment capable of providing the detection zones and functionality as shown on the plans. All methods shall provide for true presence detection. Approved detection methods shall be best suited for site conditions and the anticipated construction activities.

C Construction
In accordance to the plans, standard spec 661.3, and as hereinafter provided:

C.1 Street Lighting
Install poles, arms and luminaires as shown on the plans. Re-orient the luminaires throughout the stages of construction as needed to illuminate the active travel lanes.

C.2 Temporary Vehicle Detection
Provide equipment specifications and other technical documentation to the engineer for approval prior to purchasing equipment. Include documentation depicting the equipment dimensions and operational characteristics of the detection method(s) proposed for each intersection. Provide verification of the detection method's ability to function correctly under the proposed site conditions, including mounting methods and coordination with temporary pavement operations.

Install, adjust, relocate, or remove detection equipment and/or detection zones for each stage of traffic operations shown in the plans, or as modified by changes in field conditions, and as directed by the engineer.

Damage to new or temporary pavement for temporary inductive loops will not be allowed.

D Measurement
In accordance to the plans and standard spec 661.4.

E Payment
In accordance to the plans and standard spec 661.5 and as hereinafter provided:

Payment is full compensation for furnishing, installing, operating, maintaining and removing the complete installation, including temporary vehicle detection systems.

75. 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)

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

A Description

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

B Materials

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

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

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

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

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

C Construction

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

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

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

D Measurement

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

E Payment

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

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

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

673-010 (20100630)

77. Install Ethernet Switch, Item 675.0400.S.

A Description

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

B Materials

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

C Construction

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
675.0400.S	Install Ethernet Switch	Each

Payment is full compensation for installing an Ethernet switch; furnishing all necessary incidental hardware; and making all necessary connections.

675-040 (20100630)

78. Install Video Encoder, Item 677.0300.S.

A Description

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

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

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

D Measurement
The department will measure Install Video Encoder by each individual assembly, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
677.0300.S	Install Video Encoder	Each

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

79. 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 (Height) 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)

80. Fiber Optic Splice Enclosure.

Perform work in accordance to standard spec 678 except as hereinafter modified:

The department will measure Fiber Optic Splice Enclosure as one enclosure for all splices at each location called out on the plans acceptably spliced and completed.

81. High Performance Concrete (HPC) Masonry Structures, Item SPV.0035.300.

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

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 100% 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 amount of deleterious substances must not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0
Clay lumps	0.3
Soft fragments	5.0
Any combination of above	5.0
Thin or elongated pieces based on a 3:1 ratio	15.0
Materials passing the No. 200 sieve	1.5
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 35, the weighted soundness loss must not exceed 6 percent, and the weighted freeze-thaw average loss must not exceed 12 percent.

501.3.2.4.3.3 Extended Delivery Time

Delete paragraph one.

501.3.5.2 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 the entire text with the following:

(1) The contractor is responsible for the quality of the concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions the contractor will take to control concrete temperature if the concrete temperature at the point of placement

exceeds 80° F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

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

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

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

1. The un-iced concrete temperature exceeds 80 F.

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

3. The contractor elects to use ice.

501.3.8.2.2 Bridge Decks

Replace the entire text with the following:

(1) Do not place concrete for bridge decks when the ambient 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 the contractor will take to maintain concrete surface evaporation at or below 0.15 pounds per square foot per hour. Do not place concrete for bridge decks without the engineer's written acceptance of that evaporation control plan. 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 prior to each bridge deck pour.

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

(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 sole discretion of the engineer, the contractor may be allowed to implement immediate corrective action and complete the pour.

502.2.6.2 Burlap

Replace the entire text with the following:

(1) Furnish burlap conforming to AASHTO M 182, class 1, 2, 3 or 4.

502.3.5.4 Superstructures

Delete paragraph six.

502.3.7.8 Floors

Delete paragraphs thirteen, fourteen and fifteen.
Add the following to the end as paragraphs nineteen, twenty and twenty-one.

(19) Do not place bridge deck concrete more than 10 feet ahead of the finishing machine. If there is a delay of more than 10 minutes during the placement of a bridge deck, cover all concrete (unfinished and finished) with wet burlap to protect the concrete from evaporation until placement operations resume.

(20) Hand finishing, except for the edge of deck, must be kept to a minimum. The finishing machine must be equipped with a pan behind the screed. Apply micro texture using a broom or turf drag following the use of a 10-foot straight edge. Only finish by hand as necessary to close up finished concrete. Begin wet curing the deck immediately following the micro texture.

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

502.3.8.1 General

Replace paragraph one with the following:

(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, approach slabs, sidewalks and raised medians for 14 days by use of a soaker hose system, or other engineer-approved methods. Cover the finished surface of bridge decks and overlays with one layer of wetted burlap or wetted cotton mats within 10 minutes after the finishing machine has passed. Apply the burlap/cotton gently so as to minimize marking of the fresh concrete. Keep the first layer of burlap/cotton continuously wet until the bridge deck or overlay is sufficiently hard to apply a second layer of wetted burlap/cotton. Immediately after applying the second

layer of burlap/cotton, continue to keep the deck wet until placing and activating the soaker hose system. Throughout the remainder of the curing period, keep the burlap/cotton continuously wet with soaker hoses hooked up to a continuous water source. Inspect the burlap/cotton twice daily to ensure the entire surface is moist. If necessary, alter the soaker hose system as needed to ensure the entire surface is completely covered and stays moist. After 48 hours from the time of completion of the bridge deck or overlay pour, the soaker hose system and burlap/cotton may be covered with polyethylene sheeting. Provide a continuous flow of water through the soaker hose system for the entire curing period.

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

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

502.3.8.2.3 Decks
Delete the entire text.

502.3.8.2.4 Parapets
Replace the entire text with the following:

(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 standard spec 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:

The department will pay for measured quantities at the contract unit price and incidentals necessary to complete the work under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.300	HPC Masonry Structures	CY

710.5 Sampling and Testing
Add the following subsection:

710.5.7 Chloride Penetration Resistance

- 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.

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

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

715.2.3.2 Structures
Replace paragraph one with the following:

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

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

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

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

Replace paragraph two with the following:

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

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

82. Planting Mixture, Item SPV.0035.500.

A Description

This special provision describes furnishing and installing Planting Mixture at the locations shown on the plans and in accordance to the applicable sections of standard spec 632, as shown in the plans, and as hereinafter provided.

B Materials

B.1 Planting Mixture

Provide Planting Mixture consisting of the following blend by volume:

- 2 parts topsoil conforming to standard spec 625.
- 1 part sand conforming to the gradation in standard spec 209.2.2.
- 1 part compost. Provide compost that is either well-rotted shredded leaf mulch, free of disease; or well-rotted, unleached, stable or cattle manure containing no more than 25 percent by volume of straw, sawdust, or other bedding materials and free of toxic substances. Provide compost free of stones, sticks, soil, weed seeds, debris, and other material harmful to plant growth.
- 1 part peat moss conforming to standard spec 632.

C Construction

C.1 Coordination

Deliver Planting Mixture to project site and install within seven days of delivery. Coordinate and schedule the delivery and installation of the Planting Mixture with the delivery and installation of all landscape plant materials.

C.2 Planting Mixture Preparation and Placement
Provide a list of all materials used in Planting Mixture including manufacturers or suppliers (source) and quantities to the engineer.

Remove construction materials, stone, or other debris larger than 2" in length or diameter, debris, slag piles and trash from areas receiving Planting Mixture.

Till or disc subgrades to loosen and de-compact. Obtain the engineer's approval of subgrade preparation including depth excavated, removal of trash materials, and loosening of subgrades before placing any Planting Mixture.

Provide Planting Mixture over entire planting bed area and fine grade to match grades as indicated on plans or to adjacent back of curb or other hardscape surface as indicated on plans, accounting for settling. Place Planting Mixture in 6-inch to 8-inch lifts, watering or tamping to reduce settling potential.

D Measurement
The department will measure Planting Mixture in volume by the cubic yard, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.500	Planting Mixture	CY

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

83. Topsoil Special, Item SPV.0035.501.

A Description
This special provision describes excavating and disposing of material taken from within planting bed and tree planting locations in accordance to standard spec 205 and furnishing and installing topsoil at the planting bed and tree planting locations in accordance to standard spec 625, the plans, and as hereinafter provided.

B Materials
Furnish topsoil materials in accordance to standard spec 625.

Ensure Topsoil Special is in a pH range of 6.0 to 7.0.

C Construction
Excavate materials as the plans show or the engineer allows from the planting bed areas and tree planting areas in accordance to standard spec 205. Dispose of surplus or unsuitable material as specified in standard spec 205.3.12. Place Topsoil Special in

accordance to standard spec 625 in locations shown on the plans, and to a depth of 18 inches.

Take care not to damage or disturb adjacent finished landscape placed in previous contract(s) and be responsible for seeding, sodding or placing Shredded Hardwood Bark Mulch to repair any and all damage caused to adjacent landscape materials with like materials conforming to the Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction (SSHSC), current edition and Special Provisions of this contract.

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

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.501	Topsoil Special	CY

Payment is full compensation for furnishing all materials; for excavating and disposing of planting bed and tree planting area materials; and for furnishing and placing all topsoil materials in planting bed and tree planting areas, including excavation, loading, and hauling.

84. Abandon Sanitary Sewer - Slurry, Item SPV.0035.600.

A Description
This work consists of abandoning sanitary sewer pipe with slurry as shown in the plans and hereinafter provided.

B Materials
Provide slurry conforming to Type B Slurry Mix as specified in Article 301.9 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Perform materials testing as required in the Madison Standard Specifications for Public Works Constriction - Latest Edition.

C Construction
Provide replacement sanitary sewers and laterals or appropriate bypass pumping prior to abandoning sanitary sewer pipe. These items are not included in this bid item.

Sawcut and remove the ends of the sanitary sewer pipe to be abandoned as necessary to complete the abandonment. The sawcut and removal is incidental to this bid item.

Maintain service in all existing sewers until the replacement sewers or appropriate bypasses, approved the engineer, have been installed, at which time bulkheads or plugs may be placed.

Plug the downstream end of the sanitary sewer pipe to be abandoned. Fill the entire pipe with concrete slurry. Provide vent holes, as directed by the engineer, to verify the slurried pipe is free of air voids.

D Measurement
The department will measure Abandoning Sanitary Sewer-Slurry by the cubic yard of slurry, 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.0035.600	Abandon Sanitary Sewer - Slurry	CY

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work. Replacement sanitary sewer pipe and laterals or appropriate bypass pumping are not included in this bid item.

85. PCMS Remote Communications, SPV.0045.700.

A Description
This special provision describes remote communications requirements for use with portable changeable message signs (PCMS) provided under the contract.

B Materials
Furnish an EV-DO cellular modem registered to a 3G or 4G cellular carrier. Ensure that the cellular modem includes 1 or more external antennas, 1 or more 10/100 Ethernet ports, and 1 or more db9 Serial RS-232 interfaces. Ensure that the device is able to handle -30° C to +75° C and is powered by a 12VDC power supply. Ensure that the cellular modem has a built-in secure router with NAT, port forwarding and IP pass-through capabilities.

Provide management IP address, serial port setting, and password(s). for the cellular modem to the department. The department will notify contractor of message changes.

Furnish antenna cable without splices mounted at the highest practical location on the PCMS.

C Construction
Install a cellular modem in a lockable, weatherproof compartment in the PCMS trailer.

A minimum of 14 days before deployment, demonstrate to the department that the installed system is capable of communicating with Trans Suite software.

If remote communications are interrupted or temporarily unavailable, the department will direct the contractor to manually change the message.

D Measurement

The department will measure PCMS Remote Communications by the day, acceptably completed, measured as the number of calendar days that remote communications are available and functioning properly. The department will measure separately for each PCMS requiring remote communications that is available for exclusive use under the contract. The department will deduct one day for each calendar day remote communications are required but out of service for more than 2 hours.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.700	PCMS Remote Communications	DAY

Payment is full compensation for providing remote communications capability, and for making message changes if remote communications are interrupted or temporarily unavailable.

86. Work Zone Access Assistance Vehicle, Item SPV.0045.701.

A Description

This special provision describes providing a dedicated work zone access assistance vehicle between 9:00 AM and 3:00 PM to assist the contractor and department administration staff entering and exiting the work zone.

B Materials

Furnish a vehicle with the following.

- Front and rear directional amber warning lights with flashing capability and on/off switch in the cab.
- A directional amber light bar able to display right, left, split (center to outwards), and warning flash.
- A programmable directional sign capable of displaying symbols and text.
- Ability to mount up to a 48-inch by 48-inch diamond shaped static sign if the programmable sign becomes disabled.

C Construction

The vehicle must be exclusively dedicated for project use during the times specified. A secondary vehicle must be made available within 1 hour if the primary vehicle is taken out of service for any reason. Utilize the vehicle to create a suitable gap in traffic to assist contractor and department administration staff entering and exiting the work zones, except during prohibited hours defined in the Traffic article. The vehicle is not allowed to leave the traffic lane and enter the work zone and shall not be utilized for contractor material or equipment deliveries.

Provide the engineer the programmable messages and symbols for approval a minimum of 5 working days prior to use. Do not use any programmable messages, symbols or static signing without approval of the engineer.

D Measurement
The department will measure the Work Zone Access Assistance Vehicle by the day, acceptably completed, measured as the number of calendar days the Work Zone Access Assistance Vehicle is in use on the project.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.701	Work Zone Access Assistance Vehicle	DAY

Payment is full compensation for providing vehicle, driver, equipment, mileage and fuel.

87. Utility Line Opening (ULO), Item SPV.0060.001.

A Description
This work consists of excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown on the plans or as directed by the engineer.

B (Vacant)

C Construction
Perform the excavation in such a manner that the utility in question is not damaged.

Perform the utility line openings as soon as possible and at least 10 days in advance of proposed utility construction to allow any conflicts to be resolved with minimal disruption. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening will be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Provide utility line openings with a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

Notify the utility engineers or their agents of this work a minimum of 3 working days prior to the work so they may be present when the work is completed. Do not perform utility line openings without the approval of the engineer.

D Measurement
The department will measure Utility Line Opening (ULO) as each individual ULO, 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.0060.001	Utility Line Opening (ULO)	Each

Payment is full compensation for the excavation required to expose the utility line, backfilling with existing material removed from the excavation, compacting the backfill material, restoring the site, and for cleanup.

Existing asphaltic pavement removal necessary to facilitate utility line openings will be considered part of or paid for under Utility Line Openings. Replacement pavement, concrete curb, gutter, and sidewalk items will be considered separate from Utility Line Openings and will be measured and paid for separately.

88. Construction Staking Curb Ramp, Item SPV.0060.002.

A Description
Preform work in accordance to the applicable provisions of standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction
Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Set additional construction stakes as necessary to establish location and grade of the curb ramp including points of change in alignment and grade in accordance to the plans, standard details for curb ramps, and for conformance with ADAAG. Locate stakes to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

D Measurement
The department will measure Construction Staking Curb Ramp as each individual construction staking curb 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.0060.002	Construction Staking Curb Ramp	Each

Payment is full compensation for locating and setting all construction stakes and for relocating and resetting damaged or missing construction stakes.

89. Construction Staking Sign Structure, Item SPV.0060.003.

A Description
Preform work in accordance to the applicable provisions of standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction
Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Set additional construction stakes as necessary to establish location and grade of the sign structure in accordance to the plans and details for sign structures. Locate stakes to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

D Measurement
The department will measure Construction Staking Sign Structure as each individual construction staking sign structure, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.003	Construction Staking Sign Structure	Each

Payment is full compensation for locating and setting all construction stakes and for relocating and resetting damaged or missing construction stakes.

90. Concrete Barrier Transition NJ32DF-S36 Special, Item SPV.0060.004; S36-S42 Special, Item SPV.0060.005; S42-S56 Special, Type A, Item SPV.0060.006; S42-S56 Special, Type B, Item SPV.0060.007; S42-S56 Special, Type C, Item SPV.0060.008; S42-S56 Special, Type D, Item SPV.0060.009; S42C-S56C, Item SPV.0060.010; S56-56Vertical Special, Type A, Item SPV.0060.011; S56-56Vertical Special, Type B, Item SPV.0060.012; S56-56Vertical Special, Type C, Item SPV.0060.013; S56-56 Vertical Special, Type D, Item SPV.0060.014; P32-S42 Special, Item SPV.0060.015.

A Description
Perform work in accordance to the applicable provisions of standard spec 603, as detailed in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Barrier Transition (type) as each individual concrete barrier transition, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.004	Concrete Barrier Transition NJ32DF-S36 Special	Each
SPV.0060.005	Concrete Barrier Transition S36-S42 Special	Each
SPV.0060.006	Concrete Barrier Transition S42-S56 Special, Type A	Each
SPV.0060.007	Concrete Barrier TransitionS42-S56 Special, Type B	Each
SPV.0060.008	Concrete Barrier TransitionS42-S56 Special, Type C	Each
SPV.0060.009	Concrete Barrier TransitionS42-S56 Special, Type D	Each
SPV.0060.010	Concrete Barrier TransitionS42C-S56C	Each
SPV.0060.011	Concrete Barrier TransitionS56-56Vertical Special, Type A	Each
SPV.0060.012	Concrete Barrier TransitionS56-56Vertical Special, Type B	Each
SPV.0060.013	Concrete Barrier TransitionS56-56Vertical Special, Type C	Each
SPV.0060.014	Concrete Barrier TransitionS56-56Vertical Special, Type D	Each
SPV.0060.015	Concrete Barrier TransitionP32-S42 Special	Each

Payment is full compensation according to standard spec 603.5.2.

91. Inlets 1.75x2-FT, Item SPV.0060.016; 6x6-FT, Item SPV.0060.017.

A Description
Perform work in accordance to the applicable provisions of standard spec 611, as detailed in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Inlets (size) as each individual inlet, 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.0060.016	Inlets 1.75x2-FT	Each
SPV.0060.017	Inlets 6x6-FT	Each

Payment is full compensation for providing all materials and performing the work, including all concrete, steel reinforcement, conduit and sewer connections, steps and other fittings; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring to work site, except that the department will pay for covers, including frames, grates and lids separately.

92. Fiber Tracer Marker Post, Item SPV.0060.018.

A Description

This special provision describes providing and installing a fiber tracer marker post as specified in standard spec 671, as shown on the plans, and as hereinafter provided.

B Materials

Furnish fiber tracer marker post constructed from high-impact polycarbonate, with stainless steel hardware, five standard terminals, terminal enclosure for cathodic protection, an anchor bar, white and orange in color, fade resistant, ultraviolet stable, a minimum of 62 inches long, 3.5 inch outside diameter, vandalism resistant, and labeled with WARNING FIBER OPTIC CABLE BELOW on the top of the marker molded into the marker and not separately surface applied.

Furnish conduit rigid non-metallic 1-inch for connection into the communications vault.

C Construction

Provide installation at locations shown on the plans and as directed by the engineer. Install so that marker cannot be pulled out or removed manually.

Install conduit rigid non-metallic 1-inch into the communications vault. Connect locate wire to fiber tracer maker post terminal. Follow all manufacturer's recommended installation procedures.

D Measurement

The department will measure Fiber Tracer Marker Post as each individual fiber tracer marker post, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.018	Fiber Tracer Marker Post	Each

Payment is full compensation for providing and installing all materials, making all connections, restoration of ground to original condition including any topsoil, seed, fertilizer, mulch or sod; and for disposing of any surplus materials.

93. Connect Pipe Underdrain to Existing Structure, Item SPV.0060.019.

A Description
This special provision describes coring a hole into an existing storm sewer structure to connect proposed pipe underdrain.

Perform the work in accordance to the applicable provisions of standard spec 607, standard spec 611, standard spec 612, as hereinafter provided, and as shown on the plans.

B (Vacant)

C Construction
Core into the existing storm sewer structure. Insert the pipe underdrain to be flush with the interior wall of the existing structure.

Construct a watertight connection between the pipe underdrain and existing storm sewer structure using Portland cement mortar in accordance to standard spec 519.2.3.

D Measurement
The department will measure Connect Pipe Underdrain to Existing Structure as each individual connect pipe underdrain to existing structure, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.019	Connect Pipe Underdrain to Existing Structure	Each

Payment is full compensation for excavating, backfilling, and disposing of surplus material; for providing and removing necessary sheeting and shoring; for coring into the existing storm sewer structure and inserting the pipe; for constructing the watertight connection; and for cleaning out the storm sewer structure and removing concrete.

94. Slotted Vane Drain Type A 6-FT, Item SPV.0060.020.

A Description
This special provision describes furnishing and installing slotted vane drain as shown on the plans, in accordance to standard spec 501, 505, 607, and 611, and as hereinafter provided.

B Materials
Provide a pipe that the vane drain casting rests in that is 15-inch diameter SDR-35 poly vinyl chloride, (PVC) pipe.

C Construction
Prior to encasing the pipe in concrete, cover the upper end of the slotted drain with a cap as shown on the plans.

Prior to construction operations adjacent to the slotted area of the slotted vane drain pipe, cover the slots on the top of the drain. Remove any material entering the pipe.

Exercise care to avoid damage to the slotted vane drainpipe. If any section of pipe is damaged or is unsatisfactory as determined by the engineer, replace the drainpipe at contractor's expense.

Place concrete pavement and base course with this item as shown on the plans.

D Measurement
The department will measure Slotted Vane Drain Type A 6-FT as each slotted vane drain type A 6-ft, 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.0060.020	Drain Slotted Vane Type A 6-FT	Each

Payment is full compensation for furnishing all materials, including PVC pipe and end cap, slotted vane drain castings, concrete masonry and reinforcement; for adjacent concrete pavement 7-Inch and base course; for adjusting bricks; drilling type V inlet cover to accommodate connection bolts to vane drain; hauling and placing the pipe; making connections to existing inlets; and for cleaning and restoring the work site.

95. Concrete Cut Off Wall, Item SPV.0060.021.

A Description
Perform work in accordance to the applicable provisions of standard spec 504, as hereinafter provided, and as detailed in the plans.

B Materials
Provide concrete in accordance to the applicable provisions of standard spec 501 and as detailed in the plans. Provide high strength bolts and minimum 2" diameter washer in accordance to the applicable provisions standard spec 506.2.5 and as detailed in the Construction Details.

C Construction
Drill bolt holes in the specified locations after the concrete in the concrete cutoff wall is cured and use epoxy to secure the bolts in place.

D Measurement
The department will measure Concrete Cutoff Wall as each individual concrete cutoff wall, 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.0060.021	Concrete Cut Off Wall	Each

Payment is full compensation for furnishing all foundation excavation and preparation; for providing all equipment and materials, including concrete and high strength bolts; for placing, finishing, protecting, and curing; for disposing of surplus excavation material; and for restoring the work site.

96. Inlet Protection Type FLI, Item SPV.0060.022.

A Description
This special provision describes providing inlet protection type FLI at locations shown on the plans and as hereinafter provided.

B Materials
Provide inlet protection fabric in accordance to standard spec 628.2.12.

Provide 2x4 lumber in lengths as show on the plans.

C Construction
Secure the inlet protection fabric to the 2x4 lumber as shown on the plans.

Place the inlet protection in the Inlets Type FLI opening as shown on the plans.

Inspect and maintain the Inlet Protection Type FLI in accordance to standard spec 628.3.4.2.

D Measurement
The department will measure Inlet Protection Type FLI as each individual inlet protection type FLI, 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.0060.022	Inlet Protection Type FLI	Each

Payment is full compensation for furnishing, transporting, erecting, installing all materials; and for inspecting, maintaining, and removing the inlet protection device.

97. Storm Sewer Tap, Item SPV.0060.023.

A Description
This special provision describes tapping various sized storm sewer pipes into existing structures, including manholes or inlets, or other pipes at locations shown on the plans.

Perform the work in accordance to the applicable provisions of standard spec 607 and standard spec 611, and as hereinafter provided.

B (Vacant)

C Construction
Tap into the existing structure to allow the pipe to be flush with the interior wall of the existing pipe or structure.

D Measurement
The department will measure Storm Sewer Tap as each individual storm sewer tap, 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.0060.023	Storm Sewer Tap	Each

Payment is full compensation for providing all materials, including saw cuts, for excavating; for removing concrete; for providing and removing sheeting and shoring, making connections to new or existing facilities, and for cleaning out.

98. Inlet ML640, SPV.0060.024.

A Description
Perform work in accordance to the applicable provisions of standard spec 611 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Inlet ML640 as each individual inlet ML640, 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.0060.024	Inlet ML640	Each

Payment is full compensation for providing all materials and performing the work, including all concrete, steel reinforcement, conduit and sewer connections, steps and other fittings; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and

restoring to work site, except that the department will pay for covers, including frames, grates and lids separately.

99. Remove Existing City-Owned Light Pole Assembly, Item SPV.0060.100.

A Description

This special provision describes removing and salvaging or disposing of existing city-owned light poles, pedestal/transformer bases, arms, luminaires, and wiring as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction

Contact Mike Christoph, (608) 266-9031, at least 7 days prior to removing any street lights on the City of Madison lighting systems. Arrange a meeting to document the existing condition of all light pole assemblies that will be affected by construction activities. The City of Madison will provide the following information:

- Identification of all items to be salvaged or disposed.
- Identification of existing feed-point locations and circuit breakers.

Remove existing light poles, pedestal/transformer bases, wiring in light poles and between light poles being removed, and fixtures in accordance to standard spec 204, and as shown on the plans. Disconnect underground conduit system from concrete pole base and cap conduit, unless otherwise approved by the engineer or the city of Madison.

When removing existing light pole assemblies, carefully stockpile all equipment at a location approved by the engineer. Place all equipment on blocks so as not to be in direct contact with the ground. Protect luminaires from moisture. Either reinstall lights as the plans show or make available for City of Madison to pick up and salvage. Properly dispose of any equipment that the city does not salvage.

Replace any equipment damaged in the removal process with equipment that is of greater or equal quality than the damaged piece.

D Measurement

The department will measure Remove Existing City-Owned Light Pole Assembly as each individual removed existing city-owned light pole assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.100	Remove Existing City-Owned Light Pole Assembly	Each

Payment is full compensation for removing light poles, including fixtures, transformer/pedestal bases, wiring and conduit; for salvaging and disposing of surplus material; for stockpiling salvaged equipment and materials; and for meeting and coordinating with the City of Madison.

100. Remove Existing WisDOT-Owned Light Pole Assembly, Item SPV.0060.101.

A Description

This special provision describes removing and salvaging or disposing of existing department-owned light poles, pedestal/transformer bases, arms, luminaires, and wiring as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction

Contact Dena Dramm, (608) 246-5360, at least 7 days prior to removing any light pole assemblies owned by the department. Arrange a meeting to document the existing condition of all light pole assemblies that will be affected by construction activities. The department will provide the following information:

- Identify all items to be salvaged or disposed.
- Identify existing feed-point locations and circuit breakers.

Remove existing light poles, pedestal/transformer bases, wiring in light poles and between light poles being removed, and fixtures in accordance to standard spec 204, and as shown on the plans. Disconnect underground conduit system from concrete pole base and cap conduit, unless otherwise approved by the engineer or the department.

When removing existing light pole assemblies, carefully stockpile all equipment at a location approved by the engineer. Place all equipment on blocks so as not to be in direct contact with the ground. Protect luminaires from moisture. Either reinstall lights as the plans show or make available for the department to pick up and salvage. Properly dispose of any equipment that the department does not salvage.

Replace any equipment damaged in the removal process with equipment that is of greater or equal quality than the damaged piece.

D Measurement

The department will measure Remove Existing WisDOT-Owned Light Pole Assembly as each individual removed existing WisDOT-owned light pole assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.101	Remove Existing WisDOT-Owned Light Pole Assembly	Each

Payment is full compensation for removing light poles, including fixtures, wiring and conduit; for furnishing all salvaging and disposing of surplus material; for stockpiling salvaged equipment and materials; and for meeting and coordinating with the department.

101. Luminaires Underdeck LED, Item SPV.0060.102.

A Description

This special provision describes furnishing and installing lighting systems under highway bridges together with hardware and fittings as shown in the plans.

B Materials

Provide luminaires constructed of extruded aluminum, die cast aluminum, and stamped metal components. Provide a LED driver sealed in the luminaire for weather-tight operation. Provide stainless steel mounting brackets and junction boxes for field wiring connections. Provide luminaires with a five year limited manufacturer warranty.

Provide luminaires with the following minimum requirements:

- Provide luminaires having 120-277V 50/60 Hz, have Class 1 LED drivers with >90% power factor, 525 mA drive current, 5700K color temperature, and Type V Medium optical distribution.
- Provide luminaires that are new, unused, and the latest model being produced.
- Provide luminaires that are manufactured by Cree Lighting, THE EDGE Transportation Luminaires (Order No. TSP-EDG-5M-DM-10-D-UL-BZ-525).

C Construction

Furnish and install Luminaires Underdeck LED under bridges together with hardware and fittings in accordance to standard spec 659.3.4 and as shown on the plans.

D Measurement

The department will measure Luminaires Underdeck LED as each individual luminaire underdeck LED, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.102	Luminaires Underdeck LED	Each

Payment is full compensation for furnishing and installing luminaires; for luminaire mounting boxes as required; junction box fusing; for hardware and fittings; required coordination.

102. Lighting Control Cabinet, Item SPV.0060.103.

A Description
This special provision describes furnishing, assembling, and installing lighting control cabinets and accessories, as specified in standard specs 651, 652, and 655, as shown on the plans, and as provided hereinafter. Electrical service, service entrance conductors, and concrete control cabinet base will be measured and paid separately.

B Materials
Provide 120/240 VAC lighting control cabinets from the department Qualified Product List.

C Construction
Furnish, deliver and install the Lighting Control Cabinet from the department Qualified Product List to the project site.

Obtain approval from the region Lighting Engineer, Dena Dramm, (608) 246-5360 before installation.

D Measurement
The department will measure Lighting Control Cabinet as each individual lighting control cabinet, 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.0060.103	Lighting Control Cabinet	Each

Payment is full compensation for furnishing, assembling, installing the lighting control cabinet including installation of components.

103. Concrete Control Cabinet Bases Special, Item SPV.0060.104.

A Description
Perform work in accordance to the applicable provisions of standard spec 654, as detailed in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Control Cabinet Bases Special as each individual concrete control cabinet bases special, 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.0060.104	Concrete Control Cabinet Bases Special	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; and for excavating, backfilling and disposing of surplus materials.

104. Wood Pole, 65-FT with Service, Item SPV.0060.105.

A Description

This special provision describes furnishing and installing a 65-foot wood pole with an aerial electrical service to an existing adjacent meter breaker pedestal as specified in standard spec 656, as shown on the plans, and as provided hereinafter.

B Materials

Furnish a Class II wood pole conforming to the American Standard Specifications and Dimensions for Wood Poles (ANSI 2051), unless otherwise specified by the engineer.

Treat the wood pole in accordance to the requirements and recommendations of AWPA Standard C1 and the applicable AWPA Commodity Standards. Do not use Creosote for treatment.

Furnish all necessary riser conduit and fittings, weather heads, guy wire, span wire, tether wire, messenger wire and mounting hardware, intermediate support posts, electrical wire, and all other necessary materials to make the aerial service connection as shown on the plans.

Use metallic conduit, flexible liquid tight conduit, fittings, and adapters required from the underground conduit transition point between the existing meter breaker pedestal and adjacent wood post.

Furnish grounding electrodes that are one solid rod with a minimum 8-foot length and 5/8-inch diameter made of the copper clad type or engineer-approved equal. Furnish a separate 6 AWG stranded bare copper wire to run up the pole to attached equipment for grounding purposes.

Furnish circuit breakers in existing meter breaker pedestal as necessary with an amperage capacity of 50 A.

Furnish and install guy wires and support cables at all wood poles that have aerial power cable.s

C Construction

Install the wood pole with 20% of the pole length below ground.

Perform work according to the WSEC. Install aerial service between wood pole and existing meter breaker pedestal at nearby traffic signal cabinet as shown on the plans. Provide and install wood poles, intermediate support posts, tether wire, messenger wire, tether wire hardware, messenger wire hardware, guy wire, span wire, guy wire hardware, and span wire hardware, riser conduit, banding, underground conduit, and required connection into existing meter breaker pedestal at existing traffic signal cabinet. Restore ground to original condition using seed, mulch and fertilizer, as required.

Attach all electrical service wires to the span wire or messenger wire, at 3-foot or less intervals with 4 wraps of a manufacturer recommended adhesive tape or UV resistant, outdoor rated nylon lock fasteners. Install wires in continuous lengths without splices in any cable run.

Install tether wire 15 feet to 17 feet above any bike path and 17 feet to 19 feet above any roadway.

Install one 50 A circuit breaker in existing meter breaker pedestal, as needed.

Drive a grounding electrode vertically into the ground outside the wood pole. Exothermically weld copper wire to the grounding electrode, run to, and terminate at a grounding lug inside equipment on the pole.

Coordinate with Kyle Hemp of the WisDOT SW Region at (608) 246-5367 a minimum of 10 working days prior to connecting into existing meter breaker pedestal service in the adjacent ITS cabinet at the location shown on the plans.

Loss of camera feed during the transition between existing camera location to temporary location or temporary location to final camera location can shall not exceed 48 hours.

D Measurement

The department will measure Wood Pole, 65-FT with Service as each individual wood pole 65-foot with service, 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.0060.105	Wood Pole, 65-FT with Service	Each

Payment is full compensation for furnishing and installing the wood pole, all materials necessary for aerial service connection to existing adjacent meter breaker pedestal, for excavating, bedding, backfilling, and restoration of ground to original condition including

seed, mulch and fertilizer. Grounding components, guy wires, support cables, and rigid metallic conduit are incidental to this item.

105. Lighting Control Cabinet-City of Madison, Item SPV.0060.106.

A Description

This special provision describes furnishing, assembling, and installing lighting control cabinets and accessories, as specified in standard specs 651, 652, and 655, as shown on the plans, and as provided hereinafter. See other electrical special provisions for related items that shall be provided.

B Materials

Provide lighting control cabinets meeting the following minimum requirements:

1. Provide a 14 gauge enclosure, 304 stainless steel in construction, free standing, with a minimum size of 55”H x 38”W x 26”D. Grind smooth welded seams.
2. Single door, stainless steel door handle with 3-point latch and hasp and staple for padlocking.
3. Provide a door seal having a closed-cell neoprene gasket around the entire perimeter.
4. Provide a cabinet equipped with a metal back plane mounting plate.
5. Provide a cabinet as manufactured by Tri-County, Saginaw, or Hoffman enclosures, or equal.
6. Provide a cabinet having a minimum circuit interrupting capacity of 10,000A.
7. Provide all stainless steel mounting hardware.

Mount lighting control devices on steel back panel within the enclosure. Provide control and switching devices that are NEMA rated when applicable. Provide devices as specified below:

1. Panelboard: provide 20-circuit, 120/240V, single-phase panelboard, with 100A, 2-pole service entrance rated main circuit breaker. Main circuit breaker shall not be branch mounted. Breakers shall be bolt-on type.
2. Provide 30A, electrically held lighting contactors, Square D, Class 8903, Allen Bradley 400-DP, ABB, or equal; quantity and number of poles shall be as required to control the circuits as shown on the plans plus 25% spare circuit space.
3. Accessories:
    - Provide one 20A, GFI receptacle
    - Incandescent light and door switch
    - Wiring troughs to route wire between devices
    - Three position, 30mm, NEMA type 13 selector switch control station (H-O-A)
    - Terminal Strips to land all wiring and branch circuits which exit the cabinet
    - TVSS unit (Square D SDSA1175, Intermatic AG24013, Citel M40-120T, or equal)
    - Photocell

- Control power fusing as required. Provide indicating type fuse holders.
- Time clock 4 pole with independent bypass switch for each circuit.
- Interposing/isolation relays (Allen Bradley, 700-HK, Idec RR3B-UL, Eaton D3PR, or equal)

Furnish and install grounding electrodes for each cabinet under the item Electrical Service Meter Breaker Pedestal.

C Construction

Install Lighting Control Cabinet on Concrete Control Cabinet Base Type 8 as specified in standard spec 654 and as shown on standard detail drawing Concrete Base Type 8. Install Lighting Control Cabinet and Electrical Service Meter Breaker Pedestal upon the concrete control cabinet base as shown on standard detail drawing Cabinet Service Installation (Meter Breaker Pedestal).

D Measurement

The department will measure Lighting Control Cabinet-City of Madison as each individual lighting control cabinet-City of Madison, 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.0060.106	Lighting Control Cabinet-City of Madison	Each

Payment is full compensation for furnishing, assembling, and installing lighting control cabinet; assembly and installation of components.

106. Relocating Existing Light Pole Assembly, Item SPV.0060.107.

A Description

This special provision describes removing existing light poles and attached fixtures from their concrete bases, storing them, and reinstalling the light poles and fixtures as shown on the plans and as hereinafter provided. The work also consists of disconnecting and disposing of existing lighting wire. New concrete bases, conduit, and wire for reinstalling salvaged light poles are not included in this item of work and will be paid separately.

B (Vacant)

C Construction

Perform all work in accordance to standard specs 651 and 659.

Notify the appropriate lighting utilities personnel at least three working days prior to the removal of the lights. For lighting maintained by the City of Madison, notify Mike Christoph, (608) 266-9031.

Coordinate the de-energizing of the lighting system with lighting utilities personnel. Perform a field review of existing lighting equipment for condition of equipment prior to removal. Notify the lighting utilities personnel of any damaged or non-operating equipment.

Disconnect the wiring splices in the transformer base, remove light poles, pedestal/transformer bases, fixture, mounting arms, and all hardware. Dispose of existing wire in light pole and between poles that are being relocated back to the first light pole to remain as shown on the plans. Maintain full operation of remaining light poles.

If the equipment is not reinstalled the same day, store all materials removed in a safe and secure location as directed by the engineer. Protect from theft and damage.

Contact the owner to coordinate a post-storage inspection of all equipment to be reinstalled. All equipment that is determined to have been damaged during storage shall be replaced in kind at contractor's expense.

Reinstall salvaged light pole assemblies on a concrete base as shown on the plans.

D Measurement
The department will measure Relocating Existing Light Pole Assembly as each individual existing light pole, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.107	Relocating Existing Light Pole Assembly	Each

Payment is full compensation for removing, storing, and reinstalling light poles, disposing of existing wire, furnishing and installing materials including conduit fittings and any additional required mounting hardware; for disposal of surplus materials, drilling holes, storing and protecting equipment, and for making all connections; and for corresponding with the owner. New concrete bases, conduit, and wiring will be paid for under separate bid items.

107. Install IP Wireless 5.8 GHz Radio/Antenna, Item SPV.0060.108.

A Description
This special provision describes installing a department-furnished IP wireless (5.725-5.875 GHz) radio/antenna, as specified in standard specs 651, 652, 655, and 670, as shown on the plans, and as provided hereinafter.

B Materials
The IP wireless radio/antenna will be furnished by the department.

Provide all necessary outdoor rated cables between the IP wireless radio/antenna and other devices as shown on the plans.

C Construction
Pole mount the IP wireless radio/antenna as indicated on the plans and per the manufacturer's recommendations. Make connections between the IP wireless radio/antenna and other devices as shown in the plans, or as directed by the engineer.

D Measurement
The department will measure Install IP Wireless 5.8 GHz Radio/Antenna as each individual IP wireless 5.8 GHz radio/antenna, 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.0060.108	Install IP Wireless 5.8 GHz Radio/Antenna	Each

Payment is full compensation for installation of the IP wireless radio/antenna, furnishing and installing all necessary hardware, making all necessary connections.

108. Remove Existing Traffic Signal Faces, Item SPV.0060.109.

A Description
This work consists of the removing traffic signal faces in accordance to the plans and as hereinafter provided.

B (Vacant)

C Construction
Perform all work in accordance to standard specs 651 and 658.

Contact Kyle Hemp Southwest Region ITS Engineer, (608) 246-5367 at least seven working days prior to the removal of the traffic signal faces.

Perform a field review of existing equipment with Kyle Hemp for condition of equipment prior to removal. The department will identify all items to be removed and salvaged or disposed. Coordinate the delivery of any salvaged items with Kyle Hemp.

Disconnect the wiring splices in the transformer/pedestal bases, remove traffic signal faces, traffic signal cable, and all hardware. Seal and plug any remaining holes in the poles by an approved method. Removal of the traffic signal cable from the cabinet to the base will be paid for under a separate bid item.

Properly dispose of any equipment that the department does not want salvaged.

D Measurement
The department will measure Remove Existing Traffic Signal Faces by each individual pole location, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.109	Remove Existing Traffic Signal Faces	Each

Payment is full compensation for removing, salvaging, and delivering traffic signal faces; removing wiring and all hardware; for sealing and plugging; for disposal of material; and for corresponding with owner.

109. Loop Detector Splice, Item SPV.0060.110.

A Description
This special provision describes furnishing and installing splice kits on new loop wire in pull boxes as shown on plans and as herein provided, for the purpose of sealing the loop wire for future connection.

B Materials
Furnish Loop Detector Splice that is in accordance to the pertinent requirements of standard spec 655.

C Construction
Make splices as soon as possible after wires as specified in Loop Detector Wire are installed, but after all required testing of the item Loop Detector Wire. Follow the manufacturer's recommended installation procedures.

D Measurement
The department will measure Loop Detector Splice 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.0060.110	Loop Detector Splice	Each

Payment is full compensation for furnishing and installing Loop Detector Splice, mechanical connection, and splice kit.

110. Relocate Solar-Powered Bluetooth Sensor, Item SPV.0060.111.

A Description

This special provision describes relocating an existing solar-powered bluetooth sensor with onboard cellular modem, solar panel and solar panel mounting hardware, as specified in standard specs 651, 670, 674, and 675, as shown on the plans, and as provided hereinafter.

B (Vacant)

C Construction

Contact Kyle Hemp Southwest Region ITS Engineer, (608) 246-5367 at least seven working days prior to relocating the solar-powered bluetooth sensor.

Perform a field review of existing solar-powered Bluetooth sensor and notify the department of any damaged or non-operating equipment. Any equipment that is determined to have been damaged while being relocated shall be replaced in kind at contractor's expense.

The solar-powered bluetooth sensor shall be removed, transported and reinstalled in the same day.

Relocate the solar-powered Bluetooth sensor as indicated on the plans and in accordance to the manufacturer's recommendations. Mount the antenna to maximize signal strength.

D Measurement

The department will measure Relocate Solar-Powered Bluetooth Sensor as each individual relocate solar-powered Bluetooth sensor, 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.0060.111	Relocate Solar-Powered Bluetooth Sensor	Each

Payment is full compensation for removal, transporting, and installation of the solar-powered Bluetooth sensor and cellular modem, furnishing and installing all necessary hardware, and making all necessary connections.

111. Repair Loop Detector Slot, Item SPV.0060.112.

A Description

This special provision describes repairing existing loop detector slot fill material as specified in standard spec 652, as shown on the plans, and as provided hereinafter.

B Materials
Provide materials as specified in Standard Detail Drawing 'Loop Detector Installed In Existing Asphaltic Pavement'.

C Construction
Remove existing backfill material in existing loop detector slots. Clean the slots with jets of compressed air. Remove all dirt, dust, debris and thoroughly dry the loop detector slot. Prevent damage to the existing loop detector conduit.

Backfill and compact the existing loop detector slot in accordance to Standard Detail Drawing 'Loop Detector Installed In Existing Asphaltic Pavement'.

D Measurement
The department will measure Repair Loop Detector Slot as each individual repair loop detector slot, 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.0060.112	Repair Loop Detector Slot	Each

Payment is full compensation for removal and disposal of existing backfill material; for cleaning and drying the slot; and for providing all materials, including high performance cold patch and hot poured joint sealant or epoxy.

112. Posts Round Tubular Steel 2-Inch 10-FT, Item SPV.0060.200; 12-FT, Item SPV.0060.201; 14-FT, Item SPV.0060.202; Reflective 10-FT, Item SPV.0060.203; Reflective 12-FT, Item SPV.0060.204; Reflective 14-FT, Item SPV.0060.205.

A Description
Perform work in accordance to the applicable provisions of standard spec 634, as shown in the plans, and as hereinafter provided.

B Materials
Provide sign posts conforming to the standard specification for hot rolled carbon sheet steel, commercial quality, ASTM A-570-GR-33 for zinc coating tubing to resist corrosion. Provide a 2-inch, schedule-40 sign post at the length shown on the plans, with threading on the bottom end, as detailed in the plans, and a water tight end cap on the top end.

For reflective sign posts provide two sheets of engineer grade yellow sheeting completely around pipe as shown in the plans.

C Construction
Install sign posts at the locations shown on the plans and approved by the engineer. If the finished grade cannot be determined, ask the engineer to identify the finished grade. Install all signs in a true vertical position conforming to the latest edition of the Manual on Uniform Traffic Control Devices. Band signs to the sign posts in accordance to the details in the plans. Also, locate all underground utilities prior to placing sign posts. Cut off excess sign post length in the field to provide the desired sign clearance.

Notify the City of Madison within 3 working days of placing the sign post for signs the city will install. Contact Phil Nehmer, City of Madison Traffic Engineering at (608) 267-1960.

D Measurement
The department will measure Posts Round Tubular Steel 2-Inch (Reflective) (Size) as each individual posts round tubular steel 2-inch, 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.0060.200	Posts Round Tubular Steel 2-Inch 10-FT	Each
SPV.0060.201	Posts Round Tubular Steel 2-Inch 12-FT	Each
SPV.0060.202	Posts Round Tubular Steel 2-Inch 14-FT	Each
SPV.0060.203	Posts Round Tubular Steel 2-Inch Reflective 10-FT	Each
SPV.0060.204	Posts Round Tubular Steel 2-Inch Reflective 12-FT	Each
SPV.0060.205	Posts Round Tubular Steel 2-Inch Reflective 14-FT	Each

Payment is full compensation for providing, hauling, and installing the posts; threading; treating cut post ends; providing and installing a water tight top end cap; providing hardware and anchors; and for reflective sheeting. Replace all materials damaged during construction with new items at no cost to the department.

113. Precast Sign Post Base, Item SPV.0060.206.

A Description
This special provision describes constructing and installing precast sign post bases at locations shown on the plans and as hereinafter provided. Sign bases located within concrete pavement will be furnished and installed by the City of Madison.

B Materials
Furnish all materials for the work that meet the requirements for the class of materials named.

Specific reference is made to the following sections of the standard specifications:

Concrete Masonry	Standard spec 501
Steel Reinforcement	Standard spec 505

Provide concrete masonry of a minimum 3,200-psi strength in 28 days. Provide the 2-inch x 24-inch +1/3-inch insert meeting the requirements of ASTM Designation 120 A53 Fed Spec P404, Schedule 40 untreated pipe 2-inch diameter, with a galvanized rigid conduit coupling installed.

C Construction

Contact Phil Nehmer, City of Madison Traffic Engineering at (608) 267-1960 two weeks prior to installing signs within concrete limits.

The City of Madison will furnish and install sign post bases for posts located within concrete limits.

Form the 24-inch x 11-inch precast base in accordance to the details in the plan. Weld the coupling and pipe over 50 percent of the circumference. Center the insert in the base and plumb with the vertical axis of the base, and place so that the coupling is flush 1/8-inch with the top of the troweled surface of the base. The bottom of the insert extends a minimum of 1/8-inch below the base and shall remain open to permit drainage. Weld 3/8-inch by 8-inch reinforcing bar to the insert 8 inches from the top of the base and 8 inches from the bottom of the base to prevent the insert from rotating within the concrete base.

Set the sign post bases at the locations shown on the plans.

Upon request and a seven day advance notice from the contractor, the engineer will establish and stake the location for sign post bases. The City of Madison Traffic Engineering Division Staff will verify all sign post base locations prior to installation.

Coat the treads of the pipe and coupling in the base with graphite prior to assembly. Install the base and pipe as a unit, level with the finished grade of the surrounding surface with the pipe plumb. Tamp the material used for backfilling around the base in 6-inch layers to ensure the installation will remain plumb. Provide a 1-year warranty that the sign post base installation shall remain plumb.

Remove and dispose of all excess excavation, surplus material and debris resulting from operations and satisfactorily repair and restore other work damaged by operations.

D Measurement

The department will measure Precast Sign Post Base as each individual precast sign post 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.0060.206	Precast Sign Post Base	Each

Payment is full compensation for furnishing all materials; for the manufacturing of the sign post base; for hauling, handling and installing the sign post base; and for backfilling.

114. Temporary Street Light Unit, Item SPV.0060.207.

A Description

This special provision describes furnishing, installing and removing a complete temporary street light unit. Temporary street light units consist of all equipment and incidentals required by an individual temporary street light location. The temporary street lighting electrical distribution system, as well as the maintenance and operation of the temporary lighting systems are separate bid items.

B Materials

B.1 Wood Poles

Furnish wood poles as needed to provide temporary supports for luminaires and overhead wiring. Furnish poles in accordance to standard spec 661.2.1.1. Provide poles sufficient in length to provide a minimum of 30-foot luminaire mounting height during all stages of installation.

B.2 Luminaire Arms

Furnish 15-foot luminaire arms in accordance to standard spec 657.2.2.3. Luminaire arms shall accommodate mounting to a wood pole.

B.3 Luminaires Utility

Furnish luminaires in accordance to standard spec 659.2. Provide 250 watt high pressure sodium luminaires capable of operating by photo cell if necessary.

B.4 Appurtenant Items

Furnish each temporary street light unit with all equipment required to complete a functioning street lighting system. Appurtenant equipment includes, but not limited to: electrical conduit, wiring, junction boxes, equipment grounding, guy cables, cable attachment hardware, cable guards, backfill material and all electrical hardware necessary. Appurtenant items will vary depending on location and whether the temporary street light unit is connected to the distribution system by underground or overhead feed.

Furnish all items conforming to the requirements listed in the following sections of the standard specifications:
Electrical Conduit (652.2); Electrical Wiring (655.2); Junction Boxes (661.2.4.3); Equipment Grounding (654.2); Guy Cables, Cable Attachment Hardware, Cable Guards (661.2); Backfill Material (209.2); Electrical Hardware (659.2).

B.5 Existing Lighting Equipment

Utilize existing street lighting equipment for as long as possible or as noted in the plans. Obtain approval from the department for use of any existing street lighting equipment beyond the time the equipment is noted to be removed; or if it is to be used at other locations on the project. Removal of the existing lighting equipment is paid under separate bid items in this contract.

C Construction

C.1 Wood Poles

Install poles in accordance to standard spec 661.3.1.1. The engineer will determine final pole positions after marking the utilities in the field.

C.2 Luminaire Arms

Install arms in accordance to standard spec 657.3. Orient arms to be 90 degrees to the adjacent roadway unless shown otherwise on the plan.

C.3 Luminaires Utility

Install luminaires in accordance to standard spec 659.3. Provide for photocell operation at all times when the temporary lighting is not part of an existing circuit under system-wide photo cell control.

C.4 Appurtenant Items

Install all appurtenant electrical equipment required to complete a functioning street lighting system. Appurtenant equipment includes, but not limited to: electrical conduit, wiring, junction boxes, equipment grounding, guy cables, cable attachment hardware, cable guards, backfill material and all electrical hardware necessary.

Install items conforming to the requirements listed in the following sections of the standard specifications:

Electrical Conduit (652.3); Electrical Wiring (655.3); Equipment Grounding (654.3); Junction Boxes, Guy Cables, Cable Attachment Hardware, Cable Guards (661.3); Backfill Material (209.3); Electrical Hardware (659.3).

C.5 Existing Lighting Equipment

Use existing street lighting equipment as required to maintain illumination over the active travel lanes. Obtain approval from the engineer to modify any existing lighting equipment. Modifications include, but are not limited to; drilling holes, attaching aerial wiring, and attaching conduit risers. Do not damage any existing equipment in a manner which renders it useless unless the item has been scheduled for disposal after the completion of the project. Removal of the existing lighting equipment is paid under separate bid items in this contract.

D Measurement

The department will measure Temporary Street Light Unit bid item as each individual temporary street light unit, acceptably completed.

Individual temporary street light unit locations are measured as shown on the plans or additional locations only if directed by the engineer. Re-use of an existing temporary street light unit removed from an earlier stage to a later stage is also measured as an individual location.

Multiple relocations of an individual temporary street light unit location to facilitate construction activities, installing wood poles without luminaires for aerial cable attachments and/or other installations not as shown on the plans or directed by the engineer are incidental to the Temporary Street Lighting System (Location) bid item.

E Payment

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

ITEM UMBER	DESCRIPTION	UNIT
SPV.0060.207	Temporary Street Light Unit	Each

Payment is full compensation for furnishing, installing, and removing the complete temporary installation.

115. Maintenance and Salvaging of Crash Cushions Temporary Left In Place By Others, Item SPV.0060.300.

A Description

This special provision describes maintaining and removing temporary crash cushions left in place by others in accordance to standard spec 614 and as hereinafter provided.

Crash cushions temporary left in place by others remain the property of the department upon completion of the contract.

B Materials

Furnish any replacement materials for the temporary crash cushions left in place by others in accordance to the pertinent requirements of standard spec 614.2.

C Construction

Maintain and remove the temporary crash cushion in accordance to standard spec 614.3.4.

Salvage the crash cushions temporary left in place by others in accordance to standard spec 614.3.7.

Remove and stockpile crash cushions temporary left in place by others at a location determined by the department and the engineer.

D Measurement

The department will measure Maintenance and Removal of Crash Cushions Temporary Left In Place by Others as each individual crash cushion location, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.300	Maintenance and Removal of Crash Cushions Temporary Left In Place By Others	Each

Payment is full compensation for maintaining and removing the crash cushions; and for removing and disposing of all materials.

116. Relocate Crash Cushion Temporary Left In Place By Others, Item SPV.0060.301.

A Description

This special provision describes removing and relocating temporary crash cushions in accordance to standard spec 614 and as hereinafter provided.

B (Vacant)

C Construction

Remove or re-anchor department owned temporary crash cushions in accordance to the applicable sections of standard spec 614.3.

Store temporary crash cushions on site while not in use.

D Measurement

The department will measure Relocate Crash Cushion Temporary Left In Place By Others as each individual relocate crash cushion temporary left in place by others, 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.0060.301	Relocate Crash Cushion Temporary Left In Place By Others	Each

Payment is full compensation for removing, loading, hauling, and storing; and for furnishing replacement parts, assembling, and installing.

117. Traffic Control, Vertical Panels, 8-Inch, Double, Item SPV.0060.302.

A Description

This special provision describes the furnishing and installing vertical panels, their supporting posts, and surface-mounted bases in accordance to the MUTCD and pertinent requirements of standard spec 643 and as hereinafter provided.

B Materials
Provide vertical panels and flexible supporting posts made of non-metallic material that have a reactive spring so as to be resistant to direct wheel impacts with speeds up to 60 mph, and have the capability of immediately restoring itself to a vertical position when struck by a standard vehicle.

Provide surface-mounted bases having a maximum size of 8 square inches and not hazardous to vehicles.

Provide new and unused vertical panels, supporting posts, and bases.

Provide vertical panels with alternating orange and white reflective stripes in accordance to the MUTCD. Face the panels in the direction of traffic (two-way) as indicated on the plans and have an overall height above the pavement of 36 inches. Provide reflective sheeting with dimensions of 8 inches by 24 inches. Provide Reflective sheeting meeting the requirements of standard spec 637.2.2.2 and suitable for use on reboundable traffic control devices. Orient the alternating orange and white stripes to slope downward when facing the panel in the direction traffic is to flow.

C Construction
Attach vertical panels and supporting posts to the bases in accordance to the manufacture's recommendations. Fasten bases to the pavement using the manufacture's recommendations.

D Measurement
The department will measure Traffic Control, Vertical Panels, 8-Inch, Double as each individual traffic control vertical panel, 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.0060.302	Traffic Control, Vertical Panels, 8-Inch, Double	Each

Payment is full compensation for furnishing, installing, and removing the vertical panels, their supporting posts, bases and mounting hardware.

118. Inlet Covers, Flat, Temporary, Item SPV.0060.303.

A Description
This special provision describes furnishing, installing, adjusting and removing temporary inlet covers on existing storm sewer structures at locations shown in the plans.

B Materials
Furnish inlet covers in accordance to the pertinent requirements of standard spec 611. Provide open grates for drainage, traversable by vehicle and bicycle traffic, and rated for traffic loading.

C Construction
Remove the existing inlet or manhole cover and place the temporary inlet cover on the existing structure with the necessary adjustments in accordance to standard spec 611. Adjust and set the grade of the inlet cover to meet the final surface of the temporary pavement for traffic lanes. Secure inlet covers placed within lanes open to traffic to the inlet or inlet frame.

Provide a detailed plan, stamped by a licensed professional engineer in the State of Wisconsin, indicating the methods and materials required to secure the inlet covers and grates to the inlet frames for traffic loading.

Remove the temporary inlet cover once no longer needed in the temporary traffic lanes.

D Measurement
The department will measure Inlet Covers, Flat, Temporary as each individual temporary flat inlet cover, 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.0060.303	Inlet Covers, Flat, Temporary	Each

Payment is full compensation for furnishing temporary inlet covers, including frames, grates or lids; for furnishing all necessary bolting; and for furnishing all other required materials and for installing, adjusting, and removing each cover. Upon removal, the temporary inlet cover becomes the property of the contractor.

119. Inlets Temporary, Item SPV.0060.304.

A Description
This special provision describes furnishing, installing, adjusting and removing a temporary inlet and cover in accordance to the plans and pertinent requirements of standard spec 611 and as hereinafter provided.

B Materials
Furnish inlets and covers conforming to the requirements of standard spec 611.2. Furnish inlet cover type as appropriate to match surroundings during multiple stages. Provide open grates for drainage, traversable by vehicle and bicycle traffic, and rated for traffic loading.

C Construction
Install, adjust, and remove the inlets and covers as shown in the plans and as required to maintain drainage during all stages of construction. Secure inlet covers placed within lanes open to traffic to the inlet or inlet frame.

Provide a detailed plan, stamped by a licensed professional engineer in the State of Wisconsin, indicating the methods and materials required to secure the inlet covers and grates to the inlet frames for traffic loading.

D Measurement
The department will measure Inlets Temporary as each individual temporary inlet, 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.0060.304	Inlets Temporary	Each

Payment is full compensation for furnishing and installing inlets, frames, grates, lids, securing covers, and all other required materials; and for removing and disposing of the temporary inlet and cover.

120. Temporary Curb Ramp, Item SPV.0060.305.

A Description
This special provision describes providing, maintaining, moving, and removing temporary curb ramps where the plans show or engineer directs.

B Materials
Provide either asphalt or concrete conforming to the standard specifications.

For asphalt provide materials in accordance to standard spec 465.2.

For concrete provide materials in accordance to standard spec 602.2(2).

No QMP will be required for this work.

Furnish yellow cast iron detectable warning fields from the department's approved products list.

Furnish yellow surface applied detectable warning fields from the following manufacturers or an approved equal:

1. ADA Solutions, Inc.
2. Alert Tile
3. Armor Tile

Cast iron detectable warning fields are not considered surface applied.

Furnish surface applied detectable warning fields in accordance to the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and having a minimum slip resistance coefficient of 0.80 wet and dry. Maintain the minimum slip resistance throughout

construction. Provide a certification of the slip resistance to the engineer for approval prior to installation. The certification shall include the anticipated duration the slip resistance can be maintained under normal use conditions.

Test the slip resistance of the surface applied detectable warning fields in accordance to ASTM F 609-05 and AASHTO Draft T4-33 Part 9 as directed by the engineer throughout construction.

C Construction

For asphalt temporary curb ramps, construct in accordance to standard spec 465.3.1. For concrete temporary curb ramps, construct in accordance to standard spec 602.3.2.

Provide detectable warning field, curbing, grading and restoration for temporary curb ramps conforming to the plan details for permanent curb ramps. Match the width of the facility leading to the curb ramp. Conform to the requirements of the detectable warning field manufacturer and the current ADAAG.

Reconstruct or move temporary curb ramps if required for work operations. Maintain the temporary curb ramps including the detectable warning field, throughout the duration of the project to be compliant with the ADAAG and the manufacturer's specifications.

Construct temporary curb ramps with concrete and a cast iron detectable warning field when the temporary curb ramp and warning field will remain during and throughout the winter traffic pattern as provided in the construction staging plans or when the temporary curb ramp is used when snow is expected.

Construct temporary curb ramps with asphalt and a surface applied detectable warning field, or concrete and a cast iron detectable warning field for other temporary curb ramp locations in use when snow is not expected.

Remove temporary curb ramps and associated detectable warning fields as the staging plans provides or the engineer directs.

D Measurement

The department will measure Temporary Curb Ramp as each individual temporary curb 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.0060.305	Temporary Curb Ramp	Each

Payment is full compensation for excavation and preparing the foundation; providing all materials including concrete or asphalt; maintaining, moving, reconstructing, removing

temporary curb ramps, and restoring the site; and for cast iron or surface applied detectable warning fields.

121. Pre-Engineered Skylight System, Item SPV.0060.306.

A Description

This special provision describes furnishing a pre-engineered skylight system. Furnish a fully engineered, fabricated skylight system, and transport and erect it as shown in the plans, in accordance to Part 5 Structures of the standard spec, and as hereinafter provided. Use these specifications as minimum standards for design and construction.

A.1 Design Requirements

Provide structural design of the pre-engineered skylight system by a professional engineer registered in the State of Wisconsin.

A.2 Submittals

Submit four sets of prints of the pre-engineered skylight system plans and one set of design computations to the engineer for acceptance by the Structures Design Section. Make the submittal no later than 12 weeks after date of notice of contract approval. Allow the following time period in the construction schedule: 20 calendar days after the first receipt of plans by the Structures Design Section for a complete initial review of the design and plans submittal, and an additional 20 calendar days for any necessary revisions and/or corrections.

Submit the following documents to the department for approval:

a. Product Data: Manufacturer's data sheets on each product to be used, including:
   - Preparation instructions and recommendations.
   - Storage and handling requirements and recommendations.
   - Installation methods.
   - Maintenance instructions.

b. Shop Drawings: Include plans, elevations, sections, and details, indicating dimensions, tolerances, profiles, anchorage, connections, fasteners, provisions for expansion and contraction, drainage, flashing, finish, glazing, and attachments to other work.

c. Design Data:
   - Submit manufacturer's structural calculations showing sizes of framing members and loads applied to supporting structure based on design loads.
   - Prepare structural calculations in accordance to Aluminum Association Specifications for Aluminum Structures SAS30 by a professional engineer qualified in design of self-supporting, sloped glazed systems and curtain wall systems and licensed in Wisconsin.
   - Structural Loads: Refer to the Wisconsin Commercial Building Code.

d. Test Reports: Submit certified test reports from a qualified independent testing agency, indicating skylights comply with specified requirements, based on testing of current products. Submit results from the following tests:
   - Flame spread and smoke development, ASTM E 84.
   - Burn extent, ASTM D 635.
   - Color change, ASTM D 2244 in accordance to ASTM D 1435.
   - Impact strength, exterior face sheets, UL 972.
   - Accelerated aging, ASTM D 1037.
   - Bond strength, ASTM C 297.
   - Insulating U-factor, ASTM C 236.
   - Self-ignition, ASTM D 1929.
   - Class A burning brand, ASTM E 108.
   - Air infiltration, ASTM E 283.
   - Water penetration, ASTM E 331.
   - Uniform load deflection, ASTM E 72 and E 330.
   - Concentrated and Impact, ASTM E 661.
   - Certification authorization under the NFRC PCP (Framing and Panel).

e. Selection Samples: For each finish product and glazing material specified, submit sets of color chips representing manufacturer's full range of available colors and finishes.

f. Verification Samples: For each finish product and glazing material specified, submit one sample, minimum 12 inches (150 mm) wide, representing actual product and color(s).

g. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

The department will return one set of prints from this submittal, and any subsequent submittals, to the contractor, either indicating acceptance or marked with required revisions and/or corrections. Provide the engineer copies of final plans to be used in fabrication and construction.

A.3 Quality Assurance

- Manufacturer Qualifications: a minimum of ten years documented experience in the fabrication of skylights of the type required for this project and be capable of providing field service representation during installation.

- Installer Qualifications: a minimum of five years documented experience in the work of this section who has specialized in the installation of work similar to that required for this project and is approved by the manufacturer.

- Preinstallation Meeting: Convene a meeting 2 weeks before start of installation of skylights. Require attendance of parties directly affecting work of this section, including contractor, Architect, installer, and manufacturer's representative.

Review requirements for preparation, installation, cleaning, protection, and coordination with other work.

A.5 Manufacturer Warranty

- Submit manufacturer's and installer's written warranty agreeing to repair or replace panel system work, which fails in materials or workmanship within one year of the date of delivery. Failure of materials or workmanship shall include leakage, excessive deflection, deterioration of finish on metal in excess of normal weathering and defects in accessories, insulated translucent sandwich panels and other components of the work.

- Extended Warranty: Provide manufacturer’s extended warranty, including 5 year Materials and Workmanship, 10 year Limited Warranty covering separation of faces from grid core, and/or abnormal color change of the exterior face, and 20 year Limited Warranty against reinforcing fiberbloom.

B Materials

B.1 Approved Manufacturers

Provide pre-engineered skylight system manufactured by a supplier as approved by the department.

B.2 Panel Components

- Panel Construction
  Translucent facings of ICC ES Listed architectural-grade fiberglass reinforced polymer sheets bonded under controlled heat and pressure to a mechanically-interlocked aluminum I-beam grid core framework to form double-faced, self-supporting, structural composite, sandwich panels.
- Thickness: 2-3/4 inches.
- Overall Dimensions: 11 feet-4 ¾ inches x 21 feet-11 ¾ inches.
- U-Factor: 0.25. NFRC 100-2010 certified values for complete system (including internal grid and perimeter framing - thermally broken).
- Grid Pattern: In-line Shoji.
- Nominal Grid Size: 12 inches x 24 inches.
- Unbonded Areas: Maximum of 4 unbonded areas, a maximum of 3/64 inch in diameter, in an area a maximum of 40 square feet of panel surface.
- Panel Weeps: Weep holes provided on down slope side of installed panels to permit condensation to leave panel interior.
- Panel Corners: Notch and interlock or reinforce with aluminum angle for radius conditions.
- Assembly: Factory assembled and factory sealed when allowable.
- Field assembly of major components will not be allowed.

- Physical Properties
- Burning Brand, ASTM E 108: Class A rating.
- Aged Adhesive Bond Strength, ASTM D 1037:
- Shear Strength, ASTM D 1002: 1212 psi.
- Tensile Strength, ASTM C 297: 914 psi.
- Uniform Load Deflection, ASTM E 72 and E 330.
- Concentrated and Impact, ASTM E 661.
- Air Infiltration through Fixed Panel System and Perimeter Framing, ASTM E 283: 0.04 cfm/ft of panel perimeter at 15 psf air pressure (77 mph constant wind).
- Water Penetration Through Fixed Panel System and Perimeter Framing, ASTM E 331: No leakage when water is applied to entire panel surface at rate of 5 gal/hr/sq ft for 15 minutes (8 inch per hour rainfall) at 15 psf air pressure (77 mph constant wind).

- I-Beam Grid Core
- Material: Aluminum Alloy 6061-T6 or equivalent.
- Flange Width: 7/16 inch minimum.
- Web Thickness: 0.050 inch.
- Mechanically interlocked.
- Full surface contact with face sheets.
- Welded or web interlock grid system will not be acceptable.

- Adhesive
- Laminate Adhesive: Waterproof resin for use in laminating polyester sheet to aluminum grid core.
- Impact and Thermal Shock: Adhesive capable of withstanding impact and thermal shock normally encountered in exterior construction.
- Adhesive Bond Line: Straight, black, cover entire width of I-beam, with neat, sharp edge.
- Initial Bond Strength Between Face Sheet and Grid Core, ASTM C 297: 557 psi minimum.
- After Accelerated Aging, ASTM D 1037: Minimum of 850 psi, ASTM C 297.

- Thermal Barriers
- Perimeter Framing System: Cast-in-place rigid polyurethane, insulating U-Factor of 0.5.
- Do not use screw-applied thermal barriers.

- Translucent Face Sheets
- Appearance of Face Sheets
- Uniform in color to prevent splotchy appearance.
- Free of ridges and wrinkles that prevent proper surface contact for bonding to grid core.
- Free of clusters of air bubbles and pinholes that collect moisture and dirt.
- ICC-ES listed face sheet (ER 2026).

- Exterior Face Sheet
- Darkening, ASTM D 2244: Color change on exterior sheet shall not exceed 3.0 Delta E units after 5 years of South Florida (or accelerated test equivalent) weathering.
- Protective Weathering Surface:
- Application: Factory-applied.
- Minimum Thickness: 1.0 mil.
- Repairs: Fully field repairable.
- Impact Strength, UL 972: 230 ft-lbs.
- Thickness: 0.060 inches.
- Color: White.

- Interior Face Sheet
- Flame Spread, ASTM E 84: 10 maximum.
- Smoke Development, ASTM E 84: 300 maximum.
- Burn Rate, ASTM D 635: 1.0 inch per minute maximum.
- Self-Ignition, ASTM D 1929: Greater than 650 degrees F.
- Thickness: 0.060 inches.
- Color: White.

B.3 Framing Materials

- Aluminum
- Extruded Aluminum: ASTM B 221, Alloy 6063-T5/T6, 6061-T5/T6, or equivalent.
- Formed Aluminum Components and Flashing: ASTM B 209, Alloy 5005-H34 or equivalent.
- Minimum Thickness: 0.040 inch.
- Construct skylights of extruded aluminum shapes.

- Interior Glazing Gaskets
- Extruded closed cell sponge neoprene hybrid, 9/16 inch wide.
- Factory installed in extruded dovetail slots.
- Compression Deflection, 25 Percent Deflection Limits, ASTM D 1056 13 to 24 psi.
- Compression Set, 22 Hours at 158 Degrees F, Maximum Percent, ASTM D 395, Method B: 30 psi.
- Heat Aging, 70 Hours at 212 Degrees F, Change in Compression Values, ASTM D 865 and D 1056: 0 to 10 psi.
- Dimensional Stability, Change Maximum Percent After Heat Aging, 70 Hours at 212 Degrees F, 4 psi: 11.4 percent.
- Ozone Resistance at 40 Percent Elongation, 100 Hours at 104 Degrees F, ASTM D 1149:
- Type I, 1 ppm Ozone: No cracks.
- Type II, 3 ppm Ozone: No cracks.

- Water Absorption, Percent of Weight:
- Option I: 5.0 percent.
- Option II: 11.7 percent.
- Flame Propagation:
- Option I, 4 Inch Maximum: 11.7 percent.
- Option II, No Limit: 11.8 percent.
- Straining of Surface, ASTM D 925: Nonstraining, no migratory strain.

B.4 Exterior Skylight Glazing Gaskets
Provide factory installed Butyl tape with integral polypropylene backer rod.

B.5 Condensation Control System
- Mechanically design entire condensation control system to function properly with minimal dependency upon sealants.

- Provide skylight system with an integral gutter system on all framing members, including rafters.

B.6 Custom Designs
- Perform fitting and assembly of custom designs at factory, insofar as practicable.

- Completely assemble, mark, and disassemble components which cannot be permanently factory assembled, before delivery to site to ensure proper assembly in field.

B.7 Expansion and Contraction
Design and install components with provisions for expansion and contraction due to a 100 degree F temperature variation.

B.8 Glazing Caps
- Provide extruded aluminum glazing caps.

- Attach glazing caps with glazing cap fasteners located at a maximum of 9 inches on center or as required to resist negative loading.

B.9 Fasteners
- Clips for Attachment of Rafter Bars:
- Provide aluminum clips.
- Attach using bolted fastening methods.

- Construction and Glazing Cap Fasteners:
- Provide 18-8 stainless steel fasteners.
- Include gasketed sealing washers.

- Field Anchors: provide Cadmium plated anchors, unless otherwise specified.

- Exposed Fasteners: match aluminum finish.

B.10 Welding
Use Heliarc welding process.

B.11 Weep Holes in Sill Components
Locate weep holes as required to control condensation that may enter system by allowing it to pass to exterior.

B.12 Wall System Baffles
Provide baffled weep holes to prevent water infiltration due to unequal pressures.

B.13 Aluminum Finish
Provide manufacturer's factory applied finish, which meets the performance requirements of AAMA 2604. Select color from manufacturer's standards.

C Construction
C.1 Delivery, Storage, Handling and Erection
Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name, manufacturer, and location of installation. Notify the contractor and the department in advance of the expected arrival time. Inform the contractor as soon as possible regarding delays after the trucks depart the plant such as inclement weather, delays in permits, rerouting by public agencies, or other circumstances.

Storage: Store products above the floor and under cover in a clean, dry area until ready for installation.

Handling: Protect materials and finish from damage during handling and installation.

Manufacturer: Advise the contractor of the actual lifting weights, attachment points, and all other pertinent information needed to install the pre-fabricated skylight system. The contractor is responsible for unloading and providing proper lifting equipment as well as all tools, equipment, labor, and miscellaneous items required to complete the work.

C.2 Sequencing
- Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.

- Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

C.3 Project Conditions
Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

C.4 Examination
Do not begin installation until substrates have been properly prepared.

Examine areas to receive translucent skylights with installer and manufacturer's representative present, including supporting structure and substrate for dimensions, tolerances, material conditions, and support.

Notify engineer of conditions that would adversely affect installation or subsequent utilization of skylight and parapet. Do not proceed with installation until unsatisfactory conditions are corrected.

C.5 Preparation
Clean surfaces thoroughly prior to installation.

Ensure supports to receive skylight are clean, flat, level, plumb, and square.

Aluminum Protection: Apply a protective coating of bituminous paint or other neutral material to dissimilar materials coming in contact with aluminum or separate with a nonabsorbent isolator.

C.6 Installation
Install pre-engineered skylight system in accordance to manufacturer's instructions at locations indicated on the Drawings.

Install skylight level, plumb, square, accurately aligned, correctly located, and without warp or rack.

Do not install skylight components with deficiencies or dimensional errors. Do not proceed with installation until unsatisfactory components are replaced.

Anchor skylights securely in place to supports. Use attachment methods permitting adjustment for construction tolerances, irregularities, alignment, and expansion and contraction.

Install skylight including flashings, fasteners, hardware, sealants, and glazing materials required for a complete, weatherproof installation.

Sheet Metal Flashing: Install sheet metal flashing at skylight perimeter as specified by manufacturer.

Sealants: Install sealants at sill flashing and perimeter framing as required to prevent air and water intrusion as specified by manufacturer.

Repair damages to protective weathering surface of exterior face sheet in accordance to manufacturer's instructions and as approved by engineer.

C.7 Field Quality Control
Water Test: Test skylight according to procedures in AAMA 501.2.

Repair or replace work that does not pass testing or that is damaged by testing and retest work.

Inspect installation of sheet metal flashing and sealants.

Inspect face sheets for cracks, deep scratches, and other damage.

C.8 Cleaning
Clean installed skylight in accordance to manufacturer's instructions.

Clean skylight inside and outside, including member connections and inside corners, immediately after installation and after sealants have cured.

Remove temporary protective coverings and strippable coatings from prefinished metal surfaces.

Remove labels and part number markings from components.

Do not use harsh cleaning materials or methods that would damage metal finishes or glazing.

C.9 Protection
Protect installed products until completion of project.

Touch-up, repair or replace damaged products before completion of project.

D Measurement
The department will measure Pre-engineered Skylight System as each pre-engineered skylight system, 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.0060.308	Pre-engineered Skylight System	Each

Payment is full compensation for designing, manufacturing, transporting and erecting the pre-engineered skylight system; furnishing flashings, fasteners, hardware, sealants, and glazing materials.

122. Perennials, Autumn Moor Grass, CG, 1 Gal., Item SPV.0060.500; Perennials, Beardtongue, 'Husker Red', CG, 1 Gal., Item SPV.0060.501; Perennials, Bee Balm, 'Grand Marshall', CG, 1 Gal., Item SPV.0060.502; Perennials, Bee Balm, 'Jacob Cline', CG, 1 Gal., Item SPV.0060.503; Perennials, Black-Eyed Susan, 'Goldsturm', CG, 1 Gal., Item SPV.0060.504; Perennials, Blue Moor Grass, CG, 1 Gal., Item SPV.0060.505; Perennials, Butterflyweed, CG, 1 Gal., Item SPV.0060.506; Perennials, Calamint, Lesser, 'Montrose White', CG, 1 Gal., Item SPV.0060.507; Perennials, Catmint, 'Walker's Low', CG, 1 Gal., Item SPV.0060.508; Perennials, Coneflower, Pale Purple, CG, 1 Gal., Item SPV.0060.509; Perennials, Coneflower, 'PowWow Wildberry', CG, 1 Gal., Item SPV.0060.510; Perennials, Coneflower, 'White Swan', CG, 1 Gal., Item SPV.0060.511; Perennials, Crested Hair Grass, CG, 1 Gal., Item SPV.0060.512; Perennials, Gayfeather, Spiked, 'Kobold', CG, 1 Gal., Item SPV.0060.513; Perennials, Gayfeather, White, CG, 1 Gal., Item SPV.0060.514; Perennials, Ironweed, 'Iron Beauty', CG, 1 Gal., Item SPV.0060.515; Perennials, Knautia, CG, 1 Gal., Item SPV.0060.516; Perennials, Little Bluestem, 'Blue Heaven', CG, 1 Gal., Item SPV.0060.517; Perennials, Little Bluestem, 'The Blues', CG, 1 Gal., Item SPV.0060.518; Perennials, Northern Sea Oats, CG, 1 Gal., Item SPV.0060.519; Perennials, Ornamental Chives, 'Globemaster', CG, 1 Gal., Item SPV.0060.520; Perennials, Ornamental Chives, 'Summer Beauty', CG, 1 Gal., Item SPV.0060.521; Perennials, Prairie Clover, Purple, CG, 1 Gal., Item SPV.0060.522; Perennials, Purple Love Grass, CG, 1 Gal., Item SPV.0060.523; Perennials, Prairie Dropseed, CG, 1 Gal., Item SPV.0060.524; Perennials, Prairie Dropseed, 'Tara', CG, 1 Gal., Item SPV.0060.525; Perennials, Reed Grass, 'Karl Foerster', CG, 1 Gal., Item SPV.0060.526; Perennials, Reed Grass, 'Overdam', CG, 1 Gal., Item SPV.0060.527; Perennials, Russian Sage, 'Little Spire', CG, 1 Gal., Item SPV.0060.528; Perennials, Salvia, 'May Night', CG, 1 Gal., Item SPV.0060.529; Perennials, Sedum, 'Autumn

Fire', CG, 1 Gal., Item SPV.0060.530; Perennials, Snowdrop Windflower, CG, 1 Gal., Item SPV.0060.531; Perennials, Switch Grass, 'Northwind', CG, 1 Gal., Item SPV.0060.532; Perennials, Switch Grass, 'Rotstrahlbusch', CG, 1 Gal., Item SPV.0060.533; Perennials, Tickseed, Threadleaf 'Zagreb', CG, 1 Gal., Item SPV.0060.534; Perennials, White False Indigo, CG, 1 Gal., Item SPV.0060.535; Perennials, Wild Indigo, 'Purple Smoke', CG, 1 Gal., Item SPV.0060.536; Perennials, Yarrow, 'SummerWine', CG, 1 Gal., Item SPV.0060.537.

A Description
This special provision describes furnishing and installing Perennials in accordance to the applicable sections of standard spec 632, as shown on the plans, and as hereinafter provided.

B Materials
Provide Perennial (plant) complying with American Standard for Nursery Stock (ANSI Z60.1-2004) for type, shape, and height.

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

C Construction
Lay out location of plantings for approval by the engineer and/or City of Madison Forestry Department.

Place Planting Mixture in accordance to the bid item Planting Mixture.

Compact the bottom of the hole to guard against settling. Tamp or water in as necessary to create a condition by which plants will not settle in the planting beds. Place the bottom of the root ball directly on the bottom of the hole.

Install Perennials (plant) at locations shown on the plans.

D Measurement
The department will measure Perennials (plant) as each individual perennial, 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.0060.500	Perennials, Autumn Moor Grass, CG, 1 Gal.	Each
SPV.0060.501	Perennials, Beardtongue, ‘Husker Red’, CG, 1 Gal.	Each
SPV.0060.502	Perennials, Bee Balm, ‘Grand Marshall’, CG, 1 Gal.	Each
SPV.0060.503	Perennials, Bee Balm, ‘Jacob Cline’, CG, 1 Gal.	Each
SPV.0060.504	Perennials, Black-Eyed Susan, ‘Goldsturm’, CG, 1 Gal.	Each
SPV.0060.505	Perennials, Blue Moor Grass, CG, 1 Gal.	Each
SPV.0060.506	Perennials, Butterflyweed, CG, 1 Gal.	Each
SPV.0060.507	Perennials, Calamint, Lesser, ‘Montrose White’, CG, 1 Gal.	Each
SPV.0060.508	Perennials, Catmint, ‘Walker’s Low’, CG, 1 Gal.	Each
SPV.0060.509	Perennials, Coneflower, Pale Purple, CG, 1 Gal.	Each
SPV.0060.510	Perennials, Coneflower, ‘PowWow Wildberry’, CG, 1 Gal.	Each
SPV.0060.511	Perennials, Coneflower, ‘White Swan’, CG, 1 Gal.	Each
SPV.0060.512	Perennials, Crested Hair Grass, CG, 1 Gal.	Each
SPV.0060.513	Perennials, Gayfeather, Spiked, ‘Kobold’, CG, 1 Gal.	Each
SPV.0060.514	Perennials, Gayfeather, White, CG, 1 Gal.	Each
SPV.0060.515	Perennials, Ironweed, ‘Iron Beauty’, CG, 1 Gal.	Each
SPV.0060.516	Perennials, Knautia, CG, 1 Gal.	Each
SPV.0060.517	Perennials, Little Bluestem, ‘Blue Heaven’, CG, 1 Gal.	Each
SPV.0060.518	Perennials, Little Bluestem, ‘The Blues’, CG, 1 Gal.	Each
SPV.0060.519	Perennials, Northern Sea Oats, CG, 1 Gal.	Each
SPV.0060.520	Perennials, Ornamental Chives, ‘Globemaster’, CG, 1 Gal.	Each
SPV.0060.521	Perennials, Ornamental Chives, ‘Summer Beauty’, CG, 1 Gal.	Each
SPV.0060.522	Perennials, Prairie Clover, Purple, CG, 1 Gal.	Each
SPV.0060.523	Perennials, Purple Love Grass, CG, 1 Gal.	Each
SPV.0060.524	Perennials, Prairie Dropseed, CG, 1 Gal.	Each
SPV.0060.525	Perennials, Prairie Dropseed, ‘Tara’, CG, 1 Gal.	Each
SPV.0060.526	Perennials, Reed Grass, ‘Karl Foerster’, CG, 1 Gal.	Each
SPV.0060.527	Perennials, Reed Grass, ‘Overdam’, CG, 1 Gal.	Each
SPV.0060.528	Perennials, Russian Sage, ‘Little Spire’, CG, 1 Gal.	Each
SPV.0060.529	Perennials, Salvia, ‘May Night’, CG, 1 Gal.	Each
SPV.0060.530	Perennials, Sedum, ‘Autumn Fire’, CG, 1 Gal.	Each
SPV.0060.531	Perennials, Snowdrop Windflower, CG, 1 Gal.	Each
SPV.0060.532	Perennials, Switch Grass, ‘Northwind’, CG, 1 Gal.	Each
SPV.0060.533	Perennials, Switch Grass, ‘Rotstrahlbusch’, CG, 1 Gal.	Each
SPV.0060.534	Perennials, Tickseed, Threadleaf ‘Zagreb’, CG, 1 Gal.	Each
SPV.0060.535	Perennials, White False Indigo, CG, 1 Gal.	Each
SPV.0060.536	Perennials, Wild Indigo, ‘Purple Smoke’, CG, 1 Gal.	Each
SPV.0060.537	Perennials, Yarrow, ‘SummerWine’, CG, 1 Gal.	Each

Payment is full compensation for providing, transporting, handling, storing, pruning, placing, and replacing plant materials; for laying out plantings and excavating all plant holes, salvaging topsoil, mixing, and backfilling; for providing and applying all required fertilizer, water, rodent protection, herbicides and anti-desiccant spray; and for disposing of all excess and waste materials, and except that the department will pay for Planting Mixture separately.

123. Light Box, Item SPV.0060.550.

A Description

This special provision describes furnishing and installing a fully engineered light box as shown on the plans and as hereinafter provided.

B Materials

Welding Electrodes and Filler Materials: Provide type and alloy of filler metal and electrodes as recommended by producer of the metal to be welded and as required for color match, strength and compatibility in the fabricated items.

Exposed Fasteners: Provide stainless steel fasteners matching finishing color and texture of the metal being fastened, unless otherwise indicated.

Anchors and Inserts: Furnish inserts to be set into concrete foundation to foundation contractor, or provide other anchoring devices as required by the light box manufacturer. Anchoring device shall be galvanized steel.

Reinforced Concrete: Provide concrete and reinforcement in accordance to standard specs 501, 504, and 505.

Aluminum

Extrusions: Provide shapes and thicknesses as required by the cabinet manufacturer. Provide suitable alloy and temper for extruding with adequate structural characteristics and suitable for finishing as specified.

Sheets and Plates: Provide size and minimum gages as shown and as required by manufacturer to meet performance requirements. Provide suitable alloy and temper for forming and fabricating requirements with adequate temper and structural characteristics and suitable for finishing as specified. Unless otherwise specified, use alloy #5052 H32.

Aluminum in Contact with Concrete or Dissimilar Metal: Provide multiple coats of bituminous paint (minimum 10 mils dry) to aluminum in contact with concrete or a dissimilar metal.

Bars, Rods and Wire: ASTM B211.

Color: Mill finish (unpainted).

Polycarbonate Faces: Provide 1/4" thick, white polycarbonate faces. Acrylic faces are not acceptable.

Graphics: Provide translucent exterior grade vinyl with digital prints. Provide UV laminate on graphic panels. Light Box black and white graphics will be produced by Plaid Tuba/Reginald Baylor Studio. Electronic/digital files will be made available to the contractor upon request.

Internal Illumination: Provide white LED lighting.

Disconnect: Provide an internal disconnect.

Entire cabinet must have a UL label. All components within the light box must be UL rated.

C Construction

C.1 Design Requirements

Light box manufacturer must have a minimum of 5 years of experience in the design and fabrication of internally illuminated signs of similar size and nature to the proposed Light Box. Provide project references and record of experience to the department upon request.

Design the light box sign cabinet in accordance to the plans and requirements specified herein and all applicable codes and design standards. Design the anchorage system to connect the sign cabinet to the concrete foundation.

Thermal movement: Design, fabricate and install component parts to provide for expansion and contraction over a temperature range for the material of 150 degrees F, without detrimental effects to any of the light box components.

Wind loading: Design and fabricate all exterior structures to withstand a minimum wind loading of 40 psf or greater.

C.2 Coordination

Provide shop drawings in accordance to standard spec 105. Include complete detailed drawings of the light box including the cabinet, anchorage system, electrical system, and all other components.

Coordinate the anchorage embedments with the concrete contractor.

Submittal Schedule

Work Element	**Submittal Required**
Foundation	Shop Drawings
Light box	Shop Drawings
Light box graphics	Sample of polycarbonate and a single full size panel for approval

C.3 Construction Methods

Construct the light box to provide an overall appearance that is clean and free of exposed fasteners, except those that are necessary for access panels where required for service and maintenance.

Position graphic faces to have no visual distortion when viewed in the installed position. The maximum slope of the surface at any point, measured from the nominal plane of the surface, is not to exceed 2.0%.

Protect light box and graphic panels from damage during shipment and handling prior to installation.

Fasten joints flush or weld where thickness of section permits. Use concealed fasteners wherever possible.

Drill holes for bolts and screws. Mill smooth exposed ends and edges, with corners slightly rounded. Form joints exposed to weather to exclude water.

Countersink all parts to receive hardware. Rivet or weld in place all plates for mounting hardware.

Cutting, Fitting, and Placement: Perform all cutting, drilling and fitting required for installation. Set the work accurately in location, alignment and elevation, plumb, level and true, measured from established lines and levels. Provide temporary bracing or anchors as required. Form tight joints with exposed connections accurately fitted with uniform reveals and spaces for sealant and joint fillers. Where cutting, welding and grinding are required for proper fitting and jointing of the work, restore finishes which cannot be completely restored in the field.

D Measurement

The department will measure Light Box as each individual light box, 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.0060.550	Light Box	Each

Payment is full compensation for designing, furnishing, and complete installation of the light box including electrical connections; for coordination and disposing of surplus materials; and for storing prior to installation.

124. Hydrants, Item SPV.0060.600.

A Description
This work consists of furnishing and installing hydrants in accordance to Article 704.7 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

B Materials
Furnish materials in accordance to Article 702.4 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction
Install hydrants in accordance to Article 703.8 and Standard Detail Drawing 7.04 of the City of Madison Standard Specification for Public Works Construction – Latest Edition, unless otherwise shown or specified.

D Measurement
The department will measure Hydrants as each individual hydrant, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.600	Hydrants	Each

Payment is full compensation for excavating, backfilling; and for making connections.

125. Water Valve, 4-Inch, Item SPV.0060.601; 6-Inch, Item SPV.0060.602; 8-Inch, Item SPV.0060.603; 12-Inch, Item SPV.0060.604; 16-Inch, Item SPV.0060.605.

A Description
This work consists of furnishing and installing water valves in accordance to Article 704.27 of the City of Madison Standard Specification for Public Works Construction – Latest Edition. Proposed valves associated with pressure taps, as indicated on the plans, are not to be included in these items.

B Materials
Furnish materials in accordance to Article 702 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction
Install water valves in accordance to section 703 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

D Measurement
The department will measure Water Valve (size) as each water valve, 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.0060.601	Water Valve, 4-Inch	Each
SPV.0060.602	Water Valve, 6-Inch	Each
SPV.0060.603	Water Valve, 8-Inch	Each
SPV.0060.604	Water Valve, 12-Inch	Each
SPV.0060.605	Water Valve, 16-Inch	Each

Payment is full compensation for excavating, backfilling, making connections, and bedding the valves; for dewatering and compacting the trenches; all valve box adjustments; and for installing and removing all necessary sheeting and bracing.

126. Cut-In Connection, Item SPV.0060.606.

A Description
This special provision describes providing a cut-in connection to existing water main in accordance to Article 703.6 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

B Materials
Furnish materials in accordance to Article 702 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

C Construction
Provide a water-tight cut-in connection at the locations shown on the plans in accordance to Article 703 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

D Measurement
The department will measure Cut-In Connection as each individual cut-in connection, 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.0060.606	Cut-In Connection	Each

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

127. Adjust Water Valve Box, Item SPV.0060.607.

A Description

Adjust Water Valve Box consists of adjusting and extending all existing water valve boxes within the project limits to between ¼ inch to ½ inch below finished grade.

B Materials

Provide materials conforming to the requirements of Article 702 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C Construction

Construct the adjust water valve box in accordance to the applicable sections of Article 703 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Excavate and expose the existing water valve boxes to the depth needed to adjust the valve boxes to finished grade. Extensions may be required. Backfill and compact in accordance to the City of Madison Standard Specifications for Public Works Construction - Latest Edition. Leave all valve boxes centered over the valve operating nut and free of dirt and debris.

D Measurement

The department will measure Adjust Water Valve Box as each individual adjust water valve box, 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.0060.607	Adjust Water Valve Box	Each

Payment is full compensation for excavating, backfilling, adjusting, and compacting.

128. Cut-Off Existing Water Main, Item SPV.0060. 608.

A Description

The work under this section consists of abandoning the existing water mains at the locations shown on the drawings or as designated by the Madison Water Utility in accordance to section 704.14 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

B Materials

Furnish all materials as appropriate per section 702 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction
After a safe sample on the new water main section has been obtained and all water service laterals have been reconnected, abandon the existing water main where indicated on the drawings or where designated by the Madison Water Utility. Complete all work under this section in accordance to Section 703.15 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

D Measurement
The department will measure Cut Off Existing Water as each individual cut-off existing water main, acceptably completed. Work associated with Cut-In Connections will be measured separately.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.608	Cut Off Existing Water Main	Each

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

129. Abandon Water Valve Box, Item SPV.0060.609.

A Description
Work under this item includes abandoning of water valve boxes no longer in service, as indicated in the plans or as directed by the Madison Water Utility in accordance to section 704.15 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

B Materials
Provide all materials necessary for completion of this work in accordance to Section 702 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

C Construction
Complete all work associated with this item in accordance to Section 703 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

After the existing water main has been abandoned, complete all work associated with this bid item.

Place the valve in the closed position prior to abandoning the box and completely remove the valve box. Where complete removal of the existing water valve box is not possible, remove the box to a point 2 feet below the subgrade elevation and backfill the remaining components with Backfill Course Aggregate Size No. 1.

D Measurement
The department will measure Abandon Water Valve Box as each individual abandon water valve box, 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.0060.609	Abandon Water Valve Box	Each

Payment is full compensation for Backfill Course Aggregate Size No. 1 needed for abandonment; and for disposing of surplus materials.

130. Remove and Salvage Hydrant, Item SPV.0060.610.

A Description
Work under this item includes removal and salvaging of fire hydrants as identified on the drawings or as directed by the Madison Water Utility, in accordance to Article 704.16 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

B Materials
Provide all materials necessary to complete the work associated with this item in accordance to Article 702 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

C Construction
Complete all work associated with this item in accordance to Article 703 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

Remove hydrant only after the connected existing water main section has been abandoned or removed.

If the hydrant is a screw type hydrant, unscrew the hydrant with chain tongs (or like) and remove and salvage the high stock and frost case and deliver to the Madison Water Utility. If the hydrant is not a screw type hydrant, excavate to the bottom of the hydrant and disassemble from the hydrant lead. Remove, salvage and deliver the hydrant to the Madison Water Utility.

D Measurement
The department will measure Remove and Salvage Hydrant as each individual remove and salvage hydrant, 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.0060.610	Remove and Salvage Hydrant	Each

Payment is full compensation for excavating, backfilling, restoring the site, and disposing of surplus materials; and for disassembly, removal, storage, and delivery of the hydrant to the Madison Water Utility.

131. Temporary Water Main Connection, Item SPV.0060.611.

A Description

This special provision describes providing a temporary water connection to existing water main. A temporary connect is a connection that is needed to provide temporary water service due to the staging and phasing of the water main construction as part of the overall project.

B Materials

Furnish all materials needed for the temporary connection in accordance to Article 702 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition. Materials may include but are not limited to; fittings, valves, pipe extensions and select backfill.

C Construction

Provide a water-tight temporary connection at the locations to be determined and approved by the Madison Water Utility in accordance to Article 703 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

After a safe sample on the new water main section has been obtained a connection to the existing water main can occur and all water service laterals can be reconnected. Coordinate all temporary connections with the Madison Water Utility.

D Measurement

The department will measure Temporary Water Main Connection as each individual temporary water main connection, acceptably completed.

Work associated with permanent Cut-In Connections will be measured separately.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.611	Temporary Water Main Connection	Each

Payment is full compensation for excavation, backfilling, and compacting; removal and disposal of temporary water main connections; and for making all connections and disposing of surplus materials. Permanent connection to an existing water main will be paid under bid item Cut-In Connection.

132. Excavate Trench for Live Tap, SPV.0060.612.

A Description

This special provision describes excavating and preparing a trench for the Madison Water Utility to perform a live-tap connection on an existing water main (may also be noted on the plans as "Pressure Tap") in accordance to Article 702 and 703 of the City of Madison Standard Specifications - Latest Edition.

B (Vacant)

C Construction

Contact Madison Water Utility five working days prior to excavating and preparing the trench for a live-tap connection to an existing water main.

D Measurement

The department will measure this Excavate Trench for Live Tap as each individual excavate trench for live tap, 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.0060.612	Excavate Trench for Live Tap	Each

Payment is full compensation for contacting and coordinating with the Madison Water Utility; for excavating trench, providing necessary shoring/trenching protection, and dewatering of trench; for clearing and preparing the work area; for backfilling the trench and backfill material; and for compacting the backfill and restoring the site.

133. Disconnect and Reconnect Existing Service Lateral - 1-Inch, Item SPV.0060.613; 1.5-Inch, Item SPV.0060.614; 2-Inch, Item SPV.0060.615.

A Description

This special provision describes cutting off and reconnecting the existing copper water service laterals to the new water main that results in a shorter water service lateral in accordance to Articles 702 and 703 of the City of Madison Standard Specifications - Latest Edition.

B (Vacant)

C Construction

Service interruptions may have to be done at night in order to minimize disruption of service to utility customers. Coordinate and notify all service interruptions at least two working-days in advance in accordance to City of Madison Standard Specifications - Latest Edition and authorized Madison Water Utility personnel.

D Measurement
The department will measure Disconnect and Reconnect Existing Service Lateral (Size) as each individual disconnect and reconnect existing service lateral, acceptably completed.

E Payment
The department will measured quantities for each diameter of service lateral at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.613	Disconnect and Reconnect Existing Service Lateral - 1-Inch	Each
SPV.0060.614	Disconnect and Reconnect Existing Service Lateral - 1.5-Inch	Each
SPV.0060.615	Disconnect and Reconnect Existing Service Lateral - 2-Inch	Each

Payment is full compensation for excavating, disconnecting and reconnecting; for backfilling and compacting; for maintaining trenches, disposing of surplus materials, and for restoring the site.

134. Adjust Water Service Box, Item SPV.0060.616.

A Description
This special provision describes adjusting water service boxes within the project limits to match finished grade as shown on the plans or directed by the engineer in accordance to Article 702 and 703 of the City of Madison Standard Specifications - Latest Edition.

B (Vacant)

C Construction
Excavate and expose the existing water service boxes to the depth needed to adjust the valve boxes to finished grade. Extensions may be required. Leave all service boxes centered over the curb stop and free of dirt and debris.

D Measurement
The department will measure Adjust Water Service Box as each individual Adjust Water Service Box, 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.0060.616	Adjust Water Service Box	Each

Payment is full compensation for excavating, exposing, backfilling, disposing of surplus material, and restoring the site; and for necessary extensions.

135. Adjust SAS Special, Item SPV.0060.617.

A Description

This special provision describes adjusting Sanitary Sewer Access Structure (Rim) castings as shown on the plans to the final proposed grades or directed by the City of Madison in accordance to Article 702 and 703 of the City of Madison Standard Specifications - Latest Edition. This bid item is required for vertical casting adjustments greater than 9 inches or to replace a chimney seal in poor condition, as indicated by the City of Madison.

B (Vacant)

C Construction

Remove existing adjustment rings and concrete barrel section(s) as necessary to install new adjustment rings and/or barrel sections needed to reach the final proposed grade as shown on the plans or as directed by the City of Madison.

Rotate the existing cone section as shown on the plans.

Install an offset cone section and casting as shown on the plans.

Adjustment ring heights exceeding 9 inches will not be allowed.

D Measurement

The department will measure Adjust SAS Special as each individual adjust SAS special, 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.0060.617	Adjust SAS Special	Each

Payment is full compensation for excavating, exposing, backfilling, disposing of surplus material, and restoring the site; for necessary structure reconstruction or adjustment; and for offset cone and offset cone rotation and/or installation.

Manhole adjustments less than 9 inches will be paid for separately under bid item Adjusting Manhole Covers.

136. Sanitary Sewer Access Structure (4-Foot Diameter), Item SPV.0060.618.

A Description

Work under this item includes installing Sewer Access Structures at the depths and locations shown on the plan.

B Materials
Provide precast concrete Sanitary Sewer Access Structure (4-Foot Diameter) meeting the requirements of Standard Detail Drawing 5.7.2, 5.7.15, and Article 507.3 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Furnishing and installing Sewer Access Structure Frames and Covers, in accordance to Standard Detail Drawing 5.7.16 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition, will be paid for separately under the Manhole Covers Type MAD bid item.

C Construction
Install Sanitary Sewer Access Structure (4-Foot Diameter) in accordance to Article 507.3 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Maintain the normal flow of wastewater at all times during installation of the new sanitary sewer access structure and when connecting pipes to the new structure. All bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout construction, is incidental to this bid item.

Place concrete benches and flow lines as directed by the City of Madison or the engineer.

Complete testing of new sanitary sewer access structure in accordance to Article 501 of the City Standard Specifications for Public Works Construction - Latest Edition.

D Measurement
The department will measure Sanitary Sewer Access Structure (4-Foot Diameter) as each individual sanitary sewer access structure (4-foot diameter), 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.0060.618	Sanitary Sewer Access Structure (4-Foot Diameter)	Each

Payment is full compensation for constructing benches and flow lines; for furnishing and installing all bypass or temporary piping and connections.

137. Manhole Covers Type MAD, Item SPV.0060.619.

A Description
Furnish and install metal frames, grates and lids in accordance to standard spec 611, as shown on the plans, and as hereinafter provided.

B Materials
Furnish castings in accordance to standard spec 611 and Article 507 of the City of Madison Standard Specifications for Public Works Construction-Latest Edition, and the details shown on the plans.

C Construction
Install castings in accordance to standard spec 611.

D Measurement
The department will measure Manhole Covers Type MAD as each manhole cover type MAD, 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.0060.619	Manhole Covers Type MAD	Each

Payment is full compensation for providing new covers, including frames, lids, and all other required materials; for installing and adjusting each cover; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work. Old covers removed remain the property of the municipality.

138. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.620.

A Description
Furnish and install an internal chimney seal on all sanitary sewer access structures located within 100 feet of a street low point, in greenways, and where indicated on the plan.

B Material
Provide an internal chimney seal consisting of either rubber with metal bands or a low density polyethylene insert conforming to the City of Madison Standard Detail Drawing 5.7.17 – SAS Internal Chimney Seal or other equivalent chimney seal products as approved by the engineer.

C Construction
Install internal chimney seals in accordance to the manufacturer's instructions.

D Measurement
The department will measure Sanitary Sewer Internal Chimney Seal as each individual sanitary sewer internal chimney seal, 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.0060.620	Sanitary Sewer Internal Chimney Seal	Each

Payment is full compensation for furnishing all labor, tools, materials, and all other work incidental to the installation of the sanitary internal chimney seal.

139. Sanitary Sewer Tap, Item SPV.0060.621.

A Description
Work under this item includes the connection of a new lateral or main to an existing structure and the connection of an existing lateral or main to a new structure.

B Materials
Provide Kor-n-Seal flexible connector, or approved equal, in the tapped hole, in accordance to Standard Detail Drawing 5.7.31 of the City of Madison Standard Specifications for Public Works Construction- Latest Edition.

C Construction
C.1 New Pipe to Existing Structure
Use a portable coring drill to produce a pipe opening that is round, clean and free of any pitting of the concrete.

Make a watertight connection of the pipe to the sewer access structure with a Kor-n-Seal flexible connector, or approved equal, in accordance to Standard Detail Drawing 5.7.31 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C2. Existing Pipe to New Structure
Provide a flexible connector to connect the existing pipe to any new pipe which is required to make the connection to the structure.

Provide PVC (SDR-26 or SDR-35) that matches the existing pipe's diameter, or the next larger diameter, to reconnect the existing sewer main or lateral. The PVC (SDR-26 or SDR-35) sanitary sewer pipe is considered incidental to this bid item.

The pouring and construction of concrete benches and flowlines in new sewer access structures for the inlet or outlet pipes is not included in this bid item and is considered incidental to the bid item Sanitary Sewer Access Structure (4-Foot Diameter).

The downstream pipe connection to a Sewer Access Structure (4-Foot Diameter or 5-Foot Diameter) is considered incidental to the Sewer Access Structure (4-Foot Diameter or 5-Foot Diameter).

D Measurement
The department will measure Sanitary Sewer Tap as each individual sanitary sewer tap, 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.0060.621	Sanitary Sewer Tap	Each

Payment is full compensation for providing all connectors; for coring; and for furnishing all work, materials, labor and incidentals required to complete the work.

140. Remove Sanitary Sewer Structure, Item SPV.0060.622.

A Description

This special provision describes removing sanitary sewer access structures as shown on the plans. The work includes salvaging and disposing of the resulting materials and backfilling the trenches with select fill.

B Materials

Provide select fill meeting the requirements of Article 202.2 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition; furnishing and placing select fill in void created by the structure removal is included with this bid item.

C Construction

Remove sanitary sewer access structures in accordance to Article 203.2(a) of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Plugging sewer mains and laterals that are connected to removed Sanitary Sewer Access is incidental to the removal of the structure. This is applicable to sewer plugs only. Concrete slurrying of an entire sewer main or lateral under a proposed or existing roadway is paid for separately under Abandon Sanitary Sewer - Slurry.

D Measurement

The department will measure Remove Sanitary Sewer Structure as each individual remove sanitary sewer structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.622	Remove Sanitary Sewer Structure	Each

Payment is full compensation for furnishing all materials, including fill material; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site; and for furnishing all labor, tools equipment, and incidentals necessary to complete the contract work.

141. Abandon Sanitary Sewer - Pipe Plug, Item SPV.0060.623.

A Description
This work consists of plugging pipes as shown in the plans and hereinafter provided.

B Material
Provide concrete conforming to Article 301 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C Construction
Abandon sanitary sewer pipe with a plug in accordance to Article 203 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Provide replacement sanitary sewers and laterals or appropriate bypass pumping prior to abandoning sanitary sewer pipe.

Saw cut end of existing pipe and clean interior of pipe to create a good bonding surface. Form and pour a minimum 1-FT deep concrete plug completely filling the opening of the pipe.

Where structures are called out for removal or abandonment, plug pipes at the structure are incidental to removal or abandonment of the manholes.

Plugs required to abandon the existing sanitary main where laterals are being extended are incidental to sanitary sewer lateral bid item. Concrete slurrying of an entire sewer main or lateral is paid separately under Abandon Sanitary Sewer - Slurry.

D Measurement
The department will measure Abandon Sanitary Sewer - Pipe Plug as each individual abandon sanitary sewer - pipe plug, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.623	Abandon Sanitary Sewer – Pipe Plug	Each

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work.

142. Temporary Sanitary Sewer Connection, Item SPV.0060.624.

A Description
This special provision describes providing a temporary sanitary sewer connection to existing sanitary sewer. A temporary connect is a connection that is needed to provide temporary sanitary service to the sanitary mainline and laterals during staging and phasing of the sanitary sewer construction as part of the overall project.

B Materials
Furnish all materials needed for the temporary connection in accordance to Article 503 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition. Flexible corrugated piping may be utilized as a temporary connection but may not be left in place as a permanent pipe connection.

C Construction
C.1 New Pipe to Existing Structure
Use a portable coring drill to produce a pipe opening that is round, clean and free of any pitting of the concrete.

Make a watertight connection of the pipe to the sewer access structure with a flexible connector in accordance to Standard Detail Drawing 5.7.31 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C2. Existing Pipe to New Structure
Provide a flexible connector to connect the existing pipe to any new pipe which is required to make the connection to the structure.

Provide PVC (SDR-26 or SDR-35) that matches the existing pipe's diameter, or the next larger diameter, to reconnect the existing sewer main or lateral. The PVC (SDR-26 or SDR 35) sanitary sewer pipe is considered incidental to this bid item.

The pouring and construction of concrete benches and flowlines in new sewer access structures for the inlet or outlet pipes is not included in this bid item and is considered incidental to the bid item Sanitary Sewer Access Structure.

The downstream pipe connection to a Sanitary Sewer Access Structure is considered incidental to the Sanitary Sewer Access Structure.

Provide a temporary connection at the locations to be determined and approved by the City of Madison in accordance to Article 503 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C.3 New Pipe to New Pipe
Provide jointing materials which conform to the requirements specified in Article 503.2 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition, for the type of pipe being installed.

Prior to making joints, inspect jointed surfaces for chips, cracks, or other defects in the joints and jointing materials. Clean and lubricate jointing surfaces with a vegetable lubricant or a lubricating adhesive. Apply lubricant to both the bell and spigot surfaces of the joint.

Provide proper alignment and proper grade prior to applying the pressure necessary to make the joint.

C.4 New Pipe to Existing Pipe
Couple the junction of a new pipe to an existing pipe as required in the field by the City of Madison. Saw cut the existing main to accommodate a clean joint for the installation of the compression couplings. Placed the coupling as directed by the City of Madison and per Standard Detail Drawing 5.3.3, Coupling Details, from the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

D Measurement
The department will measure Temporary Sanitary Sewer Connection as each individual temporary sanitary sewer connection, acceptably completed.

Work associated with permanent connections and taps will be measured separately.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.624	Temporary Sanitary Sewer Connection	Each

Payment is full compensation for excavating, backfilling, and compacting; removal and disposal of temporary sanitary sewer connections; making all connections and disposing of surplus materials; and for furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the contract work, except a permanent connection to an existing sanitary sewer will be paid under bid item Sanitary Sewer Tap for a connection, to a Sewer Access Structure, or sanitary lateral to a sewer main.

143. Baseline CPM Progress Schedule, Item SPV.0060.700; CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.701.

Replace standard spec 108.4 with the following:

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

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

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

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

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

Critical Path Method (CPM)
A network based planning technique using activity durations and the relationships between activities to mathematically calculate a schedule for the entire project.

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

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

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

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

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

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

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

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

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

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

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

108.4.3 Department's Preliminary Design Schedule
The department's preliminary design schedule was developed during the design phase of the contract. Its purpose was to illustrate work areas per Stage/Phase of construction.

Durations and resource availability are department estimates only. Contractor is solely responsible for its use of means and methods and as such is fully responsible for determining durations based on own estimate of production and available resources. The suggested use of the department's preliminary design schedule is ease of identification of work availability during each Stage/Phase and the logical relationship between the Stages/Phases. The Preliminary Design Schedule reflects one possible approach to the work, consistent with the phasing requirements. The logic contained in the Preliminary Design Schedule is not intended to alter or supplement contract requirements for the phasing of the work, but to reflect those requirements. Any reliance on the department's preliminary design schedule is at the sole risk of the contractor

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

The contractor shall submit to the department initial and monthly update schedules, each consistent in all respects with the time and order of work requirements of the contract.

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

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

108.4.5 Submittals

108.4.5.1 Initial Work Plan

Within ten business days after the Initial Work Plan Workshop, as required in standard specification 103.9, submit an Initial Work Plan consisting of the following:

- Provide a detailed plan of activities to be performed within the first 90 calendar days of the contract. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
- Provide activities as necessary to depict administrative work, including submittals, reviews, procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.
- Provide activities as necessary to depict third party work related to the contract.
- Provide summary activities for the balance of the project. Summary activities may have durations greater than 28 calendar days (20 business days).
- Submit three copies of the Initial Work Plan schedule, including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's.
- The engineer will accept the contractor's Initial Work Plan and/or provide comments within five business days after receipt of the Initial Work Plan. Provide formal responses to the comments and resubmit the Initial Work Plan as necessary. Do not begin work until the engineer accepts the Initial Work Plan. The department will use the initial work plan to monitor the progress of the work until the Baseline CPM Progress Schedule is accepted.

- Submit an updated version of the Initial Work Plan on a bi-monthly basis (every other week) until the engineer accepts the Baseline CPM Progress Schedule. With each update, include actual start dates, completion percentages, and remaining durations for activities started but not completed. Include actual finish dates for completed activities.

108.4.5.2 Baseline CPM Progress Schedule

Within 15 business days after the Baseline CPM scheduling workshop, as required in standard spec 103.10, submit a Baseline CPM Progress Schedule and written narrative consisting of the following:

- Develop the Baseline CPM schedule. The Baseline CPM is the contractor's committed plan to complete the work within the time frames required to achieve the contract completion date and intermediate milestone dates. The department will use the schedule to monitor the progress of the work. Include the following:

- Provide a detailed plan of activities to be performed during the entire contract duration, including all administrative and construction activities required to complete the work as described in the contract documents. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
- Provide activities as necessary to depict administrative work, including submittals, reviews, procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.
- Provide activities as necessary to depict third party work related to the contract. Third party work activities may include but is not limited to Railroads, Utilities, Real Estate and local government agencies.
- Make allowance for specified work restrictions, non-working days, time constraints, calendars, and potential or approved weather delays; reflect involvement and reviews by the department; and coordination efforts with adjacent contractors, utility owners, and other third parties.
- With the exception of the Project Start Milestone and Project Completion Milestone, all activities must have predecessors and successors. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag unless the engineer accepts requested exceptions. Include and discuss request for exceptions in the schedule narrative provided with each schedule submittal.
- Schedule activities shall include the following:

- A clear and legible description. The use of abbreviations shall be limited. Descriptions shall include an action verb describing the work performed, a basic description of the materials used, and, where applicable, a general location of the work.
- Codes for Contract ID / WisDOT Project ID, Responsibility, Stage, and Area. The department may provide additional codes for use within department reporting.
- Activities shall carry a single Responsibility assignment.

- Schedule all intermediate milestones in the proper sequence and input as either a "Start on or After" or "Finish on or Before" date. Do not use other constraint types, within the software, without prior approval by the engineer. Provide predecessors and successors for each intermediate milestone as necessary to model each Stage of the Work. Unless the engineer accepts a requested exception, the schedule shall encompass all the time in the contract period between the starting date and the specified completion date.
- Using the bid quantities and unit prices, develop an anticipated cash- flow curve for the project, based on the Baseline CPM.

- Provide three hard copies (11"x17") of the CPM schedule depicting the CPM network. Organize the logic diagram by grouping related activities, based on the activity codes in the CPM.
- Provide a written narrative with the Baseline CPM explaining the planned sequence of work, as-planned critical path, critical activities for achieving intermediate milestone dates, traffic phasing, and planned labor and equipment resources. Use the narrative to further explain:

- The basis for activity durations in terms of production rates for each major type of work (number of shifts per day and number of hours per shift), and equipment usage and limitations.
- Use of constraints.
- Use of calendars.
- Estimated number of adverse weather days on a monthly-basis.
- Scheduling of permit and environmental constraints, and coordination of the schedule with other contractors, utilities, and public entities.

- Submit three copies of the Baseline CPM schedule including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's.

Within ten business days of receiving the Baseline CPM, the engineer will review the submittal, provide review comments, and schedule a workshop for the contractor to present the Baseline CPM and answer questions raised during the engineer's review.

At the Baseline CPM scheduling workshop, provide a presentation of the Baseline CPM. In the presentation, include a discussion of the staging and sequencing of the work, understanding of traffic phasing, and application of labor and equipment resources to the Work. Address comments raised in the engineer's review.

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

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

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

108.4.5.3 Monthly CPM Updates

Submit CPM Updates on a monthly basis after acceptance of the Baseline CPM. With each CPM Update, include the following:

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

108.4.5.4 Three-Week Look-Ahead Schedules

Submit Three-Week Look-Ahead Schedules on a weekly basis after NTP. The schedule shall be prepared by computer. Provide three hard copies (11"x17") to the engineer. With each Three-Week Look-Ahead include:

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

108.4.5.5 Weekly Production Data (WisDOT construction PM to provide input)

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

- Provide data on the following items by the units specified:
- Underground Facilities – LF per week
- Retaining Walls – SF per week
- MSE Walls
- Other Wall Types
- Bridge Construction
- Foundation Pile – Each per week
- Foundation/Substructure Concrete – CY per week
- Structural Steel Girders – Each per week
- Prestressed Concrete Girders – Each per week
- Deck Formwork – SF per week
- Roadway Excavation – CY per week
- Roadway Embankment – CY per week
- Roadway Structural Section
- Grading/Subgrade Preparation – SY per week
- Base Material Placement – Ton per week
- Base Material Subgrade Preparation – SY per week
- Asphaltic Base – Ton per week
- Asphaltic and HMA Pavements – Ton per week
- Concrete Pavement – SY per week
- Concrete Pavement – CY per week
- Finishing Items – SY per week

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

- For each item, indicate the actual daily production for the past week and the anticipated weekly production for the next week. Also include cumulative production curves showing the production information for each item to date.

- Submit the data in an electronic spreadsheet format at the same time the Three-Week Look-Ahead is submitted. On a weekly basis, the department and the contractor shall agree on the production data or document any disagreements.

108.4.6 Progress Review Meetings

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

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

108.4.7 CPM Progress Schedule Revisions

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

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

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

108.4.8 Documentation Required for Time Extension Requests

To request a time extension to an intermediate milestone date or the contract completion date associated with changes to the work, provide a narrative detailing the work added or deleted and the other activities affected, based on the latest accepted CPM Monthly Update. For added work, submit a proposed fragnet of activities to be added or revised in the CPM schedule, indicating how the fragnet is to be tied to the CPM schedule.

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

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

108.4.10 Measurement for CPM Progress Schedule

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

108.4.11 Payment for CPM Progress Schedule

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.700	Baseline CPM Progress Schedule	Each
SPV.0060.701	CPM Progress Schedule Updates and Accepted Revisions	Each

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

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

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

144. Street Sweeping, Item SPV.0075.001.

A Description

This special provision describes removing dirt and dust particles from the roadway using a street sweeper periodically during the project as directed by the engineer.

B Materials

Provide a mechanical, vacuum-assisted or regenerative street sweeper capable of collecting debris within an enclosed collection bin or hopper and disposing of the debris.

C Construction

Remove debris from the roadway using the street sweeper periodically during the project as directed by the engineer.

Provide logged hours of street sweeping to the engineer for approval on a weekly basis.

D Measurement

The department will measure Street Sweeping by the hour that the street sweeper is on the project picking up and removing debris from the roadway, 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.0075.001	Street Sweeping	HRS

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

145. Bar Steel Reinforcement HS Stainless Bridges, Item SPV.0085.300.

A Description

This work consists of furnishing and placing stainless steel reinforcing bars as shown in the plans and as hereinafter provided.

B Materials

B.1 General

Conform to standard spec 505.2 except as modified hereinafter.

B.2 Grade and Type

Provide material conforming to ASTM A 955 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.

B.3 Evaluation of Corrosion Resistance

Prior to fabrication, supply test results from an independent testing agency certifying that stainless steel reinforcement from the selected UNS designation meets the requirements of Annex A1 of ASTM A955. Corrosion performance for the selected UNS designation shall be redemonstrated if the processing method is significantly altered. Removal of mill scale or pickling processes used for stainless steel reinforcement supplied under this contract shall be the same as those used to prepare the samples tested per Annex A1 of ASTM A955.

B.4 Chemical Composition

Material shall conform to that specified in ASTM A276, Table 1, Chemical Requirements, for the given UNS designation.

B.5 Heat Treatment

Bars may be furnished in one of the heat treatment conditions listed in ASTM A955, and as needed to meet the requirements of this specification.

B.6 Finish

Supply bars that are free of dirt, mill scale, oil and debris by pickling to a bright or uniform light finish. Bars supplied with a tarnished or mottled finish are sufficient cause for rejection. Fabricate and bend bars using equipment that has been thoroughly cleaned or otherwise modified to prohibit contamination of the stainless steel from fragments of carbon steel or other contaminants.

Bars displaying rust/oxidation, questionable blemishes, or lack of a bright or uniform pickled surface are subject to rejection.

B.7 Bending and Cutting
Bend bars in accordance to standard spec 505.3.2 and ASTM A955. Use fabrication equipment and tools that will not contaminate the stainless steel with black iron particles. To prevent such contamination, equipment and tools used for fabrication, including bending and cutting, shall be solely used for working with stainless steel. Do not use carbon steel tools, chains, slings, etc. when fabricating or handling stainless steel reinforcing bars.

B.8 Control of Material
Clearly identify, with tags bearing the identification symbols used in the plans, all reinforcement bars or bar bundles delivered to the project site. Also include the UNS designation, heat treat condition, heat number, grade (corresponding to minimum yield strength level), and sufficient identification to track each bar bundle to the appropriate Mill Test Report on all tags.

Provide samples for department testing and acceptance in accordance to the CMM requirements for Concrete Masonry Reinforcement – Bar Steel (Uncoated).

Provide Mill Test Reports (MTR) for the project that:

- Are from the supplying mill verifying that the stainless reinforcement provided has been sampled and tested and the test results meet ASTM A 955, ASTM A 276, Table 1 and the contract requirements;

- Include a copy of the chemical analysis of the steel provided, with the UNS designation, the heat lot identification, and the source of the metal if obtained as ingots from another mill;

- Include a copy of tensile strength, yield strength and elongation tests per ASTM A955 on each of the sizes of stainless steel reinforcement provided;

- Permit positive determination that the reinforcement provided is that which the test results cover;

- Include a statement certifying that the materials meets standard spec 106 regarding material being melted and manufactured in the United States; and

- Certify that the bars have been pickled to a bright or uniform light finish.

C Construction
C.1 General
Conform to the construction methods in standard spec 505.3, except as modified in this special provision:

Ship, handle, store, and place the stainless steel reinforcing bars according to the applicable provisions with the following additions and exceptions:

- Prior to shipping, ensure that all chains and steel bands will not come into direct contact with the stainless steel reinforcing bars. Place wood or other soft materials (i.e., thick cardboard) under the tie-downs. Alternatively, use nylon or polypropylene straps to secure the stainless steel reinforcing bars.

- When bundles of reinforcing steel and stainless steel reinforcing bars must be shipped one on top of the other, load the stainless steel reinforcing bars on top. Use wooden spacers to separate the two materials. Space supports sufficiently close to prevent sags in the bundles.

- Outside storage of stainless steel reinforcing bars is acceptable. Cover the stainless steel reinforcing bars with tarpaulins.

- Store stainless steel reinforcing bars off the ground or shop floor on wooden supports and separately from carbon steel reinforcement. Space supports sufficiently close to prevent sags in the bundles.

- Do not use carbon steel tools, chains, slings, etc. when fabricating or handling stainless steel reinforcing bars. Only use nylon or polypropylene slings. Protect from contamination during construction operations including any cutting, grinding, or welding above or in the vicinity of the stainless steel bars. Flame cutting or welding of stainless steel reinforcing bars is prohibited.

- Place all stainless steel reinforcing bars on bar chairs that are solid plastic or stainless steel. Fabricate stainless steel metal chairs and continuous metal stainless steel supports from stainless steel conforming to the same requirements and UNS designations as stainless steel reinforcing bar as listed in Section B, “Materials”. Use stainless steel chairs with plastic-coated feet above steel beams.

- Use stainless steel tie wires, to tie stainless steel reinforcing bars, conforming to the same requirements and UNS designations as stainless steel reinforcing bars as listed in Section B, “Materials”, dead soft annealed, annealed at size. The tie wire does not need to be of the same UNS designation as the bar reinforcement.

Do not tie stainless steel reinforcing bars to, or allow contact with uncoated reinforcing bars, galvanized forming hardware or attachments, or galvanized conduits. Direct contact with these materials is not acceptable. When stainless steel reinforcing bars or dowels must be near uncoated steel reinforcing bars, galvanized forming hardware, or other galvanized metals, maintain a minimum 1-inch clearance between the two metals. Where insufficient space exists to maintain this minimum, sleeve the bars with a continuous 1/8-inch minimum thickness polyethylene or nylon tube extending at least 1 inch in each direction past the point of closest contact between the two dissimilar bars and bind them with nylon or polypropylene cable ties. Sleeves are not required between stainless steel reinforcing bars and welded girder shear studs. Stainless steel reinforcing bars are allowed to be in direct contact with undamaged epoxy-coated reinforcing bars.

Completely remove, or cut off flush with the top flange of the beam, uncoated fasteners (such as used for static safety lines on beams), anchors, lifting loops, etc., that extend from the top flange of prestressed concrete beams into the bridge deck prior to casting the deck.

C.2 Splices

Construct splices at locations shown in the plans. Substitution of stainless steel mechanical splices in lieu of lap slices shown on the plans may be permitted in certain situations subject to written approval by the engineer. Provide mechanical splices for stainless steel reinforcing bars made of stainless steel conforming to one of the UNS designations listed in section B, "Materials" and meeting the minimum capacity, certification, proof testing and written approval requirements of standard spec 550.3.3.4.

If it is necessary or the contractor elects to increase or alter the number or type of bar splices from those indicated in the plans, provide copies of plan sheets to the engineer showing the revised reinforcement layout, type, length and location of revised bar splices and revised bar lengths. The engineer must approve the location of new lap splices or substitution of mechanical bar couplers in lieu of bar lap splices prior to fabrication. New lap splices must be at least as long as those shown in the plans.

D Measurement

The department will not measure Bar Steel Reinforcement HS Stainless Bridges. The department will use pay plan quantity according to standard spec 109.1.1.2

The department will compute the stainless steel bar weight using the standard weight per foot of equivalent size carbon steel reinforcing bars (ASTM A615) regardless of which stainless steel alloy is provided.

If the contractor is permitted to alter the reinforcement layout per C.2, no adjustment to the reinforcement bar quantity will be made for such alterations. Mechanical bar couplers that are provided but not shown in the plans are included in the item Bar Steel Reinforcement HS Stainless Bridges and will not be measured separately.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.300	Bar Steel Reinforcement HS Stainless Bridges	LB

Payment is full compensation for providing, transporting and placing the stainless steel reinforcing bars with all component materials as described above.

If the contractor is permitted to alter the reinforcement layout per C.2, no additional compensation will be made for such alterations. Mechanical bar couplers that are provided, but not shown in the plans are included in the item Bar Steel Reinforcement HS Stainless Bridges and will not be paid for separately.

146. Concrete Curb and Gutter 24-Inch Type A, Item SPV.0090.001; 24-Inch Type D, Item SPV.0090.002; 32-Inch Special, Item SPV.0090.003; 30-Inch Type A Full Depth, Item SPV.0090.004; 4-Inch Sloped 36-Inch Type A Full Depth. Item SPV.0090.005; Concrete Gutter 18-Inch, Item SPV.0090.006.

A Description

Perform work in accordance to the applicable provisions of standard spec 601, as detailed in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement

The department will not measure Concrete Curb and Gutter (Type). The department will use pay plan quantity according to standard spec 109.1.1.2.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.001	Concrete Curb and Gutter 24-Inch Type A	LF
SPV.0090.002	Concrete Curb and Gutter 24-Inch Type D	LF
SPV.0090.003	Concrete Curb and Gutter 32-Inch Special	LF
SPV.0090.004	Concrete Curb and Gutter 30-Inch Type A Full Depth	LF
SPV.0090.005	Concrete Curb and Gutter 4-Inch Sloped 36-Inch Type A Full Depth	LF
SPV.0090.006	Concrete Gutter 18-Inch	LF

Payment is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway and alley entrances, or curb ramps; for providing all materials, including concrete, expansion joints, and reinforcement tie bars unless specified otherwise; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

147. Concrete Barrier Special, Type A, Item SPV.0090.007; Type B, Item SPV.0090.008; Type C, Item SPV.0090.009; Type D, Item SPV.0090.010; Type E, Item SPV.0090.011; Type F, Item SPV.0090.012; Type G, Item SPV.0090.13.

A Description
Perform work in accordance to the applicable provisions of standard spec 603 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Barrier Special (type) in length 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.0090.007	Concrete Barrier Special, Type A	LF
SPV.0090.008	Concrete Barrier Special, Type B	LF
SPV.0090.009	Concrete Barrier Special, Type C	LF
SPV.0090.010	Concrete Barrier Special, Type D	LF
SPV.0090.011	Concrete Barrier Special, Type E	LF
SPV.0090.012	Concrete Barrier Special, Type F	LF
SPV.0090.013	Concrete Barrier Special, Type G	LF

Payment is full compensation for furnishing all foundation excavation and preparation; for providing all materials, including concrete, expansion joints, and reinforcement tie bars unless specified otherwise; for placing, finishing, protecting, and curing; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

148. Pavement Marking Grooved Wet Reflective Contrast Epoxy, 8-Inch, Item SPV.0090.014.

A Description
This special provision describes furnishing, grooving, and installing wet reflective epoxy pavement marking with a 1.5 inch contrast border as shown on the plans, in accordance to standard spec 646, and as hereinafter provided.

B Materials
Furnish a 20 mils application of modified epoxy binder pavement marking, LS65, HPS-4 or Mark 55.4 in a grooved slot. Provide a double drop system of 5.3 pounds per gallon of 3M elements Series 70E wet reflective beads for white marking and 71E for yellow markings and Utah Performance beads mixture at a drop rate of 12-22 pounds per gallon:

Utah Bead Gradation

US Mesh	Percent Passing (ASTM D1214)
18	65-80
20	
25	
30	30-50
40	
50	0-5

Replace standard spec 646.2.3 (1) with the Utah Bead Gradation listed above. Achieve a minimum of 250 mcd, initial, and 80 mcd, for white after one year from placement, per ASTM E 2177, 45 seconds after the pavement marking is wetted.

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 contrast wet reflective epoxy/bead marking.

Plane the grooved lines in accordance 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.

C.2 Groove Depth for Concrete

Cut the groove to a depth of 60 mils ±10 mils from the pavement surface or, if tined from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove 1-inch wider than the width of the pavement marking.

C.4 Groove Position

Position the groove edge in accordance to SDD Pavement Marking (Mainline). If necessary, groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the pavement marking segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning for 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 pavement 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; use of the air blower does not decrease the amount of time required for the groove to dry.

D Measurement
The department will measure Pavement Marking Grooved Wet Reflective Contrast Epoxy 6-Inch in length 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.0090.014	Pavement Marking Grooved Wet Reflective Contrast Epoxy, 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the contrast epoxy, 3M elements and beads; for removing existing or temporary marking, if necessary.

149. Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate, Item SPV.0090.015.

A Description
This special provision describes providing and placing pipe underdrain, geotextile fabric, and aggregate as shown on the plans and hereinafter provided.

B Materials
B.1 Pipe Underdrain
Provide Pipe Underdrain 6-Inch in accordance to standard spec 612.2.

B.2 Geotextile Fabric
Provide Geotextile Fabric Type, DF Schedule B in accordance to standard specs 645.2.1 and 645.2.4.

B.3 Aggregate
Provide coarse aggregate size No. 1 conforming to standard spec 501.2.5.4.

C Construction
Construct the Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate in locations shown on the plans and in accordance to standard specs 612.3.1, 612.3.3, 612.3.5 and 645.3.4.

D Measurement
The department will measure Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate in length 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.0090.015	Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate	LF

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

150. Concrete Curb and Gutter HES 24-Inch Type A, Item SPV.0090.016; 30-Inch Type A, Item SPV.0090.017; 24-Inch Type D, Item SPV.0090.018; 30-Inch Type D, Item SPV.0090.019.

A Description

Perform work in accordance to the applicable provisions of standard spec 601, as detailed in the plans, and as hereinafter provided.

B Materials

Furnish materials conforming to the following:

Joint Filler……..…… standard spec 415.2.3
Concrete…….....standard spec 501 - Type III portland cement

C (Vacant)

D Measurement

The department will not measure Concrete Curb and Gutter High Early Strength (Type). The department will use pay plan quantity according to standard spec 109.1.1.2.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.016	Concrete Curb and Gutter HES 24-Inch Type A	LF
SPV.0090.017	Concrete Curb and Gutter HES 30-Inch Type A	LF
SPV.0090.018	Concrete Curb and Gutter HES 24-Inch Type D	LF
SPV.0090.019	Concrete Curb and Gutter HES 30-Inch Type D	LF

Payment is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway and alley entrances, or curb ramps; for providing all materials, including concrete, expansion joints, and reinforcement tie bars unless specified otherwise; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site. However, if the

contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

151. Storm Sewer Pipe 8-Inch, Item SPV.0090.020.

A Description

This special provision describes furnishing and installing storm sewer in accordance to standard spec 607 and standard spec 608, as shown on the plans, and as hereinafter provided.

B Materials

Supplement standard spec 607.2 and standard spec 608.2 as follows:

The contractor may elect to furnish either corrugated High Density Polyethylene (HDPE) pipe or corrugated polyvinyl chloride (PVC) pipe. Storm sewer will be accepted on the basis of a Manufacturer's Certificate of Compliance and WisDOT field inspection upon delivery to a project.

Provide corrugated HDPE pipe and fittings conforming to the requirements of the Specifications for Corrugated Polyethylene Drainage Tubing, AASHTO Designation: M 252-92, Type S, for 8 and 10 inch diameter pipe. Provide gasketed joint connections as recommended by the manufacturer.

Provide corrugated PVC pipe and fittings conforming to the requirements of Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings, ASTM Designation: F949. Provide gasketed joint connections as recommended by the manufacturer.

Provide coupling as recommended by the pipe manufacturer to connect to Downspout 8-Inch.

C Construction

Supplement standard spec 607.3 for corrugated HDPE pipe or corrugated PVC pipe as follows:

Construct trench width in accordance to Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe, ASTM Designation D2321. Minimum trench width may be not less than the greater of either the pipe outside diameter plus 16 inches or the pipe outside diameter times 1.25 plus 12 inches.

Connect pipe to Downspout 8-Inch located on bridge Structure B-13-653.

Seal coupling and all joints for pipe to be soil tight in accordance to AASHTO Standard Specifications for Highway Bridges, section 26.4.2.4(e).

Supplement standard spec 607.3.5 for corrugated HDPE pipe as follows:

Backfill immediately all trenches and excavations after the sewers have been constructed therein. Use backfill that meets the requirements for Granular Backfill in standard spec 209, except that all such material placed around the pipe and to 6 inches, above the pipe shall pass a 1-inch sieve.

D Measurement
The department will measure Storm Sewer Pipe 8-Inch in length 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.0090.020	Storm Sewer Pipe 8-Inch	LF

Payment is full compensation for performing the work as described in standard spec 607.5.1.

152. Construction Fence Temporary, Item SPV.0090.021.

A Description
This special provision describes furnishing, erecting, moving, maintaining and removing temporary construction fencing and gates in accordance to standard spec 616 and as hereinafter provided.

B Materials
B.1
Provide a 6’ high temporary chain link fence with materials conforming to standard spec 616.2.3 with the following exceptions:

- Used/salvaged fencing materials are acceptable.
- Determine post size, bracing, and hardware requirements with consideration for wind loading due to the privacy screening.
- Portable free standing chain link fence panels may be used.

B.2
Provide privacy screening of either slats or fabric on the entire height and length of all construction fencing and gates that is green in color.

B.2.1
Provide bottom-locking PVC privacy fence slats.

B2.2
Provide HDPE or polypropylene commercial grade screening fabric with at least 88% blockage.

C Construction

Erect construction fence temporary at the locations shown on the plans or as directed by the engineer prior to beginning work operations. Provide gates and openings of size and location required by contractor's operations. Close and secure all gates and openings when not in use. Maintain the construction fence temporary including the privacy screening for the duration of the project and within four hours of any damage.

Install privacy screening in accordance to manufacturer's recommendations.

D Measurement

The department will measure Construction Fence Temporary in length 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.0090.021	Construction Fence Temporary	LF

Payment is full compensation for providing the chain link construction fencing, erecting the fencing, installing the privacy screening, maintaining and repairing the fence and privacy screening, for providing secure gates and openings, for moving and adjusting the fencing during construction, and for removing and disposing of the fence and privacy screening upon contract completion.

153. Temporary Street Lighting Aerial Cable, Item SPV.0090.200.

A Description

This special provision describes furnishing, installing and removing street lighting electrical system aerial cable. Temporary street lighting aerial cable shall consist of all equipment and incidentals required to provide electrical connectivity to each temporary street light location. The temporary street light units as well as the maintenance and operation of the temporary lighting systems are separate bid items.

B Materials

B.1 General

Furnish materials as required to operate and maintain a fully functioning temporary street lighting system. Furnish materials in accordance to the method of electrical distribution as shown on the plans and in concurrence with the engineer. Furnish materials in compliance with the Wisconsin State Electrical Code, consisting of Chapter Comm. 16 of the Wisconsin Electrical Code combined with the National Electrical Code.

This item includes verification of the electrical distribution method for each individual location on the project and construction stage, prior to installation. Obtain approval by the engineer to make modifications to installation methods shown in the plans.

Furnish materials compatible with existing electrical service capabilities when operating as part of an existing system. This item includes locating existing system feeds, verification of circuit loading and over-current protection devices, and determining system connection limits.

Furnish incidental materials to provide all wiring terminations rated for wet locations as defined by the National Electric Code.

B.2 Overhead System Distribution
Furnish aerial cables consisting of conductors rated for the proposed electrical loading, circuit distribution and span tension requirements. Overhead system distribution also includes all hardware and incidentals necessary to complete wiring terminations and connections to other components of the temporary lighting system.

B.3 Existing System Distribution
Utilize existing street lighting circuits for as long as possible or as noted in the plans. Obtain approval from the department for the use of any sections of the existing street lighting system distribution that is not shown in the plans; or is requested to remain in use beyond the time the equipment is noted to be removed or abandoned. Removal or abandonment of the existing lighting system distribution are paid under a separate bid items in this contract.

C Construction
C.1 General
Provide the engineer with a proposal including the following:

- Wiring connection methods at all locations on the project and during each stage of construction.
- Considerations for the following items: changes in grade during construction, construction equipment adjacent to overhead wiring, trenching and excavation adjacent to underground wiring, site restoration, utility conflicts and coordination with existing system operation.

Install all system distribution in accordance to the furnished material specifications, electrical code requirements and OSHA working clearance requirements.

C.2 Overhead System Distribution
Install overhead system distribution in accordance to the applicable sections of standard spec 661.3.

C.3 Existing System Distribution
Do not disconnect, terminate or otherwise modify any sections of existing street lighting system distribution without approval from the engineer and maintaining authority. Verify acceptable methods for modification of existing distribution prior to starting work. Refer to coordination requirements in the “Temporary Street Lighting System” article in these special provisions for additional information.

D Measurement
The department will measure Temporary Street Lighting Aerial Cable by the linear foot, acceptably completed, measured horizontally along the ground between temporary street light units.

Plan quantities include linear footage to install aerial cables between each individual temporary street light unit location once with the initial installation. Individual segments of temporary street lighting aerial cable are measured between temporary street light units as shown on the plans or additional segments only if directed by the engineer. Re-use of an existing segment of temporary street lighting aerial cable removed from an earlier stage and installed in a later stage is also measured as an individual segment.

Multiple relocations and alternative routing of an individual segment of aerial cable to facilitate construction activities and/or other installations not as shown on the plans or directed by the engineer is incidental to the Temporary Street Lighting System (Location) bid item.

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

ITEM UMBER	DESCRIPTION	UNIT
SPV.0090.200	Temporary Street Lighting Aerial Cable	LF

Payment is full compensation for furnishing, installing, and removing the complete temporary aerial cable installation.

154. Salvage Concrete Barrier Precast, Item SPV.0090.301.

A Description
This provision describes salvaging existing on-site State-owned concrete precast barrier on the project.

B (Vacant)

C Construction
Remove and stockpile the existing on-site State-owned concrete precast barrier on the project to a location within 5 miles of the project site, at a location as directed by the engineer.

D Measurement
The department will measure Salvage Concrete Barrier Precast in length by linear foot, acceptably complete.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.301	Salvage of Concrete Barrier Precast	LF

Payment is full compensation for removing, hauling, stockpiling, and storing.

155. Pedestrian Safety Fence, Item SPV.0090.302.

A Description

This special provision describes providing a pedestrian safety fence.

B Materials

Furnish notched commercially available metal "T" or "U" shaped fence posts.

Furnish construction grade 2 x 4 dimensional lumber.

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
Service Temperature:	-60° F to 200° (ASTM D648)
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

Construct wooden frames as the plans show using nails or screws as fasteners.

Secure fence fabric to frame with staples. Overlap fence fabric rolls at a vertical member of the frame.

Drive fence posts to the depth shown in the plans. Provide a post for each vertical member of the frame.

If the fence is placed on a surface which prevents fence posts from being driven in the ground, the fence may be braced using the 'Alternative Installation for Hard Surfaces' shown in the plans.

Secure frame to fence posts as shown in the plans, with the fence fabric facing away from the pedestrian facility.

D Measurement
The department will measure Pedestrian Safety Fence by the linear foot, acceptably completed, measured along the base of the fence.

E Payment
The department will pay for Pedestrian Safety Fence at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.302	Pedestrian Safety Fence	LF

Payment is full compensation for providing the fence and posts; maintaining the fence and posts; removing and disposing of fence and posts at staging revisions or project completion.

156. Pedestrian Overhead Protection, Item SPV.0090.303.

A Description
This special provision describes furnishing and installing pedestrian overhead protection at locations shown on the plans and as hereinafter provided.

B Materials
Furnish conventional 2 x 4 dimensional lumber.

Furnish conventional CDX plywood in thicknesses shown on the plans.

C Construction
Construct frame of 2 x 4 dimensional lumber as shown in the plans using nails or screws as fasteners.

Sheath the sides and top with CDX plywood as shown on the plans.

Light the interior of the Pedestrian Overhead Protection at all times. Install lights on the ceiling and the level of illumination shall be the equivalent of that produced by 100 watt, 1,700 lumen minimum, standard incandescent lamps enclosed in vandal-resistant fixtures and spaced 16 feet apart and 8 feet above the floor level. Lights must be left on overnight. Inspect lighting nightly, and replace burned out or repair inoperative by the next business day. Comply with the National Electrical Code.

D Measurement
The department will measure Pedestrian Overhead Protection in length by the linear foot, acceptably completed.

E Payment
The department will measure Pedestrian Overhead Protection at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.303	Pedestrian Overhead Protection	LF

Payment is full compensation for furnishing, installing the unit, maintaining the unit in satisfactory condition; all necessary coordination; and for removing the disposing of the unit at staging revisions or project completion.

157. Storm Sewer Pipe Temporary, 12-Inch, Item SPV.0090.304.

A Description
This special provision describes furnishing, installing, and removing temporary storm sewer in accordance to standard spec 607 and standard spec 608, as shown on the plans, and as hereinafter provided.

B Materials
Supplement standard spec 607.2 and standard spec 608.2 as follows:

Use reinforced concrete storm sewer pipe, class III under live traffic lanes. In other locations, the contractor may elect to furnish non-reinforced concrete pipe, High Density Polyethylene (HDPE) pipe, corrugated polyvinyl chloride (PVC) pipe, steel spiral rib (SSR) pipe, composite pipe, or reinforced concrete pipe. Storm sewer will be accepted on the basis of WisDOT field inspection on delivery to the project.

C (Vacant)

D Measurement
The department will measure Storm Sewer Pipe Temporary, 12-Inch in length 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.0090.304	Storm Sewer Pipe Temporary, 12-Inch	LF

Payment is full compensation for furnishing, installing, and removing temporary storm sewer pipe and all other required materials; and for removing and disposing of the temporary storm sewer.

158. Glare Screens Temporary, Item SPV.0090.305.

A Description
This special provision describes furnishing, installing, moving, removing, storing and re-installing a gawk-glare screen on concrete barrier and removal upon completion of the project.

B Materials
Furnish Armorcast Guardian Gawk-Glare Screen Part No. P6000963 and all necessary hardware and materials to install and move the glare screen.

Provide Glare Screens Temporary having a concrete gray color.

C Construction
Furnish and deliver glare screen to worksites within the project as indicated on the plans, move to intermediate locations in conjunction with concrete barrier wall moves and placement, remove and store the glare screen between construction stages and phases as necessary, re-install the glare screen needed for subsequent construction stages and phases in conjunction with concrete barrier wall moves and placement, and remove it upon project completion.

Do not perform construction operations until Glare Screens Temporary are in the proper locations in accordance to the manufacturer's recommendations, the plans and as agreed upon by the engineer.

Install and move the screen in accordance to the manufacturer's recommendations at locations provided in the plans or as the engineer directs.

Maintain the screen during construction. Repair or replace any portion of the screen that is damaged during construction as directed by the engineer. Upon removal, fill all holes in the Concrete Barrier Precast 12.5-FT left by anchorage methods with an epoxy from the departments approved products list.

D Measurement
The department will measure Glare Screens Temporary in length 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.0090.305	Glare Screens Temporary	LF

Payment is full compensation for providing the specified screen, delivery, trucking between worksites, installation, storage and trucking on and off the project site, re-installations, maintaining, repairing, replacing, furnishing all hardware and epoxy, and for removing after contract completion.

159. Integrated Concrete Barrier, Item SPV.0090.306.

A Description
This special provision describes providing an integrated concrete barrier.

B Materials

Furnish materials conforming to the following:

Bar steel reinforcement	Standard spec 505.2.2
Joint filler	Standard spec 415.2
Select crushed material	Standard spec 312.2
Base Aggregate Dense 1 1/4 –Inch	Standard spec 305.2

Provide grade A, A-2, 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 class II ancillary concrete as specified in standard spec 716.

C Construction

Construct integral concrete barrier as shown in the plans.

Excavate for barrier footings as shown in the plans. Saw cut the pavement full depth in the required excavation area. Backfill, dispose of excess material, and restore the grade after placing footings.

Cast integrated concrete barrier in place using forms and construction methods conforming to standard spec 502.

Cure intergrated concrete barrier as specified in standard spec 415.3.12.2. Use linseed oil or PAM as required in standard spec 415.3.12.1.

D Measurement

The department will measure Integrated Concrete Barrier in length by the linear foot, acceptably completed, measured along the face of the barrier.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.306	Integrated Concrete Barrier	LF

Payment is full compensation for bar steel reinforcement, select crushed material, base aggregate dense 1-1/4 inch, concrete masonry, sawing concrete, construction of the barrier, maintaining the barrier, and removing the barrier after contract completion.

160. Shovel Cut Edging, Item SPV.0090.500.

A Description

This special provision describes Shovel Cut Edging at locations shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Shovel cut an edge around the perimeter of planting beds at locations shown on the plans. Manually, or machine cut, edge to a minimum depth of 6 inches and a width of 8 inches. Fill shovel cut edge with Shredded Hardwood Bark Mulch and finish approximately 2 inches below adjacent lawn grades. Tamp mulch lightly and add additional mulch, as necessary, so that the final level of the mulch, after compacting, is level with adjacent lawn grades.

D Measurement
The department will measure Shovel Cut Edging in length 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.0090.500	Shovel Cut Edging	LF

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

Shredded Hardwood Bark Mulch will be paid separately.

161. Water Main Insulation, Item SPV.0090.600.

A Description
This special provision describes furnishing and installing Styrofoam insulation in order to insulate water mains and/or water service laterals in accordance to Article 704.13 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

B Materials
Provide insulation in accordance to Article 702.12 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction
Provide water main insulation at locations where there is 5 feet or less of cover to finished grade, where water main crosses below existing or proposed storm sewer pipe, or where specified in accordance to Article 703.13 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

D Measurement
The department will measure Water Main Insulation in length 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.0090.600	Water Main Insulation	LF

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

162. Water Main, 4-Inch, Item SPV.0090.601; 6-Inch, Item SPV.0090.602; 8-Inch, Item SPV.0090.603; 12-Inch, Item SPV.0090.604; 16-Inch, Item SPV.0090.605.

A Description

This special provision describes furnishing and installing water main (size) in accordance to Article 704.6 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

B Materials

Furnish materials in accordance to Article 702.2 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction

Install water main in accordance to section 703 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

D Measurement

The department will measure Water Main (Size) in length as linear foot of water main, 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.0090.601	Water Main, 4-Inch	LF
SPV.0090.602	Water Main, 6-Inch	LF
SPV.0090.603	Water Main, 8-Inch	LF
SPV.0090.604	Water Main, 12-Inch	LF
SPV.0090.605	Water Main, 16-Inch	LF

Payment is full compensation for furnishing all materials, excavation, dewatering, bedding, laying, jointing, backfilling, and maintenance of surface; and for furnishing all special connections to existing mains, fittings, bends, tees, and appurtenances.

163. Extend and Reconnect Service Lateral – 1-Inch, Item SPV.0090.606; 1.5-Inch, Item SPV.0090.607; 2-Inch, Item SPV.0090.608.

A Description

This special provision describes extending and replacing copper water service laterals where shown on the drawings, or as directed by the Madison Water Utility, in accordance to Section 703 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

B Materials

Provide all materials necessary to complete the work associated with this item in accordance to Section 702 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

C Construction

Complete all work associated with this item in accordance to Section 703 of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

Notify the Madison Water Utility of potential conflicts a minimum of three working days prior to relocation of the curb stop.

D Measurement

The department will measure Extend and Reconnect Service Lateral (Size) in length by the linear foot, acceptably completed.

Measurement will occur along the centerline of the service lateral at the finished surface from the center of the water main to the center of the curb stop. If relocation of the curb stop is requested by the Madison Water Utility, or is necessary to avoid conflict with adjacent structures or utilities, tail extensions beyond the curb stop will be measured along the centerline of the service lateral at the surface from the curb stop to the property end of the service connection.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.606	Extend and Reconnect Service Lateral - 1-Inch	LF
SPV.0090.607	Extend and Reconnect Service Lateral - 1.5-Inch	LF
SPV.0090.608	Extend and Reconnect Service Lateral - 2-Inch	LF

Payment is full compensation for providing all materials, including all required fittings; curb box and stop; excavating the trench; installing and removing temporary soil retention; trimming tree roots as needed per section 107.13 of the City of Madison Standard Specification for Public Works Construction – Latest Edition; dewatering; backfilling and compacting the backfill material; making the tap; bedding the pipe; laying the pipe; installing fittings and curb box; installing and/or repairing polyethylene encasement;

restoration; and for adjusting the curb box to finish grade. Compensation also includes abandoning the existing service, curb box and stop.

164. HDPE Pipe, Horizontally Directionally Drilled, 10-Inch, Item SPV.0090.609.

A Description

Work under this item includes furnishing high density polyethylene (HDPE) water main pipe and installing, where shown on the drawings or as directed by the Madison Water Utility, via horizontal directional drilling method.

B Materials

Provide materials conforming to Article 702 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition, and as described herein.

B.1 HDPE Pipe Materials

Provide HDPE pipe materials conforming to AWWA C906 and ASTM F714, with a rated working pressure of 200 psi, and of dimension ratio (DR) 11. Size pipe to match as closely as practical the inside diameter of the pipe it is connected to, with an ductile iron pipe size (DIPS) outside diameter standard. Provide HDPE pipe that complies with the requirements of the Safe Drinking Water Act and that is certified as suitable for contact with drinking water by an accredited certification organization in accordance to ANSI/NSF Standard 61.

B.2 Pipe Joints

Provide the following joints:

a. HDPE pipe to HDPE pipe joints: Thermal butt fusion.
b. HDPE pipe to HDPE fitting joints: Thermal butt fusion.
c. HDPE pipe to valve joints: HDPE mechanical joint adapter with restraining device (Electrofusion Flex Restraint) and a concrete collar (cast in-place). Provide concrete collar in accordance to Articles 301 and 703.9 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.
d. HDPE pipe to ductile iron pipe: HDPE mechanical joint adapter with restraining device (Electrofusion Flex Restraint) and a concrete collar (cast in-place). Provide concrete collar in accordance to Articles 301 and 703.9 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Complete thermal butt fusion joints in accordance to the HDPE pipe and fitting manufacturer's requirements. Equipment used in the process of butt-fusion welding is required to be furnished by or approved by the HDPE pipe and fitting manufacturers. Utilize personnel trained and certified by the HDPE pipe and fitting manufacturers to complete all butt fusion joints. Prior to construction, provide certification of training to the Madison Water Utility.

B.3 Tracer Wire

Provide tracer wire with a minimum breaking strength of 2,000 pounds and with a protective PVC coating to protect it from corrosion and damage during installation.

B.4 Tracer Wire Access Box

Provide a water valve box in accordance to Article 702.3 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition for accessing tracer wire termini.

C Construction

Complete the work in accordance to Article 703 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition, and as described herein.

Prior to bidding, review the site to assess anticipated subsurface and existing field conditions that will affect the location of the bore pits and the lengths and depths of the pipe installation, as well as any equipment, tools and materials required to keep the necessary installation within the limits identified on the drawings. The contract and construction documents depict the best information available representing the anticipated field conditions; however, any provisions necessary for encountering hard-rock drilling are considered the responsibility of the contractor and incidental to the installation.

Use in-line anchoring at each end of the HDPE pipe using flex restraint fittings fused to the HDPE pipe. Pour concrete collars flex restraint fittings. Install 1/4-inch corrosion resistant (i.e. galvanized, stainless steel) braided tracer wire along the full length of the HDPE pipe. Bring the tracer wire up to finish surface elevation at each end of the bore inside a water main valve box to allow access for future use. Securely clamp or weld the tracer wire to the valve box.

Cuts or gouges in the HDPE pipe, per ASTM F585 are acceptable up to 10% of wall thickness. Cut out any damaged sections where the cut or gouge is greater than 10% of the wall thickness and butt fuse the ends. The stripe along the length of the pipe shall be blue to designate it as water pipe.

Complete jointing of the HDPE pipe and fittings using only personnel trained by the thermal fusion equipment manufacturer and in accordance to ANSI/AWWA C901and the manufacturers recommendations. Do not, under any circumstance, dump, drop, roll, or push any pipe or pipe materials into the installation pit or trench.

Submit a directional drilling plan, sequence or work, and drilling schedule to the Madison Water Utility for review a minimum of two weeks prior to commencing work. At a minimum, provide a directional drilling plan including: detailed site set-up, location and size of the boring pits, sequence of operation, method of determining bore location, accuracy, and depth, staging area, drilling mud storage and handling, and other details on how the work will progress and be controlled.

If proposing to use pipe material other than HDPE for horizontal directional drilling, submit full material specifications to the Madison Water Utility for review and approval. Only materials that have been used on a minimum of five similar size horizontal directional drilling projects within the last three years will be considered for review.

Install horizontally directional drilled pipe to meet a horizontal accuracy of 3 feet from the pipe alignment shown in the drawings, and vertical accuracy of 6-inches higher than, or 3-feet lower than finished grade shown in the drawings. Provide final line and grade of installed pipe to Madison Water Utility for review. The contractor is responsible for all costs associated with pipe installed outside of the acceptable accuracies, including, but not limited to: modifications to existing structures or utilities, modifications to the newly installed pipe, reinstallation of pipe to meet specifications, modifications to existing permanent or temporary easements, acquisition of new permanent or temporary easements, and engineering time necessary to review, consult, and redesign site work or utilities to accommodate the incorrectly installed line. The Madison Water Utility reserves the right to require an unacceptable pipe be reinstalled at no additional cost to the City of Madison for gross misalignment.

Make provisions for impounding the drilling fluids or cuttings at or near the entry or exit pits. If provisions for storage of the fluids or cuttings on site are exceeded, suspend drilling until these materials can be removed from the site. Handle and disposed of all materials, and complete all associated restoration/cleanup with no unnecessary delays and in accordance to WDNR regulations, and at no additional cost to the City of Madison. Upon completion of the bore, dispose of any drilling fluids or cuttings in accordance to all applicable WDNR regulations.

D Measurement

The department will measure HDPE Pipe, Horizontally Directionally Drilled 10-Inch in length by the linear foot, acceptably completed.

Pipe will be measured along the centerline of the main at the surface, beginning at one end of the main and ending at the other end of the main.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.609	HDPE Pipe, Horizontally Directionally Drilled, 10-Inch	LF

Payment is full for furnishing all tools, equipment, labor, materials, and any other appurtenances required to furnish, assemble, install and test horizontal directional-drilled water pipe and fittings as designated on the drawings, specifications, and the City of Madison Standard Specifications for Public Works Construction - Latest Edition; excavation of the boring pits or any other associated excavations, including hard-rock drilling; dewatering; furnishing, assembling and installing pipe, valves, fittings, tracer wire, joint adapters, bracing, plugs, accessories; disposing of surplus material; disinfecting and testing the new piping system; backfilling any excavations; compacting the backfill material; storing, containing, handling, contamination testing, hauling and disposing of

drilling fluids or cuttings; restoring the site and all other work incidental to horizontal directional drill water pipe.

Utility line openings (ULO's) indicated on the drawings, requested by the Madison Water Utility, or needed to verify existing utility locations prior to construction will be paid for under a separate item.

Water valve boxes installed to provide access to tracer wire termini will be paid for under a separate item.

165. Select Fill for Water Main, Item SPV.0090.610.

A Description

This special provision describes furnishing and placing select backfill over the water main and water services along the entire length of the pipe.

B Materials

Provide select fill meeting the requirements of Article 202.2(b) of the City of Madison Standard Specifications for Public Works Construction - Latest Edition for select fill for water main and water services.

C Construction

Place select fill for water main in accordance to all applicable provisions of Article 703 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

D Measurement

The department will measure Select Fill for Water Main in length by the linear foot, acceptably completed. Measurement is along the centerline of the installed water main and includes the length through bends, tees, valves, and hydrants.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.610	Select Fill for Water Main	LF

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

166. Sanitary Sewer Pipe, 8-Inch, Item SPV.0090.611.

A Description

This special provisions describes installing Sanitary Sewer Pipe, 8-Inch at the alignment and grades shown on the plan.

All sections of the sewer mainline are required to pass a low pressure air test, mandrel test, and a visual inspection via televising as specified in Article 501.3(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. Costs associated with the testing of the gravity main are included in the contract unit price bid for this item.

B Materials

Provide solid-wall Poly (Vinyl Chloride) (PVC) sanitary sewer pipe and fittings meeting the requirements for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, ASTM D 3034.

Provide pipe and fittings having a standard dimension ratio of 26 or 35 as called out on the plan.

Assemble solvent cement joints using solvent cement obtained from the pipe manufacturer, which conforms to the requirements of ASTM D2564.

The assembled joint must pass the performance tests as required in ASTM D3212.

Provide ASTM D3034 SDR-26 pipe for sewer mains deeper than 12 feet.

C Construction

Install the sanitary sewer pipe in accordance to all applicable provisions of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Remove all abandoned or existing material located in the new sanitary sewer alignment. Removal of material (including existing sanitary sewer/watermain/etc) is incidental to this bid item.

Use manufactured wye fittings to install new laterals to the new main as called for on the plans; provide and place in accordance to standard spec 503 for Public Works Construction – Latest Edition. Do not install saddle type wyes without prior approval from the city of Madison.

Complete testing and televising of new sewer lines in accordance to Article 501 of the City Standard Specifications for Public Works Construction - Latest Edition.

D Measurement

The department will measure Sanitary Sewer Pipe, 8-Inch in length by the linear foot, acceptably completed.

Sanitary Sewer Pipe, 8-Inch will be measured through sanitary sewer structures, from the center of sanitary sewer casting to center of sanitary sewer casting. Sanitary Sewer Pipe 8-Inch not terminating at a sanitary sewer structure will be measured to the end of pipe. Deductions from the measure length will not be made for wye installations.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.611	Sanitary Sewer Pipe, 8-Inch	LF

Payment is full compensation for furnishing all materials, necessary to perform the work; excavation of the trench, except tunneling and jacking; installation and removal of sheeting and bracing; removal of water from the trench; disposal of surplus material from the trench; backfilling the trench and compaction of the backfill material; embankment over the sewer using surplus material from the excavation of the trench; bedding the pipe; laying the pipe and installing the fittings and accessories; jointing and sealing of joints in pipe, fittings and accessories; encasement, where specified; connections to existing structures; cleaning out the sewer; restoring the site; and all other work incidental to the installation of sanitary sewers.

167. Select Fill for Sanitary Sewer, Item SPV.0090.612.

A Description

This special provision describes furnishing and placing select fill over the sanitary sewer main and laterals along the entire length of the pipe.

B Materials

Provide select fill meeting the requirements of Article 202.2(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition for select fill for sanitary sewer mains and laterals.

C Construction

Install select fill for sanitary sewer in accordance to all applicable provisions of Article 502.1(e) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

D Measurement

The department will measure Select Fill for Sanitary Sewer in length by the linear foot, acceptably completed. Measurement will be completed along the centerline of the installed sanitary sewer pipe and includes the length through Sewer Access Structures.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.612	Select Fill for Sanitary Sewer	LF

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

168. Construction Staking Structure, R-13-194, Item SPV.0105.001; R-13-197, Item SPV.0105.002; R-13-232, Item SPV.0105.003; R-13-238, Item SPV.0105.004; R-13-241, Item SPV.0105.005; N-13-2, Item SPV.0105.006.

A Description
Preform work in accordance to the applicable provisions of standard spec 650, and as hereinafter provided.

B (Vacant)

C Construction
Set construction stakes or marks on a line offset from the structure centerline or on a reference line, whichever is appropriate.

Establish horizontal and vertical accuracy to support the method of operations. Maintain and set additional construction stakes as necessary to establish location and grade of the structure in accordance to the method of operations. Locate stakes to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

Stake all alignments, footings, and vertical components to construct the structures in accordance to the plans.

D Measurement
The department will measure Construction Staking Structure (Structure) as a single lump sum unit of work, completed in accordance 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
SPV.0105.001	Construction Staking Structure, R-13-194	LS
SPV.0105.002	Construction Staking Structure, R-13-197	LS
SPV.0105.003	Construction Staking Structure, R-13-232	LS
SPV.0105.004	Construction Staking Structure, R-13-238	LS
SPV.0105.005	Construction Staking Structure, R-13-241	LS
SPV.0105.006	Construction Staking Structure, N-13-2	LS

Payment for Construction Staking Structure (structure) bid item is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes.

169. Research and Locate Existing Property Monuments, Item SPV.0105.007.

A Description

This special provision describes researching and locating existing property monuments located within permanent easement and temporary easement areas, within the construction limits that may be lost or disturbed by construction operations, as directed by the engineer, and as hereinafter provided.

This provision does not relinquish the contractor of his responsibility under standard spec 107.11.

B (Vacant)

C Construction

Prior to construction, research, locate and document the adjacent property monuments located within permanent easement and temporary easement areas. Tie the located property monuments in with coordinates accurate to 1:3000 and tied to at least two adjacent witness markers that will not be disturbed by any project.

Prepare a property monument location map showing the type of monuments originally found with their coordinates. A legible tax map or right-of-way plat is acceptable as a base map for the property monument location map. Provide a copy of the property monument location map to the engineer.

All work under this item is to be performed by, or under the direction of, a land surveyor registered in the State of Wisconsin.

After construction is completed property monument locations will be verified and reset, if necessary, under the item titled "Verify and Replace Existing Property Monuments".

D Measurement

The department will measure Research and Locate Existing Property Monuments as a single lump sum unit of work, completed in accordance 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.0105.007	Research and Locate Existing Property Monuments	LS

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

170. Verify and Replace Existing Property Monuments, Item SPV.0105.008.

A Description

This special provision describes verifying the location of, and replacing existing property monuments, which were previously located under the item "Research and Locate Existing Property Monuments", that are determined to be lost or disturbed, as directed by the engineer, and as hereinafter provided.

This provision does not relinquish the contractor of his responsibility under standard spec 107.11.

B Materials

Provide replacement property monuments that are one-inch inside diameter by 24-inch long iron pipe or ¾-inch diameter iron rod or rebar that are 24 inches long in locations outside of pavement areas, a Berntsen Steel Nail Marker for placement in asphalt pavement, or a Berntsen BP1 Brass Marker with anchoring plug for placement in concrete pavement.

C Construction

After construction is completed, verify the location of all property monuments previously located under the item "Research and Locate Existing Property Monuments". Replace or reset as necessary, any property monuments that are lost or disturbed.

Prepare a property monument location map showing the type of monuments originally found, and the type of replacement monument used to replace or reset the lost or disturbed monuments, with their coordinates. A legible tax map or right-of-way plat is acceptable as a base map for the property monument location map. The property monument location map is to explicitly state that the replaced or reset monuments are not being certified as an actual property monument, only that evidence of a property monument was found and reset. Provide a copy of the property monument location map to the engineer and the county surveyor.

All work under this item is to be performed by, or under the direction of, a land surveyor registered in the State of Wisconsin.

D Measurement

The department will measure Verify and Replace Existing Property Monuments as a single lump sum unit of work, completed in accordance 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.0105.008	Verify and Replace Existing Property Monuments	LS

Payment is full compensation for furnishing all survey work necessary to verify the location of all property monuments previously located under the item "Research and Locate Existing Property Monuments"; replacing or resetting, as necessary, property monuments that are lost or disturbed from their original location; furnishing property monuments; furnishing a registered land surveyor; and for preparing, annotating and delivering the property monument location map.

171. Concrete Pavement Joint Layout, Item SPV.0105.009.

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. A jointing concept is provided in the plan for information only.

B (Vacant)

C Construction

Locate all joints in accordance to standard detail drawings concrete pavement jointing and concrete pavement jointing at utility fixtures. 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. Provide the construction staging of the intersection within the joint layout, indicating how the joints will correspond with the proposed staging. Mark the location of all concrete pavement joints in the field. Utilize the plan details as a guide 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, completed in accordance 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.0105.009	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.

172. Sealing Culvert Box, SPV.0105.010.

A Description
Perform work in accordance to the applicable provisions of standard specs 502 and 611, as detailed in the plans, and as hereinafter provided.

B (Vacant)

C Construction
Expose the top of the existing box culvert and clean the existing concrete surface where new concrete will be placed. Form, place the concrete, and remove the forms in accordance to the applicable sections of standard specs 502.3.3, 502.3.4, and 502.3.5, respectively. Backfill the excavated work area and restore the site.

D Measurement
The department will measure Sealing Culvert Box as a single lump sum unit of work, completed in accordance 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.0105.010	Sealing Culvert Box	LS

Payment is full compensation for providing all materials, including all concrete, steel reinforcement, for drilling dowel bars into existing concrete; for furnishing all forming; for furnishing all excavating, backfilling, disposing of surplus material; and for cleaning out the existing structures and restoring the work site.

173. Remove, Salvage and Deliver ITS Wireless Components, Gammon Road/Whitney Way, Item SPV.0105.100; Existing CCTV-13-002, Item SPV.0105.101; Whenona Drive Repeater Site, Item SPV.0105.102; Raymond Road, Item SPV.0105.103; Verona Road/Atticus Way, Item SPV.0105.104.

A Description
This special provision describes removing, salvaging and delivering State-owned ITS wireless components no longer in use on the project.

B (Vacant)

C Construction

Contact WisDOT SW Region ITS Engineer, Kyle Hemp, (608) 246-5367 or Kyle.Hemp@dot.wi.gov, to confirm that the fiber system along the USH 12/14 (Beltline Highway) is operational at least 14 calendar days prior to removing ITS components.

Perform a field review of existing equipment with Kyle Hemp for condition of equipment prior to removal. The department will identify all items to be removed and salvaged or disposed. Coordinate the delivery of any salvaged items with Kyle Hemp.

Properly dispose of any equipment that the department does not want salvaged.

D Measurement

The department will measure Remove, Salvage and Deliver ITS Wireless Components (Location), as a single lump sum unit of work, completed in accordance 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.0105.100	Remove, Salvage and Deliver ITS Wireless Components, Gammon Road/Whitney Way	LS
SPV.0105.101	Remove, Salvage and Deliver ITS Wireless Components, Existing CCTV-13-002	LS
SPV.0105.102	Remove, Salvage and Deliver ITS Wireless Components, Whenona Drive Repeater Site	LS
SPV.0105.103	Remove, Salvage and Deliver ITS Wireless Components, Raymond Road	LS
SPV.0105.104	Remove, Salvage and Deliver ITS Wireless Components, Verona Road/Atticus Way	LS

Payment is full compensation for removing, salvaging and delivering ITS wireless components; disposing of surplus material; and for meeting with the department.

174. Remove and Transport Traffic Signals, Westbound Ramp Terminal, Item SPV.0105.105; Eastbound Ramp Terminal, Item SPV.0105.106.

A Description

This special provision describes removing and transporting existing traffic signals at the intersection of US 18/151 (Verona Road) and the eastbound and westbound ramp terminals. 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 region Lighting Engineer, Dena Dramm at (608)-246-5360 at least three working days prior to the removal of the traffic signals. Complete the removal work immediately following shut down of this equipment.

Perform a field review of existing equipment with Dena Dramm for condition of equipment prior to removal. The department will identify all items to be removed and salvaged or disposed.

Remove all standards and poles per plan from their concrete footings and disassemble. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring/cabling and traffic signal mounting devices from each signal standard, arm or pole. Ensure that access handhole doors and hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable.

The Southwest Region traffic signal department will remove the cabinet. After removal of signal equipment, deliver all remaining materials, except wire and cable to the Southwest Region office at 3601 Pierstorff Street, Madison WI, 53704.

D Measurement

The department will measure Remove and Transport Traffic Signals (Location) as a single lump sum unit of work, completed in accordance 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.0105.105	Remove and Transport Traffic Signals, Westbound Ramp Terminal	LS
SPV.0105.106	Remove and Transport Traffic Signals, Eastbound Ramp Terminal	LS

Payment is full compensation for removing, disassembling traffic signals, and delivering the requested materials to the department; properly disposing of scrap material; and for any necessary interim stockpiling of requested materials on site.

175. Remove and Transport City of Madison Traffic Signals, S. Midvale Boulevard and Nakoma Road, Item SPV.0105.107.

A Description
This special provision describes removing and transporting existing traffic signals at the intersection of S. Midvale Boulevard and Nakoma Road. 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 Mike Christoph at (608)-266-9031 at least three working days prior to the removal of the traffic signals. Complete the removal work immediately following shut down of this equipment.

Perform a field review of existing equipment with Mike Christoph for condition of equipment prior to removal. The city will identify all items to be removed and salvaged or disposed.

Remove all standards and poles per plan from their concrete footings and disassemble. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring/cabling and traffic signal mounting devices from each signal standard, arm or pole. Ensure that access handhole doors and hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable.

After removal of signal equipment, coordinate deliver all remaining materials, except wire and cable, with Mike Christoph.

D Measurement
The department will measure Remove and Transport City of Madison Traffic Signals, (Location) as a single lump sum unit of work, completed in accordance 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.0105.107	Remove and Transport City of Madison Traffic Signals, S. Midvale Boulevard and Nakoma Road	LS

Payment is full compensation for removing, disassembling traffic signals, and delivering the requested materials to the city; properly disposing of scrap material; and for any necessary interim stockpiling of requested materials on site.

176. Temporary Traffic Signals for Intersections USH 18-151 and USH 12-14 Interchange (All Stages), Item SPV.0105.201.

A Description

This special provision describes Temporary Traffic Signals for Intersecitons (Location) in accordance to the plans, standard spec 661.1 and as hereinafter provided.

B Materials

B.1 General

In accordance to the plans, standard spec 661.2, and as hereinafter provided:

Coordinate directly with the department's assigned project electrician for all activities associated with this bid item which require modifications to the traffic signal control cabinet. The department will provide contact information for the designated project electrician at the preconstruction meeting. Contact the department at least five working days prior to the scheduled installation of the temporary traffic signal and all subsequent changes in operation. Contact Dena Dramm (Southwest Region Signal Operations) at (608) 246-5360 in advance of the preconstruction meeting with any questions regarding this bid item.

Modification and installation of traffic signal cabinets (not including splice cabinets), wiring terminations, programming changes and testing procedures will be provided by the department.

B.2 Equipment Transfer

Contractor furnished materials from the previous contract (1206-07-78) become the property of the 1206-07-84 contractor with the exception of the traffic signal cabinet and microwave detection systems. Remove all existing temporary signal equipment at the end of its use. Removal of the existing permanent signals is not included as part of this item.

Existing microwave detectors and cables become the property of the department upon completion of the contract.

B.3 Street Lighting

Furnish street lighting equipment including poles, arms, luminaires, cable mounting hardware, wiring and incidentals necessary to provide lighting as shown on the temporary traffic signal plans. Aerial cables shall be rated to maintain acceptable voltage drop and span tension.

B.4 Type 2 Concrete Bases, Poles and Trombone Arms

Furnish materials in accordance to the pertinent provisions in standard specs 654.2 (bases) and 657.2 (poles and arms).

B.5 Girder Supported Cables

This item requires temporary signal cables be installed under the USH 12-14 structures during several stages of construction activities. Furnish non-metallic cable raceways and supports as required to place temporary signal cables under the structures. Furnish all cable raceways and supports in compliance with the Wisconsin State Electrical Code, consisting of Chapter Comm. 16 of the Wisconsin Electrical Code combined with the National Electrical Code.

B.6 Temporary Signal Cabinet Base
Furnish all temporary signal cabinet base platform, stringers and post material from green-treated lumber rated for direct contact with the ground. All fasteners shall be galvanized.

B.7 Temporary Signal Splice Cabinet
Furnish splice cabinet in accordance to standard spec 661.2.1.7.1. Cabinet equipment shall include necessary components to terminate and splice the temporary signal and street lighting cables.

B.8 Pedestrian Signal Signs
Furnish R10-3E (MOD) signs for all signalized pedestrian crossings. Furnish with arrow direction as appropriate. Furnish signs without "cross to median" when single stage crossing.

B.9 Incidental Materials
Furnish incidental materials required to install and maintain the temporary signal during all stages as shown on the plans. Incidental materials include, but are not limited to:

- Conduit and mounting anchors for the splice cabinet feed
- Stabilizing hardware for anchoring poles to temporary shoring (shoring methods may vary)
- Sheeting for obscuring (bagging) existing signals
- Signal head visibility limiting devices (if needed)
- Pedestrian signal signage (R10-3E (MOD) for all pedestrian crossings

C Construction
C.1 General
In accordance to the plans, standard spec 661.3, and as hereinafter provided:

Arrange for monthly inspections with the engineer to check the height of the span wire above the roadways to ensure that the bottom of the traffic signal heads remain within the minimum and maximum heights allowed above the roadway. Make all height adjustments within 24-hours of an inspection indicating that adjustments are required. Notify the engineer in writing upon completion of all necessary adjustments. Maintain a written log to properly document the date of each monthly inspection, the heights above the roadway, the roadway clearance after adjustments have been made and acceptance by the engineer.

Verify the placement of traffic control items, crash cushions and temporary concrete barrier prior to locating and installing temporary signal poles during all stages.

C.2 Operational Transfer
Operation and maintenance responsibility will begin immediately upon the start of work under contract 1206-07-84. Work completed under the prior contract (1206-07-78) will be finalized and transferred to the department prior to the start of work under contract 1206-07-84.

C.3 Street Lighting
Install poles, arms and luminaires as shown on the plans. Re-orient the luminaires throughout the stages of construction as needed to illuminate the active travel lanes.

C.4 Type 2 Concrete Bases, Poles and Trombone Arms
Install materials in accordance to the pertinent provisions in standard specs 654.3 (bases) and 657.3 (poles and arms). All bases, poles and trombone arms shall be removed and part of this temporary traffic signal installation.

C.5 Girder Supported Cables
Install all girder supported cables in raceways and supports with non-destructive methods only. Do not drill, weld, or otherwise permanently alter the condition of any elements of the USH 12-14 structures. Install girder supported cables in a manner that maintains full clearance below the structures without the use of ground supports. Raceways and supports shall not sag below the level of the bottom of the girders, excepting the depth of the cable raceway. Install all cable raceways and supports in compliance with the National Electric Code.

C.6 Temporary Signal Cabinet Base
Construct and install the base in accordance to the plans at a location to be determined by the engineer.

C.7 Temporary Signal Splice Cabinet
Install splice cabinet in accordance to standard spec 661.3.

C.8 Microwave Detection
This item includes coordinating the operation of an existing microwave detection system installed under a previous construction contract (1206-07-78). Re-aim and re-position sensors as needed for changes in temporary signal operations throughout construction to provide detection areas as shown on the plans.

This item includes installation and operation of an additional microwave detector per ramp approach as needed during construction, if directed by the department.

Under this item, install, operate and maintain any new detectors and cables above and beyond what is shown as existing as required during construction. WisDOT will furnish all additional microwave detection equipment.

The department's assigned project electrician will oversee changes in operation. Provide emergency maintenance response in accordance to standard spec 661.3.1.4 paragraph (3).

C.9 Pedestrian Signal Signs
Install signs in accordance to requirements in standard spec 637.3.

C.10 Multiple Temporary Signal Configurations

This item includes multiple configurations and re-installations of the temporary traffic signal. Work includes installing reconstructed portions of the temporary traffic signal while the temporary signals under the previous configuration remain in operation. Allow for additional equipment on site to maintain temporary signal operations at all times during construction.

C.11 Locate and Protect Existing Conduits

This item includes providing underground utility locating for all existing in-use underground traffic signal conduits during construction activities; including the existing connection under USH 12-14 (installed under contract 1206-07-78). Work also includes supporting, protecting and re-establishing existing conduits and cables during construction; and making adjustments required to facilitate construction activities.

C.12 Single Point Interchange Switch-Over

Refer to information in the Traffic article in this special provisions document for coordination requirements to be followed when executing the switch-over from existing diamond interchange configuration and control to single-point interchange configuration and control. Multiple switch-overs will be required during the final stage of construction. First, to perform the switch from diamond interchange control to temporary single-point control; second, to perform the switch from temporary single-point control to permanent single-point control.

The first switch-over (from diamond to temporary single-point) will consist of operating permanent signal heads on the structure with temporary signal heads operating at all other locations.

Critical steps required prior to stage 7 phase 1 during the first switch-over include:

- All permanent signal heads, conduits, cables attached to the structures are installed and wired back to the pier cap junction boxes.
- Construct a temporary signal cabinet base as shown on the plans.
- WisDOT personnel to install a temporary signal cabinet with single-point controller operation. Provide temporary electrical service connections to the temporary single-point cabinet.
- Wood poles, span wires, temporary signals installed for stage 7 phase 1 as shown on the plans.
- Terminate all temporary signal cables on the north side of the interchange span wires into the temporary single-point signal cabinet.
- Terminate all temporary signal cables on the south side of the interchange within the existing conduit connection under USH 12-14 (conduit and extra cables installed under contract 1206-07-78) into the temporary single-point signal cabinet.
- Follow procedures as described in the Traffic article for the traffic impacts associated with placing existing signals in flashing operation then activating the temporary single-point signal operation.

The second switch-over (from temporary single-point to permanent single-point) will consist of operating permanent signal heads at all locations while the temporary signals are removed.

Critical steps required during stage 7 phase 1 to accomplish the second switch-over include:

- All remaining permanent signal conduits, pull boxes, bases, poles, heads and cables are installed.
- Construct the permanent primary cabinet base and splice cabinet bases as shown on the plans.
- WisDOT personnel to install the permanent primary cabinet with single-point controller operation and splice cabinets. Provide permanent electrical service connection to the primary cabinet.
- Terminate all permanent signal cables to primary and splice cabinets on both sides of the interchange.
- Follow procedures as described in the Traffic article for the traffic impacts associated with placing the temporary single-point signals in flashing operation then activating the permanent single-point signals under flashing operation.
- Flashing operations will cease once the permanent single-point signals are activated for all but the structure mounted signal heads.
- Shut down the temporary single-point cabinet.
- Disconnect all temporary signal cables that are wired back to the pier cap junction boxes.
- Terminate all permanent signal cables to the pier cap junction boxes.
- Permanent single-point signal will be in full operation.
- Take down all temporary signals, poles, span wires and remove from the site.

All coordination required to execute the switch-overs shall be considered incidental to this bid item. All traffic control devices required to execute the switch-overs shall be considered incidental to the Traffic Control Project bid item.

D Measurement

The department will measure Temporary Traffic Signals For Intersections USH 18/151 and USH 12-14 Interchange (All Stages) as a single lump sum unit of work, completed in accordance 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.0105.201	Temporary Traffic Signals For Intersections USH 18-151 and USH 12-14 Interchange (All Stages)	LS

Payment is full compensation for furnishing, installing, operating, maintaining and removing the complete installation.

177. Temporary Street Lighting System, (Midvale Boulevard/Nakoma Road/Mohawk Drive), Item SPV.0105.202.

A Description

This special provision describes operating, maintaining, and removing a temporary street lighting system during construction at all times prior to the fully functioning operation of the permanent street lighting system. This item also includes furnishing, installing and removing street lighting control centers and electrical services as needed. The temporary street light units as well as the electrical system distribution are separate bid items.

B Materials

Furnish all incidental materials required to maintain operation of a fully functioning temporary street lighting system. Materials include, but may not be limited to the following items: replacement lamps, fusing, control centers, service pedestals and all incidentals not covered under separate bid items.

Furnish control centers with photo-controlled operation, over-current protection and exterior disconnect; all within a lockable NEMA 3R rated enclosure.

Furnish service pedestals in accordance to standard spec 656.2.

Furnish additional wood poles, aerial cables, underground conduit and wiring in excess of the quantities as shown on the plans to facilitate construction activities as needed. Furnish these items conforming to the requirements listed in the following sections of the standard specifications:

Wood Poles (661.2.1.1); Electrical Conduit (652.2); Electrical Wiring (655.2); Junction Boxes (661.2.4.3); Equipment Grounding (654.2); Guy Cables, Cable Attachment Hardware, Cable Guards (661.2); Backfill Material (209.2); Electrical Hardware (659.2).

C Construction

C.1 General

Maintain the existing and temporary lighting systems within the construction limits for the duration of the project. Responsibilities include, but are not limited to, coordination of the following items:

- Utility service modifications
- Rerouting/disconnecting existing system distribution
- Installing temporary system distribution
- Adjusting or relocating existing street lights
- Installing temporary street lights
- Replacement of burned out lamps
- Replacement of knocked down poles
- Maintaining continuous lighting for the duration of the project
- Monitoring construction activities and making adjustments to facilitate work

Supply an off-hours contact(s) for repair purposes. Respond within 2 hours to the project site for knockdowns or other work that must be completed in a timely manner. Provide the name, address, and telephone number(s) of the persons qualified and assigned to maintaining the temporary lighting to the engineer and local police. Ensure the persons are available 24 hours a day, 7 days a week, from the start of the project through the installation of permanent street lighting system. Ensure that emergency calls are received by an individual and not by an answering machine. Complete all other maintenance needs within 24 hours of notification. Continuously monitor the existing and temporary lighting systems until installation and operation of the permanent lighting system is complete.

Obtain approval from the City of Madison for the configuration of the temporary lighting system prior to work starting. Contact Dan Dettmann (608) 266-4058 at least 7 days prior to starting any work that will modify elements of the existing City of Madison street lighting system including, but not limited to: removing existing lights, installing temporary lights, making underground conduit connections and electrical service modifications.

C.2 Electrical Services

Assume all maintenance obligations for the existing street lighting services as well as any temporary street lighting services during the project construction. The City of Madison will pay all energy charges to the utility for existing and temporary lighting systems.

All street lighting changes need to be tracked continuously for energy billing purposes. Maintain a weekly record of lighting changes for the entire duration of the project. Note the date of any installation or removal of a light fixture. Also note the type and wattage of the light fixture being removed or installed. Use the record of lighting changes to determine accurate energy charges. Provide all documentation of lighting changes to the City of Madison throughout the project.

D Measurement

The department will measure Temporary Street Lighting System, (Location) as a single lump sum unit of work, completed in accordance to the contract and accepted.

Measurement of these items includes unspecified quantities of wood poles and aerial cables installed and/or relocated to facilitate construction activities. Refer to the ‘Measurement’ sections of the articles for bid items “Temporary Street Lighting Aerial Cable” and “Temporary Street Light Unit” in this special provisions document for additional information.

E Payment

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

ITEM UMBER	DESCRIPTION	UNIT
SPV.0105.202	Temporary Street Lighting System, (Midvale Boulevard /Nakoma Road/Mohawk Drive)	LS

Payment is full compensation for providing, operating, maintaining, and repairing the complete temporary installation. Payment also includes furnishing and installing new or replacement equipment not specifically accounted for under separate bid items; and for furnishing all utility installation fees through completion of the project.

178. Galvanized Ladder, B-13-651, Item SPV.0105.298; B-13-652, Item SPV.0105.299.

A Description

This special provision describes fabricating, galvanizing, painting and installing ladder in accordance to standard specs 506 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for ladder shall be new stock, free from defects impairing strength, durability and appearance. Ladder assemblies shall be galvanized and receive a two-coat paint system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B1 Coating System

B1.1 Galvanizing

After fabrication, blast clean steel ladder assemblies per SSPC-SP6 and galvanize according to ASTM A123. All burrs at component edges, corners and at holes shall be removed and sharp edges chamfered 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 in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when painted, will produce unacceptable aesthetic and/or visual qualities, will not be permitted.

B1.2 Two-Coat Paint System

After galvanizing, paint all exterior surfaces of steel ladder assemblies as hereinafter provided. All galvanized surfaces to be painted shall be cleaned per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface shall then be brush blast cleaned per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation for adhesion of the tie coat. Blasting shall not fracture the galvanized finish or remove any dry film thickness. After cleaning, 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 ladder 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 a preapproved 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 paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applier. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified paint 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
	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.

B2 Shop Drawings
Submit shop drawings showing the details of ladder construction. Show the ladder height, weld sizes and locations and all dimensions necessary for the construction of the railing. State the name of the paint manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components.

C Construction
C1 Delivery, Storage and Handling
Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, contractor shall repair or replace ladder assemblies to the approval of the engineer at no additional cost to the owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during ladder installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C2 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. If damage is excessive, the ladder assembly shall be replaced at no additional cost to the owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement
The department will measure Galvanized Ladder (Structure) as a single lump sum unit for each structure where ladder is 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.0105.298	Galvanized Ladder, B-13-651	LS
SPV.0105.299	Galvanized Ladder, B-13-652	LS

Payment is full compensation for fabricating, galvanizing, painting, transporting, and installing the ladder, including any touch-up and repairs.

179. Prefabricated Steel Truss Pedestrian Bridge B-13-653 LRFD, Item SPV.0105.300.

A Description

Furnish a fully engineered, fabricated steel truss pedestrian bridge structure, including bearings, and transport and erect it as shown in the plans, in accordance to Part 5 Structures of the standard specifications, and as hereinafter provided. These specifications shall be regarded as minimum standards for design and construction.

B Materials

B.1 Approved Manufacturers

The bridge shall be designed and manufactured by an approved designer and supplier selected from the department's approved products list.

To be eligible for this project, pre-fabricated bridges from other manufacturers must be pre-approved prior to the bid opening date. Applications for pre-approval may be submitted at any time. Prepare the application in accordance to the department requirements. If needed, obtain information and assistance with the pre-approval process from the Structures Design Section in the Bureau of Structures, Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

Structural design of the pedestrian bridge shall be by a professional engineer registered in the State of Wisconsin. Affix the engineer's seal, signature and date to the first page of the design calculations and plan sheets.

The two trusses in this project have a parabolic curved top chord (Bowstring) configuration with an ornamental (non-structural) continuing top chord that carries into the adjacent truss as shown in the plans. This ornamental element is to be made from a tube section, top chord depth x 2". Weld it to the truss web members and cap ends.

The pier centerlines, seat width and elevations and location of fixed and expansion bearings have been established and are shown in the plans. Based on expansion openings and bearing configuration the truss manufacturer will determine the lengths of the trusses and location of the bearings on the seats. As shown in the plans, the attachments for the railing will be provided and welded to the truss in the shop prior to painting.

Clean and paint the truss in the shop after fabrication.

Design the bridge in accordance to the most recent edition of the AASHTO LRFD Bridge Design Specifications, all current interims, and the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges, except as modified herein.

Design welded tubular connections in accordance to the Structural Welding Code-Steel ANSI/AWS D1.1. The fracture critical requirements of ANSI/AWS D1.5 do not apply, and Charpy V-notch impact testing will not be required. Loading shall be as stated in Section 3 of the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges. The bridge shall be a half-through truss with profile as shown on the plans with one diagonal per panel. Chords, diagonals, verticals, bracing, and floor beams may be tube

steel. Tube steel shall have a minimum thickness of ¼-inch. All other steel shapes shall have a minimum thickness of 5/16-inch. Field splices shall be bolted with ASTM A325 high strength bolts in accordance to the "Specifications for Structural Joints Using ASTM A325 or A490 Bolts". Type 3 bolts are required for weathering steel. For top and bottom chord field splices, splice plates are required on both the inside and outside surface of all four sides of the spliced tubing so that each bolt will be acting in double shear. Nuts may be welded to the splice plates to hold them in place during installation. When the collection of water inside a structural tube is a possibility, either during construction or during service, provide the tube with a drain hole at its lowest point.

If the profile grade line is on a crest vertical curve, camber the bridge to match the profile grade line shown on the plans plus the calculated dead load deflection. For a single span bridge, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection plus an amount equal to 1% of the bridge length. For a bridge with two or more spans, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection only. Concrete bridge decks shall be continuous over the floor beams and supported by 20-gauge, 1½-inch deep corrugated galvanized steel stay-in-place deck forms or removable deck forms if specified on the contract plans. The minimum slab thickness shall be 6-inches measured from the bottom of the deck form. Design the longitudinal reinforcing steel in the slab based on a wheel load located 1 foot from the face of the curb or toe plate, or a pedestrian live load of 90 psf, whichever controls.

Concrete strength (f'_c) shall be 4,000 psi and F_y of bar steel shall be 60,000 psi. A concrete mix with a unit weight of 120 pcf or 150 pcf may be used at the option of the manufacturer/contractor. Use a design dead load of 120 pcf or 150 pcf to match the concrete mix selected. Use load factors of 1.25 for dead load and 1.75 for live load for the design of the concrete slab. Minimum concrete cover shall be 2 inches for top reinforcement and 1 inch for bottom reinforcement. Design the bridge for expansion and contraction with a temperature range of -30º F to 120º F. Utilize Teflon slip pads or other approved material on the sliding surface of the expansion bearing assembly.

Install protective screening, when required, as shown on the plans. Use protective screening that is 9-gauge chain link fence with 2-inch mesh, coated as shown on the plans.

B.3 Plan Requirements and Submittals

Electronically submit the superstructure plans/shop drawings and design computations to the engineer for acceptance by the Structures Design Section. Make the submittal no later than 12 weeks after date of notice of contract approval. Allow the following time period in the construction schedule: 20 calendar days after the first receipt of plans by the Structures Design Section for a complete initial review of the design and plans submittal, and an additional 20 calendar days for any necessary revisions and/or corrections.

In the submittal, include the following:

1. Basic design criteria shown on the design plans.
2. Complete detailed drawings of all structural steel connections, sizes of members, span lengths between bearing points, skews, walkway widths, height of handrails and safety rails, bearing assembly details, anchor bolt locations, concrete deck reinforcement, design data, materials data, and dead and live load bearing reactions.
3. Engineer's certification. The plans shall be sealed, signed, and dated by a professional engineer registered in the State of Wisconsin.
4. One set of design calculations with independent checks.

The department will return plans (electronically) from this submittal, and any subsequent submittals, to the contractor, either indicating acceptance or marked with required revisions and/or corrections. Provide the engineer copies of final plans to be used in fabrication and construction.

B.4 Weld Testing

An independent agency shall perform nondestructive weld testing; the manufacturer shall pay for this testing. All welds are to be visually inspected except as noted below.

Ten percent of all fillet welds shall be magnetic particle tested.

All full penetration welds of chords shall be ultrasonically or radiographically tested.

Bottom chord welded tube splices for tube thicknesses less than 3/8-inches thick shall be radiographically tested or covered with fillet welded splice plates with non intersecting welds which develop 75% of the spliced member strength.

Submit electronically a written testing report upon completion.

C Construction

C.1 Delivery and Erection

Deliver the bridge by truck to the location that is nearest to the site and accessible by road. The contractor is responsible for unloading the bridge from the trucks at the time of arrival.

The manufacturer shall notify the contractor in advance of the expected arrival time. Information regarding delays after the trucks depart the plant such as inclement weather, delays in permits, rerouting by public agencies, or other circumstances shall be passed on to the contractor as soon as possible.

The manufacturer shall provide an erection procedure to the contractor and shall advise the contractor of the actual lifting weights, attachment points, and all other pertinent information needed to install the bridge. Unloading, splicing, bolting, and providing proper lifting equipment as well as all tools, equipment, labor, and miscellaneous items required to complete the work is the responsibility of the contractor. The procedure for bolting field splices shall be given to the contractor by the manufacturer.

C.2 Finishes

When unpainted steel is specified on the plans, all fabrications shall be produced from high strength, low alloy, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing. ASTM A606 sheet, and/or ASTM A588, ASTM A242, or ASTM A709 Grade 50W plate and structural steel shapes (F_y=50,000 psi) with a minimum corrosion index of 5.8 per ASTM G101.

Blast-clean all exposed surfaces of weathering steel in accordance to Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning (SSPC-SP7), latest edition. Exposed surfaces of weathering steel shall be defined as those surfaces seen from the deck and from outside the structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below the deck, and bottom of the the bottom chord do not need to be blasted.

When painted steel is specified on the plans, paint the bridge with an approved three-coat epoxy system as specified in this contract under the separate bid item Painting Epoxy System Pedestrian Bridge B-13-653.

D Measurement

The department will measure Prefabricated Steel Truss Pedestrian Bridge B-13-653 LRFD, as a single lump sum unit of work for the bridge, 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.0105.300	Prefabricated Steel Truss Pedestrian Bridge B-13-653 LRFD	LS

Payment is full compensation for designing, manufacturing, transporting and erecting the pedestrian bridge; furnishing bearing plates, pads, bolts, anchors bolts, and grout.

180. Painting Epoxy System Pedestrian Bridge B-13-653, Item SPV.0105.301.

A Description

This special provision describes the shop application of a three coat paint system on new structural carbon steel in accordance to standard spec 517 and as hereinafter provided.

B Materials

B.1 Coating System

Furnish a complete coating system from the department's approved product list. Use the same coating system for all repairs due to handling, shipping and erecting, and for all other uncoated areas. The color of epoxy shall be white and the urethane coating material shall match the color number shown on the plans in accordance to Federal Standard Number 595B, as printed in 1989. Supply the engineer with the product data sheets before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, the minimum drying time for shop or field applied coats, and the recommended procedures for coating galvanized bolts, nuts, and washers.

C Construction

The manufacturer of the structure shall be responsible for coating applications at slip critical field splices where one or all of the coatings may have to be omitted from faying surfaces.

D Measurement

The department will measure Painting Epoxy System Pedestrian Bridge B-13-653 as a single lump sum unit of work, completed in accordance 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.0105.301	Painting Epoxy System Pedestrian Bridge B-13-653	LS

Payment is full compensation for cleaning, surface preparation, furnishing and applying the paint materials to the new structural carbon steel; and for field repairs.

181. Railing Steel Type C1 Galvanized Pedestrian, B-13-653, Item SPV.0105.302; R-13-194, Item SPV.0105.303; R-13-197, Item SPV.0105.304; R-13-238, Item SPV.0105.305; R-13-241, Item SPV.0105.306; B-13-651, Item SPV.0105.307; B-13-652, Item SPV.0105.308; R-13-232, Item SPV.0105.400.

A Description

This special provision describes fabricating, galvanizing, painting and installing railing in accordance to standard specs 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Railing assemblies shall be galvanized and receive a two-coat paint system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B1 Coating System

B1.1 Galvanizing

After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Vent holes shall be drilled in members as required to facilitate galvanizing and drainage. Location and size of vent holes are to be shown on the shop drawings. All burrs at component edges, corners and at holes shall be removed and sharp edges chamfered 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 in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when painted, will produce unacceptable aesthetic and/or visual qualities, will not be permitted.

B1.2 Two-Coat Paint System

After galvanizing, paint all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints as hereinafter provided. All galvanized surfaces to be painted shall be cleaned per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface shall then be brush blast cleaned per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation for adhesion of the tie coat. Blasting shall not fracture the galvanized finish or remove any dry film thickness. After cleaning, 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 a preapproved 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 paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applier. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified paint 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
	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.

B2 Shop Drawings

Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the paint manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

C Construction

C1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, contractor shall repair or replace railing assemblies to the approval of the engineer at no additional cost to the Owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C2 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. If damage is excessive, the railing assembly shall be replaced at no additional cost to the Owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement

The department will measure Railing Steel Type C1 Galvanized Pedestrian (Structure) as a single lump sum unit of work, completed in accordance 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.0105.302	Railing Steel Type C1 Galvanized Pedestrian, B-13-653	LS
SPV.0105.303	Railing Steel Type C1 Galvanized Pedestrian, R-13-194	LS
SPV.0105.304	Railing Steel Type C1 Galvanized Pedestrian, R-13-197	LS
SPV.0105.305	Railing Steel Type C1 Galvanized Pedestrian, R-13-238	LS
SPV.0105.306	Railing Steel Type C1 Galvanized Pedestrian, R-13-241	LS
SPV.0105.307	Railing Steel Type C1 Galvanized Pedestrian, B-13-651	LS
SPV.0105.308	Railing Steel Type C1 Galvanized Pedestrian, B-13-652	LS
SPV.0105.400	Railing Steel Type C1 Galvanized Pedestrian, R-13-232	LS

Payment is full compensation for fabricating, galvanizing, painting, transporting; and for installing the railing, including any touch-up and repairs.

182. Bioretention Area Maintenance, Item SPV.0105.500.

A Description

This special provision describes maintaining Native Vegetated Mat, (Type), shrub plantings and landscape materials installed in a previous contract and located in two bioretention basins.

B Materials – FOR INFORMATION ONLY

Section B is provided for information only. Materials listed in this section have been provided as part of a previous contract, however any replacement materials necessary under this section will be required to conform to the materials listed below.

Provide any necessary replacement shrubs of the same genus and species as indicated in the previous contract conforming to standard spec 632.

Provide any necessary replacement species composition for Native Vegetated Mat by a qualified nursery having a minimum of 3 years' experience in the growing and installation of vegetated sod or mats composed of native prairie species in the Upper Midwest, including:

- Agrecol, 10101 North Casey Road, Evansville, WI 53526, (608) 884-4640
- Prairie Restoration, Inc., 31616 128th Street, Princeton, MN 55371, (800) 837-5986
- Creative Edge Landscaping, 215 Burden Avenue, Twin Lakes, WI 53181, (262) 877-2805
- Approved equal

Provide Native Vegetated Mat, (type) with the following qualities:

- Composed of solid seeded vegetated erosion control mat produced from a native seed matrix free from any noxious weeds or invasive species.
- Comprised of a soilless media with an integrated core material supporting a strong fibrous root system.
- Provide a composite growing soilless media capable of sustaining vigorous root growth: free of any admixture of topsoil, subsoil, slag, clay, stones, sticks or other extraneous matter and having a pH value of a minimum of 5.4 and maximum of 7.0.
- Provide a growing media and root zone with a 1 inch depth, +/- .20 inches.
- 100% biodegradable coir mat of woven coir fibers evenly machine twisted and spun at 20.5 to 25.5 oz/cu.yd.
- Biodegradable with the longevity of the core being 3-6 years according to manufacturer's specifications.
- Provide a roll size of 40 inches wide.

Provide species composition for Native Vegetated Mat, Type A with 35% grasses, sedges and rushes (and a minimum of 15 out of 17 grass/sedge/rush species) and 65% wildflowers (and a minimum of 35 out of 40 wildflower species) as follows:

Native Vegetated Mat, Type A
Grasses, Sedges and Rushes

COMMON NAME	LATIN NAME
Side-Oats Grama	*Bouteloua curtipendula*
Fringed Brome	*Bromus ciliatus*
Bebb's Oval Sedge	*Carex bebbii*
Copper-Shouldered Oval Sedge	*Carex bicknellii*
Fringed Sedge	*Carex crinita*
Lance-Fruited Oval Sedge	*Carex scoparia*
Brown Fox Sedge	*Carex vulpinoidea*
Canada Wild Rye	*Elymus canadensis*
Virginia Wild Rye	*Elymus virginicus*
Rattlesnake Grass	*Glyceria canadensis*
Reed Manna Grass	*Glyceria grandis*
Squirrel-Tail Barley	*Hordeum jubatum*
June Grass	*Koeleria cristata (macrantha)*
Little Bluestem	*Schizachyrium scoparium*
Dark-Green Bulrush	*Scirpus atrovirens*
Red Bulrush	*Scirpus pendulus*
Three-Square Bulrush	*Scirpus pungens*

Native Vegetated Mat, Type A
Wildflowers

COMMON NAME	LATIN NAME
Nodding Onion	*Allium cernuum*
Leadplant	*Amorpha canescens*
Meadow Anemone	*Anemone canadensis*
Marsh Milkweed	*Aesclepias incarnata*
Butterfly Weed	*Aesclepias tuberosa*
Sky Blue Aster	*Aster azureus*
Smooth Blue Aster	*Aster laevis*
New England Aster	*Aster novae-angliae*
Swamp Aster	*Aster puniceus*
Cream Wild Indigo	*Baptisia leucophaea*
Partridge Pea	*Chamaecrista fasciculata*
Prairie Coreopsis	*Coreopsis palmata*
White Prairie Clover	*Dalea candida*
Purple Prairie Clover	*Dalea purpurea*
Pale Purple Coneflower	*Echinacea pallida*
Purple Coneflower	*Echinacea purpurea*
Rattlesnake Master	*Eryngium yuccifolium*
Spotted Joe Pye Weed	*Eupatorium maculatum*
Sneezeweed	*Helenium autumnale*
Early Sunflower	*Heliopsis helianthoides*
Prairie Blazing Star	*Liatris pycnostachya*

Marsh Blazing Star	*Liatris spicata*
Cardinal Flower	*Lobelia cardinalis*
Great Blue Lobelia	*Lobelia siphilitica*
Monkey Flower	*Mimulus ringens*
Wild Bergamot	*Monarda fistulosa*
Smooth Penstemon	*Penstemon digitalis*
Prairie Cinquefoil	*Potentilla arguta*
Mountain Mint	*Pycnantheum virginianum*
Yellow Coneflower	*Ratibida pinnata*
Black Eyed-Susan	*Rudbeckia hirta*
Sweet Black-Eyed Susan	*Rudbeckia subtomentosa*
Compass Plant	*Silphium laciniatum*
Prairie Dock	*Silphium terebinthiaceum*
Ohio Goldenrod	*Solidago ohioensis*
Riddell's Goldenrod	*Solidago riddellii*
Showy Goldenrod	*Solidago speciosa*
Spiderwort	*Tradescantia ohiensis*
Blue Vervain	*Verbena hastata*
Culver's Root	*Veronicastrum virginicum*

Provide species composition for Native Vegetated Mat, Type B with 35% grasses, sedges and rushes (and a minimum of 16 out of 20 grass/sedge/rush species) and 65% wildflowers (and a minimum of 40 out of 48 wildflower species) as follows:

Native Vegetated Mat, Type B
Grasses, Sedges and Rushes

COMMON NAME	**LATIN NAME**
Side-Oats Grama	*Bouteloua curtipendula*
Fringed Brome	*Bromus ciliatus*
Blue Joint Grass	*Calamagrostis canadensis*
Bebb's Oval Sedge	*Carex bebbii*
Copper-Shouldered Oval Sedge	*Carex bicknellii*
Crawford's Sedge	*Carex crawfordii*
Brown Fox Sedge	*Carex vulpinoidea*
Canada Wild Rye	*Elymus canadensis*
Virginia Wild Rye	*Elymus virginicus*
Squirrel-Tailed Barley	*Hordeum jubatum*
Common Rush	*Juncus effusus*
Path Rush	*Juncus tenuis*
Switch Grass	*Panicum virgatum*
Little Bluestem	*Schizachyrium scoparium*
Hard-Stem Bulrush	*Scirpus acutus*
Dark-Green Bulrush	*Scirpus atrovirens*
Red Bulrush	*Scirpus pendulus*

Three-Square Bulrush	*Scirpus pungens*
Indian Grass	*Sorghastrum nutans*
Prairie Cord Grass	*Spartina pectinata*

Native Vegetated Mat, Type B
Wildflowers

COMMON NAME	LATIN NAME
Mud Plantain	*Alisma subcordatum*
Nodding Onion	*Allium cernuum*
Leadplant	*Amorpha canescens*
Marsh Milkweed	*Aesclepias incarnata*
Sky Blue Aster	*Aster azureus*
New England Aster	*Aster novae-angliae*
Swamp Aster	*Aster puniceus*
Panicled Aster	*Aster simplex*
White Wild Indigo	*Baptisia leucantha*
Wild Senna	*Cassia hebecarpa*
Prairie Coreopsis	*Coreopsis palmata*
Tall Coreopsis	*Coreopsis tripteris*
White Prairie Clover	*Dalea candida*
Purple Prairie Clover	*Dalea purpurea*
Canada Tick Trefoil	*Desmodium canadense*
Pale Purple Coneflower	*Echinacea pallida*
Purple Coneflower	*Echinacea purpurea*
Rattlesnake Master	*Eryngium yuccifolium*
Spotted Joe Pye Weed	*Eupatorium maculatum*
Boneset	*Eupatorium perfoliatum*
Sneezeweed	*Helenium autumnale*
Sawtooth Sunflower	*Helianthus grosseserratus*
Early Sunflower	*Heliopsis helianthoides*
Great St. John's Wort	*Hypericum pyramidatum*
Prairie Blazing Star	*Liatris pycnostachya*
Marsh Blazing Star	*Liatris spicata*
Monkey Flower	*Mimulus ringens*
Wild Bergamot	*Monarda fistulosa*
Smooth Penstemon	*Penstemon digitalis*
Prairie Cinquefoil	*Potentilla arguta*
Mountain Mint	*Pycnantheum virginianum*
Yellow Coneflower	*Ratibida pinnata*
Black Eyed-Susan	*Rudbeckia hirta*
Sweet Black-Eyed Susan	*Rudbeckia subtomentosa*
Rosin Weed	*Silphium integrifolium*
Compass Plant	*Silphium laciniatum*
Cup Plant	*Silphium perfoliatum*
Prairie Dock	*Silphium terebinthiaceum*
Grass-Leaved Goldenrod	*Solidago graminifolia*

Ohio Goldenrod	*Solidago ohioensis*
Riddell's Goldenrod	*Solidago riddellii*
Stiff Goldenrod	*Solidago rigida*
Spiderwort	*Tradescantia ohiensis*
Ironweed	*Veronia fasciculata*
Blue Vervain	*Verbena hastata*
Culver's Root	*Veronicastrum virginicum*

Provide species composition for Native Vegetated Mat, Type C with 35% grasses, sedges and rushes (and a minimum of 6 out of 6 grass/sedge/rush species) and 65% wildflowers (and a minimum of 20 out of 26 wildflower species) as follows:

Native Vegetated Mat, Type C
Grasses, Sedges and Rushes

COMMON NAME	LATIN NAME
Side-Oats Grama	*Bouteloua curtipendula*
Copper-Shouldered Oval Sedge	*Carex bicknellii*
Canada Wild Rye	*Elymus canadensis*
Virginia Wild Rye	*Elymus virginicus*
June Grass	*Koeleria cristata (macrantha)*
Little Bluestem	*Schizachyrium scoparium*

Native Vegetated Mat, Type C
Wildflowers

COMMON NAME	LATIN NAME
Nodding Onion	*Allium cernuum*
Leadplant	*Amorpha canescens*
Butterfly Weed	*Aesclepias tuberosa*
Sky Blue Aster	*Aster azureus*
Smooth Blue Aster	*Aster laevis*
New England Aster	*Aster novae-angliae*
Partridge Pea	*Chamaecrista fasciculata*
Prairie Coreopsis	*Coreopsis palmata*
White Prairie Clover	*Dalea candida*
Purple Prairie Clover	*Dalea purpurea*
Pale Purple Coneflower	*Echinacea pallida*
Purple Coneflower	*Echinacea purpurea*
Rattlesnake Master	*Eryngium yuccifolium*
Early Sunflower	*Heliopsis helianthoides*
Prairie Blazing Star	*Liatris pycnostachya*
Wild Bergamot	*Monarda fistulosa*
Smooth Penstemon	*Penstemon digitalis*
Prairie Cinquefoil	*Potentilla arguta*
Mountain Mint	*Pycnantheum virginianum*
Yellow Coneflower	*Ratibida pinnata*
Black Eyed-Susan	*Rudbeckia hirta*

Sweet Black-Eyed Susan	*Rudbeckia subtomentosa*
Compass Plant	*Silphium laciniatum*
Showy Goldenrod	*Solidago speciosa*
Spiderwort	*Tradescantia ohiensis*
Culver's Root	*Veronicastrum virginicum*

Provide all Pure Live Seed (PLS) from Wisconsin or Minnesota nurseries specializing in growing native species from Upper Midwestern genotypes in Zone 5a or lower of the Plant Hardiness Zone Map, Miscellaneous Publication 1475, revised 1990. Ensure all seed used to produce the final vegetated mat product is cold, dry stratified.

Provide any necessary replacement mats free of all noxious weed seeds.

Provide any necessary replacement anchoring staples conforming to the following: 6-inch long 100 percent biodegradable anchoring staples, defined as biodegradable from microbial activity in accordance to ASTM D5338 and ASTM D5271, biodegradable in cold (43° F) and hot (180° F) soil conditions. Provide staples that are water resistant.

C Construction

Maintain Bioretention Areas starting immediately upon contract start date and through the end of the last corresponding Landscape Planting and Surveillance Care Cycle of the Phase 1 Plantings. Estimated contract start date is August/September 2014. Estimated start date of Phase 1 Landscape Plantings is April or May, 2015. Estimated end of Phase 1 Landscape Planting and Surveillance Care Cycles is April or May, 2017.

Provide maintenance activities necessary to keep the Native Vegetated Mat, (type), shrubs and bioretention area in general in a healthy and flourishing condition including, but not limited to:

- Providing supplemental water if rainfall is less than 1-inch per week to maintain soil moisture content between 20-30 percent; watering to a wet condition and then letting the soil dry back to ensure roots grow deeper for moisture.
- Examining areas planted with native vegetated mat bi-weekly for the establishment of wind or water-borne weeds, invasives or pioneer woody vegetation. Removing weeds/invasives/pioneer woody vegetation selectively by hand-pulling. Do not spray weeds as drift could eliminate other plants. If a large-scale inhabitation of weeds or invasives is documented, contact supplier immediately and set into action a course of correction to eliminate the invasives before they can spread further.
- Removal of trash, debris, slurry, sediment or other material deposited by wind, water or other means in the bioretention areas.
- Removing dead material and replacing with new.

D Measurement

The department will measure Bioretention Area Maintenance as a lump sum unit of work, completed in accordance 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.0105.500	Bioretention Area Maintenance	LS

Payment is full compensation for bi-weekly inspections of bioretention areas, for providing and placing supplemental water; for removing depositions; and for maintaining and replacing plants and landscape materials.

183. Construction Staking Water Main, Item SPV.0105.600.

A Description
Preform work in accordance to the applicable provisions of standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction
Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Locate stakes to within 0.02 feet of the true horizontal position, and to establish the grade elevations within 0.01 feet of the true vertical position.

Place additional intermittent stakes as necessary to provide staking information at critical areas such as utility, driveway, roadway, and structure crossings.

D Measurement
The department will measure Construction Staking Water Main as a single complete lump sum unit of work, completed in accordance 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.0105.600	Construction Staking Water Main	LS

Payment is full compensation for locating and setting all construction stakes; and for relocating and resetting damaged or missing construction stakes.

184. Construction Staking Sanitary Sewer, Item SPV.0105.601.

A Description
Preform work in accordance to the applicable provisions of standard spec 650, and as hereinafter provided.

B (Vacant)

C Construction

Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Set and maintain a minimum of two construction stakes to establish location and grade of sanitary sewer structures in accordance to the plans and details for sanitary sewer structures. Set and maintain construction stakes to establish location and grade of sanitary sewer main. Provide stakes that establish the horizontal and grade elevation of sanitary main at intervals of 25 feet for a minimum of 100 feet from each structure and at intervals of 50 feet thereafter. Determine offsets in conjunction with contractor requirements. Verify the invert elevations of existing structures which are to remain and be connected into. Locate all stakes included in this bid item to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

Place additional intermittent stakes as necessary to provide staking information at critical areas such as utility, driveway, roadway, and structure crossings.

D Measurement

The department will measure Construction Staking Sanitary Sewer as a single complete lump sum unit of work, completed in accordance to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.601	Construction Staking Sanitary Sewer	LS

Payment is full compensation for locating and setting all construction stakes; and for relocating and resetting damaged or missing construction stakes.

185. Wastewater Control 200 GPM, Item SPV.0105.602; 500 GMP, Item SPV.0105.603.

A Description

Work under this item includes controlling or diverting, to the city of Madison's satisfaction, sanitary sewer flows during reconstruction of the sanitary sewer.

B (Vacant)

C Construction

Provide a pump with a capacity of 200 gallons per minute (GPM) for bid item Wastewater Control 200 GMP and 500 gallons per minute for bid item Wastewater Control 500 GPM and all associated equipment required to maintain a functioning sanitary sewer system during construction. It is not acceptable, at any time, to disrupt normal flow of wastewater in sanitary sewer service laterals without prior approval from the City of Madison. This condition also holds at the time of connection of an existing lateral to the new sewer main.

If the contractor elects to use bypass pumping as a means of wastewater control, the methods, equipment, type of hose, etc. are subject to approval by the city of Madison engineer. Ramp any hoses crossing streets, driveways, parking areas, etc., to prevent damage to hoses. Contain spillage of wastewater to be within the utility trench and dispose of spillage into existing sewer downstream to previously installed sewer piping. Spillage of wastewater to adjacent streets, lawns, etc. not will be tolerated. Should spillage occur, cease all construction operations immediately and begin cleanup operations. Clean site thoroughly to the satisfaction of the engineer prior to the resumption of any construction operations.

D Measurement
The department will measure Wastewater Control (amount) GPM as a single complete lump sum unit of work, completed in accordance 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.0105.602	Wastewater Control 200 GPM	LS
SPV.0105.603	Wastewater Control 500 GPM	LS

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

186. Dewatering for Sanitary Sewer Construction, Item SPV.0105.604.

A Description
Groundwater is expected to be encountered during excavation for the sanitary sewer. Provide and maintain ample means and devices with which to promptly remove all water entering excavations, trenches, and other parts of the work and keep said excavations dry until the structures to be built therein are completed.

Installation of concrete or masonry structures will not be acceptable if placed in water or if water is allowed to rise over masonry or concrete and there is danger of flotation or of setting up unequal pressures in the concrete until the concrete has set at least 24 hours and any danger of flotation has been removed.

The contractor is responsible for all work, materials, and equipment required to comply with permit conditions to dewater the site. At a minimum, pump water into a settling tank as described below to remove suspended solids prior to discharging the water into the storm sewer system.

B General
The contractor is responsible for obtaining all applicable State of Wisconsin permits for all groundwater control wells including if necessary the Wisconsin Department of Natural Resources (WDNR). In accordance to Paragraph 144.025(2)(e), Wisconsin Statutes,

permits are required for all groundwater control wells that singly or in aggregate produce 70 or more gallons per minute. Drill and seal all wells in accordance to requirements of the WDNR for installing and abandoning well.

If necessary, the WDNR address for obtaining well permits is:

Wisconsin Department of Natural Resources
Private Water Supply Section
BOX 7921
Madison, Wisconsin 53707

Maintain a copy of the permit with the City of Madison 48 hours prior to commencement of dewatering.

Where requested on the WDNR Dewater Permit Application, list the contractor as the owner. Adhere to all of the requirements of the dewatering permit including reporting requirements.

C Construction

The contractor is solely responsible for choosing a method of groundwater control which is compatible with the constraints defined. The contractor is responsible for the adequacy of the groundwater control system and shall take all necessary measures to ensure that the groundwater control operation will not endanger or damage any existing adjacent utility or structure.

Design, install, and operate all dewatering methods in such a manner to provide satisfactory working conditions and to maintain the progress of work. Design dewatering methods to avoid settlement or damage to adjacent property in accordance to the applicable legislative statutes and judicial decisions of the State of Wisconsin. Complete all required pumping, drainage and disposal of groundwater without damage to adjacent property or structures, or to the operations of other contractors and without interference with the access rights of public or private parties.

Dewater in such a manner that assures safe working conditions and provides stable trench side slopes and trench bottom for adequate support of the pipe and appurtenances. Dewater sufficiently to minimize or eliminate groundwater pressures below the proposed trench bottom which otherwise may tend to cause boiling or “quick” condition at the trench bottom.

Pump water from dewatering operations directly to a minimum 1,500 gallon holding tank to allow for settlement of large solids. Periodically pump water from the top of the settling tank.

Notify the engineer at least 3 days in advance of any proposed changes to the dewatering plan.

The contractor is responsible for removal and/or abandonment of dewatering wells. Remove and/ or abandon wells in accordance to all state and local regulations.

Obtain permission to use any storm sewers, or drains, for groundwater disposal purposes from the engineer and the city of Madison. The contractor is responsible for identifying and obtaining any permits required for the discharge of groundwater to the surface or to a sewerage system. Complete dewatering operations without causing flooding by over-loading or blocking the flow in the drainage facilities. Leave the facilities unrestricted and as clean as originally found. Upon completion of dewatering operations, repair any damage to facilities and restore facilities as directed by the engineer or the City of Madison Engineering Department. Costs for cleaning, repairing and restoring existing facilities will be considered incidental.

D Measurement

The department will measure Dewatering for Sanitary Sewer Construction as a single complete lump sum unit of work, completed in accordance to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.604	Dewatering for Sanitary Sewer Construction	LS

Payment is considered full compensation for furnishing all work necessary for pumping, settling and discharging water; for paying permit fees required; for eliminating and correcting all flooding or erosion damage caused by dewatering operations.

187. Water for Seeded Areas, Item SPV.0120.001.

A Description

This special provision describes furnishing, hauling and applying water to seeded areas as directed by the engineer, and as hereinafter provided.

B Materials

When watering seeded areas, use clean water, free of impurities or substances that might injure the seed.

C Construction

If rainfall is not sufficient, keep all seeded areas thoroughly moist by watering or sprinkling. Water for 60 days after seed placement or as the engineer directs. Apply water in a manner to preclude washing or erosion. The topsoil shall not be left un-watered for more than 3 days during this 60-day period unless the engineer determines that it is excessively wet and does not require watering. The equivalent of one inch of rainfall per week shall be considered the minimum.

D Measurement
The department will measure Water for Seeded Areas by volume by the thousand gallon units (MGAL), acceptably completed. The department will determine volume by meters or from tanks of known capacity.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0120.001	Water for Seeded Areas	MGAL

Payment is full compensation for furnishing, hauling, and applying the water.

188. Concrete Sidewalk HES 7-Inch, Item SPV.0165.001.

A Description
Perform work in accordance to the applicable provisions of standard spec 602, as detailed in the plans, and as hereinafter provided.

B Materials
Furnish materials conforming to the following:

Expansion Joint Filler……standard spec 415.2.3
Concrete……...…..standard spec 501 - Type III portland cement
Reinforcement…….……..standard spec 505
Electrical conduit……..……standard spec 652

C (Vacant)

D Measurement
The department will measure Concrete Sidewalk HES 7-Inch in area by the square foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.001	Concrete Sidewalk HES 7-Inch	SF

Payment is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway and alley entrances, or curb ramps; for providing all materials, including concrete, expansion joints, and reinforcement; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

189. Concrete Median Sloped Nose HES, Item SPV.0165.002; Blunt Nose HES, Item 0165.003.

A Description
Perform work in accordance to the applicable provisions of standard spec 620, as detailed in the plans, and as hereinafter provided.

B Materials
Furnish materials conforming to the following:

Concrete……..…..standard spec 501 - Type III portland cement
Joint Filler……standard spec 415.2
Reinforcement…….……..standard spec 505

C (Vacant)

D Measurement
The department will not measure Concrete Median Sloped Nose High Early Strength. The department will use pay plan quantity according to standards sped 109.1.1.2.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.002	Concrete Median Sloped Nose HES	SF
SPV.0165.003	Concrete Median Blunt Nose HES	SF

Payment is full compensation for furnishing all foundation excavation and preparation; for providing all materials, including concrete, and reinforcement; for placing, finishing, protecting, and curing; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

190. Grouted Joint Staining B-13-651, Item SPV.0165.100; B-13-652, Item SPV.0165.101; R-13-194, Item SPV.0165.102; R-13-197, Item SPV.0165.103; R-13-232, Item SPV.0165.104; S-13-371, Item SPV.0165.105; S-13-372, Item SPV.0165.106; S-13-385, Item SPV.0165.107; S-13-386, Item SPV.0165.108; N-13-2, Item SPV.0165.109.

A Description
Furnish and apply a colored concrete stain to the joints between stones produced by the form liner to create the appearance of grouted joints, as detailed in the plans and as hereinafter provided.

B Materials

B.1 Concrete Stain

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

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure and Seal EPX by Chem Masters
H + C Shield Plus by Sherwin-Williams

Provide concrete stain in accordance to federal color standard 36373.

C Construction

C.1 General

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

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

C.2 Preparation of Surfaces

Clean all surfaces that are to be stained 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 staining 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 surface and move it continuously in a sweeping motion. Give special attention to smooth surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the surface is not allowed.

C.3 Staining Concrete Surfaces

Apply the concrete stain in accordance to the manufacturer's recommendations.

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

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 Sample Area

Prior to applying stain to the structure, apply the stain to sample area of one structure measuring a minimum of 24-inches x 24-inches to demonstrate workmanship in the use of the stain on the structure. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to

staining. Submit color samples to the department prior to staining the sample. Prepare the concrete surfaces of the sample area and apply stain using the same materials and in the same manner as proposed for the structure. Do not apply stain to the structure until the department approves the sample area.

C.5 Surfaces to be Coated.
Apply concrete stain to the joints between stones produced by the form liner to create the appearance of grouted joints in accordance to the plan.

D Measurement
The department will not measure Grouted Joint Staining (Structure). The department will use pay plan quantity according to starndard spec 109.1.1.2.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.100	Grouted Joint Staining, B-13-651	SF
SPV.0165.101	Grouted Joint Staining, B-13-652	SF
SPV.0165.102	Grouted Joint Staining, R-13-194	SF
SPV.0165.103	Grouted Joint Staining, R-13-197	SF
SPV.0165.104	Grouted Joint Staining, R-13-232	SF
SPV.0165.105	Grouted Joint Staining, S-13-371	SF
SPV.0165.106	Grouted Joint Staining, S-13-372	SF
SPV.0165.107	Grouted Joint Staining, S-13-385	SF
SPV.0165.108	Grouted Joint Staining, S-13-386	SF
SPV.0165.109	Grouted Joint Staining, N-13-2	SF

Payment is full compensation for furnishing and applying the stain; for preparing the surface; and for preparing and staining a sample area.

191. Noise Barriers Double-Sided Sound Absorptive N-13-2, Item SPV.0165.300.

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

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

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

B.1 System Pre-Qualification

The noise wall system supplied must be pre-qualified by the department. The department maintains a list of pre-qualified systems which can be viewed at: http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm.

Systems eligible for use on this project shall be pre-qualified and added to that list prior to the award of this contract.

B.2 Design

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

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

B.2.1 Structural and Foundation Design

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

Design the noise barrier to withstand wind pressure, applied perpendicular to the barrier, in each direction, of 28.5 pounds per square foot for ground mounted barriers. Design the noise barriers to withstand earth pressures in accordance to the current edition of the AASHTO code referenced above in earth retaining areas as shown on the plans.

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

B.2.2 Fire Hose Access Openings

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

B.2.3 Barrier Profile

Unless otherwise shown on the plan or approved by the engineer, design the top of the noise barrier to be horizontal and at or above the acoustic elevation line shown on the plans. The bottom elevation of the noise barrier shall be as shown on the plans. Changes in

elevation shall be accomplished by stepping sections at posts. Steps shall not exceed 2.5-feet in height. All joints shall be horizontal or vertical and shall be aligned with the adjacent panels.

B.2.4 Panel Orientation
Design the panels to prevent entrapment and ponding of water. Avoid inadvertently providing areas for perching, nesting of birds, or collecting of dirt and debris in the design of the noise barrier system.

B.2.5 Color and Surface Texture
Unless otherwise shown and provided for in the plans, wall pattern shall contain textures with relief features of sufficient depth and quantity to be distinguishable at an observation distance of 500-feet.

The final color of the panels and posts shall be Federal Color No. 33448 and the top band of the panels shall be Federal Color No. 20122 in accordance to the plans.

Supply and deliver to the engineer a 3-foot x 5-foot minimum test panel for each panel type, with the specified pattern and colors. Obtain the engineer's acceptance of the panel's pattern and color prior to production of the panels required for the contract. The accepted pattern and color test panels shall remain on the project site in a readily accessible location for the duration of the project. The accepted pattern and color sample panels will be the standard for all noise barriers on the project.

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

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

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

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

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

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

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

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

B.2.9 Design Coordination

B.2.9.1 Underground Utility and Drainage Crossings

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

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

B.2.9.2 Proposed Structures

Noise barrier posts shall be spaced at 12-foot increments. Coordinate any required changes to the noise barrier post spacing for the design of the noise barrier with the engineer.

Formliner joint depth on the back side of the noise wall panels shall either match the plan detail or the joint depth shall match the front side of the noise wall panel.

B.2.10 Project Submittal Requirements

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

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

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

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

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

B.2.11 Review Process

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

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

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

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

B.3 Wall System Testing Requirements

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

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

B.3.1 Noise Reduction Coefficient (NRC)

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

B.3.2 Salt Scaling Resistance

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

B.3.2.1 Test Specimens

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

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

B.3.2.2 Test Procedure

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

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

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

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

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

B.3.2.3 Test Report

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

a. After 50 freeze-thaw cycles the test specimens shall not exhibit excessive deterioration in the form of cracks, spalls, aggregate disintegration, delamentation, or other objectionable features.

b. Compliance with the test requirements is based upon a loss of mass of not more than 0.2 pounds per square foot from the surface after 50 cycles of freezing and thawing. The measured surfaces are not to include the exposed surface of any core material of a composite concrete component.

c. The report shall include the following:

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

B.4 Wall Systems Material Requirement

Contractor shall provide certification of compliance to all applicable requirements in B.4. All material certifications shall reference the specific facility manufacturing the material and this contract. Certifications will be required for each lot of material not to exceed 100,000 SF of noise barrier produced. For projects that do not exceed 100,000 SF, a minimum of 2 lots of material will represent the project, each lot representing equivalent square footage.

B.4.1 Sound Transmission Loss (TL)

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

B.4.2 Structural Steel

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

B.4.3 Accelerated Weathering

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

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

B.4.4 Corrosion Resistance (Salt Fog Exposure)

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

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

C Construction

C.1 General

Construct the noise barriers at the locations shown on the plans, in accordance to the contract specifications and design drawings and/or as directed by the engineer. All sound absorbing composite concrete components shall be delivered to the project site(s) as a finished component. A sound absorbing composite concrete system, which has the sound absorbing material glue-laminated or alternately affixed by a secondary adhesion method on the project site, will not be allowed.

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

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

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

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

C.2 Fire Hydrant Location Signs
Furnish and install fire hydrant location sign(s). These shall be attached to the noise barrier at each location shown on the plans by a method as shown on the department approved drawings. The signs shall conform and be of the type specified in the department's sign plate book, plate D9-54 and/or D9-54A.

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

C.3 Tolerances The posts and panels comprising the noise barrier shall be installed plumb within ½-inch of vertical in 15-feet. The posts shall be located to the line and grades as shown in the plans to within +/- ¾-inch. Horizontal joints of adjacent panels shall be lined up to a vertical tolerance of ¼-inch. Where vertical adjustments are required for alignment, a mortar base or steel shims shall be used. Galvanize and prime coat steel shims in accordance to B.2.8.

D Measurement
The department will measure Noise Barriers Double-Sided Sound Absorptive N-13-2 by the square foot, acceptably completed.

The measurement will be based on the plan quantity and no additional quantity will be paid for, except that any modifications to the contract quantity caused by corrections or revisions of the original contract plan, which have been approved by the engineer, will be measured by the square foot. This area in square feet will be determined by measuring the

length in linear feet along the faces of the noise barrier, and height in linear feet from bottom to top of the noise barrier, then multiplying the measured length by the measured height, and the contract quantity will be adjusted accordingly to determine the final pay quantity.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.300	Noise Barriers Double-Sided Sound Absorptive N-13-2	SF

Payment is full compensation for preparing the design drawings and calculations; supplying and delivering samples and test barrier panels as required in B.2.5 and B.3; furnishing all labor, equipment, and materials required for the manufacture, testing, supply, and delivery of the noise barrier material including aesthetic patterns on panel and coloring; furnishing all labor, tools, equipment, and materials required to construct the noise barriers, including site preparation, all necessary excavation, disposing of materials, constructing foundations, and erecting posts and panels.

192. Longitudinal Grooving Bridge Deck, Item SPV.0165.301.

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

The grooving machine to contain blades mounted on a multi-blade arbor on a self-propelled machine built for grooving hardened concrete surfaces.

The grooving machine to have a depth control device that detects variations in the deck surface and adjusts the cutting head height to maintain a specified depth of groove.

The grooving machine to have a guide device to control multi-pass alignment.

C Construction

Perform longitudinal grooving operation in a manner to preclude any damage to the concrete deck surface.

Longitudinal grooving operation to result 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, all grooves on the bridge deck surface are to end 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.

Grooves shall be 1/8-inch wide and 3/16-inch deep. The longitudinal groove shall be spaced at ¾ inches center-to-center. Tolerance for groove width shall be +1/16 inch to -0 inch. Tolerance for groove depth shall be ± /16 inch. Tolerance for groove spacing shall be ± 1/16 inch.

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 by square foot, acceptably completed.

The quantity will be determined by multiplying the grooved width by the total length grooved.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.301	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.

193. Wall Concrete Panel Mechanically Stabilized Earth LRFD, R-13-194, Item SPV.0165.302; R-13-197, SPV.0165.303; R-13-238, SPV.0165.304; R-13-241, SPV.0165.305; R-13-232, Item SPV.0165.400.

A Description

This special provision describes designing, furnishing materials and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years.

B Materials

B.1 Proprietary Mechanically Stabilized Earth Concrete Panel Wall Systems

The supplied wall system must be from the department's approved list of concrete panel mechanically stabilized earth wall systems.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures, Structures Design Section. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Design Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

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.

Prepare the design/shop plans on reproducible sheets 11 inch x 17 inch, including borders. Each sheet must have a title block in the lower right corner. The title block must include the project identification number and structure number. Provide design calculations and notes on 8 ½ inch x 11 inch sheets, containing 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. Provide all plans, shop drawings, and calculations, signed, sealed, and dated by a professional engineer licensed in the State of Wisconsin.

Provide a design 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. Define the associated resistance factors in accordance to Table11.5.6-1 LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the department. 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. Design the corner element to 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, design the wall to resist the applied abutment/bridge lateral forces specified on the contract plans.

Design walls parallel to supporting highway traffic for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. Consider, in the design, the traffic barrier impact where applicable. Design walls that do not carry highway traffic for a live load surcharge of 100 psf in accordance to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department or its consultant and is provided on the wall plans.

Consider the internal and compound stability of the wall mass in accordance to AASHTO LRFD 11.10.6. Include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level in the internal stability analysis. Use the Simplified Method or Coherent Gravity Method to design the wall. Base calculations for factored stresses and resistances upon assumed conditions at the end of the design life. Compute compound stability for the applicable strength limits.

Provide facing panels meeting the design requirements of AASHTO LRFD 11.10.2.3. Design the facing panels 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. Base the design of the steel reinforcement within the panels on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 the wall height or as shown on the plan. This length cannot be less than eight feet. Design the soil reinforcement length to be the same from the bottom to the top of the wall. Extend the soil reinforcement a minimum of 3.0 feet beyond the theoretical failure plane in all cases. Design the soil reinforcement layers to have a maximum vertical spacing of 31 inches between layers. Locate the uppermost layer of the reinforcement a minimum of six inches below the bottom of an overlying slab, footing or top of the wall. Check the upper layers of the soil reinforcement to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

Connect all soil reinforcement steel required for the reinforced soil zone to the face panels. Design the reinforcement and the reinforcement/facing connection strength to resist maximum factored reinforcement loads in accordance to AASHTO LRFD Section 11.10.6. Facing connection strength is defined as the resistance factor times the failure load or the load at 0.5 inch deformation times 0.9, whichever is less. Base the nominal long term design strength in steel reinforcement and connections upon assumed conditions at the end of the design life.

Prefabricate soil reinforcement into single or multiple elements before galvanizing. Fabricate or design the soil reinforcement 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. Splicing steel reinforcement is not allowed unless approved by the Structures Design Section.

Install MSE facing panels on concrete leveling pads with a minimum cross section of 6-inches deep by 1-foot wide. Do not consider potential depth of frost penetration at the wall location 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. Submit sample analyses and hand output to verify the output by the software. Clearly indicate, in the design calculations and notes, the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

Submit the wall submittal package electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. Include all details, dimensions, quantities and cross-sections necessary to construct the walls with the submitted detailed plans and shop drawings.

B.3 Wall System Components

Provide materials furnished for wall system components under this contract conforming to the requirements of this specification. Submit all certifications related to material and components of the wall systems specified in this subsection to the engineer.

B.3.1 General

Provide walls that have modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. Provide concrete panels that have a minimum strength of 4000 psi at 28 days. Configure the panel edges to conceal the joints. The detail will 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 greater than 0.75 inches will not be allowed. 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.

Use a minimum of two bearing pads per panel with the allowable bearing stress not exceeding 900 psi. Provide bearing pads manufactured from EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80 or high-density polyethylene pads with a minimum density of 0.034 lb/in^3 in accordance to ASTM 1505.

Use an 18-inch wide geotextile on the backface of the wall panels to cover all panel joints. Provide a geotextile meeting 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. Attach the geotextile with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. Apply the adhesive to the panels, not to the geotextile.

Provide galvanized steel for all steel portions of the wall system exposed to earth. Carefully inspect all soil reinforcement and attachment devices 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 specification standard spec 501 as modified in standard spec standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard specification 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 specification standard spec 501 as modified in standard spec standard spec 716. Provide QMP for leveling pad concrete as specified in standard specification standard spec 716, Class II Concrete.

Embed the leveling pad at a minimum depth of 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. Design the leveling pad's steps to 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 but will not be measured for payment.

B.3.2 Backfill

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain recycled or milled asphalt, recycled concrete, foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

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

SieveSize	Percentage by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

Provide material that has a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. In addition, provide backfill material meeting 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.

Prior to placement of the backfill, obtain and furnish to the engineer a current certified report of test results that the backfill material complies with the requirements of this specification. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. When backfill characteristics and/or sources change, a certified report of tests will be provided for the new backfill material.

B.4 Sample Panels

Provide sample wall panels with the textures and relief features as provided on each structure plan.

Supply and deliver to the engineer a 5-foot x 5-foot minimum sample panel for each panel type, demonstrating all wall components, for each structure with the specified pattern and colors for each structure. Match or exceed the stain manufacturers minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining the sample panel. Prepare concrete surfaces of the sample panels and apply the stain using the same materials and in the same manner as proposed for each structure. Obtain the engineer's acceptance of the panel's pattern and color prior to production of the panels required for the contract. The accepted pattern and color test panels shall remain on the project site in a readily accessible location for the duration of the project. The accepted pattern and color sample panels will be the standard for the wall panels for each structure. Continue to provide test panels until accepted by the engineer.

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

C Construction

C.1 Excavation and Backfill

Excavation will encompass the preparation of the foundation for the leveling pad and the reinforcing strips in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Compact all backfill behind the wall as specified in standard spec 207.3.6.

Backfill placement shall closely follow the erection of each course of panels. Compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. 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.

Perform compaction testing on the backfill. When performing nuclear testing, use a nuclear gauge from the department's approved list, ensure that the operator is a HTCP certified Nuclear Density Technician I, and conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 2 feet of vertical wall height, per 200 feet length of wall, or major portion thereof. At least one test for every 2-foot of vertical wall height is required. Test sites will be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing. The cost of compaction testing shall be considered incidental to the cost of the wall.

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 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 plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.2 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. Specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances exceeding ¾-inch when measured along a 10-foot straight edge will not be accepted. The maximum allowable offset in any panel joint is ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) is not allowed to 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 may cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, panels with imperfect molding, honeycombing, cracking or severe chipping of panels will be cause for panel rejection.

C.3 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

C.4 Name Plates

Furnish and install name plates conforming to the requirements of standard spec 506.2.4. at the locations the plans show. Embed or epoxy the plate lugs in the concrete.

Compensation for furnishing and placing of name plates shall be included in the contract price for Wall Concrete Panel Mechanically Stabilized Earth LRFD (structure) and no additional compensation therefore will be allowed.

D Measurement

The department will not measure Wall Concrete Panel Mechanically Stabilized Earth LRFD (Structure). The department will use pay plan quantity according to standard spec 109.1.1.2.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.302	Wall Concrete Panel Mechanically Stabilized Earth LRFD, R-13-194	SF
SPV.0165.303	Wall Concrete Panel Mechanically Stabilized Earth LRFD, R-13-197	SF
SPV.0165.304	Wall Concrete Panel Mechanically Stabilized Earth LRFD, R-13-238	SF
SPV.0165.305	Wall Concrete Panel Mechanically Stabilized Earth LRFD, R-13-241	SF
SPV.0165.400	Wall Concrete Panel Mechanically Stabilized Earth LRFD, R-13-232	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 concrete masonry and steel reinforcement for cap and copings; constructing the retaining system and drainage system; providing backfill, backfilling, compacting, performing compaction testing, performing QMP testing; for name plates; and for sample panels and coordination for staining the

sample panels. 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.

194. Colored and Stamped Concrete, 5-Inch, Item SPV.0165.500; B-13-654, Item SPV.0165.501.

A Description

Construct colored concrete pavement in accordance to the standard specifications, as shown in the plans, and as hereinafter provided.

B Materials

B.1 Concrete

Provide concrete in accordance to standard specs 405 and 416 and as follows:

Integrally color the concrete using non-fading synthetic iron oxides conforming to ASTM C979. Follow color pigment manufacturers recommendations for minimum and maximum percentage of loading by weight of the cementitious materials in the mix.

Provide a tan integral color and closely matching Federal Standard 595 C Color Server, FS color #33448. Provide manufacturer's color chart for integral color to engineer for approval before use.

Maintain mix characteristics for all colored concrete requiring a matching finish. Use the same source, brand, type, and color of portland cement, supplementary cementitious materials, aggregates and admixtures for colored concrete throughout the project. Use constant cement content, supplementary cementitious material content and water/cementitious materials ratio in the concrete mix to maintain consistent color.

B.2 Concrete Curing

Supply a clear, non-yellowing liquid membrane-forming clear curing compound conforming to ASTM C 1315, Type 1 A.

B.3 Admixtures

Furnish admixtures designed for use and compatible with colored concrete pigments. Do not use calcium chloride or admixtures containing chlorides.

B.4 Mix Approval

B.4.1 General

Perform preliminary laboratory and/or field trial batching to establish the mix proportions necessary to conform to the contract-required color.

Submit to the engineer the final mix design including specific sources and/or trade names as applicable for all materials. Include the slump, air, and water-cement ratio in accordance to standard spec 416.

B.3.2 Test Panels

Provide the engineer two business days' notice for production of a test panel. At an engineer-approved location on the project, place and finish an 8-foot by 8-foot by 5-inch colored concrete test panel using processes and techniques intended for use on permanent work, including curing procedures stamping, coloring, antiquing, joint tooling and sealing. Produce test panels using the same workers who will perform the contract work. Retain samples of cements, sands, aggregates and color additives used in test panels for comparison with materials used in the contract work. For an accurate representation of the desired color or color intensity, produce the colored concrete for the test panel in a minimum batch size of 2 cubic yards or in full cubic yard increments for batch sized greater than 2 cubic yards. Remove excess material from the project site.

The engineer will determine acceptance of the test panel color based on review and approval by City of Madison and department representatives. Test panel color will be evaluated for approval within 5 business days after the test panel was poured and sealed.

Store and protect the test panel on the project site for use during the entire project as a comparison of the completed work. Work that does not match the test panel, as determined by the engineer, may be ordered for removal by the engineer.

Test panels that are damaged or removed from the project site shall be replaced at the contactors expense.

B.5. Stamp

Use reusable elastomeric/urethane form liners of the architectural surface treatment(s) as detailed in the plans and hereinafter provided.

Furnish 'Fractured Slate Embossing Skin' pattern (No. 910M), by Scofield, or approved equal with a tool size of approximately 42 inches by 42 inches. Provide a sample formliner pattern to engineer for approval by the City of Madison and department representatives a minimum of 10 business days prior to preparing the test panel.

B.6. Antiquing Release Agent

Use an antiquing release agent that is compatible with the form liner and coloring materials.

Use a dark tan to light brown antiquing release agent color closely matching Federal Standard 595 C Color Server, FS color #30145.

Provide manufacturer's color chart for antiquing release agent to engineer for approval before use.

B.7. Concrete Sealant
Use concrete sealant that is compatible with the form liner and installation methods.

Prime Sealant: Glossy.
Secondary Sealant: Matte.

C Construction
Construct Colored and Stamped Concrete, (depth) in accordance to standard spec 405 and 416.

Coordinate locations of permanent signage requiring PVC pipe box outs in accordance to standard spec 634.3.2 and as approved by the engineer.

C.1 Placement
Produce consistent colored concrete mixes. Once colored concrete placement has started, variations in the amounts, types, or source of materials are not permitted, with the exception of minor adjustments of water and air-entraining agent as necessary in accordance to the standard spec. Other changes require the contractor to repeat the mix approval process.

Schedule colored concrete placement to minimize exposure to rapid drying conditions, wind and full sun, before curing materials are applied. Do not place colored concrete if rain, snow, or freezing temperature is forecast within 24-hours.

Cover and protect adjacent construction work from discoloration and spillage during placement and curing of colored concrete. Remove and replace discolored work as the engineer directs.

Perform finishing operations consistently to avoid color variation in the finished colored concrete. Do not begin finishing until bleed water has left the surface. If water is added to the surface of the colored concrete to aid in finishing, the engineer will order removal of the colored concrete. During final finishing and texturing apply all strokes in the same direction.

Cure colored concrete in accordance to standard spec 415.3.12, using the impervious coating or impervious sheeting method. Protect colored concrete from premature drying and excessive cold or hot temperatures by prompt application of curing materials. Do not allow plastic sheeting to come in contact with colored concrete.

C.2 Form Liner (Stamp) Preparation
Clean the form liner prior to each use and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer's recommendations.

C.3 Stamp
Coordinate with the engineer to verify stamping pattern orientation prior to starting the stamping work.

Prepare stamp tools with a full, smooth coat of antiquing release agent.

While concrete is still in the plastic state, apply imprinting tools to the surface and press into the concrete to create the desired impression. Finish all surfaces uniformly. Ensure that the textured surface is free of laitance; sandblasting is not permitted. Grind or fill any blemishes.

Hand apply antiquing release agent to each individual joint line by spraying or rolling.

Shake or spray antiquing release agent over concrete surface only to achieve desired look and to match approved test panel.

C.4 Finishing
Provide tooled joints in a 4’ x 4’ grid, perpendicular to the back of the primary curb, or as directed by the engineer.

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

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

Ensure that concrete is clean and dry before proceeding with concrete sealant.

Spray or roll on a single layer of gloss sealant. Follow by spraying on a single coat of matte finish sealer. Do not roll matte finish sealer onto concrete surfaces.

Protect the colored concrete from damage. Do not permit construction traffic or material storage on colored concrete. Exclude other foot traffic from colored concrete for at least 24 hours after placement.

D Measurement
The department will measure Colored and Stamped Concrete, (Depth/Structure) by the square foot, 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.0165.500	Colored and Stamped Concrete, 5-Inch	SF
SPV.0165.501	Colored and Stamped Concrete, B-13-654	SF

Payment is full compensation for preparing the foundation; for developing mix designs and providing and storing test panels; for furnishing materials (including concrete masonry, colored pigments, sealers, joint and bond breakers, and retarders), hauling, preparing, placing, curing, and protecting the concrete; for stamping, for antiquing and finishing; for sawing required for construction of colored concrete; for jointing and joint materials; for measuring opening strength including fabricating and testing cylinders, obtaining and testing cores, and evaluating maturity; for furnishing all removal of test panels and surplus colored concrete; and for protecting adjacent work.

195. Mosaic Tile Installation, Item SPV.0165.550.

A Description

Install mosaic tile panels as shown in the plans and as hereinafter provided.

B Materials

B.1 Waterproofing

Supply a thin, load bearing waterproofing/anti-fracture membrane suitable for exterior, vertical tile applications that does not require the use of fabric in the field, coves or corners.

Provide a product that will form a flexible, seamless membrane with anti-fracture protection of up to 1/8" over shrinkage and non-structural cracks and that meets or exceeds ANSI A118.10 and A118.12 and is International Association of Plumbing and Mechanical Officials (IAPMO) approved.

Submit all waterproofing, anti-fracture product data for all materials to engineer for review and approval prior to use.

B.2 Mortar Adhesive

Supply a polymer fortified, thin-set mortar adhesive that is chemical resistant and suitable for exterior vertical tile applications in all environments. Provide a product that contains antimicrobial protection against mold and mildew.

Provide a product that meets or exceeds ANSI A 118.4 Shear Bond Strength Requirement and ANSI A118.11 and conforms to ISO 13007 with a classification of C2TES1P1.

Ensure the mortar adhesive is compatible with concrete substrate, waterproof/anti-fracture membrane, grout and mosaic tile materials.

Color: Use white mortar adhesive behind any semi-transparent glass tile mosaics. Any other standard color maybe be used elsewhere.

Do not use epoxy mortar setting materials.

Submit all mortar adhesive product data to engineer for review and approval prior to use.

B.3 Joints
Supply a high-performance, single component, neutral cure, 100% silicone caulk suitable for exterior vertical applications in environments subject to freeze-thaw from same manufacturer as grout product(s) and designed for ceramic, glass and stone tile applications and with mold and mildew inhibitor.

Provide caulk conforming to ASTM C-794 for Adhesion Properties, with 25% extension and compression, and conforming to the following ASTM C-920 properties: Type S, Grade NS, Class 25, Use NT, Use I, Use M and/or Use G or higher standard.

Ensure the caulk is compatible with concrete substrate, waterproof/anti-fracture membrane, mortar adhesive, grout and mosaic tile materials.

Color: Provide a reasonable match for the caulk color to the selected grout color. Color may vary for each separate installation based on grout color(s) chosen.

Submit caulk product data for all materials to engineer for review and approval prior to use.

B.4 Grout
Supply high-performance, non-sag, uniformly colored epoxy-based grout rated for exterior vertical applications with water resistant properties and conforming to ANSI A118.3 and with mold and mildew inhibitor.

Ensure the grout is compatible with waterproof/anti-fracture membrane, mortar adhesive and mosaic tile materials.

Color: Provide grout from industry-leading manufacturer. Each individual installation may require a separate grout color, to be selected from the standard range of colors at a later date by the two mosaic designers.

Submit grout and pigment product data for all materials to engineer for review and approval prior to use.

Submit the manufacturer's standard grout color sample chart to both the engineer and each of the two mosaic designers for final grout color selection a minimum of 30 days prior to the mosaic tile installation.

B.5 Mosaic Tiles
Individual mosaics or multiple sections of each mosaic will be supplied by the department.

Size and dimensions of the final mosaic installations may vary but will generally conform to the following:

One at 16 feet x 5 feet, one at 15 feet x 3 feet, one at 19 feet x 5 feet, one at 15 feet x 2 feet and nine at approximately 8 feet x 5 feet each.

Mosaic tile sections may be provided in smaller sections, approximately 4 square feet in area, to facilitate installation.

C Construction

Provide experienced journeymen competent in setting variable-material mosaic tile installations in exterior applications and at the general sizes of this project. Provide journeymen familiar with ANSI tile and related material specifications and standards and the Tile Council of America requirements. Submit to the engineer a list of a minimum of three references, including client contact information, project description, project size and project cost installed by the same journeymen as will be working on the project. In order to qualify as a reference, the project must have been constructed in Wisconsin or the upper Midwest in the past five years.

Coordinate with engineer and mosaic designer(s) to perform field layout of mosaics, to facilitate supervision by the engineer and mosaic designer(s) during installation and to initiate final review and acceptance by the engineer.

Pick up and deliver the mosaic tile installations to the project site. The mosaics can be picked up within 10 miles of the project site. During transit secure the mosaic tiles to prevent damage to the tiles. Store the mosaics at a secure location at the project site until installation is complete to prevent damage to the mosaics.

C.1 Equipment

Furnish equipment and tools necessary for performing all parts of the work.

C.2 Preparation

Ensure all concrete has been constructed to the tolerances indicated in the drawings and in such a manner that will allow installation of the mosaics. Concrete must be cured a minimum of 28 days, or in accordance to the manufacturer's specifications for the mortar adhesive and grout, prior to the mosaic tile installation process. Report any discrepancies or faulty concrete conditions to the engineer immediately and do not proceed with installation of mosaic tile materials until any and all unsatisfactory conditions have been corrected.

Produce mortar adhesives and grouts in full increments according to manufacturer's written mixing instructions.

Produce consistent colored mortar adhesives and grouts. Once placement has started, maintain consistent amounts, types, and source of materials without exception. If multiple units are used, blend batches of product to avoid dye lot differences and maintain consistency.

Determine proper trowel size and style by measuring mosaic tile thickness.

C.3 Placement and Finishing

Schedule materials placement to minimize exposure to rapid drying conditions such as wind and full sun. Do not place adhesives, grout or sealant if rain, snow, or temperatures below 50 degrees Farenheit are forecast within 48 hours after final placement.

Cover and protect all adjacent construction, concrete, concrete stain, and railing from discoloration and spillage during placement and curing of mosaic tile installations. Clean and correct any adjacent construction as the engineer directs at no expense to the department.

Coordinate with each mosaic designer once mosaics have been delivered to the project site to ensure the design and layout matches the installation intent.

Scour concrete with a wire brush prior to applying waterproof, anti-fracture membrane in order to remove contaminants, dust and dirt, or other materials which could interfere with bonding.

Apply waterproofing, anti-fracture membrane to concrete framework, following all manufacturers' installation instructions for preparation, application and cure time.

Firmly apply the mortar adhesive onto the waterproof substrate and using additional adhesive setting material, comb the notches full to establish the proper depth of setting mortar bed.

Locate the joint locations for the mosaic tile area for any installations exceeding 8 linear feet, measured horizontally. Locate joints a maximum of every 8-feet or at equal increments. For example, an installation measuring 16 feet in length will have a single vertical expansion joint located at 8 feet from either end; an installation measuring 15 feet will have a single vertical expansion joint located 7.5 feet from either end; an installation measuring 19 feet will have two vertical expansion joints located at 6'-4" apart. Provide space for a 3/8" wide expansion joint at the joint location. Lay tile starting at the joint location, installing outward toward the edges in both directions.

Apply mosaics using even pressure to establish contact. Tap as necessary to achieve a uniform, flat surface firmly embedded into the mortar bed. Line up adjacent tile sheets/patterns and repeat the installation, tapping sheets from one sheet to the next.

Adjust mosaic tile joints while tile tape or backing is in place and mortar has not set.

Installations may require small amounts of stitching at the edges of two adjacent but separate sheets. Small portions of tile may need to be added to the design during construction and stitched into these interstitial areas. Coordinate any stitching with engineer and mosaic designer in the field.

Allow to set for a minimum of 12 hours to allow mortar to set adequately before removing mosaic tile backing; confirm appropriate timing and methodology with the engineer and mosaic designer(s).

Re-attach any tiles that come loose during the tile sheet/tile tape removal process.

Fill the expansion joint at the centerline location of the installations with a single, smoothed, concave line of caulk.

Fill the vertical and horizontal joints around all outside edges of all installations with a single, smooth, concave line of caulk.

Apply grout in accordance to the grout manufacturer's specifications and based on the specific constraints of the project and individual mosaic layouts and materials. Construct grout joints that are full and uniformly finished.

Remove all residual films prior to curing. Provide initial and final cleaning according to manufacturer's written instructions for specific products used.

D Measurement
The department will measure Mosaic Tile Installation in area by the square foot, 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.0165.550	Mosaic Tile Installation	SF

Payment is full compensation for pick up, delivery and storage of mosaic tiles; furnishing materials (including waterproofing, anti-fracture material, mortar adhesive, grouts, and caulks); preparing, placing, adjusting, and protecting the installations; for coordinating with the engineer and mosaic designers; and for field review and approval before, during and after installations.

196. High Early Strength Concrete Pavement 11-Inch, Item SPV.0180.001; 9-Inch, Item SPV.0180.002.

A Description
Perform work in accordance to the applicable provisions of standard spec 415 and as hereinafter provided.

B Materials
Furnish High Early Strength Concrete Pavement (Depth) in accordance to Standard Spec 715, that meets the required opening strength of 3000 psi within 18 hours of placement for High Early Strength Concrete Pavement 11-Inch and within 4 hours of placement for High

Early Strength Concrete Pavement 9-Inch. Nonconforming material will be subject to a price reduction in accordance to section 8-10.6.4.2 of the Wisconsin Department of Transportation Construction and Materials Manual.

Provide a mix design that meets the conditions specified in the QMP provision. The mix design is required to have supporting laboratory or field test results. The contractor must complete department worksheet WS5014, Concrete Mix Design, and submit to the engineer. The engineer's signature verifies that the engineer had an opportunity to review the mix design.

Use at least 5 pairs of cylinders to demonstrate the compressive strength of a mix design. Use either laboratory strength data for new mixes or field strength data for established mixes. Demonstrate that the 18-hour or 4-hour compressive strength of the proposed mix will equal or exceed the required opening strength.

Do not use chloride based accelerators in mixes for new construction.

C Construction

Place High Early Strength Concrete Pavement (Depth) in accordance to standard spec 415.3.

D Measurement

The department will measure High Early Strength Concrete Pavement (Depth) 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.0180.001	High Early Strength Concrete Pavement 11-Inch	SY
SPV.0180.002	High Early Strength Concrete Pavement 9-Inch	SY

Payment for High Early Strength Concrete Pavement (Depth) is full compensation as specified in standard spec 415.5 for Concrete Pavement.

197. Temporary Pedestrian/Bicycle Access, Item SPV.0180.300.

A Description

Work under this item consists of furnishing, maintaining, moving, and removing material at locations where temporary pedestrian crosswalks, sidewalks, bus stops and multi-use paths are maintained as designated by the engineer and as shown on the plans. Provide a temporary walkway or path, constructed to match the width of the existing facility being maintained, located outside the immediate work area as approved by the engineer and as shown on the plans, and meeting the requirements of the current Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Reconstruct or move the temporary crosswalk access or bus access if required for work operations.

B Materials
Provide a hard surface material approved by the engineer, of either asphalt or concrete in accordance to the pertinent sections of the standard specifications for these items.

C Construction
Construct temporary pedestrian crosswalks, sidewalks, bus stops and multi-use paths with a maximum two percent cross slope.

D Measurement
The department will measure Temporary Bicycle/Pedestrian Access 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.0180.300	Temporary Bicycle/Pedestrian Access	SY

Payment is full compensation for furnishing, loading, and hauling; for excavation and preparing the foundation; for placing, maintaining, removing, and restoring the temporary site; for reconstructing or moving; and for providing concrete or asphalt.

198. Concrete Approach Slab, 6-Inch, Item SPV.0180.301.

A Description
This special provision describes furnishing, constructing, and placing Concrete Approach Slab, 6-Inch in accordance to standard specs 305, 415, 501 and 505 as shown in the plans, and as hereinafter provided.

B Materials
Furnish and use materials in accordance to the plans and conforming to the requirements of standard specs 501, 505 and 305.

C Construction
Construct Concrete Approach Slab, 6-Inch in accordance to the plans and standard spec 415.

D Measurement
The department will measure Concrete Approach Slab, 6-Inch 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.0180.301	Concrete Approach Slab, 6-Inch	SY

Payment is full compensation for providing concrete; for reinforcement; for joints, and joint materials; for providing base aggregate dense 1-1/4 inch; for hauling, mixing, placing, finishing, curing, and protecting the concrete; for hauling and placing reinforcement and joint materials, including fillers and for preparing the foundation.

199. Shredded Hardwood Bark Mulch, Item SPV.0180.500.

A Description

This special provision describes furnishing and installing Shredded Hardwood Bark Mulch in accordance to the applicable standard specs of standard spec 627 and as hereinafter provided.

B Materials

Provide Shredded Hardwood Bark Mulch that is finely shredded hardwood bark mulch and the product of a mechanical chipper, hammermill, or tub grinder.

Provide fibrous wood mulch, uniformly dark brown in color, free of large wood chunks, and substantially free of mold, dirt, sawdust, and foreign material. Ensure that no portion of the material is in an advanced state of decomposition.

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

Provide air dried mulch, passing a 4-inch screen, with no more than 20 percent by mass passing a 0.10-inch sieve. Ensure that unattached bark or greenleaf composition, either singly or combined, do not exceed 20 percent each by mass. The maximum length of individual pieces cannot exceed 4 inches.

C Construction

Install mulch in accordance to standard spec 632.3.9 to a depth of 3 inches over entire area of bed.

Do not use any weed barrier fabric in mulch areas.

Do not damage plants, structures, and/or other materials already in place, when placing the mulch.

D Measurement

The department will measure Shredded Hardwood Bark Mulch 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.0180.500	Shredded Hardwood Bark Mulch	SY

Payment is full compensation for furnishing and installing all materials.

200. Excavation, Hauling, and Disposal of Contaminated Soil and Management of Contaminated Groundwater, Item SPV.0195.100.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of contaminated soil at a DNR approved bioremediation facility. The closest DNR approved bioremediation facility is:

Waste Management Madison Prairie Landfill
6002 Nelson Road
Sun Prairie, WI
(608) 837-9031

Perform this work in accordance 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.

This special provision also describes pumping and disposing of contaminated groundwater (if dewatering is necessary).

Perform this work in accordance to standard spec 205 and with pertinent parts of Chapters NR 100-299 of the Wisconsin Administrative Code, as supplemented herein. Perform all work necessary to control, handle, and dispose of groundwater and surface water, and all other water that may be encountered within contaminated areas, as required for performance of the work.

A.2 Notice to the Contractor – Contaminated Soil and Groundwater Locations

The department completed testing for soil and groundwater contamination for locations within this project where excavation is required.

Petroleum-contaminated soil and groundwater (if dewatering is necessary) is potentially present at the following locations:

1. (Site -11) Station 1+00 M to Station 2+75 M reference line to construction limits LT at former Burr Oak Center (4301 West Beltline Road).

Contaminated soils and/or groundwater and/or underground storage tanks (USTs) may be encountered at other locations within the construction limits. If contaminated soils and/or groundwater and/or USTs are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer and the environmental consultant. Contaminated soil and/or groundwater at other locations shall be managed by the contractor under this contract. USTs will be removed by others.

For further information regarding previous investigation and remediation activities at these sites contact:

Name:	Daniel Haak
Address:	TRC Environmental Corporation 708 Heartland Trail, Suite 3000, Madison, WI 53717
Phone:	(608) 826-3628
Fax:	(608) 826-3941
E-mail:	dhaak@trcsolutions.com

A.3 Coordination

Coordinate work under this Contract with the environmental consultant retained by the department:

Consultant:	TRC Environmental Corporation
Contact:	Mr. Dan Haak
Address:	708 Heartland Trail, Suite 3000, Madison, WI 53717
Phone:	(608) 826-3628
Fax:	(608) 826-3941
E-mail:	dhaak@trcsolutions.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Identifying contaminated soils to be hauled to the bioremediation facility;
3. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of contaminated soil from the bioremediation facility.
5. Coordinating abandonment or protection of groundwater monitoring wells along the project corridor.
6. Identifying contaminated groundwater to be pumped for treatment and disposal (if dewatering is necessary). Coordinating groundwater characterization and approval for disposal of contaminated water.

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 contamination 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.

Identify the DNR approved bioremediation facility 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 of contaminated soils from the bioremediation facility.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated areas. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed. Do not transport contaminated soil or pump contaminated groundwater offsite without prior approval from the environmental consultant.

A.4 Protection of Groundwater Monitoring Wells

Groundwater monitoring wells, including lost or improperly abandoned wells, may be present within the construction limits. Notify the environmental consultant when groundwater monitoring wells are encountered. Protect all groundwater monitoring wells to maintain their integrity. If required by the environmental consultant, adjust wells that do not conflict with utilities, structures, curb and gutter, etc. to be flush with the final grade. For wells that conflict with the previously mentioned items, notify the environmental consultant, and coordinate with the environmental consultant, or for wells that require abandonment, the abandonment or adjustment of the wells by others. The environmental consultant will provide maps indicating the locations of all known monitoring wells, if requested by the contractor.

Coordinate with the environmental consultant to ensure that the environmental consultant is present to abandon and/or document the location of the groundwater monitoring well during excavation activities.

A.5 Excavation Management Plan Approval

The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR's concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding the investigations, including waste characterization within the project limits, contact Jennifer Grimes with the department, at (608) 246-3823.

A.6 Health and Safety Requirements
Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with gasoline, diesel fuel, fuel oil, or other petroleum related products. 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.

Disposal of petroleum-contaminated soil at the bioremediation facility is subject to the facility's safety policies, which include as a minimum:

- No smoking is allowed on-site.
- Maximum speed limit of 15 mph on access roads and 5 mph while in active area.
- All persons entering the active area must wear the following personal protective equipment: hard hats, high visibility clothing, steel toed work boots, safety glasses, and seat belts.
- Minimum requirement for spacing is as follows:
    a. A minimum 15 foot Safety Zone is required between landfill equipment and all personnel at all times.
    b. Do not back up directly behind the compactor or dozer.
    c. Trucks must yield the right-of-way to landfill equipment.
    d. 15 feet required between trucks.
- Only the driver can exit the truck and must stay within 4 feet of the truck. Use of Spotter is prohibited. Helper (if any), must remain in vehicle while unloading.
- Tailgates of all vehicles may only be opened while in the active area and must be closed prior to exiting the active area.
- Cleaning out vehicles must be done in designated area, not in the active area. Vehicles must be properly locked out / tagged out in accordance to OSHA during the clean out process.
- No scavenging is allowed.
- Horseplay is prohibited.

Violation of the landfill's safety policy will result a verbal or written warning explaining this policy and may result in the loss of dumping privileges.

Immediately report all accidents and injuries at the bioremediation facility to landfill management.

B (Vacant)

C Construction
Supplement standard spec 205.3 with the following:

The environmental consultant will periodically examine excavated soil during excavations in the areas of known petroleum or soil contamination within the construction limits.

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated and to ensure that excavations do not extend beyond the minimum required to construct utilities and highway improvements unless expressly directed to do so by the engineer.

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite bioremediation or can be beneficially re-used on-site under highway pavements, behind retaining walls, or in back-slopes with 2-foot thick soil cover, including 4 inches of topsoil and grass cover. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

On the basis of the results of such field-screening, the material will be designated for disposal as follows:

- Excavation Common consisting of clean soil and/or clean construction and demolition fill (such as clean soil, boulders, concrete, reinforced concrete, bituminous pavement, bricks, building stone, and unpainted or untreated wood), which under NR 500.08 are exempt materials, or
- Low-level contaminated material for reuse as fill within the construction limits, or
- Contaminated soil for off-site treatment and disposal at the WDNR-licensed bioremediation facility, or
- Potentially contaminated for temporary stockpiling and additional characterization prior to disposal

Some material may require additional characterization prior to disposal. Provide for the temporary stockpiling of up to 200 cubic yards of contaminated soil on-site that require additional characterization. Construct and maintain a temporary stockpile of the material in accordance 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 department's environmental consultant will collect representative samples of the stockpiled material, laboratory-analyze the samples, and advise the contractor, within 10 business days of the construction of the stockpile, of disposal requirements. The stockpiled material shall be disposed either at the WDNR-licensed disposal facility by the contractor or, if characterized as hazardous waste, by the department. As an alternative to temporarily stockpiling contaminated soil/fill

material that requires additional characterization, the contractor has the option of suspending excavation in those areas where such soil is encountered until such time as characterization is completed.

Directly load and haul soils designated by the environmental consultant for off-site bioremediation to the DNR approved bioremediation facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of petroleum-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 in accordance to applicable state and federal regulations.

When material is encountered outside the above-identified limits of known 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. If dewatering of perched groundwater or stormwater is required, allow stormwater to settle for 24 hours after a rain event, after which the water shall be managed as uncontaminated dewatering, unless the environmental consultant has evidence that the water will require treatment and/or off-site disposal.

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.

Pump contaminated water that exceeds surface water discharge limits, as determined by environmental consultant, into temporary holding tanks provided by others or an alternative discharge point as determined by the environmental consultant, as necessary to complete construction. Allow contaminated water encountered, but not requiring removal as a standard course of construction, to remain in-place and do not manage in accordance to this special provision.

The environmental consultant will coordinate approval of contaminated water hauling and disposal. Only pump contaminated groundwater if the environmental consultant is on-site.

Discharging contaminated groundwater to any location other than that approved and provided by the environmental consultant, is at the contractor's cost. If the contractor chooses alternate discharge, at the contractor's cost, obtain DNR concurrence on any dewatering plans, and provide and operate any and all treatment and discharge equipment required.

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 Contaminated Soil and Management of Contaminated Groundwater in tons of contaminated soil, 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.0195.100	Excavation, Hauling, and Disposal of Contaminated Soil and Management of Contaminated Groundwater	TON

Payment is full compensation for excavating, segregating, loading, hauling, and treatment via bioremediation of contaminated soil; tipping fees including applicable taxes and surcharges; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; and for dewatering of soils prior to transport, if necessary.

201. Landscape Boulders, Item SPV.0195.500.

A Description

This special provision describes furnishing and installing dry-laid Landscape Boulders at the locations shown on the plans and as hereinafter provided.

B Materials

Provide Landscape Boulders having the following characteristics:

Type: Native Wisconsin limestone boulder, quarried within 150 miles of the project site.
Color: Naturally selected from standard range of buff to tan.
Shape: Large, rectangular, and weathered.
Size: Approximately 2.5 to 4 feet long by 1.5 to 2 feet wide by 2 to 2.5 feet thick, pre-sorted according to these size requirements.

C Construction

Prior to ordering the landscape boulders, furnish three photographs of boulders with scale measurement in the photograph, confirming the size, shape, color, and type requirements are met. Obtain approval of Landscape Boulders by the engineer before ordering or delivery to the project site.

Sort boulders such that boulders with similar size range and characteristics are placed next to each other on the project.

Stake out locations for walls and individual stones and obtain the approval of the engineer for both sorted sizing of the boulders and final placement and layout before installation of boulders, backfilling and finishing.

Compact subgrades under landscape boulders.

Place Landscape Boulders and orient for best aspect. Align the boulder walls by the front face of the wall as indicated in the plans.

Set Landscape Boulders so that the top of the wall is level across the length and between adjacent stones and conform to the top-of-wall elevations indicated in the plans. Boulders taller than 2 feet may be buried below grade in depths that achieve top-of-wall elevations based on adjacent elevations in accordance to the plans. If individual boulder thickness' dictate, boulders may be set directly on top of the existing grade to achieve top-of-wall elevations. Finish boulders set directly on top of the existing grade by mounding soil and/or mulch up against the base of the stone such that the opening or transition between the horizontal plane and vertical face of the boulder is not visible.

D Measurement

The department will measure Landscape Boulders in tons of landscape boulders, 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.0195.500	Landscape Boulders	TON

Payment is full compensation for providing, transporting, handling, storing, and sorting of boulders; for excavating, placing and backfilling; for repairing areas disturbed by placement of landscape boulders; and for disposing of all excess and waste materials.

202. Aggregate Fines, Item SPV.0195.501.

A Description

This special provision describes furnishing and installing Aggregate Fines at the locations shown on the plans and as hereinafter provided.

B Materials

Provide angular fines with the following characteristics:

- 3/16-inch size, with fines;
- Granite;
- Charcoal black in color.

C Construction

Submit sample of material to engineer and City of Madison prior to use on the project for color verification. Select color from quarry or supplier's standard range of colors.

Compact subgrades under Aggregate Fines.

Install Aggregate Fines in locations indicated in the drawings. Depths indicated in the drawings represent final depths, taking into account settling and compacting.

Install Aggregate Fines by hand application, lightly wetting the top surface before compacting with a plate compactor or other light equipment. Apply additional material, wet the surface, and compact to achieve desired grades and to ensure that the finished surfaces of the Aggregate Fines are level with adjacent concrete pavements.

Correct any settling, subsidence or washout in the two-week period following installation by adding material, lightly wetting, and compacting.

D Measurement

The department will measure Aggregate Fines in tons of Aggregate Fines, 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.0195.501	Aggregate Fines	TON

Payment is full compensation for providing materials, transporting, handling, storing; for excavating, wetting, placing and compacting; for repairing areas of settlement, subsidence or washout; and for disposing of all excess and waste materials.

203. Cold Patch, Item SPV.0195.700.

A Description

This special provision describes furnishing, stockpiling, placing and maintaining cold patch material. The cold patch material shall be used for short term maintenance purposes to fill potholes/voids in the existing or temporary pavement surfaces as directed by the engineer.

B Materials

B.1 General

Furnish cold patch that is a combination of course aggregate, natural sand and bituminous material MC-250. Furnish a mixture designed to have a workability range of 15 degrees Fahrenheit to 100 degrees Fahrenheit without the addition of heat. Furnish a mixture having good adhesion to wet surfaces and resistant to damage by water, salt and deicing products. Provide a uniform mixture not requiring any mixing or special handling prior to use.

B.2 Gradation

Provide material conforming to the following gradation requirements:

SIEVE SIZE	PERCENT PASSING (by weight)
3/8 Inch (9.5mm)	96-100
No. 4 (4.75 mm)	76-82
No. 8 (2.38 mm)	50-60
No. 50 (.297 mm)	15-20
No. 200 (0.74 mm)	2-5
Bitumen	4.8-5.2

C Construction

Choose a smooth, firm, and well-drained area for an on-site stockpile that is cleared of vegetation and foreign material that may contaminate the cold patch. Locate the stockpile so it is easily accessible and able to be maintained and replenished at any time during the duration of the project. Maintain a minimum stockpile size of 10 tons or as directed by the engineer.

Application of cold patch must be able to be accomplished by hand labor as necessary. Prior to filling any potholes/voids remove all ponded water and loose debris with compressed air and dry the patch area thoroughly. Place material into the pothole/void and compact flush with a tamper, roller, or vehicle tire. Traffic must be able to travel over the patch immediately after compacting.

Provide 24 hours-a-day availability of equipment and forces to expeditiously repair areas within 2 hours of a repair request by the engineer.

D Measurement
The department will measure Cold Patch in tons of cold patch, 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.0195.700	Cold Patch	TON

Payment is full compensation for removing ponded water and loose debris, thoroughly drying the area and preparing the area to be patched, performing the patch operations, furnishing and providing a stockpile of material and for removing any unused stockpile at the completion of the project.

Payment includes any unused stockpile quantity remaining on the site at the completion of the project.

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 __10__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __6__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:

   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

   http://www.dot.wisconsin.gov/business/engrserv/dbe-main.htm

2. Definitions

a. Interpret these terms, used throughout this additional special provision, as follows:

   i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
   ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
   iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
   iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as “Disc” on the cover of the Highway Work Proposal, which is enforced as committed.
   v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
   vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
   vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized

comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. Department's DBE Evaluation Process

a. Documentation Submittal

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

i. Bidder Meets DBE Goal

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

ii. Bidder Does Not Meet DBE Goal

(1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.

(2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:

a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.

b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define “good faith” but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

c. Prime Contractors should:

i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, ***as required by federal rules***. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

(1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.

(2) SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.

a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.

(3) Second solicitation should take place within 5 days

a. An email solicitation is highly recommended for this second solicitation

(4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

(5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.

(6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

a. Email to all prospective DBE firms in relevant work areas
b. Phone call log to DBE firms who express interest via written response or call.
c. Fax/letter confirmation
d. Copy of the DBE quotes
e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.

i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its

capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.

ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

(1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.

(2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

e. After notification of contract award, submit **'Commitment to Subcontract'** form within the time period specified in the contract.

i. Provide the following information along with department form DT1202:

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.

(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.

(3) Photocopies or electronic copies of all written solicitations to DBE's.

(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.

(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office
6150 Fond du Lac Ave.
Milwaukee, WI 53218
Phone: 414-438-4583 / 608-266-6961
Fax: 414-438-5392
E-mail: DOTDBESupportServices@dot.wi.gov

6. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so

requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

7. Department's Criteria for DBE Participation

Department's DBE List

a. The department maintains a DBE list on the department's website at

http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx

b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

b. A DBE is performing a commercially useful function if the following conditions are met:

c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.

d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at

http://www.dot.wisconsin.gov/business/engrserv/docs/dbe-trucking-notice.pdf

11. Manufacturers and Suppliers

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

12. DBE Prime

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

13. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

14. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm

b. On every other project that the mentor protégé team identifies itself on.

c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

http://www.dot.wisconsin.gov/business/engrserv/docs/policyreplacingdbe.pdf

16. Changes to the approved DBE Commitment Form DT1506

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

17. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors, that were committed to equal work items, in the original contract.

18. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS

FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR

SUBJECT: **REQUEST FOR DBE QUOTES**

LET DATE & TIME

DATE: MONTH DAY YEAR

CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have some one contact me at this number

Prime Contractor 's Contact Person		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		Email	

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
    d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
    c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
    c. Add attachments to a sub-quote
    d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL 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
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

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

The base Fuel Index (BFI) for this contract is $2.90 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 2014 edition of the standard specifications:

101.3 Definitions

Replace the definition of semi-final estimate with the following effective with the December 2013 letting:

Semi-final estimate An estimate indicating the engineer has measured and reported all contract quantities and materials requirements.

105.11.1 Partial Acceptance

Replace paragraph two with the following effective with the December 2013 letting:

(2) Partial acceptance will relieve the contractor of maintenance responsibility for the designated portion of the work. By relieving the contractor of maintenance, the department does not relieve the contractor of responsibility for defective work or damages caused by the contractor's operations. Do not construe partial acceptance to be conditional final acceptance or final acceptance of any part of the project, or a waiver of any legal rights specified under 107.16.

105.11.2 Final Acceptance

Retitle and replace the entire text with the following effective with the December 2013 letting:

105.11.2 Project Acceptance

105.11.2.1 Inspection

105.11.2.1.1 General

(1) Notify the engineer when the project is substantially complete as defined in 105.11.2.1.3. As soon as it is practical, the engineer will inspect the work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete.
3. Complete.

105.11.2.1.2 Unacceptable or Not Complete

(1) The engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The engineer will assess contract time until the work is corrected or completed.

(2) Proceed as specified in 105.11.2.1.1 until the engineer determines that the work is complete.

105.11.2.1.3 Substantially Complete

(1) The project is substantially complete and the engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch-list. As applicable, the following must have occurred:

1. All lanes of traffic are open on a finished surface.
2. All signage and traffic control devices are in place and operating.
3. All drainage, erosion control, excavation, and embankments are completed.
4. All safety appurtenances are completed.

(2) The engineer will provide a written punch-list enumerating work the contractor must perform and documents the contractor must submit before the the engineer will categorize the work as complete.

1. Punch-list work includes uncompleted cleanup work required under 104.9 and minor corrective work. Immediately correct or complete the punch-list work. The engineer may restart contract time if the contractor does not complete the punch-list work within 5 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 5-day requirement.
2. Punch-list documents include whatever contract required documentation is missing. The engineer may restart contract time if the contractor does not submit the punch-list documents within 15 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 15-day requirement.

(3) Proceed as specified in 105.11.2.1.1 until the work is complete.

105.11.2.1.4 Complete

(1) The project is complete when the contractor has completed all contract bid items, change order work, and punch-list work including the submission of all missing documentation.

105.11.2.2 Conditional Final Acceptance

(1) When the engineer determines that the project is complete, the engineer will give the contractor written notice of conditional final acceptance relieving the contractor of maintenance responsibility for the completed work.

105.11.2.3 Final Acceptance

(1) The engineer will grant final acceptance of the project after determining that all contract is work complete; all contract, materials, and payroll records are reviewed and approved; and the semi-final estimate quantities are final under 109.7.

(2) Failure to discover defective work or materials before final acceptance does not prevent the department from rejecting that work or those materials later. The department may revoke final acceptance if the department discovers defective work or materials after it has accepted the work.

105.13.3 Submission of Claim

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than final acceptance of the project as specified in 105.11.2.3. If the contractor does not submit the claim before final acceptance of the project, the department will deny the claim.

107.17.3 Railroad Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the engineer determines that the work is complete as specified in 105.11.2.1.4.

107.26 Standard Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) Maintain the following types and limits of commercial insurance in force until the engineer determines that the work is complete as specified in 105.11.2.1.4.

TABLE 107-1 REQUIRED INSURANCE AND MINIMUM COVERAGES

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements with primary insurance coverage or with excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees shall be named as an additional insured under the general liability and automobile liability insurance.

108.14 Terminating the Contractor's Responsibility

Replace paragraph one with the following effective with the December 2013 letting:

(1) The contractor's responsibilities are terminated, except as set forth in the contract bond and specified in 107.16, when the department grants final acceptance as specified in 105.11.2.3.

109.2 Scope of Payment

Replace paragraph two with the following effective with the December 2013 letting:

(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 applicable bid items 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.

109.6.1 General

Replace paragraphs three and four with the following effective with the December 2013 letting:

(3) The department's payment of an estimate before conditional final acceptance of the work does not constitute the department's acceptance of the work, and does not relieve the contractor of responsibility for:

1. Protecting, repairing, correcting, or renewing the work.
2. Replacing all defects in the construction or in the materials used in the construction of the work under the contract, or responsibility for damage attributable to these defects.

(4) The contractor is responsible for all defects or damage that the engineer may discover on or before the engineer's conditional final acceptance of the work. The engineer is the sole judge of these defects or damage, and the contractor is liable to the department for not correcting all defects or damage.

109.7 Acceptance and Final Payment

Replace paragraphs one and two with the following effective with the December 2013 letting:

(1) After the engineer grants conditional final acceptance of the work as specified in 105.11.2.2 and reviews required document submittals and materials test reports, the engineer will issue the semi-final estimate.

(2) Within 30 calendar days after receiving the semi-final estimate, submit to the engineer a written statement of agreement or disagreement with the semi-final estimate. For an acceptable statement of disagreement, submit an item-by-item list with reasons for each disagreement. If the contractor does not submit this written statement within those 30 days, the engineer will process the final estimate for payment. The engineer and the contractor can mutually agree to extend this 30-day submission requirement.

450.3.3 Maintaining the Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the prepared foundation, tack coat, base, paved traffic lanes, shoulders, and seal coat. Correct all rich or bleeding areas, breaks, raveled spots, or other nonconforming areas in the paved surface.

455.3.2.5 Maintaining Tack Coat

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the existing surface and the tack coat. Correct areas with excess or deficient tack material and any breaks, raveled spots, or other areas where bond might be affected.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the January 2014 letting:

(1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for E-3 mixes.

[2] 15.5 for E-3 mixes.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the January 2014 letting:

(1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to the department's test method number 1559 as described in CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to the department's test method number 1559.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	___
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	50	50	45	45	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	___
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 - 78[4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)							
no antistripping additive	0.70	0.70	0.70	0.70	0.70	0.70	0.70
with antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Draindown at Production Temperature (%)	___	___	___	___	___	___	0.30

[1] The percent maximum density at initial compaction is only a guideline.

[2] For a gradation that passes below the boundaries of the caution zone(ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

[3] For 9.5mm and 12.5 mm nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For 37.5mm nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For 25.0mm nominal maximum size mixes, the specified VFB lower limit is 67%.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the January 2014 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	+/- 1.3	+/- 1.0
VMA in percent[1]	- 0.5	- 0.2

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

(2) Warning bands are defined as the area between the JMF limits and the warning limits.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace the entire text with the following effective with the January 2014 letting:

(1) The contractor may request adjustment of the JMF according to the department's test method number 1559. Have an HTCP 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 an HMA technician certified at level III review the proposed adjustment and, if acceptable, issue a revised JMF.

(2) The department will not allow adjustments that do the following:

- Exceed specified JMF tolerance limits.
- Reduce the JMF asphalt content unless the production VMA running average meets or exceeds the minimum VMA design requirement defined in table 460-1for the mixture produced.

(3) Have an HMA technician certified at level II make related process adjustments. If mixture redesign is necessary, submit a new JMF, subject to the same specification requirements as the original JMF.

520.3.8 Protection After Laying

Delete the entire subsection.

614.2.1 General

Replace paragraphs five and six with the following effective with the December 2013 letting:

(5) Furnish zinc coated wire rope and fitting conforming to the plans and galvanized according to ASTM A741.

(6) Before installation store galvanized components above ground level and away from surface run off. The department may reject material if the zinc coating is physically damaged or oxidized.

(7) Provide manufacturer's drawings, and installation and maintenance instructions when providing proprietary systems.

614.2.3 Steel Rail and Fittings

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish galvanized steel rail conforming to AASHTO M180 class A, type II beam using the single-spot test coating requirements. Furnish plates, anchor plates, post mounting brackets, and other structural steel components conforming to 506.2.2.1 and hot-dip galvanized according to ASTM A123.

614.2.7 Crash Cushions

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish permanent and temporary crash cushions from the department's approved products list. Use cushions as wide or wider than the plan back-width. Furnish transitions conforming to the crash cushion manufacturer's design and specifications. Submit manufacturer crash cushion and transition design details to engineer before installing.

616.3.1 General

Replace paragraph six with the following effective with the December 2013 letting:

(6) Remove and dispose of all excess excavation and surplus materials from the fence site.

618.3.3 Restoration

Replace paragraph one with the following effective with the December 2013 letting:

(1) Upon termination of hauling operations and before conditional final acceptance, restore all haul roads, including drainage facilities and other components, to the equivalent of pre-hauling conditions.

627.3.1 General

Replace paragraph four with the following effective with the December 2013 letting:

(4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes.

637.3.2.1 General

Delete paragraph three effective with the December 2013 letting.

670.3.4.2 Post-Construction Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit 5 copies of ITS documentation including but not limited to the following:

- Operator's manual: for contractor furnished equipment, submit a manual containing detailed operating instructions for each different type or model of equipment and or operation performed.
- Maintenance procedures manuals: for contractor furnished equipment, submit a manual containing detailed preventive and corrective maintenance procedures for each type or model of equipment furnished.
- Cabinet fiber optic wiring diagram: submit a cabinet wiring diagram, identified by location for each cabinet. Include both electrical wiring and fiber optic conductor and cable connections. Place one copy of the fiber optic wiring diagram in a weatherproof holder in the cabinet. Deliver the other copies to the engineer.
- As-built drawings: submit final as-built drawings that detail the final placement of all conduit, cabling, equipment, and geometric modifications within the contract. Provide all documentation in an electronic format adhering to the region’s ITS computer aided drafting standards and according to the department’s as-built requirements. The department will review the as-built drawings for content and electronic format. Modify both the content and format of as-built drawings until meeting all requirements.
- Equipment inventory list: submit an inventory list including serial number, make, model, date installed, and location installed of all equipment installed under the contract.

Errata

Make the following corrections to the 2014 edition of the standard specifications:

415.3.14 Protecting Concrete

Correct errata by referencing the opening to service specification.

(1) Erect and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until it is opened for service as specified in 415.3.15. Conform to 104.6 for methods of handling and facilitating traffic.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(2) Furnish sheeting conforming to ASTM C171 for white opaque polyethylene film, except that the contractor may use clear or black polyethylene for cold weather protection.

607.2 Materials

Correct errata by changing AASHTO M198 to ASTM C990.

(1) Use materials conforming to the requirements for the class of material named and specified below.

Composite pipe, couplings, fittings and joint materials	ASTM D2680
Annular rubber and plastic gaskets for flexible, watertight joints	ASTM C990
External rubber gaskets, mastic, and protective film	ASTM C877
Mortar	519.2.3

637.2.1.3 Sheet Aluminum

Correct errata by changing ASTM B449 to B921 and eliminating the specification for coating thickness.

(4) Degrease, etch, and coat the sign blank on both sides with a chromate treatment conforming to ASTM B921, class 2.

637.3.3.4 Performance

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(1) Under 105.11.2.3 the department may revoke acceptance and direct the contractor to repair or replace previously accepted sign installations if the department subsequently discovers evidence of defective materials or improper installation. Deficiencies that warrant department action include but are not limited to the following:

- Sign posts more than five degrees out of plumb.
- Signs twisted by more than 5 degrees from plan orientation.
- Signs with delaminated or warped plywood.
- Signs with bubbling, fading, delaminating, or buckling sheeting.

646.3.3.4 Proving Period

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(4) Replace all marking within sections with a percent failing more than 10% and repair or replace all markings that, in the engineer's assessment, show evidence of improper construction. If post-acceptance inspections uncover evidence of defective materials or improper construction, the department may revoke acceptance under 105.11.2.3.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

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.

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.

DECEMBER 2013

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://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5

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://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. Wage Rates, Hours of labor and payment of Wages
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Affidavits
V. Wage Rate Redistribution
VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
DANE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2014

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	32.01	17.35	49.36
Carpenter	30.48	15.90	46.38
Cement Finisher	33.51	16.13	49.64
Future Increase(s): Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/1/16. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	34.07	19.25	53.32
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	24.72	0.00	24.72
Ironworker	31.25	19.46	50.71
Line Constructor (Electrical)	38.25	17.31	55.56
Painter	21.87	11.37	33.24
Pavement Marking Operator	30.00	0.00	30.00
Piledriver	30.98	15.90	46.88
Roofer or Waterproofer	29.40	6.25	35.65
Teledata Technician or Installer	21.89	11.85	33.74
Tuckpointer, Caulker or Cleaner	35.25	13.15	48.40
Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	15.89	51.39
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.63	40.41
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.70	34.45
TRUCK DRIVERS			
Single Axle or Two Axle	34.22	19.90	54.12
Three or More Axle	24.52	17.77	42.29
Future Increase(s): Add $1.30/hr on 6/1/2014. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	29.27	20.40	49.67
Future Increase(s): Add $1.75/hr on 6/1/14); Add $1.25/hr on 6/1/15); Add $1.30/hr on 6/1/16); Add $1.25/hr on 6/ 1/ 17. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Pavement Marking Vehicle	23.31	17.13	40.44
Shadow or Pilot Vehicle	34.22	19.90	54.12
Truck Mechanic	23.31	17.13	40.44
LABORERS			
General Laborer	29.32	14.63	43.95
Future Increase(s): Add $1.60/hr on 6/1/2014. Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	24.36	14.44	38.80
Landscaper	29.32	14.63	43.95
Future Increase(s): Add $1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	25.67	14.63	40.30
Future Increase(s): Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.31	12.67	30.98
Railroad Track Laborer	23.46	3.30	26.76

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.72	20.40	57.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.22	20.40	56.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches	35.72	20.40	56.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
& A- Frames. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.46	20.40	55.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.17	20.40	55.57
Fiber Optic Cable Equipment.	26.69	16.65	43.34

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: May 2, 2014
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$29.32	14.53
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	29.42	14.53
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	29.47	14.53
Group 4: Line and Grade Specialist	29.67	14.53
Group 5: Blaster and Powderman	29.52	14.53
Group 6: Flagperson and Traffic Control Person	25.67	14.53

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	23.82	18.32
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	23.97	18.32

CLASSES OF LABORER AND MECHANICS

Bricklayer	28.41	12.81
Carpenter	30.48	15.80
Millwright	32.11	15.80
Piledriverman	30.98	15.80
Ironworker	31.50	20.03
Cement Mason/Concrete Finisher	32.09	16.13
Electrician		See Page 3
Line Construction		
Lineman	39.50	32% + 5.00
Heavy Equipment Operator	37.53	32% + 5.00
Equipment Operator	31.60	32% + 5.00
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	21.73	32% + 5.00
Painter, Brush	24.50	16.27
Painter, Spray, Structural Steel,Bridges	25.50	16.27
Well Drilling:		
Well Driller	16.52	3.70

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0, dated January 3, 2014; Modification #1, dated February 7, 2014; Modification #2, dated March 14, 2014; Modification #3, dated May 2, 2014.

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: May 2, 2014
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$36.72	$20.10
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.	$36.22	$20.10
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$35.72	$20.10
Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	$35.46	$20.10
Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.	$35.17	$20.10
Group 6: Off – road material hauler with or without ejector	$29.27	$20.10

Premium Pay:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hours

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: May 2, 2014
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$28.40	16.676
Area 2:		
Electricians	29.13	17.92
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.50	28.75% + 9.27
Area 5	28.96	24.85% + 9.70
Area 6	35.25	19.30
Area 8		
Electricians	30.60	24.95% + 10.33
Area 9:		
Electricians	32.94	18.71
Area 10	28.97	20.45
Area 11	31.91	23.60
Area 12	32.87	19.23
Area 13	32.82	22.51
Teledata System Installer		
Area 14		
Installer/Technician	21.89	11.83
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	24.75	16.04

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

SCHEDULE OF ITEMS REVISED:

CONTRACT: 20140708003

PROJECT(S): 1206-07-84, 1206-07-85

FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 CONTRACT ITEMS					
0010	201.0105 CLEARING	18.000 STA		.		.
0020	201.0120 CLEARING	404.000 ID		.		.
0030	201.0205 GRUBBING	18.000 STA		.		.
0040	201.0220 GRUBBING	404.000 ID		.		.
0050	203.0200 REMOVING OLD STRUCTURE (STATION) 300. STA. 1144+00 ML	LUMP	LUMP			.
0060	203.0200 REMOVING OLD STRUCTURE (STATION) 301. STA. 1157+40 ML	LUMP	LUMP			.
0070	203.0200 REMOVING OLD STRUCTURE (STATION) 302. STA. 10+00 P	LUMP	LUMP			.
0080	203.0225.S DEBRIS CONTAINMENT (STRUCTURE) 001. B-13-64	LUMP	LUMP			.
0090	203.0225.S DEBRIS CONTAINMENT (STRUCTURE) 002. B-13-305	LUMP	LUMP			.
0100	204.0100 REMOVING PAVEMENT **P**	90,515.000 SY		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.0110 REMOVING ASPHALTIC SURFACE **P**	9,480.000 SY		.		.
0120	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	2,341.000 SY		.		.
0130	204.0120 REMOVING ASPHALTIC SURFACE MILLING	12,274.000 SY		.		.
0140	204.0150 REMOVING CURB & GUTTER **P**	13,025.000 LF		.		.
0150	204.0155 REMOVING CONCRETE SIDEWALK	2,580.000 SY		.		.
0160	204.0157 REMOVING CONCRETE BARRIER	11,130.000 LF		.		.
0170	204.0165 REMOVING GUARDRAIL	7,105.000 LF		.		.
0180	204.0170 REMOVING FENCE **P**	6,772.000 LF		.		.
0190	204.0180 REMOVING DELINEATORS AND MARKERS	9.000 EACH		.		.
0200	204.0185 REMOVING MASONRY	4.500 CY		.		.
0210	204.0195 REMOVING CONCRETE BASES	96.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	204.0210 REMOVING MANHOLES	18.000 EACH		.		.
0230	204.0220 REMOVING INLETS	110.000 EACH		.		.
0240	204.0235 REMOVING BUILDINGS (PARCEL) 001. TPP 1206-07-28, PARCEL 8	LUMP	LUMP			.
0250	204.0240 SITE CLEARANCE (PARCEL) 001. TPP 1206-07-28, PARCEL 8	LUMP	LUMP			.
0260	204.0245 REMOVING STORM SEWER (SIZE) 001. 12-INCH	4,345.000 LF		.		.
0270	204.0245 REMOVING STORM SEWER (SIZE) 002. 15-INCH	534.000 LF		.		.
0280	204.0245 REMOVING STORM SEWER (SIZE) 003. 18-INCH	1,605.000 LF		.		.
0290	204.0245 REMOVING STORM SEWER (SIZE) 004. 21-INCH	256.000 LF		.		.
0300	204.0245 REMOVING STORM SEWER (SIZE) 005. 24-INCH	2,492.000 LF		.		.
0310	204.0245 REMOVING STORM SEWER (SIZE) 006. 27-INCH	300.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0320	204.0245 REMOVING STORM SEWER (SIZE) 007. 30-INCH	997.000 LF		.		.
0330	204.0245 REMOVING STORM SEWER (SIZE) 008. 36-INCH	670.000 LF		.		.
0340	204.0245 REMOVING STORM SEWER (SIZE) 009. 42-INCH	260.000 LF		.		.
0350	204.0280 SEALING PIPES	11.000 EACH		.		.
0360	204.9060.S REMOVING (ITEM DESCRIPTION) 001. OVERHEAD SIGN SUPPORT	8.000 EACH		.		.
0370	204.9060.S REMOVING (ITEM DESCRIPTION) 002. INLET COVERS	1.000 EACH		.		.
0380	204.9060.S REMOVING (ITEM DESCRIPTION) 003. APRON ENDWALLS	6.000 EACH		.		.
0390	204.9060.S REMOVING (ITEM DESCRIPTION) 004. BARRICADES PERMANENT TYPE III	3.000 EACH		.		.
0400	204.9060.S REMOVING (ITEM DESCRIPTION) 005. PERMANENT TRAFFIC BARRIER	2.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0410	204.9090.S REMOVING (ITEM DESCRIPTION) 001. MODULAR BLOCK RETAINING WALL STA. 1098+88 TO STA. 1100+38	150.000 LF		.		.
0420	204.9090.S REMOVING (ITEM DESCRIPTION) 002. MODULAR BLOCK RETAINING WALL STA. 1102+94 TO STA. 1105+95	300.000 LF		.		.
0430	204.9090.S REMOVING (ITEM DESCRIPTION) 003. MODULAR BLOCK RETAINING WALL STA. 140+10 A TO STA. 142+01 A	180.000 LF		.		.
0440	204.9090.S REMOVING (ITEM DESCRIPTION) 004. TIMBER RETAINING WALL	75.000 LF		.		.
0450	204.9090.S REMOVING (ITEM DESCRIPTION) 005. SHEET PILE RETAINING WALL	200.000 LF		.		.
0460	205.0100 EXCAVATION COMMON	233,148.000 CY		.		.
0470	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 300. B-13-651	LUMP	LUMP			.
0480	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 301. B-13-652	LUMP	LUMP			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0490	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 302. B-13-653	LUMP	LUMP			.
0500	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 303. B-13-654	LUMP	LUMP			.
0510	206.6000.S TEMPORARY SHORING	13,975.000 SF		.		.
0520	209.0100 BACKFILL GRANULAR	3,820.000 CY		.		.
0530	210.0100 BACKFILL STRUCTURE **P**	11,707.000 CY		.		.
0540	213.0100 FINISHING ROADWAY (PROJECT) 001. 1206-07-84	1.000 EACH		.		.
0550	305.0110 BASE AGGREGATE DENSE 3/4-INCH	2,865.000 TON		.		.
0560	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	83,267.000 TON		.		.
0570	305.0130 BASE AGGREGATE DENSE 3-INCH	4,545.000 TON		.		.
0580	312.0110 SELECT CRUSHED MATERIAL	177,131.000 TON		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0590	315.0100 ASPHALTIC BASE	7,905.000 TON		.		.
0600	415.0110 CONCRETE PAVEMENT 11-INCH	164,460.000 SY		.		.
0610	415.0210 CONCRETE PAVEMENT GAPS	13.000 EACH		.		.
0620	415.0410 CONCRETE PAVEMENT APPROACH SLAB	308.000 SY		.		.
0630	415.1110 CONCRETE PAVEMENT HES 11-INCH	6,500.000 SY		.		.
0640	415.1410 CONCRETE PAVEMENT APPROACH SLAB HES	465.000 SY		.		.
0650	416.0170 CONCRETE DRIVEWAY 7-INCH	197.000 SY		.		.
0660	416.0270 CONCRETE DRIVEWAY HES 7-INCH	200.000 SY		.		.
0670	416.0610 DRILLED TIE BARS	2,086.000 EACH		.		.
0680	416.0620 DRILLED DOWEL BARS	1,382.000 EACH		.		.
0690	416.1010 CONCRETE SURFACE DRAINS	5.000 CY		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0700	416.1110 CONCRETE RUMBLE STRIPS SHOULDER	33,590.000 LF		.		.
0710	416.1715 CONCRETE PAVEMENT REPAIR SHES	336.000 SY		.		.
0720	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES	809.000 SY		.		.
0730	440.4410.S INCENTIVE IRI RIDE	36,759.000 DOL	1.00000		36759.00	
0740	455.0105 ASPHALTIC MATERIAL PG58-28	85.100 TON		.		.
0750	455.0115 ASPHALTIC MATERIAL PG64-22	51.100 TON		.		.
0760	455.0120 ASPHALTIC MATERIAL PG64-28	79.700 TON		.		.
0770	455.0605 TACK COAT	449.000 GAL		.		.
0780	460.1101 HMA PAVEMENT TYPE E-1	1,435.000 TON		.		.
0790	460.1103 HMA PAVEMENT TYPE E-3	1,222.000 TON		.		.
0800	460.1110 HMA PAVEMENT TYPE E-10	726.000 TON		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0810	460.2000 INCENTIVE DENSITY HMA PAVEMENT	2,180.000 DOL	1.00000		2180.00	
0820	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	423.000 TON	.		.	
0830	465.0125 ASPHALTIC SURFACE TEMPORARY	15,215.000 TON	.		.	
0840	465.0305 ASPHALTIC SURFACE SAFETY ISLANDS **P**	147.000 TON	.		.	
0850	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP	4,010.000 LF	.		.	
0860	492.2010.S SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT	160.000 GAL	.		.	
0870	502.0100 CONCRETE MASONRY BRIDGES **P**	1,806.000 CY	.		.	
0880	502.3100 EXPANSION DEVICE (STRUCTURE) 300. B-13-651	LUMP	LUMP		.	
0890	502.3100 EXPANSION DEVICE (STRUCTURE) 301. B-13-652	LUMP	LUMP		.	
0900	502.3100 EXPANSION DEVICE (STRUCTURE) 302. B-13-653	LUMP	LUMP		.	
0910	502.3200 PROTECTIVE SURFACE TREATMENT **P**	11,703.000 SY	.		.	

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0920	502.5005 MASONRY ANCHORS TYPE L NO. 5 BARS	21.000 EACH		.		.
0930	504.0500 CONCRETE MASONRY RETAINING WALLS **P**	2,367.500 CY		.		.
0940	505.0405 BAR STEEL REINFORCEMENT HS BRIDGES **P**	47,190.000 LB		.		.
0950	505.0415 BAR STEEL REINFORCEMENT HS RETAINING WALLS **P**	3,035.000 LB		.		.
0960	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES **P**	237,720.000 LB		.		.
0970	505.0615 BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS **P**	217,570.000 LB		.		.
0980	505.0904 BAR COUPLERS NO. 4	14.000 EACH		.		.
0990	505.0908 BAR COUPLERS NO. 8	19.000 EACH		.		.
1000	506.0105 STRUCTURAL STEEL CARBON **P**	167,530.000 LB		.		.
1010	506.0605 STRUCTURAL STEEL HS **P**	2,132,060 LB		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1020	506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED **P**	5.000 EACH		.		.
1030	506.3015 WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	13,392.000 EACH		.		.
1040	506.3020 WELDED STUD SHEAR CONNECTORS 7/8X7-INCH	768.000 EACH		.		.
1050	506.3025 WELDED STUD SHEAR CONNECTORS 7/8X8-INCH	768.000 EACH		.		.
1060	506.5000 BEARING ASSEMBLIES FIXED (STRUCTURE) 300. B-13-651 **P**	8.000 EACH		.		.
1070	506.5000 BEARING ASSEMBLIES FIXED (STRUCTURE) 301. B-13-652 **P**	8.000 EACH		.		.
1080	506.6000 BEARING ASSEMBLIES EXPANSION (STRUCTURE) 300. B-13-651 **P**	16.000 EACH		.		.
1090	506.6000 BEARING ASSEMBLIES EXPANSION (STRUCTURE) 301. B-13-652 **P**	16.000 EACH		.		.
1100	514.0445 FLOOR DRAINS TYPE GC	4.000 EACH		.		.
1110	514.2608 DOWNSPOUT 8-INCH	65.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1120	514.2625 DOWNSPOUT 6-INCH	40.000 LF		.		.
1130	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	135.000 SY		.		.
1140	517.0600 PAINTING EPOXY SYSTEM (STRUCTURE) 300. B-13-651	LUMP	LUMP			.
1150	517.0600 PAINTING EPOXY SYSTEM (STRUCTURE) 301. B-13-652	LUMP	LUMP			.
1160	517.1010.S CONCRETE STAINING (STRUCTURE) 001. B-13-651 **P**	5,570.000 SF		.		.
1170	517.1010.S CONCRETE STAINING (STRUCTURE) 002. B-13-652 **P**	5,474.000 SF		.		.
1180	517.1010.S CONCRETE STAINING (STRUCTURE) 003. B-13-653 **P**	8,790.000 SF		.		.
1190	517.1010.S CONCRETE STAINING (STRUCTURE) 004. B-13-654 **P**	750.000 SF		.		.
1200	517.1010.S CONCRETE STAINING (STRUCTURE) 005. R-13-194 **P**	35,970.000 SF		.		.
1210	517.1010.S CONCRETE STAINING (STRUCTURE) 006. R-13-197 **P**	29,250.000 SF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1220	517.1010.S CONCRETE STAINING (STRUCTURE) 007. R-13-232 **P**	1,680.000 SF		.		.
1230	517.1010.S CONCRETE STAINING (STRUCTURE) 008. R-13-238 **P**	660.000 SF		.		.
1240	517.1010.S CONCRETE STAINING (STRUCTURE) 009. R-13-241 **P**	1,675.000 SF		.		.
1250	517.1010.S CONCRETE STAINING (STRUCTURE) 010. S-13-368 **P**	835.000 SF		.		.
1260	517.1010.S CONCRETE STAINING (STRUCTURE) 011. S-13-369 **P**	790.000 SF		.		.
1270	517.1010.S CONCRETE STAINING (STRUCTURE) 012. S-13-370 **P**	820.000 SF		.		.
1280	517.1010.S CONCRETE STAINING (STRUCTURE) 013. S-13-371 **P**	90.000 SF		.		.
1290	517.1010.S CONCRETE STAINING (STRUCTURE) 014. S-13-372 **P**	320.000 SF		.		.
1300	517.1010.S CONCRETE STAINING (STRUCTURE) 015. S-13-373 **P**	880.000 SF		.		.
1310	517.1010.S CONCRETE STAINING (STRUCTURE) 016. S-13-374 **P**	305.000 SF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1320	517.1010.S CONCRETE STAINING (STRUCTURE) 017. CONCRETE STAINING S-13-375 **P**	885.000 SF		.		.
1330	517.1010.S CONCRETE STAINING (STRUCTURE) 018. S-13-385 **P**	320.000 SF		.		.
1340	517.1010.S CONCRETE STAINING (STRUCTURE) 019. S-13-386 **P**	130.000 SF		.		.
1350	517.1010.S CONCRETE STAINING (STRUCTURE) 020. S-13-423 **P**	1,074.000 SF		.		.
1360	517.1010.S CONCRETE STAINING (STRUCTURE) 021. CONCRETE STAINING BARRIER WALL **P*	7,400.000 SF		.		.
1370	517.1010.S CONCRETE STAINING (STRUCTURE) 022. MOSAIC WALL **P**	703.000 SF		.		.
1380	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 001. B-13-651 **P**	1,290.000 SF		.		.
1390	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 002. B-13-652 **P**	1,181.000 SF		.		.
1400	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 003. B-13-653 **P**	5,820.000 SF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1410	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 004. R-13-194 **P**	24,900.000 SF		.		.
1420	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 005. R-13-197 **P**	19,430.000 SF		.		.
1430	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 006. R-13-232 **P**	760.000 SF		.		.
1440	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 007. R-13-238 **P**	360.000 SF		.		.
1450	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 008. R-13-241 **P**	930.000 SF		.		.
1460	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 009. S-13-368 **P**	835.000 SF		.		.
1470	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 010. S-13-369 **P**	790.000 SF		.		.
1480	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 011. S-13-370 **P**	820.000 SF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1490	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 012. S-13-371 **P**	70.000 SF		.		.
1500	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 013. S-13-372 **P**	235.000 SF		.		.
1510	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 014. S-13-373 **P**	880.000 SF		.		.
1520	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 015. S-13-374 **P**	305.000 SF		.		.
1530	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 016. S-13-375 **P**	885.000 SF		.		.
1540	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 017. S-13-385 **P**	235.000 SF		.		.
1550	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 018. S-13-386 **P**	95.000 SF		.		.
1560	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 019. S-13-423 **P**	895.000 SF		.		.
1570	520.8000 CONCRETE COLLARS FOR PIPE	54.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1580	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	4.000 EACH		.		.
1590	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	1.000 EACH		.		.
1600	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	1.000 EACH		.		.
1610	532.0750.S TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH	3,400.000 SF		.		.
1620	550.1100 PILING STEEL HP 10-INCH X 42 LB	5,430.000 LF		.		.
1630	550.1140 PILING STEEL HP 14-INCH X 73 LB	10,405.000 LF		.		.
1640	601.0110 CONCRETE CURB TYPE D **P**	195.000 LF		.		.
1650	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A **P**	4,229.000 LF		.		.
1660	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D **P**	1,564.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1670	601.0551 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A **P**	805.000	LF		.		.
1680	601.0600 CONCRETE CURB PEDESTRIAN **P**	279.000	LF		.		.
1690	602.0405 CONCRETE SIDEWALK 4-INCH	3,000.000	SF		.		.
1700	602.0410 CONCRETE SIDEWALK 5-INCH	31,990.000	SF		.		.
1710	602.0420 CONCRETE SIDEWALK 7-INCH	4,010.000	SF		.		.
1720	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	400.000	SF		.		.
1730	603.1142 CONCRETE BARRIER TYPE S42	11,966.000	LF		.		.
1740	603.1242 CONCRETE BARRIER TYPE S42A	7,044.000	LF		.		.
1750	603.1256 CONCRETE BARRIER TYPE S56A	755.000	LF		.		.
1760	603.1332 CONCRETE BARRIER TYPE S32B	10.000	LF		.		.
1770	603.1442 CONCRETE BARRIER TYPE S42C	4,327.000	LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1780	603.1456 CONCRETE BARRIER TYPE S56C	589.000 LF		.		.
1790	603.2156 CONCRETE BARRIER FIXED OBJECT PROTECTION TYPE S56	90.000 LF		.		.
1800	603.3113 CONCRETE BARRIER TRANSITION TYPE NJ32SF TO S36	1.000 EACH		.		.
1810	603.3513 CONCRETE BARRIER TRANSITION TYPE S32 TO S36	1.000 EACH		.		.
1820	603.3559 CONCRETE BARRIER TRANSITION TYPE S42 TO S56	3.000 EACH		.		.
1830	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	62,270.000 LF		.		.
1840	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	87,480.000 LF		.		.
1850	604.0400 SLOPE PAVING CONCRETE **P**	85.000 SY		.		.
1860	604.0500 SLOPE PAVING CRUSHED AGGREGATE **P**	2,735.000 SY		.		.
1870	604.0600 SLOPE PAVING SELECT CRUSHED MATERIAL **P**	844.000 SY		.		.
1880	606.0100 RIPRAP LIGHT	4.000 CY		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1890	606.0200 RIPRAP MEDIUM	12.000 CY		.		.
1900	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	3,795.000 LF		.		.
1910	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	3,320.000 LF		.		.
1920	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	2,228.000 LF		.		.
1930	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	2,666.000 LF		.		.
1940	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	738.000 LF		.		.
1950	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH	22.000 LF		.		.
1960	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH	720.000 LF		.		.
1970	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	6,520.000 LF		.		.
1980	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	1,780.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1990	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	789.000 LF		.		.
2000	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH	244.000 LF		.		.
2010	608.0430 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 30-INCH	77.000 LF		.		.
2020	608.0442 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 42-INCH	269.000 LF		.		.
2030	608.0448 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 48-INCH	383.000 LF		.		.
2040	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	92.000 LF		.		.
2050	608.0518 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 18-INCH	12.000 LF		.		.
2060	610.0429 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 29X45-INCH	27.000 LF		.		.
2070	611.0420 RECONSTRUCTING MANHOLES	12.000 EACH		.		.
2080	611.0430 RECONSTRUCTING INLETS	2.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2090	611.0530 MANHOLE COVERS TYPE J	108.000 EACH		.		.
2100	611.0603 INLET COVERS TYPE A-S	1.000 EACH		.		.
2110	611.0606 INLET COVERS TYPE B	1.000 EACH		.		.
2120	611.0612 INLET COVERS TYPE C	2.000 EACH		.		.
2130	611.0624 INLET COVERS TYPE H	39.000 EACH		.		.
2140	611.0627 INLET COVERS TYPE HM	14.000 EACH		.		.
2150	611.0639 INLET COVERS TYPE H-S	46.000 EACH		.		.
2160	611.0642 INLET COVERS TYPE MS	4.000 EACH		.		.
2170	611.0651 INLET COVERS TYPE S	8.000 EACH		.		.
2180	611.0654 INLET COVERS TYPE V	289.000 EACH		.		.
2190	611.2003 MANHOLES 3-FT DIAMETER	18.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2200	611.2004 MANHOLES 4-FT DIAMETER	108.000 EACH		.		.
2210	611.2005 MANHOLES 5-FT DIAMETER	15.000 EACH		.		.
2220	611.2006 MANHOLES 6-FT DIAMETER	8.000 EACH		.		.
2230	611.2007 MANHOLES 7-FT DIAMETER	4.000 EACH		.		.
2240	611.2008 MANHOLES 8-FT DIAMETER	5.000 EACH		.		.
2250	611.3003 INLETS 3-FT DIAMETER	87.000 EACH		.		.
2260	611.3220 INLETS 2X2-FT	136.000 EACH		.		.
2270	611.3225 INLETS 2X2.5-FT	8.000 EACH		.		.
2280	611.3230 INLETS 2X3-FT	66.000 EACH		.		.
2290	611.3901 INLETS MEDIAN 1 GRATE	3.000 EACH		.		.
2300	611.8110 ADJUSTING MANHOLE COVERS	11.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2310	611.8115 ADJUSTING INLET COVERS	18.000 EACH		.		.
2320	611.8120.S COVER PLATES TEMPORARY	2.000 EACH		.		.
2330	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH	77.000 LF		.		.
2340	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	5,135.000 LF		.		.
2350	614.0305 STEEL PLATE BEAM GUARD CLASS A	100.000 LF		.		.
2360	614.0396 GUARDRAIL MOW STRIP ASPHALT	240.000 SY		.		.
2370	614.0400 ADJUSTING STEEL PLATE BEAM GUARD	1,569.000 LF		.		.
2380	614.0805 CRASH CUSHIONS PERMANENT LOW MAINTENANCE	2.000 EACH		.		.
2390	614.0905 CRASH CUSHIONS TEMPORARY	56.000 EACH		.		.
2400	614.0920 SALVAGED RAIL	21.000 LF		.		.
2410	614.0925 SALVAGED GUARDRAIL END TREATMENTS	1.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2420	614.0950 REPLACING GUARDRAIL POSTS AND BLOCKS	2.000 EACH		.		.
2430	614.2300 MGS GUARDRAIL 3	2,375.000 LF		.		.
2440	614.2310 MGS GUARDRAIL 3 HS	50.000 LF		.		.
2450	614.2320 MGS GUARDRAIL 3 QS	13.000 LF		.		.
2460	614.2330 MGS GUARDRAIL 3 K	620.000 LF		.		.
2470	614.2500 MGS THRIE BEAM TRANSITION	353.000 LF		.		.
2480	614.2610 MGS GUARDRAIL TERMINAL EAT	10.000 EACH		.		.
2490	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	4.000 EACH		.		.
2500	616.0206 FENCE CHAIN LINK 6-FT	6,252.000 LF		.		.
2510	616.0700.S FENCE SAFETY	1,380.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2520	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 001. 1206-07-84	1.000 EACH		.		.
2530	619.1000 MOBILIZATION	1.000 EACH		.		.
2540	623.0200 DUST CONTROL SURFACE TREATMENT	149,560.000 SY		.		.
2550	624.0100 WATER	1,495.000 MGAL		.		.
2560	625.0100 TOPSOIL	30,115.000 SY		.		.
2570	625.0500 SALVAGED TOPSOIL	40,105.000 SY		.		.
2580	627.0200 MULCHING	19,550.000 SY		.		.
2590	628.1504 SILT FENCE	6,180.000 LF		.		.
2600	628.1520 SILT FENCE MAINTENANCE	12,350.000 LF		.		.
2610	628.1905 MOBILIZATIONS EROSION CONTROL	16.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2620	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	24.000 EACH		.		.
2630	628.2004 EROSION MAT CLASS I TYPE B	28,955.000 SY		.		.
2640	628.2006 EROSION MAT URBAN CLASS I TYPE A	16,940.000 SY		.		.
2650	628.2027 EROSION MAT CLASS II TYPE C	1,150.000 SY		.		.
2660	628.2039 EROSION MAT CLASS III TYPE D	350.000 SY		.		.
2670	628.6505 SOIL STABILIZER TYPE A	0.080 ACRE		.		.
2680	628.6510 SOIL STABILIZER TYPE B	3.290 ACRE		.		.
2690	628.7005 INLET PROTECTION TYPE A	546.000 EACH		.		.
2700	628.7010 INLET PROTECTION TYPE B	418.000 EACH		.		.
2710	628.7015 INLET PROTECTION TYPE C	89.000 EACH		.		.
2720	628.7020 INLET PROTECTION TYPE D	121.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2730	628.7504 TEMPORARY DITCH CHECKS	987.000 LF		.		.
2740	628.7560 TRACKING PADS	10.000 EACH		.		.
2750	629.0210 FERTILIZER TYPE B	42.500 CWT		.		.
2760	630.0120 SEEDING MIXTURE NO. 20	808.000 LB		.		.
2770	630.0140 SEEDING MIXTURE NO. 40	309.000 LB		.		.
2780	630.0200 SEEDING TEMPORARY	1,316.000 LB		.		.
2790	631.0300 SOD WATER	397.000 MGAL		.		.
2800	631.1000 SOD LAWN	17,240.000 SY		.		.
2810	632.0101 TREES (SPECIES, ROOT, SIZE) 001. HONEYLOCUST, THORNLESS 'SKYLINE', B&B, 2.5-INCH CAL.	23.000 EACH		.		.
2820	632.0101 TREES (SPECIES, ROOT, SIZE) 002. CRABAPPLE, 'DONALD WYMAN', B&B, 2-INCH CAL.	16.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2830	632.0101 TREES (SPECIES, ROOT, SIZE) 003. CRABAPPLE, 'DONALD WYMAN' (SHRUB FORM TREE), B&B, 6-FOOT HT.	6.000 EACH		.		.
2840	632.0101 TREES (SPECIES, ROOT, SIZE) 004. CRABAPPLE, 'PURPLE PRINCE' (SHRUB FORM TREE), B&B, 6-FOOT HT.	3.000 EACH		.		.
2850	632.0101 TREES (SPECIES, ROOT, SIZE) 005. CRABAPPLE, 'ROYAL RAINDROPS', B&B, 2-INCH CAL.	1.000 EACH		.		.
2860	632.0101 TREES (SPECIES, ROOT, SIZE) 006. HAWTHORN, THORNLESS COCKSPUR, B&B, 2-INCH CAL.	6.000 EACH		.		.
2870	632.0101 TREES (SPECIES, ROOT, SIZE) 007. HAWTHORN, 'WINTER KING', B&B, 2-INCH CAL.	32.000 EACH		.		.
2880	632.0101 TREES (SPECIES, ROOT, SIZE) 008. HAWTHORN, 'WINTER KING' (SHRUB FORM TREE), B&B, 6-FOOT HT.	4.000 EACH		.		.
2890	632.0101 TREES (SPECIES, ROOT, SIZE) 009. LILAC, 'CHINA SNOW', B&B, 2-INCH CAL.	12.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2900	632.0101 TREES (SPECIES, ROOT, SIZE) 010. PEAR, 'CLEVELAND SELECT', B&B, 2-INCH CAL.	27.000 EACH		.		.
2910	632.0101 TREES (SPECIES, ROOT, SIZE) 011. VIBURNUM, BLACKHAW 'FOREST ROUGE' (SHRUB FORM TREE), B&B, 6-FOOT HT.	17.000 EACH		.		.
2920	632.0101 TREES (SPECIES, ROOT, SIZE) 012. CATALPA, NORTHERN, B&B, 2-INCH CAL.	4.000 EACH		.		.
2930	632.0101 TREES (SPECIES, ROOT, SIZE) 013. COFFEETREE, 'ESPRESSO', B&B, 2-INCH CAL.	21.000 EACH		.		.
2940	632.0101 TREES (SPECIES, ROOT, SIZE) 014. ELM, AMERICAN 'JEFFERSON', B&B, 2.5-INCH CAL.	7.000 EACH		.		.
2950	632.0101 TREES (SPECIES, ROOT, SIZE) 015. ELM, AMERICAN 'VALLEY FORGE', B&B, 2.5-INCH CAL.	5.000 EACH		.		.
2960	632.0101 TREES (SPECIES, ROOT, SIZE) 016. ELM, FRONTIER, B&B, 2.5-INCH CAL.	9.000 EACH		.		.
2970	632.0101 TREES (SPECIES, ROOT, SIZE) 017. ELM, 'NEW HORIZON', B&B, 2.5-INCH CAL.	12.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2980	632.0101 TREES (SPECIES, ROOT, SIZE) 018. GINKGO, 'AUTUMN GOLD', B&B, 2-INCH CAL.	17.000 EACH		.		.
2990	632.0101 TREES (SPECIES, ROOT, SIZE) 019. GINKGO, 'PRINCETON SENTRY', B&B, 2-INCH CAL.	2.000 EACH		.		.
3000	632.0101 TREES (SPECIES, ROOT, SIZE) 020. HACKBERRY, 'CHICAGOLAND', B&B, 2.5-INCH CAL.	21.000 EACH		.		.
3010	632.0101 TREES (SPECIES, ROOT, SIZE) 021. HORSECHESTNUT, 'FT. MCNAIR', B&B, 2-INCH CAL.	6.000 EACH		.		.
3020	632.0101 TREES (SPECIES, ROOT, SIZE) 022. LINDEN, AMERICAN 'SENTRY', B&B, 2.5-INCH CAL.	12.000 EACH		.		.
3030	632.0101 TREES (SPECIES, ROOT, SIZE) 023. MAPLE, 'ARMSTRONG', B&B, 2.5-INCH CAL.	2.000 EACH		.		.
3040	632.0101 TREES (SPECIES, ROOT, SIZE) 024. MAPLE, 'MARMO', B&B, 2.5-INCH CAL.	8.000 EACH		.		.
3050	632.0101 TREES (SPECIES, ROOT, SIZE) 025. MAPLE, 'SIENNA GLEN', B&B, 2.5-INCH CAL.	5.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3060	632.0101 TREES (SPECIES, ROOT, SIZE) 026. MAPLE, 'STATE STREET', B&B, 2-INCH CAL.	8.000 EACH		.		.
3070	632.0101 TREES (SPECIES, ROOT, SIZE) 027. OAK, ENGLISH 'CRIMSON SPIRE', B&B, 2-INCH CAL.	3.000 EACH		.		.
3080	632.0101 TREES (SPECIES, ROOT, SIZE) 028. OAK, 'REGAL PRINCE', B&B, 2-INCH CAL.	3.000 EACH		.		.
3090	632.0101 TREES (SPECIES, ROOT, SIZE) 029. OAK, SCHUETTES, B&B, 2.5-INCH CAL.	7.000 EACH		.		.
3100	632.0101 TREES (SPECIES, ROOT, SIZE) 030. OAK, SWAMP WHITE, B&B, 2. 5-INCH CAL	10.000 EACH		.		.
3110	632.0101 TREES (SPECIES, ROOT, SIZE) 031. PLANETREE, 'EXCLAMATION', B&B, 2-INCH CAL.	10.000 EACH		.		.
3120	632.0101 TREES (SPECIES, ROOT, SIZE) 032. TULIP TREE, B&B, 2.5-INCH CAL.	2.000 EACH		.		.
3130	632.0101 TREES (SPECIES, ROOT, SIZE) 033. ARBORVITAE, AMERICAN 'HETZ WINTERGREEN', B&B, 6-FOOT HT.	9.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3140	632.0101 TREES (SPECIES, ROOT, SIZE) 034. FIR, WHITE, B&B, 8-FOOT HT.	12.000 EACH		.		.
3150	632.0101 TREES (SPECIES, ROOT, SIZE) 035. JUNIPER, 'MOUNTBATTEN', B&B, 5-FOOT HT.	18.000 EACH		.		.
3160	632.0101 TREES (SPECIES, ROOT, SIZE) 036. PINE, LIMBER 'VANDERWOLF'S PYRAMID', B&B, 7-FOOT HT.	8.000 EACH		.		.
3170	632.0101 TREES (SPECIES, ROOT, SIZE) 037. SPRUCE, BLACK HILLS, B&B, 8-FOOT HT.	35.000 EACH		.		.
3180	632.0101 TREES (SPECIES, ROOT, SIZE) 038. SPRUCE, BLUE COLORADO, B&B, 8-FOOT HT.	6.000 EACH		.		.
3190	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 001. JUNIPER, PFITZER 'KALLAY'S COMPACT', CG, 24-INCH SP.	23.000 EACH		.		.
3200	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 002. CHOKEBERRY, BLACK IROQUOIS BEAUTY, CG, 24-INCH HT.	8.000 EACH		.		.
3210	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 003. HONEYSUCKLE, DWARF BUSH, CG, 24-INCH HT.	7.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3220	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 004. NEW JERSEY TEA, CG, 24-INCH HT.	19.000 EACH		.		.
3230	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 005. ROSE, 'DWARF PAVEMENT', CG, 18-INCH SP.	16.000 EACH		.		.
3240	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 006. SPIREA, GOLDMOUND, CG, 18-INCH HT.	2.000 EACH		.		.
3250	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 007. SUMAC, FRAGRANT 'GRO-LOW', CG, 24-INCH SP.	5.000 EACH		.		.
3260	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 008. VIBURNUM, BLACKHAW 'SUMMER MAGIC', CG, 36-INCH HT.	1.000 EACH		.		.
3270	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	40.000 EACH		.		.
3280	633.0100 DELINEATOR POSTS STEEL	11.000 EACH		.		.
3290	633.0500 DELINEATOR REFLECTORS	381.000 EACH		.		.
3300	633.1000 DELINEATOR BRACKETS	293.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3310	633.5200 MARKERS CULVERT END	6.000	EACH	.		.	
3320	634.0612 POSTS WOOD 4X6-INCH X 12-FT	7.000	EACH	.		.	
3330	634.0614 POSTS WOOD 4X6-INCH X 14-FT	21.000	EACH	.		.	
3340	634.0616 POSTS WOOD 4X6-INCH X 16-FT	10.000	EACH	.		.	
3350	634.0618 POSTS WOOD 4X6-INCH X 18-FT	29.000	EACH	.		.	
3360	634.0620 POSTS WOOD 4X6-INCH X 20-FT	5.000	EACH	.		.	
3370	634.0622 POSTS WOOD 4X6-INCH X 22-FT	2.000	EACH	.		.	
3380	634.0808 POSTS TUBULAR STEEL 2X2-INCH X 8-FT	7.000	EACH	.		.	
3390	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS	5,970.000	LB	.		.	
3400	636.0100 SIGN SUPPORTS CONCRETE MASONRY	578.200	CY	.		.	
3410	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT	664.000	LB	.		.	

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3420	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS	20,420.000	LB		.		.
3430	636.1500 SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	70,610.000	LB		.		.
3440	637.1220 SIGNS TYPE I REFLECTIVE SH	5,960.000	SF		.		.
3450	637.2210 SIGNS TYPE II REFLECTIVE H	1,101.180	SF		.		.
3460	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING	98.420	SF		.		.
3470	637.2230 SIGNS TYPE II REFLECTIVE F	300.000	SF		.		.
3480	638.2101 MOVING SIGNS TYPE I	14.000	EACH		.		.
3490	638.2102 MOVING SIGNS TYPE II	83.000	EACH		.		.
3500	638.2601 REMOVING SIGNS TYPE I	20.000	EACH		.		.
3510	638.2602 REMOVING SIGNS TYPE II	184.000	EACH		.		.
3520	638.3000 REMOVING SMALL SIGN SUPPORTS	120.000	EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3530	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS	10.000 EACH		.		.
3540	641.1200 SIGN BRIDGE CANTILEVERED (STRUCTURE) 400. S-13-371	LUMP	LUMP			.
3550	641.1200 SIGN BRIDGE CANTILEVERED (STRUCTURE) 401. S-13-374	LUMP	LUMP			.
3560	641.6600 SIGN BRIDGE (STRUCTURE) 400. S-13-368	LUMP	LUMP			.
3570	641.6600 SIGN BRIDGE (STRUCTURE) 401. S-13-369	LUMP	LUMP			.
3580	641.6600 SIGN BRIDGE (STRUCTURE) 402. S-13-370	LUMP	LUMP			.
3590	641.6600 SIGN BRIDGE (STRUCTURE) 403. S-13-372	LUMP	LUMP			.
3600	641.6600 SIGN BRIDGE (STRUCTURE) 404. S-13-373	LUMP	LUMP			.
3610	641.6600 SIGN BRIDGE (STRUCTURE) 405. S-13-375	LUMP	LUMP			.
3620	641.6600 SIGN BRIDGE (STRUCTURE) 406. S-13-385	LUMP	LUMP			.
3630	641.6600 SIGN BRIDGE (STRUCTURE) 407. S-13-423	LUMP	LUMP			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3640	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 400. S-13-386	LUMP	LUMP			.
3650	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 401. S-13-387	LUMP	LUMP			.
3660	642.5401 FIELD OFFICE TYPE D	1.000 EACH		.		.
3670	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 001. 1206-07-84	830.000 DAY		.		.
3680	643.0300 TRAFFIC CONTROL DRUMS	197,691.000 DAY		.		.
3690	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	10,211.000 DAY		.		.
3700	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	259.000 EACH		.		.
3710	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	259.000 EACH		.		.
3720	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	19,313.000 DAY		.		.
3730	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	45,715.000 DAY		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3740	643.0800 TRAFFIC CONTROL ARROW BOARDS	4,304.000 DAY		.		.
3750	643.0900 TRAFFIC CONTROL SIGNS	56,316.000 DAY		.		.
3760	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I	1.000 EACH		.		.
3770	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	30.000 EACH		.		.
3780	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE	1,352.000 SF		.		.
3790	643.1050 TRAFFIC CONTROL SIGNS PCMS	2,629.000 DAY		.		.
3800	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 001. 1206-07-84	1.000 EACH		.		.
3810	643.3000 TRAFFIC CONTROL DETOUR SIGNS	47,109.000 DAY		.		.
3820	645.0120 GEOTEXTILE FABRIC TYPE HR	23.000 SY		.		.
3830	645.0130 GEOTEXTILE FABRIC TYPE R	25.000 SY		.		.
3840	646.0106 PAVEMENT MARKING EPOXY 4-INCH	178,366.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3850	646.0116 PAVEMENT MARKING EPOXY 6-INCH	2,785.000 LF		.		.
3860	646.0126 PAVEMENT MARKING EPOXY 8-INCH	17,339.000 LF		.		.
3870	646.0600 REMOVING PAVEMENT MARKINGS	282,321.000 LF		.		.
3880	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	13,371.000 LF		.		.
3890	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	19,891.000 LF		.		.
3900	646.0881.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	2,399.000 LF		.		.
3910	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	2,385.000 LF		.		.
3920	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1	9.000 EACH		.		.
3930	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	65.000 EACH		.		.
3940	647.0176 PAVEMENT MARKING ARROWS EPOXY TYPE 3	3.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3950	647.0196 PAVEMENT MARKING ARROWS EPOXY TYPE 5	11.000 EACH		.		.
3960	647.0206 PAVEMENT MARKING ARROWS BIKE LANE EPOXY	29.000 EACH		.		.
3970	647.0256 PAVEMENT MARKING SYMBOLS EPOXY	6.000 EACH		.		.
3980	647.0306 PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY	29.000 EACH		.		.
3990	647.0356 PAVEMENT MARKING WORDS EPOXY	57.000 EACH		.		.
4000	647.0456 PAVEMENT MARKING CURB EPOXY	483.000 LF		.		.
4010	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	927.000 LF		.		.
4020	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	31.000 EACH		.		.
4030	647.0716 PAVEMENT MARKING DIAGONAL EPOXY 8-INCH	48.000 LF		.		.
4040	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	14.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4050	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	1,005.000 LF		.		.
4060	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	1,838.000 LF		.		.
4070	647.0776 PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	620.000 LF		.		.
4080	647.0796 PAVEMENT MARKING CROSSWALK EPOXY 24-INCH	385.000 LF		.		.
4090	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	300,493.000 LF		.		.
4100	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	22,260.000 LF		.		.
4110	649.0600 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 6-INCH	621.000 LF		.		.
4120	649.0701 TEMPORARY PAVEMENT MARKING 8-INCH	17,555.000 LF		.		.
4130	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	975.000 LF		.		.
4140	649.0900 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH	282.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4150	649.1000 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH	162.000 LF		.		.
4160	649.1100 TEMPORARY PAVEMENT MARKING STOP LINE 18-INCH	694.000 LF		.		.
4170	649.1200 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH	620.000 LF		.		.
4180	649.1700 TEMPORARY PAVEMENT MARKING ARROWS	13.000 EACH		.		.
4190	649.1900 TEMPORARY PAVEMENT MARKING WORDS	2.000 EACH		.		.
4200	649.2100 TEMPORARY RAISED PAVEMENT MARKERS	2,953.000 EACH		.		.
4210	650.4000 CONSTRUCTION STAKING STORM SEWER	527.000 EACH		.		.
4220	650.4500 CONSTRUCTION STAKING SUBGRADE	33,155.000 LF		.		.
4230	650.5000 CONSTRUCTION STAKING BASE	3,325.000 LF		.		.
4240	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	6,028.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4250	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 300. B-13-651	LUMP	LUMP			.
4260	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 301. B-13-652	LUMP	LUMP			.
4270	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 302. B-13-653	LUMP	LUMP			.
4280	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	39,155.000 LF		.		.
4290	650.7500 CONSTRUCTION STAKING CONCRETE BARRIER	1,086.000 LF		.		.
4300	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE	1,185.000 LF		.		.
4310	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 001. 1206-07-84	LUMP	LUMP			.
4320	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 001. 1206-07-84	LUMP	LUMP			.
4330	650.9920 CONSTRUCTION STAKING SLOPE STAKES	37,136.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4340	652.0110 CONDUIT RIGID METALLIC 1-INCH **P**	126.000 LF		.		.
4350	652.0125 CONDUIT RIGID METALLIC 2-INCH **P**	1,720.000 LF		.		.
4360	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH **P**	13,013.000 LF		.		.
4370	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH **P**	11,042.000 LF		.		.
4380	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM	20.000 EACH		.		.
4390	652.0800 CONDUIT LOOP DETECTOR	3,647.000 LF		.		.
4400	653.0135 PULL BOXES STEEL 24X36-INCH	78.000 EACH		.		.
4410	653.0140 PULL BOXES STEEL 24X42-INCH	44.000 EACH		.		.
4420	653.0222 JUNCTION BOXES 18X12X6-INCH	5.000 EACH		.		.
4430	653.0900 ADJUSTING PULL BOXES	2.000 EACH		.		.
4440	653.0905 REMOVING PULL BOXES	36.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4450	654.0101 CONCRETE BASES TYPE 1	29.000 EACH		.		.
4460	654.0102 CONCRETE BASES TYPE 2	7.000 EACH		.		.
4470	654.0105 CONCRETE BASES TYPE 5	23.000 EACH		.		.
4480	654.0106 CONCRETE BASES TYPE 6	54.000 EACH		.		.
4490	654.0110 CONCRETE BASES TYPE 10	1.000 EACH		.		.
4500	654.0113 CONCRETE BASES TYPE 13	4.000 EACH		.		.
4510	654.0210 CONCRETE CONTROL CABINET BASES TYPE 8	1.000 EACH		.		.
4520	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	4.000 EACH		.		.
4530	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	8,778.000 LF		.		.
4540	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	3,543.000 LF		.		.
4550	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG	373.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4560	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	2,175.000	LF		.		.
4570	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG	3,834.000	LF		.		.
4580	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED	656.000	LF		.		.
4590	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	12,767.000	LF		.		.
4600	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	28,581.000	LF		.		.
4610	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG	30,300.000	LF		.		.
4620	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	35,856.000	LF		.		.
4630	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	11,313.000	LF		.		.
4640	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG	6,837.000	LF		.		.
4650	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG	12,930.000	LF		.		.
4660	655.0700 LOOP DETECTOR LEAD IN CABLE	15,439.000	LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4670	655.0800 LOOP DETECTOR WIRE	12,110.000 LF		.		.
4680	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 001. MIDVALE BLVD & NAKOMA RD	LUMP	LUMP			.
4690	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 002. VERONA & USH 12/14 (BELTLINE) - LIGHTING	LUMP	LUMP			.
4700	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 001. VERONA ROAD / BELTLINE HIGHWAY	LUMP	LUMP			.
4710	657.0100 PEDESTAL BASES	29.000 EACH		.		.
4720	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	80.000 EACH		.		.
4730	657.0315 POLES TYPE 4	7.000 EACH		.		.
4740	657.0322 POLES TYPE 5-ALUMINUM	21.000 EACH		.		.
4750	657.0327 POLES TYPE 6-ALUMINUM	54.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4760	657.0410 TRAFFIC SIGNAL STANDARDS ALUMINUM 9-FT	5.000 EACH		.		.
4770	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	22.000 EACH		.		.
4780	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	2.000 EACH		.		.
4790	657.0614 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 8-FT	8.000 EACH		.		.
4800	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	60.000 EACH		.		.
4810	657.0710 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 12-FT	4.000 EACH		.		.
4820	657.0715 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 15-FT	14.000 EACH		.		.
4830	657.1345 INSTALL POLES TYPE 9	1.000 EACH		.		.
4840	657.1355 INSTALL POLES TYPE 12	3.000 EACH		.		.
4850	657.1360 INSTALL POLES TYPE 13	1.000 EACH		.		.
4860	657.1530 INSTALL MONOTUBE ARMS 30-FT	1.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4870	657.1540 INSTALL MONOTUBE ARMS 40-FT	1.000 EACH		.		.
4880	657.1545 INSTALL MONOTUBE ARMS 45-FT	3.000 EACH		.		.
4890	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT	1.000 EACH		.		.
4900	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	52.000 EACH		.		.
4910	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	10.000 EACH		.		.
4920	658.0120 TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL	2.000 EACH		.		.
4930	658.0155 TRAFFIC SIGNAL FACE 3-12 INCH HORIZONTAL	9.000 EACH		.		.
4940	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	38.000 EACH		.		.
4950	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	10.000 EACH		.		.
4960	658.0225 BACKPLATES SIGNAL FACE 5 SECTION 12-INCH	2.000 EACH		.		.
4970	658.0412 PEDESTRIAN SIGNAL FACE 12-INCH	28.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4980	658.0500 PEDESTRIAN PUSH BUTTONS	26.000 EACH		.		.
4990	658.0600 LED MODULES 12-INCH RED BALL	38.000 EACH		.		.
5000	658.0605 LED MODULES 12-INCH YELLOW BALL	27.000 EACH		.		.
5010	658.0610 LED MODULES 12-INCH GREEN BALL	16.000 EACH		.		.
5020	658.0615 LED MODULES 12-INCH RED ARROW	35.000 EACH		.		.
5030	658.0620 LED MODULES 12-INCH YELLOW ARROW	58.000 EACH		.		.
5040	658.0625 LED MODULES 12-INCH GREEN ARROW	59.000 EACH		.		.
5050	658.0660 LED MODULES COUNTDWN TIMER 12-INCH	28.000 EACH		.		.
5060	658.1110 PROGRAMMABLE TRAFFIC SIGNAL FACE 3-12 VERTICAL	3.000 EACH		.		.
5070	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 001. MIDVALE BOULEVARD / NAKOMA ROAD	LUMP	LUMP			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5080	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 002. VERONA ROAD / BELTLINE HIGHWAY	LUMP	LUMP			.
5090	659.0115 LUMINAIRES UTILITY HPS 150 WATTS	4.000 EACH	.			.
5100	659.0802 PLAQUES SEQUENCE IDENTIFICATION	4.000 EACH	.			.
5110	659.1125 LUMINAIRES UTILITY LED C	83.000 EACH	.			.
5120	659.1215 LUMINAIRES UNDERDECK LED C	6.000 EACH	.			.
5130	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 001. MIDVALE BOULEVARD AND NAKOMA ROAD	LUMP	LUMP			.
5140	670.0100 FIELD SYSTEM INTEGRATOR	LUMP	LUMP			.
5150	670.0200 ITS DOCUMENTATION	LUMP	LUMP			.
5160	671.0112 CONDUIT HDPE 1-DUCT 2-INCH **P**	710.000 LF	.			.
5170	671.0132 CONDUIT HDPE 3-DUCT 2-INCH **P**	18,614.000 LF	.			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5180	671.0232 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-IN **P**	3,930.000 LF		.		.
5190	671.0300 FIBER OPTIC CABLE MARKER	64.000 EACH		.		.
5200	672.0280 BASE CAMERA POLE 80-FT	1.000 EACH		.		.
5210	673.0105 COMMUNICATION VAULT TYPE 1	12.000 EACH		.		.
5220	673.0200.S INSTALL ITS FIELD CABINET	1.000 EACH		.		.
5230	673.0225.S INSTALL POLE MOUNTED CABINET	1.000 EACH		.		.
5240	674.0200 CABLE MICROWAVE DETECTOR	7,290.000 LF		.		.
5250	674.0300 REMOVE CABLE	1,678.000 LF		.		.
5260	674.0400 REINSTALL CABLE	33.000 LF		.		.
5270	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY	10.000 EACH		.		.
5280	675.0400.S INSTALL ETHERNET SWITCH	8.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5290	677.0100 INSTALL CAMERA POLE	1.000 EACH		.		.
5300	677.0200 INSTALL CAMERA ASSEMBLY	2.000 EACH		.		.
5310	677.0300.S INSTALL VIDEO ENCODER	2.000 EACH		.		.
5320	677.9051.S REMOVING 50-FOOT CAMERA POLE	1.000 EACH		.		.
5330	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	7,870.000 LF		.		.
5340	678.0024 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 24-CT	1,000.000 LF		.		.
5350	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT	25,360.000 LF		.		.
5360	678.0200 FIBER OPTIC SPLICE ENCLOSURE	5.000 EACH		.		.
5370	678.0300 FIBER OPTIC SPLICE	111.000 EACH		.		.
5380	678.0400 FIBER OPTIC TERMINATION	87.000 EACH		.		.
5390	678.0500 COMMUNICATION SYSTEM TESTING	LUMP	LUMP			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5400	690.0150 SAWING ASPHALT	10,480.000 LF		.		.
5410	690.0250 SAWING CONCRETE	57,645.000 LF		.		.
5420	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	51,290.000 DOL	1.00000		51290.00	
5430	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	11,150.000 DOL	1.00000		11150.00	
5440	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	2,400.000 HRS	5.00000		12000.00	
5450	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	4,900.000 HRS	5.00000		24500.00	
5460	SPV.0035 SPECIAL 300. HIGH PERFORMANCE CONCRETE (HPC) MASONRY STRUCTURES **P**	1,976.000 CY		.		.
5470	SPV.0035 SPECIAL 500. PLANTING MIXTURE	372.000 CY		.		.
5480	SPV.0035 SPECIAL 501. TOPSOIL SPECIAL	2,058.000 CY		.		.
5490	SPV.0035 SPECIAL 600. ABANDON SANITARY SEWER - SLURRY	0.300 CY		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5500	SPV.0045 SPECIAL 700. PCMS REMOTE COMMUNICATIONS	2,500.000 DAY		.		.
5510	SPV.0045 SPECIAL 701. WORK ZONE ACCESS ASSISTANCE VEHICLE	40.000 DAY		.		.
5520	SPV.0060 SPECIAL 001. UTILITY LINE OPENING (ULO)	15.000 EACH		.		.
5530	SPV.0060 SPECIAL 002. CONSTRUCTION STAKING CURB RAMP	36.000 EACH		.		.
5540	SPV.0060 SPECIAL 003. CONSTRUCTION STAKING SIGN STRUCTURE	12.000 EACH		.		.
5550	SPV.0060 SPECIAL 004. CONCRETE BARRIER TRANSITION NJ32DF-S36 SPECIAL	1.000 EACH		.		.
5560	SPV.0060 SPECIAL 005. CONCRETE BARRIER TRANSITION S36-S42 SPECIAL	2.000 EACH		.		.
5570	SPV.0060 SPECIAL 006. CONCRETE BARRIER TRANSITION S42-S56 SPECIAL, TYPE A	3.000 EACH		.		.
5580	SPV.0060 SPECIAL 007. CONCRETE BARRIER TRANSITION S42-S56 SPECIAL, TYPE B	3.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5590	SPV.0060 SPECIAL 008. CONCRETE BARRIER TRANSITION S42-S56 SPECIAL, TYPE C	2.000 EACH		.		.
5600	SPV.0060 SPECIAL 009. CONCRETE BARRIER TRANSITION S42-S56 SPECIAL, TYPE D	1.000 EACH		.		.
5610	SPV.0060 SPECIAL 010. CONCRETE BARRIER TRANSITION S42C-S56C	3.000 EACH		.		.
5620	SPV.0060 SPECIAL 011. CONCRETE BARRIER TRANSITION S56-56VERTICAL SPECIAL, TYPE A	6.000 EACH		.		.
5630	SPV.0060 SPECIAL 012. CONCRETE BARRIER TRANSITION S56-56VERTICAL SPECIAL, TYPE B	2.000 EACH		.		.
5640	SPV.0060 SPECIAL 013. CONCRETE BARRIER TRANSITION S56-56VERTICAL SPECIAL, TYPE C	3.000 EACH		.		.
5650	SPV.0060 SPECIAL 014. CONCRETE BARRIER TRANSITION S56-56VERTICAL SPECIAL, TYPE D	2.000 EACH		.		.
5660	SPV.0060 SPECIAL 015. CONCRETE BARRIER TRANSITION P32-S42 SPECIAL	2.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5670	SPV.0060 SPECIAL 016. INLETS 1.75X2-FT	36.000 EACH		.		.
5680	SPV.0060 SPECIAL 017. INLETS 6X6-FT	1.000 EACH		.		.
5690	SPV.0060 SPECIAL 018. FIBER TRACER MARKER POST	11.000 EACH		.		.
5700	SPV.0060 SPECIAL 019. CONNECT PIPE UNDERDRAIN TO EXISTING STRUCTURE	24.000 EACH		.		.
5710	SPV.0060 SPECIAL 020. SLOTTED VANE DRAIN TYPE A 6-FT	5.000 EACH		.		.
5720	SPV.0060 SPECIAL 021. CONCRETE CUT OFF WALL	6.000 EACH		.		.
5730	SPV.0060 SPECIAL 022. INLET PROTECTION TYPE FLI	1.000 EACH		.		.
5740	SPV.0060 SPECIAL 023. STORM SEWER TAP	15.000 EACH		.		.
5750	SPV.0060 SPECIAL 024. INLET ML640	1.000 EACH		.		.
5760	SPV.0060 SPECIAL 100. REMOVE EXISTING CITY-OWNED LIGHT POLE ASSEMBLY	25.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5770	SPV.0060 SPECIAL 101. REMOVE EXISTING WISDOT-OWNED LIGHT POLE ASSEMBLY	43.000 EACH		.		.
5780	SPV.0060 SPECIAL 102. LUMINAIRES UNDERDECK LED	6.000 EACH		.		.
5790	SPV.0060 SPECIAL 103. LIGHTING CONTROL CABINET	1.000 EACH		.		.
5800	SPV.0060 SPECIAL 104. CONCRETE CONTROL CABINET BASES SPECIAL	1.000 EACH		.		.
5810	SPV.0060 SPECIAL 105. WOOD POLE, 65-FT WITH SERVICE	1.000 EACH		.		.
5820	SPV.0060 SPECIAL 106. LIGHTING CONTROL CABINET - CITY OF MADISON	1.000 EACH		.		.
5830	SPV.0060 SPECIAL 107. RELOCATING EXISTING LIGHT POLE ASSEMBLY	2.000 EACH		.		.
5840	SPV.0060 SPECIAL 108. INSTALL IP WIRELESS 5.8 GHZ RADIO/ANTENNA	2.000 EACH		.		.
5850	SPV.0060 SPECIAL 109. REMOVE EXISTING TRAFFIC SIGNAL FACES	3.000 EACH		.		.
5860	SPV.0060 SPECIAL 110. LOOP DETECTOR SPLICE	3.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5870	SPV.0060 SPECIAL 111. RELOCATE SOLAR-POWERED BLUETOOTH SENSOR	10.000 EACH		.		.
5880	SPV.0060 SPECIAL 112. REPAIR LOOP DETECTOR SLOT	2.000 EACH		.		.
5890	SPV.0060 SPECIAL 200. POSTS ROUND TUBULAR STEEL 2-INCH 10-FT	10.000 EACH		.		.
5900	SPV.0060 SPECIAL 201. POSTS ROUND TUBULAR STEEL 2-INCH 12-FT	3.000 EACH		.		.
5910	SPV.0060 SPECIAL 202. POSTS ROUND TUBULAR STEEL 2-INCH 14-FT	4.000 EACH		.		.
5920	SPV.0060 SPECIAL 203. POSTS ROUND TUBULAR STEEL 2-INCH REFLECTIVE 10-FT	10.000 EACH		.		.
5930	SPV.0060 SPECIAL 204. POSTS ROUND TUBULAR STEEL 2-INCH REFLECTIVE 12-FT	5.000 EACH		.		.
5940	SPV.0060 SPECIAL 205. POSTS ROUND TUBULAR STEEL 2-INCH REFLECTIVE 14-FT	5.000 EACH		.		.
5950	SPV.0060 SPECIAL 206. PRECAST SIGN POST BASE	53.000 EACH		.		.
5960	SPV.0060 SPECIAL 207. TEMPORARY STREET LIGHT UNIT	13.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5970	SPV.0060 SPECIAL 300. MAINTENANCE AND SALVAGING OF CRASH CUSHIONS TEMP. LEFT IN PLACE BY OTHERS	4.000 EACH		.		.
5980	SPV.0060 SPECIAL 301. RELOCATE CRASH CUSHION TEMPORARY LEFT IN PLACE BY OTHERS	12.000 EACH		.		.
5990	SPV.0060 SPECIAL 302. TRAFFIC CONTROL, VERTICAL PANELS, 8-INCH, DOUBLE	100.000 EACH		.		.
6000	SPV.0060 SPECIAL 303. INLET COVERS, FLAT, TEMPORARY	27.000 EACH		.		.
6010	SPV.0060 SPECIAL 304. INLETS TEMPORARY	25.000 EACH		.		.
6020	SPV.0060 SPECIAL 305. TEMPORARY CURB RAMP	42.000 EACH		.		.
6030	SPV.0060 SPECIAL 306. PRE-ENGINEERED SKYLIGHT SYSTEM	1.000 EACH		.		.
6040	SPV.0060 SPECIAL 500. PERENNIALS, AUTUMN MOOR GRASS, CG, 1 GAL.	130.000 EACH		.		.
6050	SPV.0060 SPECIAL 501. PERENNIALS, BEARDTONGUE, 'HUSKER RED', CG, 1 GAL.	53.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6060	SPV.0060 SPECIAL 502. PERENNIALS, BEE BALM, 'GRAND MARSHALL, CG, 1 GAL.	47.000 EACH		.		.
6070	SPV.0060 SPECIAL 503. PERENNIALS, BEE BALM, 'JACOB CLINE', CG, 1 GAL.	12.000 EACH		.		.
6080	SPV.0060 SPECIAL 504. PERENNIALS, BLACK-EYED SUSAN, 'GOLDSTURM', CG, 1 GAL.	20.000 EACH		.		.
6090	SPV.0060 SPECIAL 505. PERENNIALS, BLUE MOOR GRASS, CG, 1 GAL.	124.000 EACH		.		.
6100	SPV.0060 SPECIAL 506. PERENNIALS, BUTTERFLYWEED, CG, 1 GAL.	15.000 EACH		.		.
6110	SPV.0060 SPECIAL 507. PERENNIALS, CALAMINT, LESSER, 'MONTROSE WHITE', CG, 1 GAL.	42.000 EACH		.		.
6120	SPV.0060 SPECIAL 508. PERENNIALS, CATMINT, 'WALKER'S LOW', CG, 1 GAL.	10.000 EACH		.		.
6130	SPV.0060 SPECIAL 509. PERENNIALS, CONEFLOWER, PALE PURPLE, CG, 1 GAL.	12.000 EACH		.		.
6140	SPV.0060 SPECIAL 510. PERENNIALS, CONEFLOWER, 'POWWOW WILDBERRY', CG, 1 GAL.	25.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6150	SPV.0060 SPECIAL 511. PERENNIALS, CONEFLOWER, 'WHITE SWAN', CG, 1 GAL.	10.000 EACH		.		.
6160	SPV.0060 SPECIAL 512. PERENNIALS, CRESTED HAIR GRASS, CG, 1 GAL.	78.000 EACH		.		.
6170	SPV.0060 SPECIAL 513. PERENNIALS, GAYFEATHER, SPIKED, 'KOBOLD', CG, 1 GAL.	43.000 EACH		.		.
6180	SPV.0060 SPECIAL 514. PERENNIALS, GAYFEATHER, WHITE, CG, 1 GAL.	13.000 EACH		.		.
6190	SPV.0060 SPECIAL 515. PERENNIALS, IRONWEED, 'IRON BEAUTY', CG, 1 GAL.	17.000 EACH		.		.
6200	SPV.0060 SPECIAL 516. PERENNIALS, KNAUTIA, CG, 1 GAL.	11.000 EACH		.		.
6210	SPV.0060 SPECIAL 517. PERENNIALS, LITTLE BLUESTEM, 'BLUE HEAVEN', CG, 1 GAL.	48.000 EACH		.		.
6220	SPV.0060 SPECIAL 518. PERENNIALS, LITTLE BLUESTEM, 'THE BLUES', CG, 1 GAL.	790.000 EACH		.		.
6230	SPV.0060 SPECIAL 519. PERENNIALS, NORTHERN SEA OATS, CG, 1 GAL.	54.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6240	SPV.0060 SPECIAL 520. PERENNIALS, ORNAMENTAL CHIVES, 'GLOBEMASTER', CG, 1 GAL.	12.000 EACH		.		.
6250	SPV.0060 SPECIAL 521. PERENNIALS, ORNAMENTAL CHIVES, 'SUMMER BEAUTY', CG, 1 GAL.	565.000 EACH		.		.
6260	SPV.0060 SPECIAL 522. PERENNIALS, PRAIRIE CLOVER, PURPLE, CG, 1 GAL.	40.000 EACH		.		.
6270	SPV.0060 SPECIAL 523. PERENNIALS, PURPLE LOVE GRASS, CG, 1 GAL.	14.000 EACH		.		.
6280	SPV.0060 SPECIAL 524. PERENNIALS, PRAIRIE DROPSEED, CG, 1 GAL.	127.000 EACH		.		.
6290	SPV.0060 SPECIAL 525. PERENNIALS, PRAIRIE DROPSEED, 'TARA', CG, 1 GAL.	246.000 EACH		.		.
6300	SPV.0060 SPECIAL 526. PERENNIALS, REED GRASS, 'KARL FOERSTER', CG, 1 GAL.	14.000 EACH		.		.
6310	SPV.0060 SPECIAL 527. PERENNIALS, REED GRASS, 'OVERDAM', CG, 1 GAL.	10.000 EACH		.		.
6320	SPV.0060 SPECIAL 528. PERENNIALS, RUSSIAN SAGE, 'LITTLE SPIRE', CG, 1 GAL.	17.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6330	SPV.0060 SPECIAL 529. PERENNIALS, SALVIA, 'MAY NIGHT', CG, 1 GAL.	176.000 EACH		.		.
6340	SPV.0060 SPECIAL 530. PERENNIALS, SEDUM, 'AUTUMN FIRE', CG, 1 GAL.	60.000 EACH		.		.
6350	SPV.0060 SPECIAL 531. PERENNIALS, SNOWDROP WINDFLOWER, CG, 1 GAL.	25.000 EACH		.		.
6360	SPV.0060 SPECIAL 532. PERENNIALS, SWITCH GRASS, 'NORTHWIND', CG, 1 GAL.	110.000 EACH		.		.
6370	SPV.0060 SPECIAL 533. PERENNIALS, SWITCH GRASS, 'ROTSTRAHLBUSCH', CG, 1 GAL.	315.000 EACH		.		.
6380	SPV.0060 SPECIAL 534. PERENNIALS, TICKSEED, THREADLEAF 'ZAGREB', CG, 1 GAL.	5.000 EACH		.		.
6390	SPV.0060 SPECIAL 535. PERENNIALS, WHITE FALSE INDIGO, CG, 1 GAL.	1.000 EACH		.		.
6400	SPV.0060 SPECIAL 536. PERENNIALS, WILD INDIGO, 'PURPLE SMOKE', CG, 1 GAL.	1.000 EACH		.		.
6410	SPV.0060 SPECIAL 537. PERENNIALS, YARROW, 'SUMMERWINE', CG, 1 GAL.	3.000 EACH		.		.
6420	SPV.0060 SPECIAL 550. LIGHT BOX	1.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0060 SPECIAL 600.					
6430	HYDRANTS	4.000 EACH		.		.
	SPV.0060 SPECIAL 601.					
6440	WATER VALVE, 4-INCH	2.000 EACH		.		.
	SPV.0060 SPECIAL 602.					
6450	WATER VALVE, 6-INCH	4.000 EACH		.		.
	SPV.0060 SPECIAL 603.					
6460	WATER VALVE, 8-INCH	16.000 EACH		.		.
	SPV.0060 SPECIAL 604.					
6470	WATER VALVE, 12-INCH	1.000 EACH		.		.
	SPV.0060 SPECIAL 605.					
6480	WATER VALVE, 16-INCH	2.000 EACH		.		.
	SPV.0060 SPECIAL 606.					
6490	CUT-IN CONNECTION	16.000 EACH		.		.
	SPV.0060 SPECIAL 607.					
6500	ADJUST WATER VALVE BOX	5.000 EACH		.		.
	SPV.0060 SPECIAL 608.					
6510	CUT-OFF EXISTING WATER MAIN	2.000 EACH		.		.
	SPV.0060 SPECIAL 609.					
6520	ABANDON WATER VALVE BOX	13.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6530	SPV.0060 SPECIAL 610. REMOVE AND SALVAGE HYDRANT	4.000 EACH		.		.
6540	SPV.0060 SPECIAL 611. TEMPORARY WATER MAIN CONNECTION	5.000 EACH		.		.
6550	SPV.0060 SPECIAL 612. EXCAVATE TRENCH FOR LIVE TAP	1.000 EACH		.		.
6560	SPV.0060 SPECIAL 613. DISCONNECT AND RECONNECT EXISTING SERVICE LATERAL - 1-INCH	2.000 EACH		.		.
6570	SPV.0060 SPECIAL 614. DISCONNECT AND RECONNECT EXISTING SERVICE LATERAL - 1.5-INCH	2.000 EACH		.		.
6580	SPV.0060 SPECIAL 615. DISCONNECT AND RECONNECT EXISTING SERVICE LATERAL - 2-INCH	2.000 EACH		.		.
6590	SPV.0060 SPECIAL 616. ADJUST WATER SERVICE BOX	7.000 EACH		.		.
6600	SPV.0060 SPECIAL 617. ADJUST SAS SPECIAL	3.000 EACH		.		.
6610	SPV.0060 SPECIAL 618. SANITARY SEWER ACCESS STRUCTURE (4-FOOT DIAMETER)	5.000 EACH		.		.
6620	SPV.0060 SPECIAL 619. MANHOLE COVERS TYPE MAD	5.000 EACH		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6630	SPV.0060 SPECIAL 620. SANITARY SEWER INTERNAL CHIMNEY SEA	1.000 EACH		.		.
6640	SPV.0060 SPECIAL 621. SANITARY SEWER TAP	3.000 EACH		.		.
6650	SPV.0060 SPECIAL 622. REMOVE SANITARY SEWER STRUCTURE	3.000 EACH		.		.
6660	SPV.0060 SPECIAL 623. ABANDON SANITARY SEWER - PIPE PLUG	3.000 EACH		.		.
6670	SPV.0060 SPECIAL 624. TEMPORARY SANITARY SEWER CONNECTION	2.000 EACH		.		.
6680	SPV.0060 SPECIAL 700. BASELINE CPM PROGRESS SCHEDULE	1.000 EACH		.		.
6690	SPV.0060 SPECIAL 701. CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS	30.000 EACH		.		.
6700	SPV.0075 SPECIAL 001. STREET SWEEPING	300.000 HRS	170.00000		51000.00	
6710	SPV.0085 SPECIAL 300. BAR STEEL REINFORCEMENT HS STAINLESS STEEL BRIDGES **P**	430,660.000 LB		.		.
6720	SPV.0090 SPECIAL 001. CONCRETE CURB & GUTTER 24-INCH TYPE A **P**	73.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6730	SPV.0090 SPECIAL 002. CONCRETE CURB & GUTTER 24-INCH TYPE D **P**	2,493.000 LF		.		.
6740	SPV.0090 SPECIAL 003. CONCRETE CURB & GUTTER 32-INCH SPECIAL **P**	240.000 LF		.		.
6750	SPV.0090 SPECIAL 004. CONCRETE CURB & GUTTER 30-INCH TYPE A FULL DEPTH **P**	105.000 LF		.		.
6760	SPV.0090 SPECIAL 005. CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A FULL DEPTH **P**	1,530.000 LF		.		.
6770	SPV.0090 SPECIAL 006. CONCRETE GUTTER 18-INCH **P**	275.000 LF		.		.
6780	SPV.0090 SPECIAL 007. CONCRETE BARRIER SPECIAL, TYPE A	185.000 LF		.		.
6790	SPV.0090 SPECIAL 008. CONCRETE BARRIER SPECIAL, TYPE B	100.000 LF		.		.
6800	SPV.0090 SPECIAL 009. CONCRETE BARRIER SPECIAL, TYPE C	96.000 LF		.		.
6810	SPV.0090 SPECIAL 010. CONCRETE BARRIER SPECIAL, TYPE D	50.000 LF		.		.
6820	SPV.0090 SPECIAL 011. CONCRETE BARRIER SPECIAL, TYPE E	225.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6830	SPV.0090 SPECIAL 012. CONCRETE BARRIER SPECIAL, TYPE F	56.000 LF		.		.
6840	SPV.0090 SPECIAL 013. CONCRETE BARRIER SPECIAL, TYPE G	35.000 LF		.		.
6850	SPV.0090 SPECIAL 014. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST EPOXY, 8-INCH	504.000 LF		.		.
6860	SPV.0090 SPECIAL 015. PIPE UNDERDRAIN 6-INCH WITH GEOTEXTILE FABRIC AND AGGREGATE	31,078.000 LF		.		.
6870	SPV.0090 SPECIAL 016. CONCRETE CURB & GUTTER HES 24-INCH TYPE A **P**	2,695.000 LF		.		.
6880	SPV.0090 SPECIAL 017. CONCRETE CURB & GUTTER HES 30-INCH TYPE A **P**	2,535.000 LF		.		.
6890	SPV.0090 SPECIAL 018. CONCRETE CURB & GUTTER HES 24-INCH TYPE D **P**	113.000 LF		.		.
6900	SPV.0090 SPECIAL 019. CONCRETE CURB & GUTTER HES 30-INCH TYPE D **P**	1,075.000 LF		.		.
6910	SPV.0090 SPECIAL 020. STORM SEWER PIPE 8-INCH	21.000 LF		.		.
6920	SPV.0090 SPECIAL 021. CONSTRUCTION FENCE TEMPORARY	1,470.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6930	SPV.0090 SPECIAL 200. TEMPORARY STREET LIGHTING AERIAL CABLE	3,350.000 LF		.		.
6940	SPV.0090 SPECIAL 301. SALVAGE CONCRETE BARRIER PRECAST	12,970.000 LF		.		.
6950	SPV.0090 SPECIAL 302. PEDESTRIAN SAFETY FENCE	3,210.000 LF		.		.
6960	SPV.0090 SPECIAL 303. PEDESTRIAN OVERHEAD PROTECTION	505.000 LF		.		.
6970	SPV.0090 SPECIAL 304. STORM SEWER PIPE TEMPORARY, 12-INCH	867.000 LF		.		.
6980	SPV.0090 SPECIAL 305. GLARE SCREENS TEMPORARY	17,113.000 LF		.		.
6990	SPV.0090 SPECIAL 306. INTEGRATED CONCRETE BARRIER	50.000 LF		.		.
7000	SPV.0090 SPECIAL 500. SHOVEL CUT EDGING	3,702.000 LF		.		.
7010	SPV.0090 SPECIAL 600. WATER MAIN INSULATION	250.000 LF		.		.
7020	SPV.0090 SPECIAL 601. WATER MAIN, 4-INCH	30.000 LF		.		.
7030	SPV.0090 SPECIAL 602. WATER MAIN, 6-INCH	124.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0090 SPECIAL 603.					
7040	WATER MAIN, 8-INCH	1,633.000 LF		.		.
	SPV.0090 SPECIAL 604.					
7050	WATER MAIN, 12-INCH	9.000 LF		.		.
	SPV.0090 SPECIAL 605.					
7060	WATER MAIN, 16-INCH	733.000 LF		.		.
	SPV.0090 SPECIAL 606.					
7070	EXTEND AND RECONNECT SERVICE LATERAL - 1-INCH	100.000 LF		.		.
	SPV.0090 SPECIAL 607.					
7080	EXTEND AND RECONNECT SERVICE LATERAL - 1. 5-INCH	30.000 LF		.		.
	SPV.0090 SPECIAL 608.					
7090	EXTEND AND RECONNECT SERVICE LATERAL - 2-INCH	64.000 LF		.		.
	SPV.0090 SPECIAL 609.					
7100	HDPE PIPE, HORIZONTALLY DIRECTIONALLY DRILLED, 10-INCH	230.000 LF		.		.
	SPV.0090 SPECIAL 610.					
7110	SELECT FILL FOR WATER MAIN	2,110.000 LF		.		.
	SPV.0090 SPECIAL 611.					
7120	SANITARY SEWER PIPE, 8-INCH	272.000 LF		.		.
	SPV.0090 SPECIAL 612.					
7130	SELECT FILL FOR SANITARY SEWER	190.000 LF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
7140	SPV.0105 SPECIAL 001. CONSTRUCTION STAKING STRUCTURE, R-13-194	LUMP	LUMP			.
7150	SPV.0105 SPECIAL 002. CONSTRUCTION STAKING STRUCTURE, R-13-197	LUMP	LUMP			.
7160	SPV.0105 SPECIAL 003. CONSTRUCTION STAKING STRUCTURE, R-13-232	LUMP	LUMP			.
7170	SPV.0105 SPECIAL 004. CONSTRUCTION STAKING STRUCTURE, R-13-238	LUMP	LUMP			.
7180	SPV.0105 SPECIAL 005. CONSTRUCTION STAKING STRUCTURE, R-13-241	LUMP	LUMP			.
7190	SPV.0105 SPECIAL 006. CONSTRUCTION STAKING STRUCTURE, N-13-2	LUMP	LUMP			.
7200	SPV.0105 SPECIAL 007. RESEARCH AND LOCATE EXISTING PROPERTY MONUMENTS	LUMP	LUMP			.
7210	SPV.0105 SPECIAL 008. VERIFY AND REPLACE EXISTING PROPERTY MONUMENTS	LUMP	LUMP			.
7220	SPV.0105 SPECIAL 009. CONCRETE PAVEMENT JOINT LAYOUT	LUMP	LUMP			.
7230	SPV.0105 SPECIAL 010. SEALING CULVERT BOX	LUMP	LUMP			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
7240	SPV.0105 SPECIAL 100. REM., SALVAGE & DELVR ITS WIRELESS COMPONENTS, GAMMON RD/WHITNEY WAY	LUMP	LUMP			.
7250	SPV.0105 SPECIAL 101. REM., SALVAGE & DELVR ITS WIRELESS COMPONENTS, EXISTING CCTV-13-002	LUMP	LUMP			.
7260	SPV.0105 SPECIAL 102. REM., SALVAGE & DELVR ITS WIRELESS COMPONENTS, WHENONA DR REPEATER	LUMP	LUMP			.
7270	SPV.0105 SPECIAL 103. REM., SALVAGE & DELVR ITS WIRELESS COMPONENTS, RAYMOND ROAD	LUMP	LUMP			.
7280	SPV.0105 SPECIAL 104. REM., SALVAGE & DELVR ITS WIRELESS COMPONENTS, VERONA RD/ATTICUS WAY	LUMP	LUMP			.
7290	SPV.0105 SPECIAL 105. REMOVE AND TRANSPORT TRAFFIC SIGNALS, WESTBOUND RAMP TERMINAL	LUMP	LUMP			.
7300	SPV.0105 SPECIAL 106. REMOVE AND TRANSPORT TRAFFIC SIGNALS, EASTBOUND RAMP TERMINAL	LUMP	LUMP			.
7310	SPV.0105 SPECIAL 107. REM. AND TRANSPORT CITY OF MADISON TRAFFIC SIGNALS, S. MIDVALE / NAKOMA RD	LUMP	LUMP			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0105 SPECIAL 201.					
7320	TEMP. TRAFFIC SIGNALS FOR INTERSEC. USH 18-151 AND USH 12-14 INTERCH.	LUMP	LUMP			.
	SPV.0105 SPECIAL 202.					
7330	TEMPORARY STREET LIGHTING SYSTEM, (MIDVALE BLVD/NAKOMA RD/MOHAWK DR)	LUMP	LUMP			.
	SPV.0105 SPECIAL 298.					
7340	GALVANIZED LADDER, B-13-651	LUMP	LUMP			.
	SPV.0105 SPECIAL 299.					
7350	GALVANIZED LADDER, B-13-652	LUMP	LUMP			.
	SPV.0105 SPECIAL 300.					
7360	PREFABRICATED STEEL TRUSS PEDESTRIAN BRIDGE B-13-653 LRFD	LUMP	LUMP			.
	SPV.0105 SPECIAL 301.					
7370	PAINTING EPOXY SYSTEM PEDESTRIAN BRIDGE B-13-653	LUMP	LUMP			.
	SPV.0105 SPECIAL 302.					
7380	RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, B-13-653	LUMP	LUMP			.
	SPV.0105 SPECIAL 303.					
7390	RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, R-13-194	LUMP	LUMP			.

CONTRACT: 20140708003 PROJECT(S): 1206-07-84, 1206-07-85 FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
7400	SPV.0105 SPECIAL 304. RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, R-13-197	LUMP	LUMP			.
7410	SPV.0105 SPECIAL 305. RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, R-13-238	LUMP	LUMP			.
7420	SPV.0105 SPECIAL 306. RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, R-13-241	LUMP	LUMP			.
7430	SPV.0105 SPECIAL 307. RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, B-13-651	LUMP	LUMP			.
7440	SPV.0105 SPECIAL 308. RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, B-13-652	LUMP	LUMP			.
7450	SPV.0105 SPECIAL 400. RAILING STEEL TYPE C1 GALVANIZED PEDESTRIAN, R-13-232	LUMP	LUMP			.
7460	SPV.0105 SPECIAL 500. BIORETENTION AREA MAINTENANCE	LUMP	LUMP			.
7470	SPV.0105 SPECIAL 600. CONSTRUCTION STAKING WATER MAIN	LUMP	LUMP			.
7480	SPV.0105 SPECIAL 601. CONSTRUCTION STAKING SANITARY SEWER	LUMP	LUMP			.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
7490	SPV.0105 SPECIAL 602. WASTEWATER CONTROL 200 GPM	LUMP	LUMP			.
7500	SPV.0105 SPECIAL 603. WASTEWATER CONTROL 500 GPM	LUMP	LUMP			.
7510	SPV.0105 SPECIAL 604. DEWATERING FOR SANITARY SEWER CONSTRUCTION	LUMP	LUMP			.
7520	SPV.0120 SPECIAL 001. WATER FOR SEEDED AREAS	1,905.000 MGAL		.		.
7530	SPV.0165 SPECIAL 001. CONCRETE SIDEWALK HES 7-INCH	805.000 SF		.		.
7540	SPV.0165 SPECIAL 002. CONCRETE MEDIAN SLOPED NOSE HES **P**	1,128.000 SF		.		.
7550	SPV.0165 SPECIAL 003. CONCRETE MEDIAN BLUNT NOSE HES **P*	224.000 SF		.		.
7560	SPV.0165 SPECIAL 100. GROUTED JOINT STAINING B-13-651 **P**	1,290.000 SF		.		.
7570	SPV.0165 SPECIAL 101. GROUTED JOINT STAINING B-13-652 **P**	1,181.000 SF		.		.
7580	SPV.0165 SPECIAL 102. GROUTED JOINT STAINING R-13-194 **P**	24,900.000 SF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
7590	SPV.0165 SPECIAL 103. GROUTED JOINT STAINING R-13-197 **P**	19,430.000 SF		.		.
7600	SPV.0165 SPECIAL 104. GROUTED JOINT STAINING R-13-232 **P**	760.000 SF		.		.
7610	SPV.0165 SPECIAL 105. GROUTED JOINT STAINING S-13-371 **P**	70.000 SF		.		.
7620	SPV.0165 SPECIAL 106. GROUTED JOINT STAINING S-13-372 **P**	235.000 SF		.		.
7630	SPV.0165 SPECIAL 107. GROUTED JOINT STAINING S-13-385 **P**	235.000 SF		.		.
7640	SPV.0165 SPECIAL 108. GROUTED JOINT STAINING S-13-386 **P**	95.000 SF		.		.
7650	SPV.0165 SPECIAL 109. GROUTED JOINT STAINING N-13-2 **P**	16,860.000 SF		.		.
7660	SPV.0165 SPECIAL 300. NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE N-13-2 **P**	16,860.000 SF		.		.
7670	SPV.0165 SPECIAL 301. LONGITUDINAL GROOVING BRIDGE DECK	48,000.000 SF		.		.
7680	SPV.0165 SPECIAL 302. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD, R-13-194 **P**	28,800.000 SF		.		.

CONTRACT: 20140708003
PROJECT(S): 1206-07-84, 1206-07-85
FEDERAL ID(S): WISC 2014260, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
7690	SPV.0165 SPECIAL 303. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD, R-13-197 **P**	23,000.000 SF		.		.
7700	SPV.0165 SPECIAL 304. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD, R-13-238 **P**	550.000 SF		.		.
7710	SPV.0165 SPECIAL 305. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD, R-13-241 **P**	1,400.000 SF		.		.
7720	SPV.0165 SPECIAL 400. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD, R-13-232 **P**	1,200.000 SF		.		.
7730	SPV.0165 SPECIAL 500. COLORED AND STAMPED CONCRETE, 5-INCH	28,535.000 SF		.		.
7740	SPV.0165 SPECIAL 501. COLORED AND STAMPED CONCRETE, B-13-654	1,320.000 SF		.		.
7750	SPV.0165 SPECIAL 550. MOSAIC TILE INSTALLATION	585.000 SF		.		.
7760	SPV.0180 SPECIAL 001. HIGH EARLY STRENGTH CONCRETE PAVEMENT 11-INCH	732.000 SY		.		.

CONTRACT: 20140708003
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
7770	SPV.0180 SPECIAL 002. HIGH EARLY STRENGTH CONCRETE PAVEMENT 9-INCH	1,100.000 SY		.		.
7780	SPV.0180 SPECIAL 300. TEMPORARY PEDESTRIAN/BICYCLE ACCESS	430.000 SY		.		.
7790	SPV.0180 SPECIAL 301. CONCRETE APPROACH SLAB, 6-INCH	33.000 SY		.		.
7800	SPV.0180 SPECIAL 500. SHREDDED HARDWOOD BARK MULCH	3,327.000 SY		.		.
7810	SPV.0195 SPECIAL 100. EXC, HAUL & DISP. OF CONTAMINATED SOIL & MGMT OF CONTAMINATED GROUNDWATER	100.000 TON		.		.
7820	SPV.0195 SPECIAL 500. LANDSCAPE BOULDERS	123.000 TON		.		.
7830	SPV.0195 SPECIAL 501. AGGREGATE FINES	1.360 TON		.		.
7840	SPV.0195 SPECIAL 700. COLD PATCH	20.000 TON		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE