HIGHWAY WORK PROPOSAL

Proposal Number: 1 2

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Dane	5992-09-31	WISC 2017 101	City of Madison, McKee Road Meriter Way to Maple Grove Drive	CTH PD
Dane	5992-09-32		City of Madison, McKee Road Meriter Way to Maple Grove Drive	CTH PD

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, $ 320,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: March 14, 2017 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time October 27, 2017	
Assigned Disadvantaged Business Enterprise Goal 8 %	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Removals, excavation common, base aggregate, HMA pavement, concrete curb and gutter, concrete sidewalk, storm sewer, sanitary sewer, water main, erosion control, traffic control, restoration, pavement marking, permanent signing, street lighting, temporary and permanent traffic signals, B-13-0847, B-13-0848, R-13-0309, R-13-0310, and other incidental items.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

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

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

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

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

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

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

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

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

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

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

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

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

Bidder

Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

Table of Contents

Article	Description	Page #
1.	General.	5
2.	Scope of Work.	5
3.	Prosecution and Progress.	5
4.	Traffic.	13
5.	Holiday and Special Event Work Restrictions.	17
6.	Utilities.	17
7.	Other Contracts.	25
8.	Environmental Protection, Aquatic Exotic Species Control.	26
9.	Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.	27
10.	Erosion Control.	27
11.	Public Convenience and Safety.	28
12.	Municipality Acceptance of Sanitary Sewer and Water Main Construction.	28
13.	Referenced Construction Specifications.	28
14.	Preservation of Existing Trees.	29
15.	Signing.	30
16.	Dust Control Implementation Plan.	31
17.	Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.	33
18.	Coordination with Businesses and Residents.	34
19.	General Provisions for Storm Sewer.	34
20.	General Provisions for City of Madison Sanitary Sewer.	35
21.	General Provisions for City of Madison Water Main.	38
22.	General Provisions for City Conduit Installation.	41
23.	General Provisions for City Traffic Signals.	42
24.	General Provisions for City Electric Systems.	42
25.	Removing Old Structure Over Waterway Station 151+23.39 WB, Item 203.0500.S.001.	46
26.	Removing and Salvaging Dane County Parks Signs, Item 204.9060.S.001	47
27.	Removing and Salvaging Ice Age Trail Signs, Item 204.9060.S.002.	48
28.	Removing Boulder Retaining Wall, Item 204.9090.S.001.	48
29.	General Requirements for Excavation Rock and Blasting Rock.	49
30.	Backfill Coarse Aggregate Size No 1, Item 209.0300.S.001	52
31.	QMP Base Aggregate.	53
32.	Reheating HMA Pavement Longitudinal Joints, Item 460.4110.S.	61
33.	QMP HMA Pavement Nuclear Density.	61
34.	Expansion Device, B-13-847.	68
35.	Prefabricated Steel Truss Pedestrian Bridge LRFD B-13-847, Item 506.8005.S.001.	69
36.	Painting Epoxy System B-13-847.	73

37. Concrete Staining Multi-Color B-13-847, Item 517.1015.S.001; Concrete Staining Multi-Color R-13-309, Item 517.1015.S.002; Concrete Staining Multi-Color R-13-310, Item 517.1015.S.003 74
38. Architectural Surface Treatment B-13-847, Item 517.1050.S.001; Architectural Surface Treatment R-13-309, Item 517.1050.S.002; Architectural Surface Treatment R-13-310, Item 517.1050.S.003. 76
39. Cover Plates Temporary, Item 611.8120.S. 77
40. Pipe Grates, Item 611.9800.S. 78
41. Salvaged Topsoil. 78
42. Furnishing and Planting Plant Materials. 79
43. Landscape Planting Surveillance and Care Cycles. 83
44. Clay Liner, Item 640.1303.S. 83
45. Temporary Pedestrian Surface Asphalt, Item 644.1410.S; Temporary Pedestrian Surface Plywood, Item 644.1420.S; Temporary Pedestrian Surface Plate, Item 644.1430.S. 86
46. Temporary Curb Ramp, Item 644.1601.S. 87
47. Temporary Pedestrian Safety Fence, Item 644.1616.S. 88
48. Temporary Traffic Signal Timing Parameters – CTH PD & South High Point Road, CTH PD & Maple Grove Drive. 89
49. Topsoil Special, Item SPV.0035.001. 91
50. Inlet Cover Type H Special, Item SPV.0060.001. 92
51. Inlet Covers Terrace Type 3 Special, Item SPV.0060.002. 92
52. Terrace Inlet Type 3 Special, Item SPV.0060.003. 92
53. Manhole Cover Type J Modified, Item SPV.0060.004. 92
54. Precast Sign Post Base, Item SPV.0060.005. 93
55. Sign Post Base for Concrete Installation, Item SPV.0060.006. 94
56. Locate and Reference Property Corners, Item SPV.0060.008 96
57. Reset Property Corners, Item SPV.0060.009 96
58. Remove and Replace Mailboxes, Item SPV.0060.010. 97
59. Temporary Inlet Cover, Item SPV.0060.011. 98
60. Rock Excavation for Concrete Bases, Item SPV.0060.013. 99
61. Inlet Cover Type H-S Special, Item SPV.0060.014. 99
62. Utility Line Opening (ULO), Item SPV.0060.015. 100
63. Decorative Medallion, Item SPV.0060.016. 101
64. Medallion Concrete Staining Multi-Color, Item SPV.0060.017. 102
65. Storm Sewer Plug, Item SPV.0060.091. 103
66. Pond Outlet Control Manhole, Item SPV.0060.101. 104
67. Sanitary Sewer Tap, Item SPV.0060.200. 105
68. Hydrants, Item SPV.0060.201. 106
69. Water Valve, 6-Inch, Item SPV.0060.202; 8-Inch, Item SPV.0060.203; 12-Inch, Item SPV.0060.204. 107
70. Cut-In or Connect-To Existing Water System, Item SPV.0060.205. 107
71. Adjust Water Valve Box, Item SPV.0060.206. 108
72. Temporary Water Main Connection, Item SPV.0060.208 109
73. Excavate Trench for Live Tap, SPV.0060.209. 110
74. Adjust MMSD Special, Item SPV.0060.210. 110

75. Adjust SAS Special, Item SPV.0060.211. 111
76. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.212..... 112
77. Adjust Sewer Access Structure Special, Item SPV.0060.213. 113
78. Abandon Sanitary Sewer – Plug Pipe, Item SPV.0060.214. 113
79. Sanitary Sewer Access Structure (4-Foot Diameter), Item SPV.0060.215. 114
80. Electrical Pull Box Type 1, Item SPV.0060.250; Electrical Pull Box Type 3, Item SPV.0060.251; Electrical Pull Box Type 5, Item SPV.0060.252; Electrical Pull Box Type 7, Item SPV.0060.253. 115
81. Electrical Utility Access Structure, Item SPV.0060.254. 116
82. Concrete Bases Type G, Item SPV.0060.255; Concrete Bases Type LB-2, Item SPV.0060.256; Concrete Bases Type LB-3, Item SPV.0060.257; Concrete Bases Type LB-8, Item SPV.0060.258; Concrete Bases Type M, Item SPV.0060.259; Concrete Bases Type P, Item SPV.0060.260..... 117
83. Concrete Base Offset, Item SPV.0060.261; Concrete Base Type G Spread Footing, Item SPV.0060.262. 119
84. Poles Aluminum 20-FT Street Light, Item SPV.0060.263. 120
85. Poles 30-FT 11 Gauge, Item SPV.0060.264; Poles 20-FT 7 Gauge, Item SPV.0060.265. 121
86. Transformer Bases 16-Inch Steel, Item SPV.0060.266. 123
87. LED Luminaire and Mounting Bracket Type 1, Item SPV.0060.267; LED Luminaire and Mounting Bracket Type 2, Item SPV.0060.268; LED Luminaire and Mounting Bracket Type 3, Item SPV.0060.269..... 124
88. Monotube Poles Type 9, Item SPV.0060.270; Monotube Arms 30-FT, Item SPV.0060.272. 126
89. Traffic Signal Trombone Arms Aluminum 18-FT, Item SPV.0060.271..... 128
90. Traffic Signal Heads 12-Inch 3-Section Vertical, Item SPV.0060.273; Traffic Signal Heads 16-Inch Pedestrian with Countdown, Item SPV.0060.274..... 129
91. Backplates Signal Face 3-Section 12-Inch, Item SPV.0060.275..... 130
92. Traffic Signal Control Cabinet, Item SPV.0060.276. 131
93. Traffic Signal Controller, Item SPV.0060.277. 141
94. Traffic Signal Ethernet Switch, Item SPV.0060.278. 142
95. Malfunction Management Unit, Item SPV.0060.279. 142
96. Street Light Removal, Item SPV.0060.280. 143
97. Lighting Control Cabinet, Item SPV.0060.281. 144
98. Seeding Mixture, Range Pasture, Item SPV.0085.001; Seeding Mixture, Short Grass Prairie, Item SPV.0085.002; Seeding Mixture, Detention Basin, Item SPV.0085.004. 146
99. No Mow Lawn Seed, Item SPV.0085.003..... 150
100. Concrete Curb and Gutter 24-Inch Type D Special, Item SPV.0090.001..... 151
101. Sign Post, Item SPV.0090.003; Reflective Sign Post, Item SPV.0090.004. 152
102. Railing Steel Pedestrian B-13-847, Item SPV.0090.005; Railing Steel Pedestrian B-13-848, Item SPV.0090.006; Railing Steel Pedestrian R-13-309, Item SPV.0090.007; Railing Steel Pedestrian R-13-310, Item SPV.0090.008..... 152
103. Split Rail Fence, Item SPV.0090.010. 156
104. Storm Sewer Pipe Reinforced Concrete Class IV 48-Inch Special Half Section, Item SPV.0090.011..... 156

105. Landscape Protection Fence, Item SPV.0090.012. 156
106. Select Fill for Sanitary Sewer, Item SPV.0090.201 158
107. Rock Excavation Water Main, Item SPV.0090.203. 158
108. Water Main, 6-Inch, Item SPV.0090.204; 8-Inch, Item SPV.0090.205; 12-Inch, Item SPV.0090.206. 159
109. Water Main Insulation, Item SPV.0090.207 160
110. Remove Sanitary Sewer Pipe, Item SPV.0090.208. 161
111. Sanitary Sewer Pipe PVC, 8-Inch, Item SPV.0090.210; 10-Inch, Item SPV.0090.212. 162
112. Sanitary Sewer Pressure Pipe (C900), 10-Inch, Item SPV.0090.211. 163
113. Electrical Wire Lighting 14-3 UF Grounded, Item, SPV.0090.250. 165
114. Loop Detector Lead-In Cable Special, Item, SPV.0090.251. 165
115. Fiber Optic Cable 72-Count, Item SPV.0090.252. 166
116. Survey Project 5992-09-31, Item SPV.0105.001 167
117. Detention Pond Maintenance, Item SPV.0105.002. 169
118. Construction Site Maintenance – Mowing, SPV.0105.003. 171
119. Salvage, Store and Re-Set Landscape Cobbles, Item SPV.0105.004. 172
120. Wastewater Control 300 GPM, Item SPV.0105.200. 173
121. Construction Staking Sanitary Sewer, Item SPV.0105.201 173
122. Construction Staking Water Main, Item SPV.0105.202. 174
123. Project Dewatering (Sanitary Sewer), Item SPV.0105.203. 175
124. Optical Signal Preempt, Item SPV.0105.250 178
125. Temporary Traffic Signals (CTH PD & South High Point), Item SPV.0105.251; Temporary Traffic Signals (CTH PD & Maple Grove), Item SPV.0105.252. 179
126. Wall Modular Block Gravity LRFD, Item SPV.0165.001. 182
127. Pavement Cleanup Project 5992-09-31, Item SPV.0170.001 188
128. Geogrid Reinforcement, Item SPV.0180.001. 190
129. Erosion Mat, Class I, Type B for Short Grass Prairie, Item SPV.0180.002. 192
130. Shredded Hardwood Bark Mulch, 3” Depth, Item SPV.0180.003. 193

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 5992-09-31 and 5992-09-32, City of Madison, McKee Road, Meriter Way to Maple Grove Drive, CTH PD, 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, 2017 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.
100-005 (20160607)

2. Scope of Work.

The work under this contract shall consist of removals, excavation common, base aggregate, HMA pavement, concrete curb and gutter, concrete sidewalk, storm sewer, sanitary sewer, water main, erosion control, traffic control, restoration, pavement marking, permanent signing, street lighting, temporary and permanent traffic signals, structures (B-13-847, B-13-848, R-13-309, and R-13-310), 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 ten calendar days after the engineer issues a written notice to do so.

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

Prior to beginning operations under this contract submit in writing a proposed schedule of operations and method of coordination and handling traffic to the engineer for approval.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment.

The completion of all project work prior to suspension of operations is based on the expedited work schedule and may require extraordinary forces and equipment.

Be advised that there may be multiple mobilizations and/or remobilizations to complete construction operations, for example such items as: HMA pavement, concrete curb and gutter, traffic control, signing, pavement marking, traffic signals, street lighting, finishing items and other incidental items related to the staging. No additional payment will be made, by the department, for additional mobilizations.

B Contractor Coordination and Advance Notification

Hold progress meetings once a week. The contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work to begin within the next two eeks are to attend and provide a written schedule of the next week(s) operations. Include begin and end dates of specific prime and subcontractor work operations. Agenda items to include review of contractor's schedule and subcontractor's schedule, evaluation of progress and pay items, and revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems of conflicts between contractors.

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

Coordinate with the City of Madison and Town of Verona to provide access for garbage collection.

Coordinate with the US Postal Service to provide access for mail delivery.

Notify Madison Metro transit system two weeks prior to construction. Notify one week prior to traffic switches, street closures, and reopening the road to through traffic for bus routing. Contact Tim Sobota at (608) 261-4289.

Contact and coordinate with City of Madison for signal timing and phasing setup for temporary signals prior to the start of a traffic change or stage. City of Madison contact is Brian Smith at (608) 261-9625

Notify the City of Madison Engineering Department, Dane County Highway Department, City of Madison Police and Fire Departments, Dane County Sheriff, City of Verona Police and Fire Departments, and Fitchrona EMS at least three days in advance of all traffic switches and closures of existing streets.

Notify business owners and residents at least two days prior to restricting access and three days prior to closing access. Schedule sidewalk and driveway approach removal and replacement so that the time lapse between removal and replacement is minimal. See the Traffic article of these special provisions for information on residential and business property access.

Portable Changeable Message Signs

Coordinate the locations of portable changeable message signs with the engineer. Obtain acceptance from the engineer for all messages for all portable changeable message signs.

Use portable changeable message signs two weeks in advance of and during roadway lane alterations to indicate such alterations and to notify drivers of changing stages and traffic patterns.

C Work Restrictions

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

Do not store equipment, vehicles, or materials on adjacent streets beyond the project limits without specific approval of the engineer.

Equip vehicles with a tailgate and adequate sideboards when hauling material subject to spillage on all roadways. Use covers and/or other protective devices to prevent spillage as directed by the engineer. Immediately clean up any debris or spillage that falls onto live traffic lanes or shoulders.

Once concrete sidewalks are poured, take necessary precautions to preserve the condition of the new concrete items. Any pavement or sidewalk that is damaged shall be replaced at the contractor's expense.

There are several encroachments within the right-of-way that will not be altered by this project. It is the responsibility of the contractor to avoid these encroachments. The contractor is responsible for any damage to encroachments and for returning the encroachments to their original condition if any damage occurs. The following is a list of the known encroachments to avoid:

- Wood Fence (Station 159+52EB – 160+00EB RT)
- Landscaping/Wood Fence (Station 160+26EB – 160+63EB LT)
- Landscaping/Wood Fence (Station 161+26EB – 161+84EB LT)
- Landscaping/Wood Fence (Station 161+96EB – 162+47EB LT)
- Wood Fence (Station 163+08EB – 163+62EB LT)
- Wood Fence (Station 163+18EB – 163+90EB RT)
- Wood Fence (Station 163+62EB – 164+15EB LT)
- Wood Fence (Station 165+51EB – 166+36EB RT)
- Wood Fence (Station 166+31EB – 166+36EB RT)

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

Maintain pedestrian facilities according to American with Disabilities Act Accessibility Guidelines (ADAAG) requirements at all times. Construct temporary pedestrian access accommodations (crosswalks, curb ramps, and pedestrian surfaces) as shown in the plans, or where necessary, as directed by the engineer. Payment for the construction of temporary pedestrian access accommodations will be made by the department under the bid items Temporary Pedestrian Surface (Asphalt, Plywood, or Plate), Temporary Crosswalk, and Temporary Curb Ramp, unless otherwise shown on the plans.

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

Do not close Muir Field Road (as shown in Traffic Control Stage 2A) and Silverton Trail (as shown in Traffic Control Stage 2B) concurrently.

Do not close Snowy Parkway (as shown in Traffic Control Stage 3B) and Country Grove Drive (as shown in Traffic Control Stage 3A) concurrently.

Keep CTH PD open to traffic at all times, except as permitted by these special provisions. Deliver, park and store equipment and material outside of the existing roadways clear zones or at a distance from the existing edges of pavement approved by the engineer. Provide ingress and egress locations to the engineer ten 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 and according to standard spec 104.6.1 (4).

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

Northern Long-eared Bat (*Myotis septentrionalis*)
Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

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

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

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

Maintain Access to all properties for local residents, businesses and emergency vehicles. Maintain and keep open the access to all driveways and parking lots where alternative access is not available at all times.

Ice Age National Scenic Trail and Ice Age Junction Trail
Maintain continuous access for the Ice Age National Scenic Trail and the Ice Age Junction Trail at all times crossing CTH PD via the following: existing path, temporary pedestrian surfaces, the detour route (South High Point Road to Stratton Way), or the proposed path.

Ice Age Trail Entrance
Maintain access to the Ice Age Trail trailhead parking lot entrance at all times along CTH PD via either the existing entrance or proposed location, while staging construction of the CTH PD and South High Point Road intersection.

D Construction General
Typical construction sections are provided in the traffic control plans. Conform with the work zone protection as shown in the typical construction sections. Provide a minimum of 6 feet lateral clearance from the edge of travel lane to the work zone. In areas where 6 feet of lateral clearance cannot be provided, protect work zone with temporary concrete barrier. Provide a maximum 3:1 slope from the edge of the lateral clearance zone to sub-grade excavations. Limit the length of open utility trenches adjacent to the lateral clearance to 100 feet. Backfill or plate utility trenches adjacent to the lateral clearance zone during non-working hours.

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

Stage 1 Construction

- Construct temporary pavement widening (shoulder area) along eastbound CTH PD from Meriter way to South High Point Road
- Construct temporary pavement widening (median area) along east bound CTH PD from South High Point Road to Snowy Parkway
- Construct temporary pavement widening (median area) for temporary cross-overs utilized in Stage 2, one near the Meriter Way intersection and the other near the Maple Grove Drive intersection
- Begin grading and base aggregate construction on the proposed Ice Age Trail Entrance
- Begin grading on the proposed Ice Age Junction Trail on the north side of CTH PD
- Install temporary traffic signals at South High Point Road for Stage 2 traffic

Stage 2 Construction

- Construct CTH PD westbound lanes from Meriter Way to Maple Grove Drive (HMA lower layers only)
- Construct utility improvements (storm sewer, water main, and sanitary sewer) under CTH PD westbound lanes
- Construct Structure B-13-847 (bicycle and pedestrian overpass bridge) north abutment and retaining walls
- Construct Structure B-13-848 (Badger Mill Creek box culvert) extension
- Construct South High Point Road via staged construction during stages 2A and 2B
- Install temporary traffic signals at South High Point Road for Stage 3 traffic
- Install temporary traffic signals at Maple Grove Drive for Stage 3 traffic

Stage 2A Construction

- Construct Muir Field Drive via full closure during Stage 2A. During Stage 2A, Muir Field Drive may be closed for a maximum of 15 consecutive calendar days. Do not close Muir Field Drive and Silverton Trail at the same time. Do not reopen until completing the following work:
    - Sanitary sewer
    - Water main
    - Storm sewer
    - Concrete curb and gutter
    - Pavement
    - Permanent Traffic Signals
    - Signing and marking

Stage 2B Construction

- Construct Stratton Way via a full closure during stage 2B. During Stage 2B, Stratton Way may be closed for a maximum of 15 consecutive calendar days. Do not reopen until completing the following work:
    - Water main
    - Storm sewer
    - Concrete curb and gutter
    - Pavement
    - Permanent Traffic Signals
    - Signing and marking
- Construct Silverton Trail via a full closure during Stage 2B. During Stage 2B, Silverton Trail may be closed for a maximum of 15 consecutive calendar days. Do not close Muir Field Drive and Silverton Trail at the same time. Do not reopen until completing the following work:
    - Water main
    - Storm sewer
    - Concrete curb and gutter
    - Pavement
    - Permanent Traffic Signals
    - Signing and marking

Stage 3 Construction:

- Construct CTH PD eastbound lanes from Meriter Way to Maple Grove Drive (HMA lower layers only)
- Construct utility improvements (storm sewer, water main, sanitary sewer) under CTH PD eastbound lanes
- Construct Structure B-13-847 (bicycle and pedestrian overpass bridge) south abutment, set the bridge truss and place bridge deck
- Construct improvements to the Maple Grove Drive intersection (SW and NW quadrant)
- Install temporary traffic signals at South High Point Road for Stage 4 traffic
- Install temporary traffic signals at Maple Grove Drive for Stage 4 traffic

Close CTH PD (eastbound and westbound) for an overnight short-term closure to complete the installation of the prefabricated truss for the pedestrian structure (B-13-847) over CTH PD. The short term night time closure will be allowed between 10:00 PM and 5:00 AM.

Stage 3A Construction

- Construct Snowy Parkway via a full closure during Stage 3A. During Stage 3A, Snowy Parkway may be closed for a maximum of 15 consecutive calendar days. Do not close Snowy Parkway and Country Grove Drive at the same time. Do not reopen until completing the following work:
    - Water main
    - Storm sewer
    - Concrete curb and gutter
    - Pavement
    - Permanent Traffic Signals
    - Signing and marking
- Construct Stonecreek Drive via a full closure during Stage 3A. During Stage 3A, Stonecreek Drive may be closed for a maximum of 15 consecutive calendar days. Do not close Stonecreek Drive and Tanglewood Drive at the same time. Do not reopen until completing the following work:
    - Water main
    - Storm sewer
    - Concrete curb and gutter
    - Pavement
    - Permanent Traffic Signals
    - Signing and marking

Stage 3B Construction

- Construct Country Grove Drive via a full closure during Stage 3B. During Stage 3B, Country Grove Drive may be closed for a maximum of 15 consecutive calendar days. Do not close Snowy Parkway and Country Grove Drive at the same time. Do not reopen until completing the following work:
    - Water main
    - Storm sewer
    - Concrete curb and gutter
    - Pavement
    - Permanent Traffic Signals
    - Signing and marking
- Construct Tanglewood Drive via a full closure during Stage 3B. During Stage 3B, Tanglewood Drive may be closed for a maximum of 15 consecutive calendar days. Do not close Stonecreek Drive and Tanglewood Drive at the same time. Do not reopen until completing the following work:
    - Water main
    - Storm sewer
    - Concrete curb and gutter
    - Pavement
    - Permanent Traffic Signals
    - Signing and marking

Stage 4 Construction:

- Finish construction on CTH PD (median and left turn lanes)
- Finish pavement (HMA upper layer) during night-time hours using a moving operation
- Finish Structure B-13-847 (bicycle and pedestrian overpass bridge)
- Finish permanent traffic signals installation at South High Point Road intersection
- Finish permanent traffic signals installation at Muir Field Drive/ Country Grove Drive intersection
- Finish permanent traffic signals installation at Maple Grove Drive intersection
- Finish permanent street lights installation
- Finish permanent signing and marking installation

F Contractor Obligations:

Standard spec 105.5.1 (5) Contractor Obligations is hereby revised as follows:

Employ a competent superintendent or designate a representative capable of reading and understanding the contract and experienced in the type of work being performed. The superintendent or designated representative shall be the authorized agent of the contractor and shall have full authority to execute the engineer's directions or instructions without delay. Ensure that the superintendent or designated representative is on the project or immediately accessible on site to the engineer during all hours of each work day. Notify the engineer promptly when replacing the superintendent or designated representative.

4. Traffic.

A General

Keep CTH PD open to through traffic at all times for the duration of this project with the exception of full closure of CTH PD between Meriter Way and South High Point Road to set the bike and pedestrian bridge truss over CTH PD.

Perform the work under this contract in a manner that will interfere as little as possible with active traffic. Do not park or store vehicles, equipment, or materials on local streets adjacent to active traffic except at the time of performance of the work. Materials or equipment may be stored within the right-of-way only at locations meeting the approval of the engineer.

B Traffic Operations

Stage 1 Traffic

CTH PD (eastbound and westbound): one through traffic lane will be maintained in each direction on the existing lane alignment except for minor shifting to provide clearance to the work zone.

Ice Age National Scenic Trail and Ice Age Junction Trail: maintain access across the CTH PD work zone at all times. See the access requirements for the Ice Age National Scenic Trail and Ice Age Junction Trail discussed in the Prosecution and Progress article of these special provisions.

Ice Age Trail Entrance: maintain access along CTH PD at all times. See the access requirements for Ice Age Trail Entrance discussed in the Prosecution and Progress article of these special provisions.

Intersections along CTH PD (Meriter Way, South High Point Road, Stratton Way, Snowy Parkway, Muir Field Road/Country Grove Drive, Silverton Trail/Tanglewood Drive, Stonecreek Drive, Maple Grove Drive) will remain open and existing turn lanes will be maintained.

Stage 2 Traffic
CTH PD (eastbound): one through traffic lane will be maintained by shifting to the outside.

CTH PD (westbound): one through traffic lane will be maintained by shifting and cross-over to the eastbound roadway.

South High Point Road: one through traffic lane will be maintained in each direction.

Intersections along CTH PD (Snowy Parkway, Country Grove Drive, Tanglewood Drive, Stonecreek Drive, Maple Grove Drive) will remain open on existing traffic lanes at all times.

Stage 2A Traffic
South High Point Road: southbound traffic will be reduced to one through lane and shifted to the outside. Northbound traffic will be reduced to one through lane, shifted, and cross-over to the southbound roadway.

Muir Field Drive: may be closed for a maximum of 15 consecutive calendar days. See the Prosecution and Progress article of these special provisions for additional information.

Stage 2B Traffic
South High Point Road: northbound traffic will be reduced to one through lane and shifted to the outside. Southbound traffic will be reduced to one through lane, shifted, and cross-over to the northbound roadway.

Stratton Way/Silverton Trail: may be closed for a maximum of 15 consecutive calendar days. See the Prosecution and Progress article of these special provisions for additional information.

Stage 3 Traffic
CTH PD (eastbound): one through traffic lane will be maintained by shifting and cross-over to the westbound roadway.

CTH PD (westbound): one through traffic lane will be maintained by shifting to the outside.

CTH PD (eastbound and westbound): an overnight short-term closure will occur to complete the installation of the prefabricated truss for the pedestrian structure (B-13-847) over CTH PD. Close and detour CTH PD as shown in the plans along CTH M, US 12/US14, and

US 18/US 151. See the requirements discussed in the Prosecution and Progress article of these special provisions.

South High Point Road: northbound traffic will be reduced to one through lane and shifted to the outside. Southbound traffic will be reduced to one through lane and shifted to the outside.

Maple Grove Drive: southbound traffic will be maintained on the existing lane alignment except for a minor shifting to provide clearance to the work zone.

Intersections along CTH PD (Meriter Way, Stratton Way, Muir Field Road, and Silverton Trail) will remain open at all times.

Stage 3A Traffic
Snowy Parkway: may be closed for a maximum of 15 consecutive calendar days. See the Prosecution and Progress article of these special provisions for additional information.

Stonecreek Drive: may be closed for a maximum of 15 consecutive calendar days. See the Prosecution and Progress article of these special provisions for additional information.

Stage 3B Traffic
Country Grove Drive: may be closed for a maximum of 15 consecutive calendar days. See the Prosecution and Progress article of these special provisions for additional information.

Tanglewood Drive: may be closed for a maximum of 15 consecutive calendar days. See the Prosecution and Progress article of these special provisions for additional information.

Stage 4 Traffic
CTH PD (eastbound): one through traffic lane will be maintained by shifting to the outside.

CTH PD (westbound): one through traffic lane will be maintained by shifting to the outside.

Intersections along CTH PD (Meriter Way, South High Point Road, Stratton Way, Snowy Parkway, Muir Field Road/Country Grove Drive, Silverton Trail/Tanglewood Drive, Stonecreek Drive, Maple Grove Drive) will remain open at all times.

C Residential and Business Property Access
Maintain vehicular access at all times to all driveways, parking lots, public alleys, and side roads throughout construction; except during paving and utility installation operations occurring in the immediate vicinity of the access location. Maintain and keep open access locations, where alternative access is not available at all times by closing one driveway at a time, building half the driveway at a time and/or plating concrete work. Plating of concrete work, as directed by the engineer, is incidental to the item requiring the plating. When an access or parking area must be limited due to construction operations, notify the engineer, property owners, and occupants of the premises at least two days prior to the beginning of the construction operation. Complete the work in a reasonable time and manner to resume

access to the driveway or side road. In parking lots that are being reconstructed, stage operations so that parking and access is maintained on existing or proposed base aggregate or pavement.

Coordinate with each business for the best time to construct driveways and sidewalks so as not to interrupt business operations during open hours.

Maintain emergency vehicle access and delivery vehicle access at all times to all properties throughout construction; except during paving and utility installation operations occurring in the immediate vicinity of the property. When access must be limited due to construction operations, notify the police and fire departments, the engineer and property owners and occupants at least two days prior to the beginning of the construction operation. Complete the work in a reasonable time and manner to resume access to the property.

For vehicle access, furnish, construct, and maintain a ramp of compacted base aggregate dense between closed side streets or open cross streets or driveway access and the work zone at all times, including down to excavated subgrade. The maximum ramp slope shall be 12% and delineated with traffic control drums. Use drums, barricades, flexible tubular markers, and safety fence to direct vehicular traffic in the work zone if required by the engineer. Protect and delineate hazards such as open excavations, abrupt drop-offs, and exposed manholes, inlets, and hydrants, with wedged material, drums, barricades, and safety fence as shown in the plans, special provisions, or as directed by the engineer.

D Pedestrian Access

Maintain pedestrian access to residences, businesses, public parking lots, and schools or provide where necessary, as directed by the engineer. Provide a temporary surface for pedestrian access at all times in areas of sidewalk construction. Construct the temporary pedestrian surface to meet Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements consisting of temporary pedestrian surface asphalt, temporary pedestrian surface plywood, temporary pedestrian surface plate, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. Maintain ADAAG accessible pedestrian access surfaces and walkways that are free from mud, sand, and construction debris.

Furnish and install temporary crosswalks for maintaining crosswalks through the construction zone.

Furnish and install temporary curb ramps when existing or finished curb ramps are not in place.

Furnish and install temporary pedestrian safety fence along existing and temporary sidewalk surface where there are drop-offs greater than 6-inches within 1-foot of the sidewalk edge and a grass or turf buffer does not exist to delineate the edge of sidewalk for vision impaired pedestrians.

Traffic control drums or barrels shall not be used for guidance along pedestrian access routes.

If additional special pedestrian access needs are identified along the project, provide for that access as directed by the engineer.

5. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying CTH PD traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From 5:00 AM Friday, May 26, 2017 to 5:00 AM Tuesday, May 30, 2017 for Memorial Day;
- PGA Champions Tour, June 23-25, 2017: From 5:00 AM to 10:00 AM and 3:00 PM to 8:00 PM Friday through Sunday.
- From noon Friday, June 30, 2017 to 6:00 AM Wednesday, July 5, 2017 and from noon Friday, July 7, 2017 to 6:00 AM Monday, July 10, 2017 for Independence Day;
- From 5:00 AM Friday, September 1, 2017 to 5:00 AM, Tuesday, September 5, 2017 for Labor Day.
- Ironman Wisconsin, September 10, 2017: From 5:00 AM to 10:00 PM.
- Epic's Users Group Meeting, September 25-28, 2017: From 5:00 AM to 10:00 AM Monday through Thursday.

107-005 (20050502)

6. Utilities.

This contract does not come under the provisions of Administrative Rule Trans 220.
107-065(20080501)

Additional detailed information regarding the location of vacated, relocated, and/or removed utility facilities is available in the work plan provided by each utility company or on the permits issued to them. View these documents at the City of Madison office during normal working hours.

Some of the utility work described below is dependent on prior work being performed by the contractor at a specific site. In such situations, provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Provide this notice 10 to 12 working days in advance of when the prior work will be completed and the site will be available to the utility owner. Follow-up with a confirmation notice to the engineer and the utility owner 3 to 5 working days before the site will be ready for the utility owner to begin its work.

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

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

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

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

Known utilities in the project area are as follows and station locations are approximate locations:

PROJECT 5992-09-31

Alliant Energy (Electric). Alliant Energy has underground/overhead facilities at the following locations:

- CTH PD – An overhead line from Meriter Way to Maple Grove Drive (south side)
- CTH PD – An underground line from Meriter Way (west side), crosses CTH PD to just east of Meriter Way (south side)
- CTH PD – An underground line from Meriter Way to east of Stratton Way (north side), crosses CTH PD west of Snowy Parkway to south side and continuing to Maple Grove Drive (south side)
- CTH PD – An underground line in the median of CTH PD at Stratton Way and at Snowy Parkway
- CTH PD – Two underground lines between Stratton Way and Snowy Parkway (south side)
- CTH PD – Two underground line crosses CTH PD between Snowy Parkway and Muir Field Road / Country Grove Drive
- CTH PD – An underground line from west of High Point Drive to High Point Drive (north side)
- CTH PD – An underground line from High Point Drive to Muir Field Drive (north side), continues to the west side of Muir Field Road
- CTH PD – An underground line (south side) west of Stonecreek Drive and an underground line (south side) east of Stonecreek Drive
- CTH PD – An underground line in the median of CTH PD west of Stonecreek Drive

- High Point Road – Two underground lines (west side), an underground line (center of roadway), an underground line (east side)
- Stratton Way – An underground line (east side)
- Snowy Parkway – An underground line (east side)
- Silverton Trail - Two underground lines (east side)
- Stonecreek Drive - An underground line (west side)
- Maple Grove Drive – Two underground lines (west side)

Alliant will install a new underground facility from Meritier way along CTH PD north side to CTH PD Station 121+00'EB'. Alliant will then proceed north and then east through the Dane County Parks Parcel to CTH PD Station 125+75'EB'. Alliant will continue east along CTH PD from CTH PD Station 125+75'EB' to CTH PD Station 127+00'EB' existing facilities.

Alliant will install a new underground facility from existing facilities at 6859 County Road PD resident to the east to the Ice Age Junction Path. Alliant will then proceed along the Ice Age Junction Path to Ice Age Junction Path Station 201+20'AT'. Alliant will cross the Ice Junction Path to the north and then east along the Ice Age Trail Entrance. Alliant will continue east on the south side of CTH PD to Snowy Parkway.

Alliant will install a new underground facility on the north side of CTH PD from new underground facilities crossing Stratton Way Station 30+80'SW' to the crossing of CTH PD at Station 139+90'WB'.

Alliant will install a new underground facility on the north side of CTH PD from CTH PD Station 146+18'WB' to the east Muir Field. The new facility will proceed to north along the west side of Muir Field to an existing facility.

Alliant will install a new underground facility crossing on South High Point Station 21+00'HP'.

Alliant will install a new underground facility crossing on Stratton Way Station 30+80'SW'.

Alliant will install a new underground facility crossing on CTH PD Station 139+90'WB'.

Alliant will install a new underground facility crossing on CTH PD Station 146+18'WB'.

Alliant will install a new underground facility crossing on Country Grove Station 53+68'CM' and proceed east on the south side of CTH PD to CTH PD Station 153+50'WB'.

Alliant will install a new underground facility crossing on Tanglewood Station 71+40'TS' and proceed west on the south side of CTH PD to CTH PD Station 167+75'WB'.

Alliant will install a new underground facility crossing on Stonecreek Station 92+30'SD'.

Alliant will install a new underground facility crossing on CTH PD at Station CTH PD 184+75'WB'. The new facility will then proceed east and then north along the right-of-way of Maple Grove to Station 23+30'MD'.

No conflicts are anticipated. Alliant plans to relocate all facilities prior to construction.

American Transmission Company (Electric). American Transmission Company has overhead facilities at the following locations:

- CTH PD - An overhead line (south side)

ATC will install a new overhead line from CTH M/CTH PD intersection along the south side to CTH PD Station 123+00'EB'. ATC will continue to install a new overhead line from CTH PD Station 123+00'EB' southeast into the Dane County Parks parcel to Station 206+46'AT' and then proceed northeast through the Dane County Parks parcel to CTH PD Station 128+87'EB'. ATC will then proceed with a new overhead line east from CTH PD Station 128+87'EB' concluding at CTH PD Station 152+85 'EB'.

ATC will treat the poles located at CTH PD Station 155+12'EB' and 157+69'EB' for the anticipated roadway fill.

Existing storm sewer at 143+72'EB' right will be modified to accommodate the installation of a new ATC power pole.

ATC will excavate approximately 1,600 CY of common excavation at CTH PD Station 123+00'EB' to accommodate the installation of the new ATC power pole.

ATC will clear trees and brush along the south side of CTH PD between Meriter Way and CTH PD Station 139+75'EB'.

ATC's facility is a double circuit line with one circuit at 138 kV and another at 69 kV. ATC recommends the contractor to assume both circuits at 138 kV and maintain OSHA Safe Working Clearance from the ATC based on the latest OSHA requirements with respect to a 138 kV line. It is the contractor's responsibility to determine the distance that needs to be maintained for the type of equipment being used.

Exercise caution when working and driving near ATC transmission facilities. Any contact with or damage to the ATC facilities must be reported immediately to:

Matt Dopp, ATC Construction Manager, at (608) 225-5983 or
Doug Vosberg ATC Maintenance Specialist, at (608) 438-7650

Contact ATC at least three days in advance of:

- Any grade change (cut or fill) within 1 foot of any ATC facility
- Excavations up to 3 feet deep within 10 feet of any ATC facility
- Excavations greater than 3 feet deep within 20 feet of any ATC facility
- Any grade change in excess of 1 foot change from the Roadway PS&E drawings within 20 feet horizontally of ATC facility (including OH wires).
- Directional bore or plowing work within 10 feet of any ATC facility

Should the roadway contractor identify operations that require an outage of ATC facilities, please complete a template of ATC's Transmission Facility Outage Agreement from the City of Madison. After completing the outage request details, contact Matt Dopp, ATC Construction Manager, at (608) 225-5983 for instructions on how to start the agreement process. Note that early coordination increases opportunity for the requested outage timeframe to be granted and also note that peak loads are common during summer months and therefore outage requests during that time are rarely allowed. ATC plans to relocate all conflicting structures prior to May 26, 2017.

Charter Communications. Charter Communications has telephone and fiber optic facilities at the following locations:

- CTH PD – An underground line on the north side of the roadway from west of Meriter Way to CTH PD Station 172+75'EB'
- CTH PD – An underground line crossing CTH PD at Station 146+50'EB'
- South High Point Road – An underground line (west side) from CTH PD west to South High Point Road project limits
- Muir Field Road / Country Grove Drive – Overhead line crossing CTH PD (east side)
- Muir Field Road / Country Grove Drive – An underground line crossing CTH PD (west side)

Charter will install a new underground facility from Meritier way along CTH PD north side to CTH PD Station 121+00'EB'. Charter will then proceed north and then east through the Dane County Parks Parcel to CTH PD Station 125+75'EB'. Charter will continue east along CTH PD from CTH PD Station 125+75'EB' to CTH PD Station 134+10'EB' existing facilities.

Charter will install a new underground facility crossing on South High Point Road at South High Point Road Station 20+80'HP'.

Charter will install a new underground facility from the an existing facility on the south side of CTH PD at CTH PD Station 146+75'EB' to the east to CTH PD Station 172+75'EB'.

Charter will install a new underground facility crossing on CTH PD at CTH PD Station 111+30'EB'.

Charter will install a new underground facility crossing on CTH PD at CTH PD Station 172+75'EB'.

Charter will install a new underground facility crossing Country Grove Drive at Country Grove Drive Station 53+75'CM'.

Charter will install a new underground facility crossing Tanglewood Drive at Tanglewood Drive 71+30'TD'.

Charter plans to relocate all conflicting facilities prior to the roadway construction.

Madison Gas and Electric (Gas). Madison Gas and Electric has natural gas facilities at the following locations:

- CTH PD – A 12" gas main from west of Meriter Way to Maple Grove Drive (north side)
- CTH PD – A 4" gas main crossing CTH PD between Meriter Way and High Point Road
- CTH PD – A 4" gas main from west of High Point Road to Muir Field Road (north side)
- CTH PD – A 4" gas main between Muir Field Drive / Country Grove Drive and Silverton Trail / Tanglewood Drive (north side)
- CTH PD – A 2" gas main crossing CTH PD at Silverton Trail and Tanglewood Drive intersection
- CTH PD – A 4" gas main on Silverton Trail (west side) continues on CTH PD (north side), crosses CTH west of Stonecreek Drive, continues on CTH PD (south side) until Maple Grove Drive
- CTH PD – A 4" gas main from crosses between Stonecreek Drive and Maple Grove Drive (north side)
- Stratton Way – A 4" gas main (east side)
- Snowy Parkway – A 4" gas main (east side)
- Muir Field Road / County Grove Road – A 4" gas main crossing CTH PD (east side)
- Tanglewood Drive – A 2" gas main (east side)
- Silverton Trail – Two 4" gas mains cross Silverton Trail.
- Silverton Trail – A 2" gas main (west side)
- Stonecreek Drive – A 2" gas main (west side)
- Maple Grove Drive – A 4" gas main (west side)

The following facilities will be relocated prior to construction:

- Madison Gas and Electric (MGE) will install a new underground facility from Meritier way along CTH PD north side to CTH PD Station 121+00'EB'. MGE will then proceed north and then east through the Dane County Parks Parcel to CTH PD Station 125+75'EB'. MGE will continue east along CTH PD from CTH PD Station 125+75'EB' to CTH PD Station 136+25'EB' existing facilities.
- MGE will install a new underground facility crossing of South High Point Road at South High Point Road Station 20+90'HP'.

The following facilities will be relocated during construction. Perform a Utility Line Opening to confirm if the existing gas main is in conflict. If in conflict, 5 day advance warning to Steve Beversdorf at (608) 444-9620. 5 days of work to complete any relocations during construction.

- MGE will lower the existing underground facilities on CTH PD from CTH PD Station 139+00'EB' to Station 141+00'EB'.
- MGE will lower the existing underground facilities on CTH PD at CTH PD Station 148+62'WB'
- MGE will relocate the existing underground facilities within 100-FT on CTH PD at CTH PD Station 152+65'WB'
- MGE will retire and discontinue a regulator station in the northwest corner of CTH PD and Maple Grove Road Drive. MGE will remove these manholes in coordination with the project contractor. MGE will relocate these facilities outside of the project limits.
- MGE will modify the existing valve manhole near CTH PD Station 185+25'WB'

City of Madison (Signals, Lights, and Communications). The City of Madison has facilities at the following locations:

- CTH PD – High Point Road Intersection
- CTH PD – Maple Grove Drive Intersection

City of Madison signal, lights, and communications will be adjusted according to the plans. This work will be done as part of the project 5992-09-31.

Madison Metro Sewerage District (Sanitary Sewer). The Madison Metro Sewerage District has facilities at the following locations:

- CTH PD – A 36" RCP crosses CTH PD at a skew between Snowy Parkway and Muir Field Road / Country Grove Drive

Madison Metro Sewerage District will be adjusted according to the plans. This work will be done as part of the project 5992-09-32.

TDS Telecom. TDS Telecom has telephone and fiber optic facilities at the following locations:

- CTH PD – An overhead line east of Meriter Way to High Point Rd (north side)
- CTH PD – Two underground lines from west of Meriter Way to CTH PD Station 146+75'EB' (north side)
- CTH PD – An underground line from CTH PD Station 146+75'EB'to Maple Grove Drive (north side)
- CTH PD – An underground line south side of CTH PD from CTH PD Station 139+75'EB' to CTH PD Station 172+50'EB'
- CTH PD – An underground line crossing of CTH PD at CTH PD Station 146+75'EB'
- CTH PD – An underground line crossing of CTH PD at CTH PD Station 172+50'EB'

- South High Point Road – An underground line crossing of South High Point Road at South High Point Road Station 20+50'HP'
- Stratton Way – An underground line crossing of Stratton Way at Stratton Way Station 30+70'SW'
- Snowy Parkway – An underground line crossing of Snowy Parkway at Snowy Parkway Station 41+10'SP'
- Country Grove Road – An underground line crossing of Country Grove Road at Country Grove Station 53+75'CM'
- Muir Field Drive – An underground line crossing of Muir Field Drive at Muir Field Drive Station 54+75'CM'
- Tanglewood Drive – An underground line crossing of Tanglewood Drive at Tanglewood Drive Station 71+60'TS'
- Silverton Trail – An underground line crossing of Silverton Trail at Silverton Trail Station 73+00'TS'
- Maple Grove Drive – An underground line (west side) on the north side of intersection crosses CTH PD west of intersection

TDS will install new underground facilities on the north side of CTH PD from Raymond Road to CTH PD Station 121+00'EB'. TDS will then proceed north and then east through the Dane County Parks Parcel to CTH PD Station 125+75'EB'. TDS will continue along CTH PD from CTH PD Station 125+75'EB" to Stratton Way.

TDS will install a new underground facility on the south side of CTH PD from CTH PD Station 107+00'EB' to CTH PD Station 120+00'EB'

TDS will install a new underground facility crossing of CTH PD at CTH PD Station 146+50'EB'

TDS will install a new underground facility crossing of CTH PD at CTH PD Station 160+05'EB'

TDS will install a new underground facility on the west side of Meriter Way from CTH PD to Meritier Way Station 13+00'MW'

TDS will install a new underground facility on the west side of South High Point Road from CTH PD to the north limits of South High Point Road.

TDS will install a new underground facility crossing of South High Point Road at South High Point Road Station 20+90'HP'

No conflicts are anticipated. TDS plans to relocate all facilities prior to construction.

PROJECT 5992-09-32

All utilities located on or near this project are being coordinated under project 5992-09-31.

City of Madison (Water). The City of Madison has water main at the following locations:

- CTH PD – A 12" main from High Point Road to Muir Field Road (north side)
- CTH PD – A 10" main from Muir Field Road to Silverton Trail (north side)
- CTH PD – A 16" main crosses CTH PD to south side west of Stonecreek Drive, continues on CTH PD to Maple Grove Drive (south side), continues south at Maple Grove Drive (center of roadway)
- CTH PD – A 12" main (south side) crossing CTH PD west of Maple Grove Drive, continues on CTH PD (north side)
- Snowy Parkway – An 8" main crosses CTH PD from the east side of Snowy Parkway
- Muir Field Road – A 12" main (east side)
- Country Grove Drive – A 10" main crosses CTH PD from the east side of Country Grove Drive
- Silverton Trail – A 10" main (east side)
- Tanglewood Drive – A 10" main crosses CTH PD from the east side of Tanglewood Drive
- Stonecreek Drive – A 10" main (east side)
- Maple Grove Drive – A 12" main north of the intersection (west side)

City of Madison (Water) will be adjusted according to the plans. This work will be done as part of the project 5992-09-32.

City of Madison (Sanitary Sewer). The City of Madison has sanitary sewer at the following locations:

- CTH PD – A 36" RCP crosses CTH PD at a skew between Snowy Parkway and Muir Field Road / Country Grove Drive
- CTH PD – An 8" PVC pipe from west of Muir Field Road to Muir Field Road
- CTH PD – An 8" PVC pipe from east of Muir Field Road to Silverton Trail, continues north on Silverton Trail (west side)
- CTH PD – A 21" RCP crosses CTH PD east of Silverton Trail / Tanglewood Drive
- CTH PD – An 8" PVC pipe from east of Silverton Trail to Maple Grove Drive
- Muir Field Road – An 8" PVC pipe in center of roadway

City of Madison (Sanitary Sewer) will be adjusted according to the plans. This work will be done as part of the project 5992-09-32.

7. Other Contracts.

The Wisconsin Department of Transportation plans on letting the following projects:

Project 5992-09-81, City of Madison, South Pleasant View Road, Cross Country Road – Prairie Hill Road, CTH M, Dane County, which will construct the CTH M roadway and adjacent CTH PD roadway starting in the 2017 Fall. Coordination with the contractor on this project will be required and is incidental to the items of work in this contract.

8. Environmental Protection, Aquatic Exotic Species Control.

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

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

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

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

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

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Mike Novey at (608) 566-1370.
107-054 (20080901)

10. Erosion Control.

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMP's) shown on the plans are at suggested locations. The actual locations will be determined by the contractor's ECIP and by the engineer. Include each dewatering (mechanical pumping) operation in the ECIP submittal. The ECIP will supplement information shown on the plans and not reproduce it. The ECIP will identify how to implement the project's erosion control plan. ECIP will demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-application of topsoil to minimize the period of exposure to possible erosion.

Provide the ECIP 14 days prior to the pre-construction conference. Do not implement the ECIP until department approval, and perform all work according to the approved ECIP.

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

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

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

Do not allow any excavation for; structures, utilities, grading, maintaining drainage that requires dewatering (mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Prior to each dewatering operation, submit to the department a separate ECIP amendment describing in words and pictorial format an appropriate BMP for sediment removal, according to WisDNR Storm Water Construction Technical Standard, Code 1061, Dewatering. Include reasoning, location, and schedule

duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide additional inlet protection for back-up protection. Dewatering is considered incidental to the project.

Keep all public roadways clean and free from dirt and debris at all times. Provide a self-contained mechanical or air conveyance street sweeper, and dispose of the accumulated material.

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

11. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.
107-001 (20060512)

12. Municipality Acceptance of Sanitary Sewer and Water Main Construction.

Both the department and City of Madison personnel will inspect construction of sanitary sewer and water main under this contract. However, testing, and acceptance of the sanitary sewer and water main construction will be by the City of Madison.
105-001 (20140630)

13. Referenced Construction Specifications.

Construct the work enumerated below conforming to the City of Madison Standard Specification. If there is a discrepancy or conflict between the referenced specification and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

Conform to the referenced construction specifications for the following:

- Sanitary Sewer
- Water main

105-002 (20130615)

14. Preservation of Existing Trees.

Tree preservation is of great importance on the project. Take precautions during construction so as not to disfigure, scar, or impair the health of any tree on public or private property that is not marked for removal. Do not place, park, or store on the surface of any unpaved areas within the drip lines of trees any equipment, vehicles, or materials. Do not deposit any chemicals, rinsates, or petroleum products within the drip lines of trees. The drip line is defined as the outermost extent of the tree canopy, extended vertically to the ground surface. The engineer and the City Forestry Representative will review trees that are in close proximity to the grading limits of the project and will identify specific trees to be protected. Contact Dean Kahl, City of Madison Forestry at (608) 266-4891 with questions regarding tree preservation.

Preconstruction Pruning
Trees larger than 10 inches Diameter Breast Height (DBH) will be pruned by City Forestry to an approximate height of 14 feet above the road wherever construction equipment is expected to invade the tree crown. Pruning will be done according to ANSI A300 tree pruning specifications. Occasionally a limb may have to remain at height less than 14 feet above the roadway. Note these instances during the 'walk through' and employ methods to protect the limb.

Excavations
Do not rip or pull roots out towards the trunk of a tree while excavating. The use of an excavator, backhoe, or loader to cut roots is not acceptable. Immediately cut damaged roots over 1/2-inch in diameter in back of the damaged section. Make cuts with an ax, lopping shears, chainsaw, stump grinder, or other means that will produce a clean cut. Cover any exposed roots as soon as excavation and installation are complete.

Underground Utility Excavation and Installation
Do not grade, excavate, or disturb the area within 5 feet of any tree measured from the outside edge of the tree at DBH along the length of the terrace, without permission from the City Forestry Representative.

The engineer and the City Forestry Representative will review laterals that are in close proximity to terrace trees on a case by case basis. The engineer may elect to terminate lateral or service installation prior to conflict with tree roots (i.e. at the curb line). For laterals that continue to the property line, use construction methods that minimize tree damage as directed by the engineer. The engineer may allow boring under or within the 5 feet protection zone.

Curb and Gutter Removal and Replacement
Provide extra care to root masses that grow very close to, up to or over the curb during excavation. The City Forestry will mark "NRC" (No Root Cutting) next to trees with roots that could be damaged in curb removal.

Sidewalk Removal and Replacement
Provide extra care to root masses that grow very close to the sidewalk during excavation. The City Forestry will mark "NRC" (No Root Cutting) next to trees with roots that could be damaged in sidewalk removal.

Terrace Restoration
Do not mechanically grade within 5 feet of any tree. If in the root protection zone, do grading with hand implements in a manner that will minimize damage to the root system.

Damages
Failure to follow the proper safeguards of this specification, or the Root Pruning Existing Tree Item will result in the following cost recovery charges and liquidated damages assessed against the contractor:

Where construction damage occurs causing or resulting in removal of the tree:
- The costs associated with removing the tree including wood disposal.
- The costs associated with removing the stump to a depth of at least 24 inches below the ground.
- The costs associated with replanting a replacement tree that is balled and burlapped and shall have a minimum caliper of 3 inches. The species and replanting location shall be determined by the City Forestry.
- The value of the existing tree which shall equal $125.00 per trunk diameter inch, measured at 4.5 feet above ground.

For bark scraping and broken branches:
- The costs associated with pruning broken branches, including wood disposal.
- Loss of limb or broken branch larger than 3 inches in diameter: $150.00 for each occurrence. Breakage of limbs that are less than 14 feet above the roadway shall be reviewed on a case by case basis.
- Damage to trunk or bark larger than one square foot in area: $400.00 each area.

For root cutting or excavation within the root protection zone:
- For mechanical excavation within 5 feet of a tree, along the length of the terrace or sidewalk of the tree, including ripping of roots back towards the trunk, without prior permission from City Forestry Representative: $150.00 for each occurrence.
- For mechanical excavation beyond 6 inches or 1 foot of the proposed curb installation, as determined by the size of the existing tree and terrace width, including ripping of roots back towards the trunk: $150.00 for each occurrence.

15. Signing.

The City of Madison Traffic Engineering Division will remove existing City of Madison signs and sign posts as shown in the plans. Contact Steve Grob, City of Madison Traffic Engineering at (608) 266-4767 at least five days prior to starting construction to arrange to have signs removed. Sign support bases are to be removed and disposed of by the contractor.

The City of Madison Traffic Engineering Division will be installing bus route, bus stop and bike route signs as shown in the plans. Contact Steve Grob, City of Madison Traffic Engineering at (608) 266-4767 at least five days prior to installing new sign support bases and sign posts to arrange for signing installation.

16. Dust Control Implementation Plan.

A Description

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

B (Vacant)

C Construction

C.1 General

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

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

C.2 Dust Control Implementation Plan Contents

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

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

1. A single contact person with overall responsibility for the DCIP development as well as surveillance and remediation of job related dust. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
2. Individual contact persons and their respective areas of responsibility. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.

3. A site map locating project features, the job site boundaries, all ingress and egress points, air intakes and other dust-sensitive areas, and all public and private paved surfaces within and immediately adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where employing various dust control or prevention strategies.
4. A matrix showing, for each anticipated land disturbing, dust generating activity, the following:
    - Preventive measures that shall be employed.
    - The applicable contact person.
    - The contractor's timetable and surveillance measures used to determine when remediation is required.
    - The specific dust control and remediation measures that shall be employed. List the specific contract bid items that shall be used for payment. Also indicate costs that are incidental to the contract.
    - Both maintenance and cleanup schedules and procedures.
    - How excess and waste materials shall be disposed of.
5. A description of how off-site impacts shall be monitored and dealt with.

C.3 Updating the Dust Control Implementation Plan

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

C.4 Dust Control Deficiencies

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

D Measurement

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

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

623.0200	Dust Control Surface Treatment
624.0100	Water
628.7560	Tracking Pads
SPV.0170.001	Pavement Cleanup Project 5992-09-31

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

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

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

John Roelke, License Number All-119523, inspected the Badger Mill Creek box culvert for asbestos on December 22, 2015. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Mike Novey (608) 566-1370.

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Mike Novey, DAAR Engineering, 151 East Cook Street, Portage, WI 53901 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 No number Culvert, CTH PD/McKee Road over Tributary to Badger Mill Creek
- Site Address: 430158.19/895131.30, City of Madison, Dane County
- Ownership Information: Dane County, 2302 Fish Hatchery Road, Madison, WI 53713
- Contact: Mike Novey
- Phone: (608) 566-1370
- Age: 24 years old. This structure was constructed in 1993.
- Area: 0 SF of deck

Insert the following paragraph in Section 6.g.:

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

107-125 (20120615)

18. Coordination with Businesses and Residents.

The contractor shall arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week prior to the start of work under this contract and hold one meeting per month thereafter. The contractor shall arrange for a suitable location for the meeting(s) that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for the meeting(s). The contractor shall schedule the meeting(s) with at least two weeks' prior notice to the engineer to allow for these notifications.
108-060 (20141107)

19. General Provisions for Storm Sewer.

Construct all round and elliptical shape storm sewers according to the pertinent provisions of standard spec 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 shall include 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 607.2.3 and 607.2.4. The use of mortar as a pipe joint method is prohibited.

Lay all round and elliptical shape storm sewers on a 6-inch minimum thick bed of Base Aggregate Dense Graded 1 1/4-Inch according to standard spec 305.2.1 or when water is encountered, No. 1 coarse concrete aggregate according to standard spec 501.2.5.4. Bedding for round and elliptical pipe shall be incidental to the installation costs of the round or elliptical pipe.

Construct all storm structures rectangular in shape. Construct catch basins, manholes and inlets using only precast or cast in place concrete masonry options. All structures shall be 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 Graded 1 1/4-Inch according to standard spec 305.2.1 or when water is encountered, No. 1 coarse concrete aggregate according to standard spec 501.3.6.4.5, and as shown on the plans. Bedding for structures shall be incidental to the installation costs of the structure.

Bid all structures (manholes and inlets) as field poured, and construct all structures as field-poured unless the contractor receives approval of the project leader to precast the structures. This approval will not be given until it can be confirmed that the proposed design will fit existing conditions including possible utility conflicts. No precast approval shall be authorized for any structure until such time as all ULO's that could affect the structure/structures in question have been completed and the City of Madison design engineer has had a minimum of three working days to review all the relevant information.

Submit shop drawings for all precast structures to the project leader. The project leader will coordinate the City of Madison design engineer and shall have three days to approve or reject the shop drawings. Under no circumstance shall a precast structure be brought to or used on the construction site without a written approval of the shop drawing for that structure prior to its use on site.

Do not use station and offset for inlet structures, as given on the storm plans, 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.

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 as specified above, will be included in the unit price bid for the pipe of the type, class and diameter used. The cost includes installing a concrete plug in the portion of the abandon pipe that remains in place after completion of storm sewer trench.

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 dispose of all frames or grates and all other material that the city does not want.

20. General Provisions for City of Madison Sanitary Sewer.

Utility Standard Specifications

Perform work according to these provisions and the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and the City of Madison Standard Specifications for Public Works Construction-Latest Edition, hereinafter referred to as the *City Standard Specifications*. In the event of a conflict the Wisconsin Department of Transportation Standard Specifications will take precedence.

Work Sequence
Contact Mark Moder (608)261-9250 mmoder@cityofmadison.com ten working days prior to starting work on the sanitary sewer and provide a schedule of operations. Construct sanitary sewer main and laterals in stages according to the traffic control plan and in proper coordination with construction for activities adjacent to the sanitary sewer main.

Contact Ray Schneider (608)347-3628, rays@mmsdsewer.org 5 days prior to making the tap connection to arrange for inspection of connection. Tap connection shall conform to all MMSD connection specification criteria. Elevation of tap may need to be adjusted to make sure connection not made at a barrel joint.

Provide bypass pumping of sanitary sewage to maintain sanitary sewer service when new sewer access structures are being constructed over the existing mains.

Shop Drawings and Samples
Submit shop drawings and samples to the engineer and City of Madison Engineering Department as required in these Special Provisions and for the following:

- Sanitary Sewer Pipe Material
- Sanitary Sewer Access Structure Casting and Manhole Covers Type J Special (Madison logo lid)
- Sanitary Sewer Internal Chimney Seal
- Sanitary Sewer Access Structure (4-Foot Diameter)
- Sewer Electronic Markers
- Select Fill for Sanitary Sewer

Contractor's responsibilities include:

- Review shop drawings and samples prior to submittal;
- Determine and verify field measurements, field construction criteria, catalog numbers and similar data, and conformance with specifications;
- Coordinate each submittal with requirements of work and of Special Provisions;

Notify city engineer or city engineer's representative, in writing, at time of submittal of deviations in submittals from requirements of special provisions.

NOTE: Do not begin any fabrication or work listed above as requiring shop drawings or samples until return of submittals with city engineer's or city engineer representative's approval.

Provide shop drawings containing the following:

A. Date of submittal and dates of previous submittals.
B. Project title and number.
C. Contract identification.
D. Names of contractor, supplier, and manufacturer.
E Identification of product, with identification numbers, and drawing and specification section numbers.
F. Field dimensions clearly identified.
G. Identification of details required on drawings and in specifications.

H. Manufacturer and model number (give dimensions and provide clearances).
I. Relation to adjacent or critical features or work or materials.
J. Applicable standards, such as ASTM, and identification of deviations from contract documents.
K. Source of samples and material properties.
L. Identification of revisions on re-submittals.
M. Eight-inch and three-inch blank space for contractor and city engineer stamps.
N. Contractor's stamp, signed, certifying to review of submittal, verification of products, field measurement, field construction criteria, and coordination of information with submittal with requirements of work and Special Provisions.

If required by the city engineer or city engineer's representative, resubmit shop drawings that include the following:

A. Corrections or changes from previous submittals as indicated by city engineer or city engineer's representative. re-submittals are required until approved.

B. shop drawings and product data: review initial drawings or data and resubmit as specified for initial submittal. Indicate changes, which have been made other than those requested by city engineer.

Testing and Acceptance: Submit materials production and field placement 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 sanitary sewer and related materials such as backfill, concrete, slurry, etc. 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 Mark Moder, City of Madison, Department of Public Works, City-County Building, Room 115, 210 Martin Luther King Jr. Boulevard, Madison, Wisconsin 53710, mmoder@cityofmadison.com.

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

Protection of Sewers: Take adequate measures to prevent impairment of operation of existing sanitary sewer and storm sewer systems. Prevent construction material, concrete, earth, or other debris from entering sewer or sewer structure.

Divert sewage flow interfering with construction to sanitary sewers leading away from construction area. Prior to commencing excavation and construction of work impacting existing city sewer, submit to city engineer for review, detailed plans, including routing and connections, required to handle and dispose of sanitary wastes. By reviewing the plan, the city engineer neither accepts responsibility for adequacy thereof nor for damages to

public or private property resulting there from, such responsibilities remain with the contractor.

Sanitary sewer damaged or removed during construction, which is to remain in service, will be restored or replaced to original material and workmanship used for original construction.

All City of Madison manhole castings removed from sewer access structures (removed, discontinued, or swapped out with a casting elevation adjustment) will be delivered to City Engineering's Service Building, 1600 Emil Street, Madison, WI 53713.

The costs to remove all discontinued utility pipes within the sanitary sewer pipe trench or sewer access structure excavation will be included in the unit price bid for the pipe of the type, class and diameter used. The cost includes installing a concrete plug in the portion of the discontinued pipe that remains in place after completion of sanitary sewer trench.

According 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 will not be compensated as remove pipe and will be considered to be incidental to the new pipe installation." Same trench will considered to be any pipe located with 3' horizontally of the pipe being installed.

City of Madison (sanitary sewer) has underground facilities located within the project area. Relocation of the underground facilities will be accomplished as part of contract 5992-09-32 by the contractor. Existing facilities and anticipated proposed relocations are as follows:

- CTH PD – North side of street (new 10-inch diameter): Station 148+73'WB' to Station 152+22'WB'
- CTH PD – North side of street (8-inch): Station 160+58'WB' to Station 168+69'WB'
- CTH PD – North side of street (8-inch): Station 170+33'WB' to Station 183+87'WB'
- Snowy Parkway - Center of street (8-inch)
- Muir Field Drive - Center of street (8-inch) replace with new 10-inch.
- Silverton Trail – Center of street (8-inch)

Sanitary Sewer removals, replacements, and adjustments are included as part of the project as shown on the plans. Complete all work within the existing right-of-way. Coordinate operations with the City of Madison. Contact Mark Moder, (608) 261-9250.

21. General Provisions for City of Madison Water Main.

Contact Information:

Madison Water Utility
Adam, Wiederhoeft, P.E.
Phone: (608) 266-9121
E-mail: awiederhoeft@madisonwater.org

Utility Standard Specifications: Perform work according to these provisions and the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and the City of Madison Standard Specifications for Public Works Construction-Latest Edition, hereinafter referred to as the *City Standard Specifications*. In the event of a conflict the Wisconsin Department of Transportation Standard Specifications will take precedence.

Work Sequence:
Contact the identified person above ten (10) working days prior to starting water main work and provide a schedule of operations.

Construct water main and water service laterals in stages according to the traffic control plans and in proper coordination with construction activities adjacent to the water main. Note that all water main and service laterals that will cross the north CTH PD corridor from the south CTH PD corridor where the proposed main is to be installed, will need to be stubbed at the traffic control/phasing limits.

As construction staging and sequence allows, disinfect the new water mains. Madison Water Utility will flush and test all newly installed water mains. Coordinate as necessary with 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. Water main installation will consist of strategic abandonment of the existing water main. Abandon existing water main only after the new water main has passed all required testing, new main has been properly brought online into the system and all service laterals, except those called to be abandoned, have been relocated to the new main.

Keep valves at connection points between the new water main and 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, sequencing shall be so arranged 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 bulk-headed with concrete; and the pipe abandoned in place. This work is considered incidental to the new water main installation.

Hydrants: 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 installation.

Where needed, use offsets and/or bends on the hydrant lead such that the hydrant is installed at a minimum bury depth of six feet and required clearances with storm sewer, sanitary sewer and other pipes are maintained. In no case may a hydrant be set at a depth greater than nine feet from grade. Assess the need for hydrant extensions. All hydrant extensions and fittings on the lead are incidental to the installation of the hydrant.

Either permanently abandon or securely bag any installed hydrant, either existing or new, that is not supplied by an in-service main overnight or for longer than twelve hours until the hydrant is permanently abandoned or back in service.

Temporary Flushing Hydrants: The installation of temporary flushing hydrants may be desired as part of the phasing and sequencing of water main installation. The furnishing, installation, use and abandonment of temporary flushing hydrants is considered incidental to water main installation.

Temporary Air Bleed: Where any installation of proposed water main does not have an adjacent hydrant or other means of bleeding air from the main, install a temporary 2-inch corporation stop at the high point of the main. Remove the stop and plug the opening after successful completion of water main testing. Installation, use, maintenance, removal and plugging of corporation stops for use as air bleeding devices are considered incidental to the installation of water main.

Thrust Restraint: Restrain all joints on proposed water main. Use restrained joint pipe except at valves and where vertical installations exceed 45°. Use mechanical joint fittings with mechanical joint restraint for all valves and fittings installed at an angle greater than 45° vertically. Restrain fittings per City Standard Specifications at hydrant installations and where connecting to existing water main.

Abandoned Facilities: Abandoned facilities exist within the project limits and utility companies will be abandoning some additional facilities in place after relocating facilities to avoid conflicts with the proposed work. Removal by the contractor of any abandoned facilities necessary to complete the proposed work, including plugging the remaining ends of the facility, is considered incidental to the contract. Contact each utility company individually to verify if any can be expected and to possibly obtain facility maps for approximate locations. The costs to remove all abandoned utility pipes within the water main trench or related excavation will be included in the unit price bid for the respective bid item. The cost includes installing a concrete plug in the portion of the abandoned pipe that remains in place after completion of the trench or excavation.

Location of 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's available records. These records are not guaranteed to be accurate in all cases and do not indicate at what depths these laterals 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 Water 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'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.

22. General Provisions for City Conduit Installation.

Supplement standard spec 652 as follows:

Use Schedule 80 conduit under all traffic areas.

Install all conduit at a minimum depth of 30 inches, unless otherwise approved by the engineer. Solvent weld all joints. Mark the location of each conduit, where conduit crosses traffic areas, by a permanent chiseled arrow or other appropriate permanent stamp in top of the curb head.

Install and connect all conduit to the concrete bases, manholes, handholes, existing conduit, or conduit elbows so as to provide a continuous network, unless otherwise indicated on the plan. All connections shall be watertight. Do not install drainage holes in conduit. Uncover the ends or mid-sections of all existing conduit that is being extended by or incorporated into this project work.

When connections are to be made to an existing conduit, first verify that the existing conduit is fully clear and useable for its entire cross-section and length. When the existing conduit is found to be defective, notify the engineer and do not proceed until the engineer so directs. If the contractor connects to an existing defective conduit without the express direction from the engineer, make any and all necessary repairs and replacements to all conduits, including conduit that was “existing” prior to the contractor starting work and to the satisfaction of the engineer. All costs of this work shall be at the expense of the contractor.

Turn up conduits terminating in a non-paved location and not in a structure, and end at terrace finish grade with a PVC cap securely attached, per duct termination detail. Where conduit runs parallel to curb and gutter, place the conduit within 12 inches of the back of the curb, except as directed by the engineer. The engineer will determine termination points not within pull boxes or concrete bases.

Unless the contract provides for installation of cable, cap the ends of each run of conduit with standard conduit caps or otherwise appropriately plug the ends to preclude infiltration of water and soil. Install a pull wire in each conduit, except those with only streetlight wire. A pull wire shall be approximately 4 feet longer than the conduit run, and shall be doubled back for at least 2 feet at each terminal. The pull wire shall be #10 AWG copper, stranded, with THHN insulation and green color coding. Install the pull wire within seven days of completing a conduit installation from structure-to-structure.

Use a 6-inch minimum sand padding below the conduit and a 6-inch minimum sand lift above the conduit. Do not backfill trench with any rocks larger than 4 inches in diameter or any foreign debris.

23. General Provisions for City Traffic Signals.

Perform all work on the lighting and conduit/pull box system according to the Wisconsin Electrical Code, the applicable provisions of the standard specifications, and these special provisions and plans.

The City of Madison will remove existing traffic signals and "signal only" poles when the temporary signals are in place at each intersection. Contact Michael Christoph at the City of Madison Traffic Engineering Shop, (608) 266-9031, to coordinate removal of existing signals and installation of new signals.

Remove existing streetlight poles identified for removal, including those that also have traffic signal equipment on them.

Each pedestrian push button installation shall include "Push Button for Walk Signal" signs. Single direction arrow signing shall also be used with all buttons except two direction arrow signing is needed for single buttons on median poles.

If existing conduits, handholes and bases designated as "save" cannot be saved, contact Jerry Schippa, (608) 267-2969, for further direction.

All new electric services shall be metered power, 100 amperes, 120 volt, CG-3 rate. A minimum of 6 feet separation shall be maintained between any adjacent loop detectors.

24. General Provisions for City Electric Systems.

A General Requirements

Perform this work according to the Wisconsin Electrical Code, National Electrical Contractor's Association (NECA) electrical construction practices, OSHA and the standard specifications.

Perform all work on the lighting and conduit/pull box system according to the Wisconsin Electrical Code, and applicable provisions of standard spec 659, and these special provisions and plans.

Carefully remove and salvage the steel frames and covers from all pull boxes and manholes to be removed or abandoned, and all street light poles, arms, transformer bases, fixtures, concrete handholes, and associated equipment. Material designated by the city to be saved shall be returned to City Traffic Engineering, 1120 Sayle St., Madison.

Complete electrical work by a journey-worker electrician or be completed by an electrical apprentice under the supervision of a journey-worker electrician. Legal status or standing as a journey-worker and apprentice electricians shall be certified or otherwise documented to the engineer before beginning any electrical work. Electrical work is hereby defined as electrical and related construction required to be performed under the contract by the contractor, according to the standard specifications, contract provisions, standard detail drawings and plan details applicable to electrical construction.

At the pre-construction conference, supply the engineer with a list of names and qualifications of journey-workers and/or electrical apprentices who will or may be working on this contract.

Proof of qualification to do electrical journey-worker level work shall be the "Completion of Apprenticeship" certification card issued by an approved state agency, or a resume showing sufficient electrical education and a minimum of 14,000 hours of varied electrical work experience. All apprentices shall be indentured by an approved state agency.

The contractor is hereby advised that electrical apprentices must work under the terms of their indentures, which require an apprentice be under the direct supervision of a journey-worker with the exception of an apprentice in the final year as an apprentice. Any violation, or suspected violation, of these terms will be reported to the Bureau of Apprenticeship Standards.

On completion of the work, test the installation and ensure that it is entirely free of grounds and short circuits. This contract contemplates and intends a complete and operating installation of electrical work. Everything in the form of labor or material necessary for this result is in the intent of the contract.

It must be understood that electrical drawings and details are diagrammatic; they are not intended to be shop drawings. It is expected it may be necessary to move conduit, and/or equipment in some cases, to get a coordinated installation. Such changes are considered part of the contract obligation, without cost to the owner. Do not locate any equipment where its usefulness and/or operation may be affected by the work of other trades, door swing, counter, equipment, etc.

The contractor acknowledges his acquaintance with the plans and specifications and their respective requirements, and shall guarantee the electrical system has been installed strictly according to the electrical plans and specifications, using only the best of materials available and installed in a substantial manner by experienced labor. The contractor agrees to replace and/or repair items failing from causes of faulty workmanship, material or design, without extra cost, at any time within one year from the date of final acceptance.

Furnish the City of Madison with service manuals for all items furnished under this contract. Service manuals shall be complete with drawings, diagrams, operation and installation instructions, and parts lists.

New streetlight wire in conduits shall consist of 3#6 and 1#8 green wire. The color coding for the #6 wire shall be one black, one red, and one white.

Ground wires shall have green insulation or be marked with green tape at all junction or pull boxes and at all terminations. Equipment and enclosures shall be grounded, ground connection surfaces shall be cleaned, and connections shall be made so it is impossible to move them.

All maintenance of existing street light facilities within the project limits shall be the contractor's responsibility. Maintain the new street lights until project work is accepted. This work shall be considered incidental to installation of street light units, temporary lighting, structures and ducts, and no separate compensation will be paid.

Extend existing lighting circuits to feed the new and relocated lights as part of this project. Verify the existing loads of each lighting circuit before adding additional load to a lighting circuit. Loading on any circuit shall not exceed NEC requirements.

Submit one copy of as-built plans, including cable and conduit routing diagrams, wiring of fixtures and other pertinent details, to the engineer and the City of Madison.

Furnish equipment and appliances necessary to test the complete installation of electrical conductors. Test and demonstrate to the satisfaction of the engineer that the circuits are properly connected, continuous and free from short circuits and unspecified grounds, that the circuits are connected according to the manufacturer's wiring layout, and that each circuit is operational. The lighting system shall not be deemed complete until the electrical work has been completed and the electrical systems are found to be in proper working order, including operation for ten consecutive nights without failure.

B Materials

All materials furnished by the contractor for lighting installation under this contract are subject to approval by the engineer.

Manufacturers shall be responsible for providing materials listed by UL or other approved agencies and all governing codes and ordinances. Materials must bear a UL and/or other approved labels, where possible. Items specified by catalog number of brand name and shop drawing approval will not relieve the manufacturer of this responsibility.

All electrical material for which a standard has been established by the Underwriters Laboratories, Inc. shall be furnished and installed under this contract. Material shall have the UL label firmly attached and be listed by UL Listing signifies that the material has passed the established standard testing. All electrical materials shall conform to the latest requirements of the Wisconsin Electrical Code.

All materials, not specified herein, used in the work shall conform to the requirements specified on the plan or the contract special provisions.

Furnish and install incidental items, such as wire nuts, grommets, tape, connectors, and electrical varnish that are obviously necessary to make the proposed system complete from the source of supply to the most remote unit.

Touch up mars and scratches on painted equipment with two coats of synthetic resin enamel or as directed by the engineer.

Furnish a complete list and cut sheets/shop drawings of materials to be furnished and used for lighting. Include the names and addresses of manufacturers, together with catalog numbers, certificates of compliance, specifications, and other product information requested by the engineer. Submit the list and cut sheets/shop drawings within 20 calendar days of the award of the contract. Do not incorporate any materials into the lighting system prior to obtaining the written approval of the engineer. Approval does not change the intent of the specifications. Do not substitute any materials. The contractor is allowed up to two submittals of material for approval. If more than two submittals are required, the contractor will be charged on a time-and-material basis for additional review time with payment made before submittals will be reviewed.

C Splices

Splices shall comply with standard spec 659.3.2. All splices within a junction box, handhole, etc. shall be of the same type. No splices are allowed in underground pull boxes, except for grounding conductors.

D Circuit Identification

Accomplish color coding by using cable jackets of the proper color. Code all tails of all splices. Color-code secondary distribution circuits as shown on the plans; the ground conductor shall be green. Each accessible location of underground cable in junction boxes, pull boxes and pole bases shall have a permanent white nylon tag with black lettering, attached in a “flag” manner using a nylon tie, identifying the cabinet and conductor circuit number.

E Branch Circuit Tagouts

The contractor may at his option work on live circuits or he may disconnect and tag out circuits. Any branch circuit not disconnected and tagged out shall be considered live; restrict work force to those qualified to work on live circuits. Disconnection may be made by disconnecting branches at the overcurrent device. Make tagouts with contractor furnished manufactured electrical warning tags and endorse with the name of the contractor, the date, and the project. Clear all tagouts by the end of the workday.

F Threaded Fasteners

Liberally coat all threaded fasteners, i.e., screws, and bolts with an approved anti-seize compound. Excepting fasteners inside control cabinets, fasteners up to 1/2-inch in diameter shall be stainless steel.

Provide rust, corrosion and anti-seize protection at threaded assemblies by coating the mating surfaces with Markal (Hightemp E-Z Break), Never-Seez (marine grade), LPS 100, Lubriplate or approved equal.

G Bonding Wire

Install bonding wire in conduits for equipment grounding. Ground all equipment as required.

H Initial Failures
The contractor and the engineer shall agree on a time for test burning of completed installations, which is generally toward the end of the contract period. Replace failed lamps, along with any other non-functioning component, for no additional compensation. Only one test burn for the purpose of identifying initial failures will be required. Coordinate supply of replacement lamps with the city.

I Project Construction Staging
The construction of the new lighting system shall maintain the integrity of the existing lighting systems within and beyond the project limits at all times. Exceptions to this shall only be granted for just cause by the inspector.

J Items of the Same Classification
All items of the same classification shall be of the same manufacturer and series.

L Underground Installation
Ensure that the engineer has inspected all underground conduit and concrete base forms before backfilling any trench or pouring concrete. Any work completed without such inspection is subject to rejection as unacceptable work and shall be immediately removed and acceptably replaced or otherwise satisfactorily corrected by and at the expense of the contractor. It is the contractor's responsibility to arrange for inspections. There will not be any additional compensation to the contractor for delays and inconvenience associated with arranging and waiting for inspections.

25. Removing Old Structure Over Waterway Station 151+23.39 WB, Item 203.0500.S.001.

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

Add the following to standard spec 203:

203.3.6 Removals Over Waterways and Wetlands
203.3.6.1 Removing Old Structure Over Waterway
(1) Remove the existing Structure B-13-848 over the Badger Mill Creek conforming to the contractor's approved structure removal and clean-up plan. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. Remove large pieces of the structure within 36 hours. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.

(2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:

1. Methods and schedule to remove the structure.
2. Methods to control potentially harmful environmental impacts.
3. Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
4. Methods for cleaning the waterway or wetlands.

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

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

ITEM NUMBER	DESCRIPTION	UNIT
203.0500.S.001	Removing Old Structure Over Waterway Station 151+23.39 WB	LS

203-015 (20090105)

26. Removing and Salvaging Dane County Parks Signs, Item 204.9060.S.001.

A Description
This special provision describes removing, storing and reinstalling Dane County Parks Signs according to the pertinent provisions of standard spec 204 and 634 and as hereinafter provided.

B (Vacant)

C Construction
Remove Dane County Parks Signs from locations shown on the plans. Store salvaged signs on the Dane County Parks property outside the construction limits at a location approved by the engineer and Dane County Parks. Reinstall signs at locations specified by Dane County Parks. The Dane County Parks contact is Chris James at (608) 224-3763. The contactor shall be responsible for replacing any parts that are damaged unless Dane County Parks agrees that the damage was unavoidable or that the parts were defective or excessively worn.

D Measurement
The department will measure Removing and Salvaging Dane County Parks Signs as each, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.001	Removing and Salvaging Dane County Parks Signs	Each

Payment is full compensation for removal, storage and reinstallation of the Dane County Parks Signs.
204-025 (20150630)

27. Removing and Salvaging Ice Age Trail Signs, Item 204.9060.S.002.

A Description
This special provision describes removing, storing and reinstalling Ice Age Trail Signs according to the pertinent provisions of standard spec 204 and 634 and as hereinafter provided.

B (Vacant)

C Construction
Remove Ice Age Trail Signs from locations shown on the plans. Store salvaged signs on the Dane County Parks property outside the construction limits at a location approved by the engineer and Dane County Parks. Reinstall signs at locations specified by Ice Age Trail Alliance. The Dane County Parks contact is Chris James at (608) 224-3763. The Ice Age Trail Alliance contact is Tim Malzahn at (608) 798-4453. The contactor shall be responsible for replacing any parts that are damaged unless the Ice Age Trail Alliance agrees that the damage was unavoidable or that the parts were defective or excessively worn.

D Measurement
The department will measure Removing and Salvaging Ice Age Trail Signs as each, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.002	Removing and Salvaging Ice Age Trail Signs	Each

Payment is full compensation for removal, storage and reinstallation of the Ice Age Trail Signs.
204-025 (20150630)

28. Removing Boulder Retaining Wall, Item 204.9090.S.001.

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

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Boulder Retaining Wall, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.01	Removing Boulder Retaining Wall	LF

204-025 (20150630)

29. General Requirements for Excavation Rock and Blasting Rock.

It is assumed that all excavation to levels and dimensions required by the contract documents are earth excavations. Earth excavation includes removal and disposal of all materials encountered except rock/sound bedrock which is defined as natural materials which:

- Cannot be excavated with a minimum 3/4 cubic yard capacity backhoe without drilling and blasting
- Cannot be economically removed with a one-tooth ripper on a D8 cat (or equivalent)
- Requires the use of special equipment such as a pneumatic hammer
- Requires the use of explosives (after obtaining written permission of the owner)

The completed Geotechnical Exploration Reports are available information to bidding contractors. These documents are available from Chris Petykowski, City of Madison Department of Public Works – Engineering Division, City-County Building, Room 115, 210 Martin Luther King Jr. Boulevard, Madison, WI 53703 at (608) 267-8678.

Stated models of earth excavation equipment are merely for purposes of defining the various excavation categories and are not intended to indicate the brand or type of equipment that is to be used. The following provisions are included with the contract in the event that excavations to construct the project are not considered earth excavations as defined above.

Add the following to standard spec 205.3.7:

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

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

1. Station limits of proposed shot.
2. Plan and section views of proposed drill pattern including free face, burden, blasthole spacing, blasthole diameters, blasthole angles, lift height, and subdrill depth.

3. Loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming.
4. Initiation sequence of blastholes including delay times and delay system.
5. Manufacturer's data sheets for all explosives, primers, and initiators to be employed.

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

Safety

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

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

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

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

Condition Surveys

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

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

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

Vibration Control and Monitoring

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

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

A vibration specialist, approved by the engineer, shall perform vibration monitoring. The vibration specialist shall monitor vibration levels according to the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 and interpret the seismograph records to ensure that the seismograph data shall be effectively utilized in the control of the blasting operations with respect to the existing structures and utilities.

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

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

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

1. Identification of vibration monitoring instrument used.
2. Name of qualified observer and interpreter.
3. Distance and direction of recording station from blast area.
4. Type of ground at recording station and material on which the instrument is sitting.
5. Peak particle velocity and principal frequency in each component.

6. A dated and signed copy of records of seismograph readings.
7. A comparison of measured seismograph readings to maximum allowable readings identified in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 or as specified in this special provision.

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

All costs associated with the work described herein shall be considered included in the bid item Excavation Rock.
205-050 (20141107)

30. Backfill Coarse Aggregate Size No 1, Item 209.0300.S.001.

A Description
This special provision describes furnishing and placing coarse aggregate backfill as shown on the plans and as hereinafter provided.

B Materials
Provide clean concrete aggregate graded according to the requirements as specified under standard spec 501.2.5.4.4. The soundness and wear requirements are deleted from this material.

C Construction
Construct the coarse aggregates according to standard spec 209.3.

D Measurement
The department will measure Backfill Coarse Aggregate Size No 1 in volume by the cubic yard in the vehicle.

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

ITEM NUMBER	DESCRIPTION	UNIT
209.0300.S.001	Backfill Coarse Aggregate Size No. 1	CY

Payment is full compensation for furnishing and installing the aggregate.
209-030 (20030820)

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

A.2 Contractor Testing for Small Quantities

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

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

1. The contractor need not submit a full quality control plan but shall provide an organizational chart to the engineer including names, telephone numbers, and current certifications of all persons involved in the quality control program for material under affected bid items.

2. Divide the aggregate into uniformly sized sublots for testing as follows:

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

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

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

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

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

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

B Materials

B.1 Quality Control Plan

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

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

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

6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2 Personnel

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

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

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

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

B.3 Laboratory

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

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: (608) 246-5388
http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/qual-labs.aspx

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

(1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend

this 6-hour limit to 24 hours. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

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

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

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

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

B.5 Contractor Testing

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

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

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

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

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

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

B.6 Test Methods

B.6.1 Gradation

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

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

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

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

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

B.6.2 Fracture

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

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

B.6.3 Liquid Limit and Plasticity

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

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

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

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

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

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

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

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

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

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

B.8 Department Testing

B.8.1 General

(1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will

provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within two business days after the department obtains the sample.

B.8.2 Verification Testing

B.8.2.1 General

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

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

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

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

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

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

B.8.3 Independent Assurance

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

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

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

B.9 Dispute Resolution

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

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

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

C (Vacant)

D (Vacant)

E Payment

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

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

301-010 (20151210)

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

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

B (Vacant)

C Construction
C.1 Equipment
Provide a self-contained heating unit that heats by convection only. Do not use forced air to enhance the flame. Provide a fireproof barrier between the flame and the heater's fuel source. The heater must produce a uniform distribution of heat within the heat box. Provide automatic controls to regulate the heater output and shutoff the heater when the paver stops or the heater control system loses power.

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

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

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

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

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

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

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

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

33. 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/ft3. 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/ft3 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/ft3 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/ft3 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 two 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/ft3 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/ft3 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/ft3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft3 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)

34. Expansion Device, B-13-847.

A Description

This special provision describes furnishing and installing an expansion device according 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 1/4-inch for non-reinforced elastomeric glands and 1/8-inch for reinforced glands. Furnish the strip seal gland in lengths suitable for a continuous one-piece installation at each individual expansion joint location. Provide preformed polychloroprene strip seals that conform to the requirements ASTM D3542, and have the following physical properties:

Property Requirements	Value	Test Method
Tensile Strength, min.	2000 psi	ASTM D412
Elongation @ Break, min	250%	ASTM D412
Hardness, Type A, Durometer	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)

35. Prefabricated Steel Truss Pedestrian Bridge LRFD B-13-847, Item 506.8005.S.001.

A Description
Furnish a fully engineered, fabricated steel truss pedestrian bridge structure, including bearings, protective screening, and concrete deck, and transport and erect it as shown in the plans, according 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 according 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.

Design the bridge according 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 according 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 1/4-inch. All other steel shapes shall have a minimum thickness of 5/16-inch unless contract plans allow a minimum thickness of less than 5/16-inch for other steel shapes. Field splices shall be bolted with ASTM A325 high strength bolts according 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. Concrete bridge decks may be supported by stay in place corrugated galvanized steel deck forms unless the contract plans specify removable deck forms only. The maximum depth of the stay in place corrugated steel deck forms shall be 2 inches. The steel area of the stay in place corrugated steel deck forms shall not be considered for the design of the concrete deck. Design of the stay in place corrugated steel deck forms shall be included with the truss design. The minimum slab thickness shall be 5.5 inches for removable deck forms and 6 inches for stay in place corrugated steel deck forms. For stay in place corrugated steel deck forms the 6 inch minimum is 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 and floor beams. 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 8-gauge steel mesh with 2-inch mesh openings, 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, protective screening connections, 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 according 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 bottom chord do not need to be blasted.

When the plans specify painted steel, paint the bridge with a three-coat epoxy system from the department's approved products list as specified in standard spec 517.

D Measurement
The department will measure Prefabricated Steel Truss Pedestrian Bridge (Structure) 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
506.8005.S.001	Prefabricated Steel Truss Pedestrian Bridge LRFD B-13-847	LS

Payment is full compensation for designing, manufacturing, transporting and erecting the pedestrian bridge; furnishing concrete deck and protective screening; furnishing bearing plates, pads, bolts, anchors bolts, and grout. The department will pay separately for painting under the Painting Epoxy System Steel Truss (structure) bid item.
506-085 (20160607)

36. Painting Epoxy System B-13-847.

A Description
This special provision describes work that shall be according to standard spec 517 and as hereinafter provided:

B Materials
B.1 Coating System
Furnish a complete coating system from the department’s approved list. The color of epoxy shall be white and the urethane coating material shall match the color number shown on the plans according to Federal Standard Number 595B, as printed in 1989. Supply the engineer with the product data sheets before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, the minimum drying time for shop applied coats, and the recommended procedures for coating galvanized bolts, nuts, and washers.

C Construction
Modify the fourth paragraph of standard spec 517.3.1.7.2 to read:

On all other areas including the outside surfaces of splice plates, the minimum dry film thickness above the surface profile for the primer coat shall be 3.0 mils (0.076 mm).
517-041 (20040820)

37. Concrete Staining Multi-Color B-13-847, Item 517.1015.S.001; Concrete Staining Multi-Color R-13-309, Item 517.1015.S.002; Concrete Staining Multi-Color R-13-310, Item 517.1015.S.003.

A Description

Furnish and apply a multi-color concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement:	Tri-Mix by TK Products
	Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied according to manufacturer's recommendations:

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

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces. 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 & Seal EPX by Chem Masters
H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish according to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

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

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

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

The color of the staining shall produce a multi-color effect that consists of multiple colors replicating varying natural stone coloration. Stain the joints between stones produced by the form liner to create the appearance of grouted joints. Provide staining color and variation matching the Mineral Point Road and Junction Road interchange in the City of Madison.

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. Submit color samples to the department prior to staining the sample panels. 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 stones produced by the form liner. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.
Apply concrete stain to the surfaces according to the plan.

D Measurement
The department will measure Concrete Staining Multi-Color (Structure) in area by the square foot of surface, acceptably prepared and stained.

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S.001	Concrete Staining Multi-Color B-13-847	SF
517.1015.S.002	Concrete Staining Multi-Color R-13-309	SF
517.1015.S.003	Concrete Staining Multi-Color B-13-310	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.
517-115 (20140630)

38. Architectural Surface Treatment B-13-847, Item 517.1050.S.001; Architectural Surface Treatment R-13-309, Item 517.1050.S.002; Architectural Surface Treatment R-13-310, Item 517.1050.S.003.

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 1/4-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 3/4-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 1/4-inch from each other, attach liner securely to forms according 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 measure Architectural Surface Treatment (Structure) in area by the square foot of architectural surface acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.001	Architectural Surface Treatment B-13-847	SF
517.1050.S.002	Architectural Surface Treatment R-13-309	SF
517.1050.S.003	Architectural Surface Treatment R-13-310	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.
517-150 (20110615)

39. Cover Plates Temporary, Item 611.8120.S.

A Description
This special provision describes furnishing, installing and removing a steel plate to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

B Materials
Provide a 0.25-inch minimum thickness steel plate that extends to the outside edge of the existing masonry.

C (Vacant)

D Measurement
The department will measure Cover Plates Temporary as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	Each

Payment is full compensation for furnishing, installing, and removing the cover plates.

The steel plates shall become the property of the contractor when no longer needed in the contract work.
611-006 (20151210)

40. Pipe Grates, Item 611.9800.S.

A Description
This special provision describes furnishing and installing pipe grates on the ends of pipes as shown in the plans, and as hereinafter provided.

B Materials
Furnish steel conforming to the requirements of standard spec 506.2.2.1. Furnish steel pipe conforming to the requirements of standard spec 506.2.3.6.

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction
Repair pipes, rods, angles and brackets on which the galvanized coating has been damaged according to the requirements of AASHTO M36M.

D Measurement
The department will measure Pipe Grates in units of work, where one unit is one grate, completed and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S	Pipe Grates	Each

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to pipes.
611-010 (20030820)

41. Salvaged Topsoil.

Supplement standard spec 625.3.2 with the following:

Strip topsoil from existing prairie and meadow areas at the site of the Ice Age Trail Trailhead, up to the quantity necessary such that the finished work in the area conforms to the required lines, grades, slopes and cross sections that the plans show and the specific depths for specialty seed areas indicated in the plans. Take care to minimize removing the

underlying subsoils. Stockpile Ice Age Trail salvaged topsoil separately from other topsoil materials, either imported or salvaged.

Limit Ice Age Trail salvaged topsoil stockpile to a height of 60 inches. Control for weeds and wind-borne weed seeds over the entire topsoil stockpile for the duration of construction. Material contaminated with noxious weed or their seeds is unacceptable for re-use for areas designated to be seeded with specialty seeding mixtures.

42. Furnishing and Planting Plant Materials.

Perform the work under this item according to the plans, standard spec 632, as shown on the plans, and as hereinafter provided.

Add the following to standard spec 632.2.1:
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.

Add the following to standard spec 632.2.8:

Furnish a list of sources for plants according to standard spec 632.2.2.8 before planting begins for fall-planted plants and before March 15 for spring-planted plants. All sources will be subject to verification by the engineer.

Add the following to standard spec 632.2.3.4:

The engineer may require the Contractor to take samples (for USDA soil texture classification, pH, % organic matter, nutrient content, cation exchange capacity, soluble salts, and the presence of any materials deleterious to plant growth) and provide testing through a qualified testing laboratory approved by the State of Wisconsin to confirm that topsoil meets the requirements outlined in Section 625.

Delete standard spec 632.2.4.2 and replace with the following:

Do not include fertilizer packets if trees are planted after July 30 of any given years. Placing fertilizer in the fall stimulates foliage growth and does not promote dormancy of the plants going into winter. Only provide fertilizer packets in planting holes if trees are planted before July 30.

For fertilizer used in plant holes, provide a three-year release, water-soluble fertilizer contained in a micropore slow release polyethylene packet. Ensure each packet contains <u>two ounces</u> 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.

Delete standard spec 632.2.6 and replace with the following:

Provide Shredded Hardwood Bark Mulch for mulch rings around the base of plant material that is finely shredded hardwood bark mulch and the product of a mechanical chipper, hammermill, or tub grinder. Ensure the material is fibrous and uniformly dark brown in color, free of large wood chunks, and substantially free of mold, dirt, sawdust, weeds, weed seeds and foreign material. Ensure that no portion of the material is in an advanced state of decomposition. Ensure that the material does not contain chipped up 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 no bark of the black walnut tree. Ensure that the material, when air dried, all passes a 4-inch screen and no more than 20 percent by mass of the material passes a 0.10-inch sieve. Ensure that unattached bark or greenleaf composition, either singly or combined, does not exceed 20 percent each by mass. The maximum length of individual pieces cannot exceed 4 inches.

Supply source of shredded hardwood bark mulch to the engineer. All sources will be subject to verification and approval by the engineer.

Delete standard spec 632.2.7 and replace with the following:

Do not use wrapping on plant material.

Delete standard spec 632.2.9 and replace with the following:

Do not use rodent protection on plant material.

Delete standard spec 632.2.1, subsection (2) and replace with the following:

Use 18” long soft polymer webbing strap with grommets at end 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 only for those trees that are:

- Planted on slopes greater than 4:1;
- Planted in areas prone to high winds;
- Planted in areas prone to flooding or with seasonally saturated soils;
- At the discretion of the landscape contractor to ensure viable, healthy plantings;
- At the discretion of the engineer.

Completely remove all tree stabilization materials from the project at the end of the proving period.

Delete standard spec 632.3.1, subsection (1) and replace with the following:

The normal spring planting season for all plants is up to June 15. The normal fall planting season is September 15 to November 15 or up until the ground is frozen. Ensure the planting of evergreen trees in the fall is completed by October 15. If the overall construction schedule dictates that planting will occur between June 15 and September 15, obtain approval from the engineer to begin installation outside of the normal planting seasons. If the engineer grants approval of the request, the contractor will also be held fully responsible for any and all additional maintenance associated with planting outside of the normal planting seasons including, but not limited to, supplemental watering above and beyond the typical, specified landscape maintenance and care cycle schedule.

Add the following to standard spec 632.3.1:

Take care not to damage or disturb adjacent finished landscape and seed to repair any and all damage caused to adjacent seeded areas.

Delete standard spec 632.3.3 and replace with the following:

Stake out locations of all plant holes and obtain approval of staked location from the engineer before planting.

Add the following to standard spec 632.3.4:

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.

Add the following to standard spec 632.3.7:

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.

Delete standard spec 632.3.18.1.1 and replace with the following:

The plant establishment period for this contract is two growing seasons, beginning at the date of substantial completion as established by the engineer and ending at the end of the established care cycles, no less than two growing seasons later.

Delete standard spec 632.3.18.1.3.

Add the following to standard spec 632.3.19.1:

Remove all staking, bracing wire material, and other plant stabilization material, if required by this project, at the end of the required establishment period.

The interval for a care cycle is 10-14 days between May 15 and October 15. There will be ten required care cycles in a growing season.

Perform a complete and thorough spring clean-out around the base of all plants. 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 has grown up within mulch rings at the base of the plant material, removal of 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 the general vicinity of the planting area, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, replenishing mulch, weeding, and any and all other clean-out and maintenance operations as directed by the engineer or as required to produce an aesthetically pleasing, healthy environment for plant growth.

Perform a complete and thorough fall clean-out of all planting areas. 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 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 the general vicinity of the planting area, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, replenishing mulch, weeding, and any and all other clean-out and maintenance operations as directed by the engineer or as required to produce an aesthetically pleasing, healthy environment for plant growth.

Provide supplemental water during the April 15 to October 31 maintenance period as often as necessary to ensure healthy, thriving, and established plant material. The contractor will remain solely responsible for plant health and watering for the duration of the proving period.

Re-mulching of mulch rings at the base of tree and shrub material is expected to be performed immediately prior to the end of the two-year proving period. Work is incidental to Landscape Planting Surveillance and Care Cycles bid item. Additional payment for re-mulching will not be granted.

43. Landscape Planting Surveillance and Care Cycles.

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

44. Clay Liner, Item 640.1303.S.

A Description

This special provision describes furnishing and installing low permeable clay in the areas shown on the plans.

B Materials

For each source, prior to excavating and hauling the low permeable clay to the project, submit the results of the laboratory tests described in Table 1. The laboratory testing shall document that the each clay type from the source meets or exceeds the requirements.

The sample for the hydraulic conductivity test shall be remolded clay at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test ASTM D698 and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test ASTM D698. Conduct the laboratory source testing at the frequency listed in Table 1. Submit the test results to the engineer for review, two weeks prior to construction.

C Construction

C.1 Low Permeable Clay Placement

C.1.1 Subgrade

Compact the subgrade to a minimum density as defined in standard spec 207.3.6.2, Standard Compaction, or as otherwise specified in the contract requirements.

C.1.2 Erosion Protection

Do not place the low permeable clay until after all adjacent site grading has been completed and only after silt fence has been installed completely around the area of low permeable clay placement.

C.1.3 Low Permeable Clay Placement

After the fine grading is complete, place and compact low permeable clay in completed 6-inch lifts. Place each lift of low permeable clay in one continuous lift. See plans for low permeable clay construction limits. Measure the thickness of the low permeable clay shown on the plans perpendicular to the surface.

Notify the engineer at least three days prior to starting construction of low permeable clay.

Table 1

Reference	Number	Test Title	Requirements	Testing Frequency	
				Screening	QA/QC[3]
ASTM[1]	D698	Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort	NA[2]	1/source	1/source
ASTM	D1140	Standard Test Methods for Amount of Material in Soils Finer Than the No. 200 (75-um) Sieve	Per NR 538[4]	2/source	1/2,220 cy per lift
ASTM	D422	Standard Test Method for Particle-Size Analysis of Soils	Per NR 538	2/source	1/2,220 cy per lift
ASTM	D4318	Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.	Per NR 538	2/source	1/2,220 cy per lift
ASTM	D2487	Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)	Per NR 538	2/source	1/2,220 cy per lift
ASTM	D2922	Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)	Per NR 538	NA	200'x200' Grid/lift[5]
ASTM	D5084	Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	Per NR 538	1/source[6]	1/6,660 cy per lift[7]

Notes:

1. ASTM = American Society of Testing and Materials.
2. NA = Not applicable.
3. QA/QC = Quality Assurance / Quality Control.
4. NR 538 = Wisconsin Department of Natural Resources regulations Chapter NR 538 Beneficial Use of Industrial Byproducts.
5. A lift shall not exceed 8-inches.
6. The sample for the test shall be remolded at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test.

Table 1					
Reference	Number	Test Title	Requirements	Testing Frequency	
				Screening	QA/QC[3]
7. An undisturbed sample from a thinned walled sampler (Shelby tube).					

Compact the low permeable clay to a minimum of 95% Standard Proctor ASTM D698 Maximum Dry Density with a footed compaction equipment having feet at least as long as the loose lift height. As needed, clay shall be disked or otherwise mechanically processed prior to compaction to break up clods and allow moisture content adjustment. Clod size shall be no greater than 4-inches. All compaction equipment utilized shall have a minimum static weight of 30,000 pounds.

Provide all equipment necessary to adjust low permeable clay to the proper moisture content for compaction.

Make sufficient number of passes of the compaction equipment over each lift of clay to ensure complete remolding of the clay.

Do not proceed with placement of additional lifts until all required low permeable clay testing and documentation has been completed for the previous lift.

During placement of the low permeable clay the minimum moisture content shall be as defined by the testing performed in the source evaluation and with the following limits:

- No drier than the optimum moisture content as determined by the Standard Proctor test ASTM D698.

If the in-place low permeable clay fails to meet the requirements of Table 1, then remove and replace or rework any portion of the low permeable clay not meeting the project requirements until project specifications are met. There shall be no compensation for removing, replacing and reworking low permeable clay not meeting the requirements in Table 1.

C.1.4 QA/QC Testing of the Low Permeable Clay

The department will perform the QA/QC testing at the frequency shown in Table 1. The department will record the thickness of low permeable clay on a 200-foot x 200-foot grid pattern.

Provide the following:

- Access for on-site testing, inspection, and documentation.
- Machinery required to grade/blade density test locations.
- Machinery required to collect undisturbed clay samples (i.e., with Shelby tubes).
- Replace and recompact clay material removed for testing purposes.

D Measurement
The department will measure Clay Liner in volume by the cubic yards, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
640.1303.S	Clay Liner	CY

Payment is full compensation for dewatering areas of site where the low permeable clay is to be placed; for furnishing, placing and compacting the low permeable clay; and for performing all tests.
640-015 (20130615)

45. Temporary Pedestrian Surface Asphalt, Item 644.1410.S; Temporary Pedestrian Surface Plywood, Item 644.1420.S; Temporary Pedestrian Surface Plate, Item 644.1430.S.

A Description
This special provision describes providing, maintaining, and removing temporary pedestrian surface.

B Materials
Furnish 1 1/4-inch dense graded aggregate conforming to standard spec 305.2. Furnish:

- Asphaltic surface conforming to standard spec 465.2.
- Pressure treated 2x4 framing lumber, pressure treated 3/4-inch plywood with skid resistant surface coating, and weather resistant deck screws 3-1/2-inch minimum for framing and 1-5/8-inch minimum for plywood.
- 1/4 inch minimum steel plate or commercially available prefabricated plates with skid resistant surface coating conforming to Americans with Disabilities Act Accessibility Guidelines. If placed in the roadway, must be able to handle a vehicle weight of 88,000 lbs.

C Construction
Place, compact, and level a dense graded aggregate foundation before placing the surface.

Provide a firm, stable, and slip-resistant surface layer with vertical joints no higher than 1/4 inch and horizontal joints no wider than 1/2 inch. Sheet materials up to 1 inch thick may be lapped if the edge is beveled at 45 degrees or flatter. Asphalt may also be used to ramp up to materials up to 1 inch thick. Construct conforming to the following:

- Asphalt surface a minimum of 2 inches thick compacted with compactors, tampers, or rollers.
- Framed plywood panels 4 feet wide with a skid resistant surface coating.
- Steel or prefabricated plate with a skid resistant surface coating.

Align parallel to the existing roadway grade or, if outside of a street or highway right-of-way, do not exceed 5 percent longitudinal slope. Provide cross slope of 1 to 2 percent unless the engineer approves a steeper cross slope in writing.

Maintain the surface with a 4-foot minimum clear width and the specified joint and slope requirements. Repair or reconstruct installations disturbed during construction operations. Remove and dispose of as specified in standard spec 203.3.4 when no longer required.

D Measurement
The department will measure temporary pedestrian surface 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
644.1410.S	Temporary Pedestrian Surface Asphalt	SF
644.1420.S	Temporary Pedestrian Surface Plywood	SF
644.1430.S	Temporary Pedestrian Surface Plate	SF

Payment is full compensation for providing, maintaining, and removing temporary pedestrian surface.
644-010 (20150630)

46. Temporary Curb Ramp, Item 644.1601.S.

A Description
This special provision describes providing, maintaining, and removing temporary curb ramps.

B Materials
Furnish materials as follows:

- Asphaltic surface conforming to standard spec 465.2.
- Engineer-approved ready mixed concrete or ancillary concrete conforming to standard spec 602.2 except no QMP is required.
- Commercially available prefabricated curb ramps conforming to Americans with Disabilities Act Accessibility Guidelines.

Furnish yellow detectable warning fields conforming to Americans with Disabilities Act Accessibility Guidelines. Use either an engineer-approved surface-applied type or cast iron from the department's approved products list.

C Construction
Provide and maintain temporary curb ramps, including detectable warning fields, throughout the project duration. Place and compact a dense graded aggregate foundation before placing the curb ramp, unless the curb ramp is to be placed on existing roadway surface.

Remove and dispose temporary curb ramps and associated detectable warning fields when no longer required.

D Measurement
The department will measure temporary curb ramps by each individual 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
644.1601.S	Temporary Curb Ramp	Each

Payment is full compensation for providing, maintaining, and removing temporary curb ramps.
644-020 (20150630)

47. Temporary Pedestrian Safety Fence, Item 644.1616.S.

A Description
This special provision describes providing, maintaining, and removing the temporary pedestrian safety fence.

B Materials
Furnish notched metal "T" or "U" shaped fence posts weighing 1 1/3 pounds per foot or more.

Furnish select 2x4 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
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

The engineer may allow prefabricated fencing systems conforming to Americans with Disabilities Act Accessibility Guidelines.

C Construction
Provide a continuous safety fence with the top edge free of sharp or rough edges.

Repair or reconstruct installations disturbed during construction operations. Remove and dispose of as specified in standard spec 204.3 when no longer required.

D Measurement
The department will measure Temporary Pedestrian Safety Fence 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
644.1616.S	Temporary Pedestrian Safety Fence	LF

Payment is full compensation for providing, maintaining, and removing the temporary pedestrian safety fence.
644-025 (20150630)

48. Temporary Traffic Signal Timing Parameters – CTH PD & South High Point Road, CTH PD & Maple Grove Drive.

The following temporary traffic signal timings shall be used for all stages of construction.

All work required to implement permanent and temporary traffic signal timing, perform test operations and make updates for all signalized intersections in this contract shall be considered incidental to the Temporary Traffic Signals for Intersections bid items.

TEMPORARY TRAFFIC SIGNAL TIMING
CTH PD & SOUTH HIGH POINT ROAD

Main Street:	CTH PD
Cross Street:	HIGH POINT
Location:	CITY OF MADISON - DANE COUNTY
Type:	TEMPORARY TRAFFIC SIGNAL TIMINGS
Date:	September 1, 2016

Phase Data	Phase			
N	2	3	4	6
Approach Name	CTH PD WBT	HIGH POINT NBT	HIGH POINT SBT	CTH PD EBT
Vehicle Basic Timings				
Minimum Green (sec.)	15.0	8.0	8.0	15.0
Max 1	60.0	15.0	30.0	60.0
Passage	6.0	3.0	3.0	6.0
Yellow Change (sec)	4.0	4.0	4.0	4.0
Red Clearance (sec)	2.0	2.0	2.0	2.0
Max Variable Initial	-	-	-	-
Sec/Actuation	-	-	-	-
Time Before Reduction	-	-	-	-
Time to Reduce	-	-	-	-
Minimum Gap	-	-	-	-
Pedestrian Timings				
Walk (sec)	7.0	7.0	7.0	7.0
Ped Clearance (sec)	24.0	31.0	31.0	24.0
Miscellaneous				
Vehicle Recall	MIN	NONE	NONE	MIN
Phase Locking	LOCKING	NON-LOCKING	NON-LOCKING	LOCKING

TEMPORARY TRAFFIC SIGNAL TIMING
CTH PD and MAPLE GROVE DRIVE

Main Street: CTH PD
Cross Street: MAPLE GROVE
Location: CITY OF MADISON - DANE COUNTY
Type: TEMPORARY TRAFFIC SIGNAL TIMINGS
Date: September 1, 2016

Phase Data

N

	Phase					
	2	4	5	6	7	8
Approach Name	CTH PD WBT	MAPLE GROVE SBT	CTH PD WBL	CTH PD EBT	MAPLE GROVE SBL	MAPLE GROVE NBT
Vehicle Basic Timings						
Minimum Green (sec.)	23.0	12.0	5.0	23.0	5.0	12.0
Max 1	60.0	35.0	25.0	50.0	25.0	35.0
Passage	6.0	3.0	2.0	4.0	2.0	3.0
Yellow Change (sec)	4.0	4.0	3.5	4.0	3.5	3.5
Red Clearance (sec)	2.0	2.0	1.5	2.0	1.5	2.0
Max Variable Initial	-	-	-	-	-	-
Sec/Actuation	-	-	-	-	-	-
Time Before Reduction	-	-	-	-	-	-
Time to Reduce	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Green Delay	-	2.0	-	-	-	2.0
Pedestrian Timings						
Walk (sec)	7.0	7.0	-	7.0	-	7.0
Ped Clearance (sec)	25.0	29.0	-	25.0	-	29.0
Miscellaneous						
Vehicle Recall	MIN	NONE	NONE	MIN	NONE	NONE
Phase Locking	LOCKING	NON-LOCKING	NON-LOCKING	LOCKING	NON-LOCKING	NON-LOCKING

Note: Phases 4 and 8 shall be programmed with a two (2.0) second leading pedestrian interval (shown as "Green Delay" in timing plan).

49. Topsoil Special, Item SPV.0035.001.

A Description

This special provision describes excavating and disposing of material taken from within planting locations planting locations according to standard spec 205 and furnishing and installing topsoil in the planting locations according to standard spec 625, the plans, and as hereinafter provided.

B Materials

Furnish topsoil materials according 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 tree or shrub planting areas according to standard spec 205. Dispose of excavated material as specified in standard

spec 205.3.12. Place Topsoil Special according to standard spec 625 in locations shown on the plans, and to a depth of 18 inches for all evergreen or ornamental trees and a depth of 12 inches for all shrubs.

Take care not to damage or disturb adjacent landscape materials and be responsible for seeding, placing Shredded Hardwood Bark Mulch, 3" Depth and/or additional erosion control materials 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.0035.001	Topsoil Special	CY

Payment is full compensation for furnishing all materials; for excavating and disposing of tree planting area materials; and for furnishing and placing all topsoil materials in tree planting areas.

50. Inlet Cover Type H Special, Item SPV.0060.001.

Perform the work under this item according to the applicable provisions of standard spec 611 and as detailed.

51. Inlet Covers Terrace Type 3 Special, Item SPV.0060.002.

Perform the work under this item according to the applicable provisions of standard spec 611 and as detailed.

52. Terrace Inlet Type 3 Special, Item SPV.0060.003.

Perform the work under this item according to the applicable provisions of standard spec 611 and as detailed.

53. Manhole Cover Type J Modified, Item SPV.0060.004.

A Description

Furnish and install metal frames, grates and lids according to standard spec 611, as shown on the plans, and as hereinafter provided.

B Materials
Furnish castings according 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. Lids furnished with logo per Madison Standard Specifications for Public Works Construction-Latest Edition Standard Detail Drawing 5.7.16.

C Construction
Install castings according to standard spec 611.

D Measurement
The department will measure Manhole Covers Type J Modified as each manhole 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.0060.004	Manhole Cover Type J Modified	Each

Payment is full compensation for providing new covers, including frames, lids, and all other required materials; and for installing and adjusting each cover. Old covers removed remain the property of the municipality.

54. Precast Sign Post Base, Item SPV.0060.005.

A Description
This special provision describes constructing and installing precast sign post bases at locations shown on the plans and as hereinafter provided.

B Materials
All materials furnished for the work shall 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

Concrete Masonry shall be of a 3,200-psi minimum strength in 28 days. The 2-inch x 24-inch +1/3-inch insert shall be an ASTMA Designation 120 A53 Fed Spec P404, Schedule 40 untreated black pipe 2-inch diameter, with a galvanized rigid conduit coupling installed.

C Construction
Form the 24-inch x 11-inch precast base according 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 signpost bases at the locations shown on the plans. The center of the finished installation shall be 5'0" + inches from the face of the adjacent curb or from the edge of paved shoulder.

Upon request and reasonable notice from the contractor, the engineer will establish and stake the location for the sign post bases. The City of Madison Traffic Engineering Division Staff will verify all signpost base locations.

Coat the threads of the pipe and coupling in the base with graphite grease 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 one- year warranty that the signpost 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 by each individual unit, installed and accepted 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
SPV.0060.005	Precast Sign Post Base	Each

Payment is full compensation for furnishing all materials; for the manufacture of the sign post base; for hauling, handling and installing the sign post base, including backfill.

55. Sign Post Base for Concrete Installation, Item SPV.0060.006.

A Description
This special provision describes constructing and installing the sign post bases in concrete sidewalk or pavement at locations shown on the plans and as hereinafter provided.

B Materials
The 2-inch x 16-inch sign post base shall be an ASTMA Designation 120 A53 Fed Spec P404, Schedule 40 untreated black pipe 2-inch diameter, with a galvanized rigid conduit coupling installed.

Waterproof anchoring cement for concrete shall be Unitex, Thorogrip 29/64 or equivalent.

C Construction

The sign post base shall consist of a 2-inch x 16-inch schedule 40 pipe with attached 2" rigid conduit galvanized coupling according to the details in the plan. Weld the coupling and pipe over 100 percent of the circumference.

Set the signpost bases at the locations shown on the plans. The center of the finished installation shall be 5'0" (2'6" for Advanced Street Name Sign Special installations) from the face of the adjacent curb or from the edge of paved shoulder. Upon request and reasonable notice from the contractor, the engineer will establish and stake the location for the sign post bases. The City of Madison Traffic Engineering Division Staff will verify all signpost base locations.

Box out all installations in hard surfaced areas (concrete) with a round PVC pipe with a minimum diameter of 3-inches or installed by drilling or coredrilling a 3-inch hole all the way through the concrete to the base material. If drilling in architectural concrete pavement, cover the surface prior to drilling to protect the surface from drilling slurry. Coordinate all box out locations. With a temporary pipe 4 to 5 feet long, hand-tighten it into the insert. Drive the insert into the base material at a level/plumb position until the insert is flush with the top of the concrete. Shim insert to a level/plumb position with lag bolts or p.k. nails. All shims must be set below the concrete/insert. Remove temporary pipe, replace with permanent pipe, and tighten into insert with large pipe wrench until insert turns. Reset shims or add shims until pipe no longer turns. Retighten pipe and recheck level/plumb/top of concrete with insert. Patch concrete with a waterproof anchoring cement for concrete. Mix patch to a liquid consistency, not a paste. Pour patch until it is flush with the top of the insert. Recheck level/plumb/top of concrete with insert immediately due to fast setting time of cement. Additional cement may be required as it settles. Completed installation shall be level/plumb, solid, and able to support required sign post and signs. Patch shall be flush with adjacent concrete without exposed shims.

Coat the threads of the pipe and coupling in the base with graphite grease prior to assembly. Install the base such that the installed sign post will be plumb. Provide a one- year warranty that the signpost 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 Sign Post Base for Concrete Installation by each individual unit, installed and accepted 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
SPV.0060.006	Sign Post Base for Concrete Installation	Each

Payment is full compensation for furnishing all materials; for the manufacture of the sign post base; for hauling, handling and installing the sign post base, including drilling holes in concrete; and for anchoring cement.

56. Locate and Reference Property Corners, Item SPV.0060.008.

A Description
This work consists of locating and referencing existing property corners within or adjacent to temporary limited easements. Locate and provide adequate reference ties for existing property corners which may be disturbed during construction such that the landmark may be re-established upon completion of construction.

B (Vacant)

C Construction
Approve the methods of with the engineer prior to beginning the work. Use a degree of accuracy for the survey work consistent with third order, Class II.

D Measurement
The department will measure Locate and Reference Property Corners as each individual locate, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.008	Locate and Reference Property Corners	Each

Payment is full compensation for furnishing all survey work necessary to locate and reference the landmark, and for resetting damaged monumentation.

All survey notes and computations used in referencing property corners shall be given to the engineer within 21 days of completing work under the above item and must be received before final payment for the work will be made.

57. Reset Property Corners, Item SPV.0060.009.

A Description
This work consists of the setting of property corners that have been damaged or destroyed during construction operations which were unavoidable. Note that this item does not apply to items damaged due to negligence or relieve the contractor of other responsibilities as outlined in standard spec 107.11.

B Materials
Match the original monumentation requirements for Reset Property Corners to meet the minimum requirements below.

(1) Block corners of recorded subdivisions shall be monumented according to Section 236.15 (1), Wisconsin Statutes, which states: "…monuments of concrete, containing a ferrous rod one-fourth inch (6.4 mm) in diameter or greater imbedded its full length, not less than 30 inches (760 mm) in length, not less than 4 inches (100 mm) square or 5 inches (130 mm) in diameter, and marked on the top with a cross, brass plug, iron rod, or durable material securely embedded; or by iron rods or pipes at least 30 inches (760 mm) long and 2 inches (50 mm) in diameter weighing not less than 3.65 pounds per linear foot (5.43 kg/m). Solid round or square iron bars of equal or greater length or weight per meter may be used in lieu of pipes wherever pipes are specified in this section."

(2) Exterior corners of a certified survey map and lot corners shall be monumented according to Section 236.15 (1), Wisconsin Statutes, which states: "…iron pipes at least 24 inches (610 mm) long and one inch (25 mm) in diameter, weighing not less than 1.13 pounds per linear foot (1.68 kg/m), or by round or square iron bars at least 24 inches (610 mm) long and weighing not less than 1.13 pounds per linear foot (1.68 kg/m)."

C Construction

When drive-in monuments are to be used, drive them into the ground with the top flush with the surface. In unstable soils the increase the depth as directed by the engineer to obtain a suitable foundation for the monument. No additional compensation will be made for the increased depth of monument

D Measurement

The department will measure Reset Property Corners as each individual corner reset, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.009	Reset Property Corners	Each

Payment is full compensation for furnishing, placing, and adjusting property corners.

58. Remove and Replace Mailboxes, Item SPV.0060.010.

A Description

This work consists of removing and replacing mailboxes at the direction of the engineer.

B (Vacant)

C Construction

Maintain access to existing mailboxes for postal deliveries and residential pick up where possible. Where geometric changes to the roadway require that the mailboxes be removed, each affected place the mailbox at a temporary location during construction. The temporary placement location will be determined by the engineer. Provide access to the temporary placement location area at all times. At the end of the project, re-install the mailboxes to their

original location or a location determined by the engineer. Re-install mailboxes in compliance with placement procedures of the U. S. Postal Service. Replace the original post and mailbox if any damage occurs.

D Measurement
The department will measure Remove and Replace Mailboxes by each unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.010	Remove and Replace Mailboxes	Each

Payment is full compensation for removing and temporarily relocating the mailbox, and placing the mailbox in the original location or location determined by the engineer.

59. Temporary Inlet Cover, Item SPV.0060.011.

A Description
Furnish, install, adjust and remove temporary inlet covers on existing or proposed storm sewer structures to maintain drainage and allow for the installation of temporary pavement around the inlet, according to the pertinent provisions of standard spec 611 and remove inlet covers, as shown on the plans and as hereinafter provided. Removed inlet covers become property of the contractor.

B Materials
Furnish mortar, risers and inlet covers according to standard spec 611.2. Furnish flush inlet covers with a traversable grate suitable for vehicular traffic with a minimum grate size of 3.3 square feet. Furnish Inlet Protection Type D according to standard spec 628.

C Construction
Install and adjust inlet covers according to standard spec 611.3. Install Inlet Protection Type D in the Temporary Inlet Cover.

D Measurement
The department will measure Temporary Inlet Cover as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.011	Temporary Inlet Cover	Each

Payment is full compensation for removing and salvaging the existing cover; for providing temporary inlet cover including frames, grates, and all other required materials for installing and adjusting each cover; for removing temporary cover and adjusting rings; and for maintaining; for furnishing and installing Inlet Protection Type D.

60. Rock Excavation for Concrete Bases, Item SPV.0060.013.

A Description
This special provision describes providing rock excavation according to standard spec 205 and as detailed herein.

B (Vacant)

C Construction
Classify rock excavation for concrete bases according to standard spec 205.2.3, except include rock boulders with a volume of a 1/2 cubic yard or more.

If rock is encountered, excavate the rock to provide full depth concrete bases according to the plans. Remove rock and any loose materials to a minimum of 2 inches below the required concrete base depth.

Excavate rock using methods and equipment so that the resulting excavation conforms to the general dimensions of the concrete base and as noted above. Avoid substantial displacement of material outside the general dimensions of the concrete base.

Keep the rock excavation dewatered until the concrete base has sufficiently cured. Dispose of the surplus excavation.

D Measurement
The department will measure Rock Excavation for Concrete Bases as each individual rock excavation for concrete bases, acceptably completed, where rock excavation is required for installing a concrete base, regardless of the vertical depth from the top of the rock to the bottom of the excavated rock.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.013	Rock Excavation for Concrete Bases	Each

Payment is full compensation for furnishing all rock excavation, dewatering and for disposing of surplus material.

61. Inlet Cover Type H-S Special, Item SPV.0060.014.

Perform the work under this item according to the applicable provisions of standard spec 611 and as detailed.

62. Utility Line Opening (ULO), Item SPV.0060.015.

A Description
Excavate and uncover utilities for the purposes of determining elevation and potential conflicts, as shown on the plans or as directed by the engineer, and as hereinafter provided.

B (Vacant)

C Construction
The excavation will be done in such a manner that the utility in question is not damaged and the safety of the workers is not compromised.

The utility line openings will be performed 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 5 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. Utility line openings will include a trench up to 5 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

All utility line openings will be approved and coordinated with the engineer. The utility engineers or their agents will be notified of this work a minimum of three days prior to the work so they may be present when the work is completed. The need for performing ULO's as shown on the plans will be verified since some of the utilities may have been relocated prior to the start of construction.

Replace pavement open to traffic within 24 hours of the excavation.

D Measurement
The department will measure (ULO) by each unit, acceptably completed. Where utilities are within 5' of each other at a potential conflict location, only one utility line opening will be measured.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.015	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 cleanup.

Existing pavement, concrete curb, gutter, and sidewalk removals necessary to facilitate utility line openings will not be considered part of or paid for under Utility Line Openings, but will be considered separate and measured and paid for separately as removal items.

Replacement pavement, concrete curb, gutter, and sidewalk items will also be considered separate from Utility Line Openings and will be measured and paid for separately.

63. Decorative Medallion, Item SPV.0060.016.

A Description
Construct a decorative concrete masonry medallion, as detailed in the plans and as hereinafter provided.

B Materials
The City of Madison will supply the decorative medallion form liner. Contact Randy Wiesner, of the City of Madison, at (608) 267-8679 at least five business days before form liner is needed.

The contractor, at contractor expense, is responsible for having the form liner repaired or replaced by the manufacturer if any damage to the form liner occurs while in the contractor's possession.

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

C Construction
Construct the decorative medallion as shown on the plans.

Apply form release per manufacturer's recommendations.
Attach the form liner to the forms according to the manufacturer's installation instructions.

After removing the form liner, clean and return the form liner to the City of Madison.

D Measurement
The department will measure Decorative Medallion as each individual decorative medallion, 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	Decorative Medallion	Each

Payment is full compensation for obtaining the form liner from the City of Madison; installing and removing the form liner; protecting the form liner; cleaning the form liner; returning the form liner to the City of Madison.

For Decorative Medallion on bridge or retaining walls, the department will pay separately for concrete masonry and bar steel reinforcement under the bid items Concrete Masonry and Bar Steel Reinforcement HS Coated as specified in standard spec 502.

64. Medallion Concrete Staining Multi-Color, Item SPV.0060.017.

A Description

Furnish and apply a multi-color concrete stain to the exposed concrete form lined medallion surfaces on the structures, as shown in the plans and as hereinafter provided.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec. 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement:	Tri-Mix by TK Products Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied according to the manufacturer's recommendations:

Acrylic Bonding Admixture:	K-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

Furnish, prepare, apply, cure, and store all materials according to 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.1 Preparation of Concrete Surfaces

Provide a sack rubbed finish according to standard spec. 502.3.7.5, using mortar as indicated above, on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water

blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.2 Staining Concrete Surfaces
Apply the concrete stain according to the manufacturer's recommendations.

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

C.3 Test Areas
Prior to applying stain to the structures, apply the stain to a sample panel measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structures. Match or exceed the stain manufacturer's minimum recommended curing time or 28 days, whichever is greater, prior to staining. Submit color samples to the department prior to staining the sample panel. Prepare the concrete surfaces of the sample panel and apply stain using the same materials and in the same manner as proposed for the structures. Do not apply stain to the structures until the department and the City of Madison approve the test panel.

C.4 Surfaces to be Coated
Apply each stain color to the specific area of the form lined concrete medallion surface according to the staining pattern shown on the plans.

D Measurement
The department will measure Medallion Concrete Staining Multi-Color as each individual medallion concrete staining multi-color, 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.0060.017	Medallion Concrete Staining Multi-Color	Each

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panel.

65. Storm Sewer Plug, Item SPV.0060.091.

A Description
Install a Storm Sewer Plug at locations specified in the plans.

B Materials
Provide a precast reinforced concrete plug or an engineer approved alternative, conforming to the inside diameter of the corresponding pipe as shown on the plan.

All materials, if concrete, must conform to standard spec 501 and standard spec 611.

C Construction
Place a watertight plug in the end of the storm sewer pipe in a manner that seals the pipe, but allows for future removal of plug without damaging the storm sewer pipe.

D Measurement
The department will measure Storm Sewer Plug 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.0060.091	Storm Sewer Plug	Each

Payment is full compensation for furnishing and installing plug; and for disposing of materials.

66. Pond Outlet Control Manhole, Item SPV.0060.101.

A Description
The specification covers all manhole structures with baffle walls for restrictor outlets from stormwater ponds. Furnish and install concrete manhole structure with baffle wall and restrictor holes, according to standard spec 501 and 611, as shown on the plan, and as hereinafter provided.

B Materials
Furnish and install reinforced concrete pipe (RCP) and fittings conforming to the requirements for Reinforced Concrete Pipe Storm Sewer and Fittings as set forth in AASHTO M 170 and standard spec 608.

C Construction
The contractor will be responsible for locating the Outlet Control Manhole and the associated storm sewer connections. The diameter and elevations of existing connections will be field verified by the contractor. Installation shall consist of ensuring the appropriate sump depth is achieved below the lowest pipe invert. No sump will be on the downstream side of the baffle restrictor wall. The sump downstream of the baffle can be filled in with concrete meeting the requirements of standard spec 501 and finished with a broom finish. The baffle restrictor wall shall be constructed out of concrete meeting the requirements of standard spec 501 and as shown on the plans. The inverts of the restrictor openings shall conform to the table in the detail and plans. The opening sizes and elevations do vary for each pond outlet.

The manhole structure shall be sized as shown on the plans and shall have two Type J-Special frame and lid in the flat top cover. Each frame and lid shall be on either side of the baffle wall to allow access to both sides for maintenance.

D Measurement
The department will measure Pond Outlet Control Manhole by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.101	Pond Outlet Control Manhole	Each

Payment for Pond Outlet Control Manhole will be made according to standard spec 611.

Manhole covers Type J-Special shall be incidental to the installation of the Outlet Control Manhole. The baffle wall construction shall be incidental to the cost of the Outlet Control Manhole. Pipe connections and associated fittings shall be incidental to the installation of the Outlet Control Manhole.

67. Sanitary Sewer Tap, Item SPV.0060.200.

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, according 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, according 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, SDR-35, AWWA C900 Class 150, DR 18) that matches the existing pipe's diameter, or the next larger diameter, to connect the existing sewer main or lateral. The PVC (SDR-26, SDR-35, AWWA C900 Class 150, DR 18) 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) is considered incidental to the Sewer Access Structure (4-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.0060.200	Sanitary Sewer Tap	Each

Payment is full compensation for providing and installing all connectors; and for coring.

68. Hydrants, Item SPV.0060.201.

A Description
This work consists of furnishing and installing hydrants according to Article 704.7 of the City of Madison Standard Specification for Public Works Construction – Latest Edition. This work also includes salvaging existing hydrants identified on the plan for removal.

B Materials
Furnish materials according to Article 702.4 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction
Install hydrants according 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 Payment
The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.201	Hydrants	Each

Payment is full compensation for excavating, backfilling, making connections, and for furnishing and installing hydrants.

69. Water Valve, 6-Inch, Item SPV.0060.202; 8-Inch, Item SPV.0060.203; 12-Inch, Item SPV.0060.204.

A Description

This work consists of furnishing and installing water valves according to Article 704.6 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 according to Article 702 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction

Install water valves according to standard spec 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.0060.202	Water Valve, 6-Inch	Each
SPV.0060.203	Water Valve, 8-Inch	Each
SPV.0060.204	Water Valve, 12-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; installing and removing all necessary sheeting and bracing; and for furnishing and installing water valves.

70. Cut-In or Connect-To Existing Water System, Item SPV.0060.205.

A Description

This special provision describes providing a plug removal or cut-in connection to existing water main according to Article 703.12 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

B Materials

Furnish materials according 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 according to Article 703 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

D Measurement
The department will measure Cut-In or Connect-To Existing Water System 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.0060.205	Cut-In or Connect-To Existing Water System	Each

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

71. Adjust Water Valve Box, Item SPV.0060.206.

A Description
Adjust Water Valve Box consists of adjusting and extending all existing water valve boxes within the project limits to between 1/4 inch to 1/2 inch below finished grade according to Article 704.20 of the City Standard Specifications. Service box adjustments or replacements will be paid under this bid item when identified on the plans.

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 according 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 according 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 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.0060.206	Adjust Water Valve Box	Each

Payment is full compensation for excavating, backfilling, adjusting, and compacting; and for furnishing and installing all materials.

72. Temporary Water Main Connection, Item SPV.0060.208.

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 according 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 according 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.0060.208	Temporary Water Main Connection	Each

Payment is full compensation for excavation, backfilling, and compacting; removal and disposal of temporary water main connections; making all connections and disposing of surplus materials; and for furnishing and installing all materials. Permanent connection to an existing water main will be paid under bid item Cut-In Connection.

73. Excavate Trench for Live Tap, SPV.0060.209.

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") according to Article 704.13 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 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.0060.209	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; furnishing and installing thrust restraint; backfilling the trench and furnishing backfill material; for compacting the backfill and restoring the site; and for furnishing and installing all materials.

74. Adjust MMSD Special, Item SPV.0060.210.

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 according 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
Please call Ray Schneider (MMSD Sewer Maintenance Supervisor) at 608-347-3628 three days prior to the adjustment. MMSD Sewer Maintenance will provide new castings as required.

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.0060.210	Adjust MMSD Special	Each

Payment is full compensation for excavating, exposing, backfilling, disposing of surplus material, and restoring the site; for necessary structure reconstruction or adjustment; offset cone and offset cone rotation and/or installation; and for furnishing and installing all materials, and select fill.

Manhole adjustments less than 9 inches will be paid for separately under bid item Adjusting Manhole Covers.

75. Adjust SAS Special, Item SPV.0060.211.

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 according 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.0060.211	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; offset cone and offset cone rotation and/or installation; and for furnishing and installing all materials, and select fill.

Manhole adjustments less than 9 inches will be paid for separately under bid item Adjusting Manhole Covers.

76. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.212.

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 Materials
Provide an internal chimney seal consisting of 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 according 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.0060.212	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.

77. Adjust Sewer Access Structure Special, Item SPV.0060.213.

A Description

Work under this item will include adjusting Sanitary Sewer Access Structure (SAS) castings as called for on the plan set to the final proposed grades. This bid item is required because the casting adjustment is greater than 9" of vertical adjustment to set the casting to the final grade or the chimney was determined to be in poor condition. Manhole adjustments less than 9" will be paid for separately under Bid Item 611.811 Adjusting Manhole Covers. Installation of offset cone and casting as called for on the plan will be considered incidental to this bid item. Rotation of an existing cone sections will be considered incidental to this bid item.

B Materials

Precast concrete barrel sections and manhole adjustment rings will meet the requirements of Article 507.3, as well as SDD 5.7.2 and 5.7.15 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

C Construction

Adjust SAS Special will be completed according to Article 507.3 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. This bid item will require adjustment rings to be removed and concrete barrel sections to be installed. The maximum allowed adjustment on the Sewer Access Structure will not exceed 9 inches and the final configuration of the structure will be in accordance of SDD 5.7.2 and 5.7.15 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

D Measurement

The department will measure Adjust Sewer Access Structure Special as each individual unit, 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.0060.213	Adjust Sewer Access Structure Special	Each

This item, measured as provided above, will be paid for at the contract price bid for each sanitary Sewer Access Structure satisfactorily installed according to Article 507 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

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

78. Abandon Sanitary Sewer – Plug Pipe, Item SPV.0060.214.

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 according 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 will be considered incidental to removal or abandonment of the manhole

D Measurement
The department will measure Abandon Sanitary Sewer – Plug Pipe as each individual 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.0060.214	Abandon Sanitary Sewer – Plug Pipe	Each

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work.

79. Sanitary Sewer Access Structure (4-Foot Diameter), Item SPV.0060.215.

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, according 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 J Special, Bid Item SPV.0060.004.

C Construction

Install Sanitary Sewer Access Structure (4-Foot Diameter) according 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.

Construct concrete benches and flow lines as directed by the City of Madison or as directed by the engineer.

D Measurement

The department will measure Sanitary Sewer Access Structure (4-Foot Diameter) as each individual sanitary sewer access structure, 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.0060.215	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.

80. Electrical Pull Box Type 1, Item SPV.0060.250; Electrical Pull Box Type 3, Item SPV.0060.251; Electrical Pull Box Type 5, Item SPV.0060.252; Electrical Pull Box Type 7, Item SPV.0060.253.

A Description

Furnish and install electrical pull boxes according to standard spec 653, the plan details, and as hereinafter provided.

B Materials

Electrical Pullbox Type 1 shall be gray-colored polymer-concrete construction. Box dimensions for Type I shall be 19” wide X 32” long X 24” deep. The Type I box and cover shall be rated to withstand 15,000 lbs over a 10” square with a minimum test load of 22,568 lbs.

Electrical Pullbox Type 3 shall be high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Box dimensions for Type 3 shall be 12” wide X 12” long X 12” deep. The Type 3 box and polymer cover shall be rated to withstand 20,000 lbs.

Electrical Pullbox Type 5 shall be high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Box dimensions for Type 5 shall be 24" wide X 36" long X 24" deep. The Type 5 box and polymer cover shall be rated to withstand 20,000 lbs.

Electrical Pullbox Type 7 shall be high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Box dimensions for Type 7 shall be 30" wide X 50" long X 36" deep. The Type 7 box and polymer cover shall be rated to withstand 20,000 lbs.

Each cover shall have the logo "TRAFFIC SIGNAL" imprinted from the manufacturer.

C Construction
Install Electrical Pullbox (Type) according to the pertinent provisions of standard spec 653.3 and the plan details.

D Measurement
The department will measure Electrical Pullbox (Type), completed according to the contract and accepted, as a unit for each pullbox.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.250	Electrical Pullbox Type 1	Each
SPV.0060.251	Electrical Pullbox Type 3	Each
SPV.0060.252	Electrical Pullbox Type 5	Each
SPV.0060.253	Electrical Pullbox Type 7	Each

Payment is full compensation for furnishing and installing all materials, including crushed aggregate; and for excavation, backfill, and disposal of surplus materials.

81. Electrical Utility Access Structure, Item SPV.0060.254.

A Description
Perform the work according to the applicable provisions of standard spec 611 and as detailed in the plans

B (Vacant)

C (Vacant)

D Measurement
The department will measure Electrical Utility Access Structure 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.0060.254	Electrical Utility Access Structure	Each

Payment for the Electrical Utility Access Structure is full compensation for providing and installing all materials, including all masonry, reinforcement, conduit connections, steps, and other fittings; frame and casting; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

82. Concrete Bases Type G, Item SPV.0060.255; Concrete Bases Type LB-2, Item SPV.0060.256; Concrete Bases Type LB-3, Item SPV.0060.257; Concrete Bases Type LB-8, Item SPV.0060.258; Concrete Bases Type M, Item SPV.0060.259; Concrete Bases Type P, Item SPV.0060.260.

A Description

Construct concrete foundations, including furnishing and installing necessary hardware, as shown on the plans, according to the pertinent provisions of standard spec 654, and as hereinafter provided.

B Materials

Furnish Grade A, A-WR, A-FA, or A-IP concrete masonry conforming to the requirements of standard spec 501. Conduit cast within the bases shall be Schedule 40 polyvinyl chloride (PVC) electrical conduit and shall conform to the requirements of standard spec 652.

Furnish anchor bolts for Concrete Bases Type G made from high-strength steel (50 ksi minimum yield strength), ASTM A36, and fit each with two hard washers and two heavy hex nuts. Each bolt shall have approximately 3 inches or more of thread at the top end. The bolts, washers and nuts shall be galvanized

Furnish anchor bolts for Concrete Base Type LB-2, Concrete Base Type LB-3 and Concrete Base Type LB-8 made from high-strength steel (50 ksi minimum yield strength), ASTM A36, and fit each with two hard washers and two heavy hex nuts. Each bolt shall have approximately 6 inches or more of thread at the top end. The bolts, washers, and nuts shall be galvanized.

Furnish 3/4-Inch x 19-Inch bolts for the LB-2 bases. Furnish 1 1/4-inch x 48-inch bolts for the LB-8 bases, including a 4-inch L-bend at the bottom. Furnish 1-inch x 40-inch bolts for the LB-3 bases, including a 4-Inch L-bend at the bottom. Furnish 3/4 inch x 19 inch bolts for the Type G bases.

Include a concrete maintenance platform on the Concrete Base Type M and Concrete Bases Type P. Generally construct the Concrete Base Type M and Concrete Bases Type P according to the standard detail drawing Concrete Control Cabinet Bases. Confirm the location of the conduits in the base with the City of Madison. Anchor bolts, nuts, and

washers for Concrete Bases Type P, will be provided and installed by the City of Madison when installing signal control cabinets. Conform bar steel reinforcement to the requirements of standard spec 505.

C Construction

Place the bases with one side parallel to the centerline of the street.

Forms shall be of sufficient depth to provide a minimum of 12 inches of formed base below the finished grade on the low side of the base. The top surface of the base shall be level with a 3/4-inch bevel on the edges and shall be given a rubbed finish.

Cast anchor bolts into the base as shown on the plans. Verify the bolt circle diameters before constructing the bases.

Furnish and install manufactured elbows in all bases, except as noted on the details. Install elbows to permit installation of conduit in as nearly straight-line runs as possible without unnecessary bends. Bases not installed to this standard will not be accepted.

Extend existing conduit into the bases. Elbows shall conform to the requirements of the type of conduit entering the base. Install an extra elbow in each base at the end of a run as directed by the engineer. Install extra elbows in any base as directed by the engineer.

Do not erect poles on the concrete bases until the bases have cured for at least seven days. All concrete bases require a rubbed finish down to finished grade.

D Measurement

The department will measure Concrete Bases (Type) by each unit, completed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.255	Concrete Bases Type G	Each
SPV.0060.256	Concrete Bases Type LB-2	Each
SPV.0060.257	Concrete Bases Type LB-3	Each
SPV.0060.258	Concrete Bases Type LB-8	Each
SPV.0060.259	Concrete Bases Type M	Each
SPV.0060.260	Concrete Bases Type P	Each

Payment is full compensation for furnishing and installing all materials including conduit, bushings, caps and/or plugs, ground rod, anchor bolts, cadwelding, copper grounding wire; bar steel reinforcement, and concrete masonry; for providing openings through existing pavement where required; for excavation, including hand-digging as required, backfill, and disposal of surplus materials.

83. Concrete Base Offset, Item SPV.0060.261; Concrete Base Type G Spread Footing, Item SPV.0060.262.

A Description

This special provision describes construction of concrete street light bases and traffic signal bases, including necessary hardware, according to the pertinent provisions of standard spec 654 and as hereinafter provided

B Materials

Provide Grade A, A-WR, A-FA, or A-IP concrete masonry conforming to the requirements of standard spec 501. Provide Schedule 40 polyvinyl chloride (PVC) electrical conduit that conforms to the requirements of standard spec 652 to be cast within the bases. Provide anchor bolts made from high strength steel (50 KSI minimum yield strength), ASTM A36, with each being fitted with two hard washers and two heavy hex nuts. Provide 6 inches or more of thread on each bolt at the top end. Galvanize the bolts, washers, and nuts. Provide bar steel reinforcement that conforms to the requirements of standard spec 505.

C Construction

Locate proposed street light and/or traffic signal bases as shown in the plans according to the Construction Staking Electrical Systems bid item. Where potential underground conflicts exist, locate the existing utility. Hand excavation may be required. MG&E gas requires an inspector to be present when excavating near MG&E gas facilities in accordance whether to adjust the base location laterally to avoid the conflict or require the use of an Offset Base. Install rock shield between the main and street light base and/or traffic signal base as directed by MG&E personnel. MG&E will supply the rock shield.

Provide forms of sufficient depth to provide a minimum of 12 inches of formed base below the finished grade on the low side of the base. Construct the top surface of the base to be level with a 3/4 inch bevel on the edges and shall be given a rubbed finish.

Cast anchor bolts into the base as shown on the plans. Verify bolt circle diameters before constructing the bases.

Furnish and install manufactured elbows in all bases by the contractor, except as noted on the details. Install elbows to permit conduit to be installed in as nearly straight-line runs as possible, without unnecessary bends. Bases not installed to this standard will not be accepted.

Extend existing conduit into the bases. Construct elbows to conform to the requirements of the type of conduit entering the base. Provide and install an extra elbow at each base at the end of a run as directed by the engineer.

Install extra elbows in any base as directed by the engineer. Do not erect poles on the concrete bases until the bases have cured for at least seven days.

Provide a rubbed finish down to finished grade on all concrete bases.

D Measurement
The department will measure Concrete Base Offset and Concrete Base Type G Spread Footing 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.0060.261	Concrete Base Offset	Each
SPV.0060.262	Concrete Base Type G Spread Footing	Each

Payment is full compensation furnishing and installing transformer bases, streetlight pole wire, mechanical grounding connector and related hardware; for leveling shims when required.

84. Poles Aluminum 20-FT Street Light, Item SPV.0060.263.

A Description
This special provision describes Poles Aluminum 20-FT Street Light according to the plans and as hereinafter provided. It is the intent to describe in these specifications minimum functional and design requirements for aluminum light poles for the City of Madison, Wisconsin.

B Materials
Provide all poles that conform to the electrical detail drawing in the plans; the manufacturer's approved shop drawing; and these specifications. Submit exceptions to these specifications and city drawings to the engineer for review prior to manufacturing. Coordinate mounting needs with the LED luminaires selected for the project prior to ordering poles to ensure mounting and wire raceway holes are compatible with the selected LED luminaires.

Provide poles that have round aluminum shafts with a base welded to the lower end of each.

Certify that all poles have been designed to withstand a 90-mile-per-hour sustained wind velocity and a 117-mile-per-hour gust velocity, with one light fixture attached.

B.1 Shaft
Provide a grounding nut or nut holder for accommodating a 1/2 inch 13 UNC threaded bolt or stud on the inside of the shaft immediately opposite the center of the handhole. Provide poles that after fabrication and assembly, will have no sharp edges, corners or points on both the interior and exterior surfaces, except at the base plate. Restore to the design alloy by heat treating after fabrication.

B.2 Pole Coatings
Confer with Brian Smith of City Traffic Engineering, (608) 261-9625, as to the specifications for a black anodized finish in order to assure the city that the city's desires are being fulfilled. Spin the poles using a fine (120) grit. Provide a uniform finish appearance free from any streaking during the pole extrusion, spinning and anodizing. Use a two-step matte black anodizing finish (AA-C22-A44-Black) or an alternate process which produces a dark black finish. A light black finish is not acceptable.

B.3 City Approval of Shop Drawings
Submit shop drawings to the City of Madison Traffic Engineering Division, PO Box 2986, Madison, WI 53701-2986, Attn: Brian Smith. Manufacture no poles until the City has approved the shop drawings. City review and approval of shop drawings will be done within three work days of their receipt unless revisions to shop drawings are necessary as determined by the city.

C Construction
Construct according to standard spec 657.

D Measurement
The department will measure Poles Aluminum 20-FT Street Light 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.0060.263	Poles Aluminum 20-FT Street Light	Each

Payment is full compensation for furnishing and installing poles, all hardware and fittings necessary to completely install the pole; for corrosion prevention where required; for installing identification required plaques.

85. Poles 30-FT 11 Gauge, Item SPV.0060.264; Poles 20-FT 7 Gauge, Item SPV.0060.265.

A Description
This special provision describes furnishing and installing poles and arms according to standard spec 657, the details shown on the plans, and these special provisions.

B Materials
Provide round poles, with a base plate welded to the bottom end of the pole. All 20 foot and 30 foot poles are to be a single section, with an 8-inch diameter shaft at the base and 0.14 inches per foot taper. All 35 foot poles are to be a single section, with an eight and 11/16-inch diameter shaft at the base and 0.14 inches per foot taper.

Provide base plates wait ha a slotted opening for anchor bolts.

Certify that all 30-foot poles have been designated to withstand a 90 mile per hour sustained wind velocity and 117 mile per hour gust velocity with the bracket arm and luminaires in place.

Use 20-foot 7 gauge poles for supporting aluminum trombone arms holding signs and/or signal heads.

Provide a 4" x 6 1/2" galvanized handhole with contoured or flat cover plate joined to the reinforced handhole frame with two bolts. Locate the handhole at 90 degrees clockwise from the bracket arm side of poles as viewed when looking down from the top of the pole. The center of the handhole should be 14 inches from the bottom of the pole. Provide a solid metal bracket, with a drilled and tapped hole for securing cover plate bolts. Clips for holding these bolts are not acceptable. The machine bolts shall be a slotted hex-head style.

Fabricate the pole shaft from the herein specified manufacturer's best grade, hot rolled basic option hearth, or basic oxygen process steel. Provide a shaft with only one longitudinal, electrically welded joint, with the strength rated at not less than 100 percent of the yield strength of the steel and shall have no intermediate horizontal joints or welds. Only one length of steel shall be used, and form it into a continuously tapered shaft, having a taper of approximately 0.14 inches per foot. Provide smooth welds allowing the specified taper to be constant. Provide a pole that is within 1/4" in 10 feet of being straight and centered on its longitudinal axis.

Provide a grounding nut or nut holder for accommodating a 1/2 inch x 13 UNC threaded bolt or stud on the inside of the shaft immediately opposite the center of the handhole. Make the nut completely free of any metal residue that would prevent a bolt from easily screwing entirely into the nut.

Provide all poles holding LED fixtures with mounting and wire raceway holes placed before being hot-dipped galvanized. Coordinate mounting needs with the LED luminaires selected for the project prior to ordering poles.

Furnish and install a pole-top cover and four nut covers for each pole.

Provide each steel pole with a permanent imprinted metal label attached with rivets midway between the base plate and the handhole. State the overall pole height, shaft gauge, and year of manufacture on the label. Provide a label that will conform to the curvature of the pole and not have any sharp edges or corners. Install rivets so they are smooth inside and outside of the pole.

Thoroughly clean the exterior surface of the pole, arm, and hardware to make them free of all loose rust, mill scale, dirt, oil, grease, and other foreign substances after all welding has been completed. Hot-dip galvanized the poles and arms according to the requirements of ASTM Designation A123. Hot-dip galvanize the hardware according to ASTM designation

A153. Provide a bright, shiny, and uniform galvanized finish. Matted or dull pole sections will not be accepted.

Furnish non-shrink commercial grout from approval products list.

C Construction
Set and plumb metal poles with the use of leveling nuts furnished with the anchor bolts. Level luminaires after erecting and leveling the metal standards with bracket arms. The proper leveling method may be obtained from the manufacturer's instruction manual. Torque nuts on anchor and transformer bolts to 175-200 foot pounds or as directed by the engineer. Provide rust, corrosion, and snit-seize protection at all threaded assemblies by coating and mating surfaces with Markal (hightemp – E-Z Break), Never-Seez (Marine Grade), LPS 100, Lubriplate, or approved equal.

Attach the stranded copper ground wire that is installed as a part of the base construction with an approved connector (Fargo GC 202 or approved equal) to a ground nut locate inside the pole opposite the handhole.

When transformer bases are not installed, trowel grout between the pole and concrete base and finished at an angle from the edge of the pole base to the outer edge of the foundation. Leave a 1/2 inch slot for drainage through the grouting on the street side at the top of the concrete base.

D Measurement
The department will measure Poles (description) 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.0060.264	Poles 30-FT 11 gauge	Each
SPV.0060.265	Poles 20-FT 7 gauge	Each

Payment is full compensation for furnishing and installing poles, all hardware and fittings necessary to completely install the pole; for corrosion prevention where required; for installing required identification plaques.

86. Transformer Bases 16-Inch Steel, Item SPV.0060.266.

A Description
This special provision describes furnishing and installing steel transformer bases as shown on the plans and as follows.

B Materials
Provide hot-dipped galvanized steel transformer bases according to ASTM designation A123. Provide bases with slotted bolt openings. Furnish steel connecting bolts, size

1.00 inches by 4 inches, hold down lugs for 1.00 or 1.25 inch bolts and nuts and washers. Verify the bolt diameter projection and bolt circle dimension required for each application. Ensure the concrete bases and pole bases are compatible with the transformer bases and bolts. Hot-dip galvanize all material and verify they are of sufficient size and strength to exceed the capacity of the bases. Construct 16-Inch bases to conform to the detail in the plan.

Furnish to the engineer at the time of delivery of the bases, a manufacturer's certificate of compliance that the base and hardware as furnished meets the above requirements.

C Construction

Install transformer bases according to the manufacturer's instructions, and as shown on the plans.

D Measurement

The department will measure Tranformer Base 16-Inch Steel 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.0060.266	Transformer Bases 16-Inch Steel	Each

Payment is full compensation furnishing and installing transformer bases, streetlight pole wire, mechanical grounding connector and related hardware; for leveling shims when required.

87. LED Luminaire and Mounting Bracket Type 1, Item SPV.0060.267; LED Luminaire and Mounting Bracket Type 2, Item SPV.0060.268; LED Luminaire and Mounting Bracket Type 3, Item SPV.0060.269.

A Description

This item number includes furnishing and installing Cooper fixture luminaires.

B Materials

B.1 Material Qualifications

Provide an integral LED lighting unit. All parts not specifically mentioned, which are necessary and are regularly furnished in order to provide a complete unit, shall be furnished by the successful bidder at the bid price and shall conform in quality of material and workmanship to that usually provided by the engineering practice indicated in this specification.

Furnish luminaires of the "cutoff" type conforming to all general aspects for luminaires as specified under standard spec 659 except as modified herein. All equipment to be furnished shall be new, unused, and the latest model being produced. The LED Luminaire Type 1 shall be a Cooper Lighting grey LED Talon luminaire (part number "TLM-E02-LED-E1-SL2-8030-PER-AP") except for SL9621 and SL9640 shall be a Cooper Lighting black LED Talon luminaire (part number "TLM-E02-LED-E1-SL2-8030-PER-BK"). The LED Luminaire Type 2 shall be a Cooper Lighting grey LED Talon luminaire (part number "TLM-E04-LED-E1-SL2-8030-AP"). The LED Luminaire Type 3 shall be a Cooper Lighting grey LED Talon luminaire (part number "TLM-E05-LED-E1-SL3-8030-AP").

B.2 Manufacturer's Warranty

The manufacturer shall warrant that goods provided for this project will conform to applicable specifications, drawings, designs, samples, descriptions and will be free from defects in material and workmanship and will be fit for the particular purpose intended by the city.

This warranty shall remain in effect for one year. The warranty period commences on the date the luminaires are installed.

Under this warranty, the manufacturer agrees to replace within a reasonable time, any part, feature or product found to be defective during the warranty period at no cost to the City of Madison.

New lighting units will not be accepted before luminaires and lamps have operated without failure for a period of at least ten consecutive nights.

C Construction

Install LED Luminaires and Mounting Bracket (Type) according to the pertinent provisions of standard spec 659 and as the manufacturer directs.

D Measurement

The department will measure LED Luminaire and Mounting Bracket (Type) as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.267	LED Luminaire and Mounting Bracket Type 1	Each
SPV.0060.268	LED Luminaire and Mounting Bracket Type 2	Each
SPV.0060.269	LED Luminaire and Mounting Bracket Type 3	Each

Payment is full compensation for furnishing all materials, including all luminaires and side of pole mounting hardware.

88. Monotube Poles Type 9, Item SPV.0060.270; Monotube Arms 30-FT, Item SPV.0060.272.

A Description

This section describes furnishing and installing poles and monotube arms for traffic signals.

B Materials

Design support structures, consisting of poles and arms, conforming to the completed maximum loading configurations and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the method of appendix C of those AASHTO standards.

Design support structures to the AASHTO fatigue category criteria III.

Along with the material list, submit a certificate of compliance certifying that poles as furnished, conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the certificate and a copy of the pole shop drawings to the engineer. Furnish poles from an approved manufacturer.

Furnish shop drawings as specified in standard spec 506.3.2, except submit five copies with the material list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the outside diameter of the pole at the butt, top, and splice locations the plans show. Show the width, depth, length, and thickness of all material, and list all pertinent ASTM specification designations and metal allow designations together with the tensile strength of all metallic members.

After completing the manufacturing process, ensure that all shafts a nominal 40 feet or less in length for lighting poles only, are round, of one-piece construction, and of the specified length.

Construct poles of materials having sufficient rigidity that, with all material installed and in place as the plans show, the centerline of the shaft is vertical. Include dampers for poles as needed. If the engineer determines that vibration is a problem after a pole has been installed, install dampeners as the engineer directs.

Thoroughly clean all exterior surfaces of the pole, arm, and hardware to free them of all loose rust, mill scale, dirt, oil, grease, and other foreign substances after all welding has been completed. Hot-dip galvanize the poles and arms according to the requirements of ASTM Designation A123. Hot-dip galvanize the hardware according to ASTM Designation A153. Provide poles with a bright, shiny, and uniform galvanized finish. Matted or dull pole sections will not be accepted.

For monotube pole, provide anchor rods, nuts and washers for the contract base (Type 10).

Provide a reinforced hand hole measuring 5 inches by 8 inches. Locate the hand hole approximately 18 inches from the bottom of the pole base plate to the center of the door. For the hand hole, include an access cover mounted to the pole by two 1/4" -20 x 3/4" hex-head stainless steel bolts.

Provide a grounding lug complete with mounting hardware as required, inside the pole, 180-degrees from the handhole side of the pole.

Provide access to the grounding L-clip from the hand hole. Before galvanizing the pole, weld the grounding L-clip directly opposite the hand hole on the inside wall of the pole. Equip the top of the pole shaft with a removable, ventilated cap held securely in place by at least one 1/4" -20 x 3/4" hex-head stainless steel set screw. Ensure that all castings are clean, smooth, and with all details well defined and true to pattern.

Attach base plates firmly to the pole shaft by welding or other approved method. Provide and install a permanent imprinted metal label attached with rivets midway between the base plate and the handhole on each steel pole. State the shaft length, manufacturer's name, and year of manufacture on each label. Conform the label to the curvature of the pole and so that it will not have any sharp edges or corners. Make all rivets smooth inside and outside of the pole.

Provide monotube arms with the following:
A mounting device welded to the pole end of the monotube arm that allows the attachment of the arm to a pole. Stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads. A wiring raceway.

C Construction
Under each bid item, furnish and install poles, ventilated pole caps, arms, and all necessary miscellaneous hardware needed to complete the installation of the poles and arms.

Install dampeners as the plans show and for poles and arms used in configurations susceptible to vibration. If the engineer determines that vibration is a problem after a pole and arm has been installed, install dampeners as the engineer directs.

After completing erection using normal pole shaft raking techniques, ensure that the centerline of the shaft is vertical.

D Measurement
The department will measure Monotube Poles Type 9, and Monotube Arms 30-FT by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.270	Monotube Poles Type 9	Each
SPV.0060.272	Monotube Arms 30-FT	Each

Payment is full compensation for furnishing and installing all materials. Payment for Monotube Poles Type 9 also includes anchor rods, nuts and washers for the concrete base Type 10; and installing all materials including all hardware, fittings, mounting clamps, shims and attachments necessary to completely install the mast arms.

89. Traffic Signal Trombone Arms Aluminum 18-FT, Item SPV.0060.271.

A Description

This special provision describes furnishing and installing trombone mast arms and all necessary miscellaneous hardware needed to complete the installation of the trombone mast arm as shown on the plans, in the standard specifications, and as hereinafter provided.

B Material

Furnish traffic signal trombone arms designed to withstand loadings resulting from a 12" 3-section aluminum signal with backplate and an 18” x 90” aluminum street name sign mounted on the arm as shown on the drawing. Design factors according to the AASHTO Specifications for the Design and Construction of Structural Supports for Traffic Signals, Signs, and Highway Lighting, together with a wind pressure resulting from a wind velocity of 80 miles per hour plus gust factor, shall be applied to these arms, with the above signals attached.

Furnish certification of compliance with these stated AASHTO performance requirements with submission of the material list.

Submit shop drawings that include dimensions of width, depth, length and thickness of all members and ASTM designation and alloy designation of aluminum members.

Construct traffic signal trombone arms of aluminum consisting of round or oval upper and lower members joined by one or more tubular vertical struts welded to them. Construct the pole end of the mast arm with a mounting clamp welded to it which will permit the attachment of the mast arm to a round pole of varying diameter. Construct the lower clamp to be 5-7/8" I.D. and the upper clamp to be 5-l/2" I.D. Design the clamps to accommodate some variation in pole diameter while still attaining full contact between the clamp and the pole. The surface area of the clamp contacting the pole shall be sufficiently large and designed to prevent horizontal rotation in windy conditions. Provide bolts connecting the arm bracket to the back bracket from galvanized steel; stainless steel bolts are not acceptable. Design the vertical strut, which has provision for mounting the signal head, to provide for horizontal adjustability along the main mast arm members so that signal heads of various lengths with backplates, up to and including 5-section 12" heads, can be accommodated within the confines of the mast arm. Design the cross tees for signal heads to have two slots on the threaded hubs that face each other.

Provide the wiring raceway entrance to be through the lower mounting bracket.

Provide the trombone arm with a uniform natural aluminum finish and clean. No painting or other corrosion preventive maintenance will be required.

Construct the portion of the main members of the arm to which the arm attachment bands are welded as one piece of seamless tapered aluminum tubes.

Attach the main arm member to the pole using extruded aluminum clamps fastened with continuously threaded stainless steel bolts with nuts and washers meeting the requirements of ASTM Designation A-320. List the strength and/or grade specification ratings on the shop drawings. Provide stiffeners or gussets at the joints between the main arm tubes and arm clamps to provide adequate strength to resist side loads.

Provide shims made of an aluminum alloy.

Provide a permanent imprint of the "Type" and "Year of Manufacture" on the underside of the lower member of each arm.

C (Vacant)

D Measurement
The department will measure Traffic Signal Trombone Arms Aluminum 18-FT by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.271	Traffic Signal Trombone Arms Aluminum 18-FT	Each

Payment is full compensation furnishing and installing all materials including all hardware, fittings, mounting clamps, shims and attachments necessary to completely install the mast arms.

90. Traffic Signal Heads 12-Inch 3-Section Vertical, Item SPV.0060.273; Traffic Signal Heads 16-Inch Pedestrian with Countdown, Item SPV.0060.274.

A Description
This special provision describes furnishing and installing vehicle and pedestrian signals with LED indications according to the standard specifications and these special provisions.

B Materials
Furnish circular and arrow LED modules from the department’s approved product list and conforming to ITE VTCSH-LED.

Furnish state approved 16-Inch Pedestrian LED Full Hand/Full Man Overlay Module with Countdown conforming to ITE VTCSH-LED.

Provide all pedestrian signals with tunnel visors in place of z-grate specified by state DOT.

Provide all vehicle signals with cutaway visors.

Provide snow-shedding shield on each signal indication on all signals mounted on monotube arms or trombone arms. The shield shall be impact resistant polycarbonate, designed and installed specifically to reduce snow accumulation, while not allowing water to enter or reside in the signal unit. If there are not any far side signals on monotube arms or trombone arms, then install snow-shedding shields on each signal indication of the far right signal.

Pedestrian countdown timers shall have a control wire so that when 120V AC current is applied, the timer will immediately go dark. This control wire shall be wired back to the signal control cabinet.

Make all vehicle and pedestrian signal heads with polycarbonate material, UV stabilized, with color impregnated in the material. All features and performance shall meet the requirements outlined in the latest revision of the Institute of Transportation Engineers' publication, "Adjustable Face Vehicular Traffic Control Signal Heads" The front face and all visors (inside and outside) shall be flat or semi-gloss black. All other exterior parts shall be Federal Highway yellow. Use only exterior hardware made of stainless steel.

C Construction
Construct according to standard spec 658.

D Measurement
The department will measure Traffic Signal Heads (Description) by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.273	Traffic Signal Heads 12-Inch 3-Section Vertical	Each
SPV.0060.274	Traffic Signal Heads 16-Inch Pedestrian with Countdown	Each

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

91. Backplates Signal Face 3-Section 12-Inch, Item SPV.0060.275.

A Description
This special provision describes furnishing and installing backplates for signal faces.

B Materials
Furnish Backplates Signal Face (Size) that are according to the pertinent requirements of standard spec 658 and these special provisions.

Provide a 5" wide black band around the signal head backplates for 12" signal heads. Make the backplates with an approved black rigid material, such as vacuum formed ABS plastic. Match the backplates to the signal heads being furnished under this bid, equipped with all necessary holes, mounting devices. Use only stainless steel mounting hardware.

C Construction
Install the backplates according to standard spec 658.3, the manufacturer's instructions, and as shown on the plans.

D Measurement
The department will measure Backplates Signal Face (Description) 12-Inch by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.275	Backplates Signal Face 3-Section 12-Inch	Each

Payment is full compensation for furnishing and installing all materials.

92. Traffic Signal Control Cabinet, Item SPV.0060.276.

A Description
This specification describes furnishing an equipped NEMA TS2 Type 1 traffic signal control cabinet. The traffic signal controller and malfunction management unit (MMU) are to be furnished under separate bid items.

Furnish and install equipment and assemble the cabinet conforming to the latest revision of NEMA Standards Publication TS 2-2003, Traffic Controller Assemblies with NTCIP Requirements, National Electrical Manufacturers Association, hereinafter called NEMA TS2 Standard, except where modified in this specification. Conform all work to the Wisconsin State Electrical Code (WSEC).

Provide cabinets designed for TS2 Type 1 operation. Pre-wire cabinets for a minimum of sixteen phases as specified herein.

Furnish and install into cabinet at no extra cost any equipment and materials not specifically described but required in order to perform the intended functions in the cabinet.

B Materials

B.1 Cabinet

Furnish a door-in-door ground mounted (without anchor bolts) aluminum cabinet of clean-cut design and appearance. Provide a cabinet of minimum size 44 inches wide, minimum 24 inches deep, and minimum 52 inches to maximum 60 inches high. The size of the cabinet shall provide ample space for housing the controller, all of the associated devices which are to be furnished with the controller, all other auxiliary devices herein specified, and all equipment to be furnished under separate bid items.

The cabinet shall comply with the environmental and operating standards outlined in the NEMA TS2 Standard. The cabinet shall provide reasonable vandalism protection. The cabinet shall have a NEMA 3R rating.

Construct the cabinet from type 5052-H32 aluminum with a minimum thickness of 0.125 inches. Furnish the cabinet with a natural, uncoated, aluminum finish inside and outside. Continuously weld all seams. The surface shall be smooth, free of marks and scratches. Use stainless steel for all external hardware.

On the top of the cabinet, incorporate a 1-inch slope toward the rear to prevent rain accumulation. Incorporate a rain channel into the design of the main door opening to prevent liquids from entering the enclosure.

Include an exhaust plenum with a vent screen into the roof of the cabinet. Perforations in the vent screen shall not exceed 0.125 inches in diameter.

Equip the lower section of the cabinet door with a louvered air entrance. The air inlet shall be large enough to allow sufficient air flow per the rated fan capacity. Louvers must satisfy the NEMA rod entry test for Type 3R ventilated enclosures. Secure a washable, fiberglass, removable air filter to the air entrance. The filter shall fit snugly against the cabinet door wall. Attach an aluminum, easily removable, gasketed cover over the air filter and louver.

B.2 Doors

The cabinet door opening shall be a minimum of 80 percent of the front surface of the cabinet. The main door and police door-in-door shall each close against a weatherproof and dust-proof, closed-cell neoprene gasket seal. The gasket material for the main door shall be a minimum of 0.188 inches thick by 1.00 inch wide. The gasket material for the police door shall be a minimum of 0.188 inches thick by 0.500 inches wide. Permanently bond the gaskets to the cabinet.

Equip the main door with a three-point latching mechanism. The upper and lower locking points of the latching mechanism shall each have a pair of nylon rollers. The handle on the main door shall utilize a shank of stainless steel 3/4 inches minimum diameter. The handle shall include a hasp for the attachment of an optional padlock. The cabinet door handle may turn either clockwise or counterclockwise to open, and shall not extend outwards past the edge of the door at any time. Position the lock assembly so the key will not cause any

interference with the handle, or a person's hand on the handle, when opening the cabinet door.

Include on the main door a solid stainless steel rod stop and catch mechanism capable of rigidly holding the door open at approximately 90, 120, and 180 degrees under windy conditions. The operator must be able to engage and disengage the catch with a shoed or booted foot.

The main door hinge shall be a one-piece, continuous piano hinge with a minimum 0.25 inch stainless steel pin running the entire length of the right side of the door (righthanded).

Attach the hinge in such a manner that no rivets or bolts are exposed. Equip the main door with a brass Corbin tumbler lock No. 2, swing away dust cap, and provide two keys No. 2. Equip the police door-in-door with a standard police lock and provide one key.

Electrically bond the door to the rest of the cabinet with a braided copper grounding conductor. The length of the grounding conductor shall allow the door to swing fully open, without using the stop bar, without stretching or breaking the grounding conductor. The grounding conductor shall not interfere with normal door operation. Provide a door switch for the main cabinet door. When the door is opened the switch shall send a signal to the controller sufficient for the controller to log an alarm.

B.3 Shelves and Mountings

Mount a minimum of three vertical "C" channels, compatible with Unistrut channel nuts, on each interior side wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. Install three vertical "C" channels or three slotted rails on the interior back wall of the cabinet. All mounting channels and rails shall extend to within 7 inches of the top and bottom of the cabinets and shall be of sufficient strength to rigidly hold specified shelves and equipment.

Provide two full-width, 11-inch deep, fully adjustable, aluminum shelves to support the controller and other equipment. Mount the lower shelf at a height above the bottom of the cabinet such that the shelf and attached drawer does not interfere with the ability to tilt the terminal facility forward on its hinges for maintenance purposes. Mount the top shelf at least 13 inches above the surface of the lower shelf.

Locate the controller and MMU on the top shelf. Locate the loop detector racks and other auxiliary equipment on the lower shelf. The power supply may be mounted on either shelf.

Provide an under-shelf drawer under the lower shelf. The drawer shall be approximately 20 inches wide and the full depth of the shelf. The drawer shall operate easily and smoothly, and shall have a stop to prevent inadvertently pulling the drawer out of its support. Design the stop to allow purposeful complete removal of the drawer without the use of tools.

B.4 Auxiliary Cabinet Equipment

Ventilate the cabinet by means of a 120 VAC, 60HZ, tube axial compact type fan located in the top of the cabinet plenum. The fan's free delivery airflow shall be equal to or greater than 100 cubic feet per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a seven year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The thermostat's turn on setting shall be adjustable from 90 to 120 degrees F. The fan shall run until the cabinet temperature decreases below the turn-on temperature setting by approximately 30 degrees F. The fan shall be fused.

Mount an incandescent lamp and socket in the cabinet to sufficiently illuminate the field terminals. Wire the lamp to a 15-amp ON/OFF toggle switch mounted on the rear cover of the police panel as specified in the Cabinet Switches section of this specification. Provide a 250 watt element heater. Install the heater on the face of the aluminum, louvered air filter cover such that feed air is supplied through the cover. Provide a protective, ventilated cover over the heater. Provide a cord and twist-off plug to an electrical receptacle on the cabinet door. Provide a thermostat with an adjustable setting from 0 to 100 degrees F. Install the thermostat on the interior ceiling of the cabinet well away from the cabinet light or any heat source. Provide a thermal limit switch to prevent the heater's protective cover from exceeding 170 degrees F.

B.5 Terminal Facility

The terminal facility panel shall be constructed from 5052-H32 brushed aluminum of 0.125 inches minimum thickness and formed so as to eliminate any flexing when plug-in components are installed.

Mount the bottom of the terminal facility a minimum of nine inches from the bottom of the cabinet. Hinge the terminal facility at the bottom to allow easy access with simple tools to all wiring on the rear of the panel. It shall not be necessary to remove the lower shelf, the shelf drawer, or any shelf-mounted equipment to hinge down the terminal facility. Provide sufficient slack in the load bay wiring to allow for dropping the load bay.

Fully wire the terminal facility with sixteen load switch sockets: eight phases of vehicular, four phases of pedestrian, and four phases of overlap operation; eight flash transfer relay sockets; one flasher socket; and two terminal facility BIU rack slots. The use of printed circuit boards is not acceptable on the terminal facility, except printed circuit boards are acceptable for the BIU interface with the load bay. Position the 16 load switch sockets in two horizontal rows of eight sockets each. Support the load switches and flasher by a bracket or shelf extending at least three inches from the terminal facility. Label all terminals, load switches, and flash transfer relay sockets. Label reference designators by silk-screening on the front and rear of the terminal facility to match drawing designations.

Provide rack mounted BIU's. Provide a dual-row, 64-pin female DIN 41612 Type B connector for each BIU rack position. Provide card guides for both edges of the BIU. Terminal and facilities BIU mounting shall be an integral part of the terminal facility.

Provide two each 16-channel, 8-position, TS2 detector racks, each with an integrally mounted BIU mounting. Racks shall be addressable. Power each detector rack by the cabinet power supply. Fasten the loop detector racks towards the left side of the lower shelf.

For BIU rack connectors, provide pre-wired address pins or jumper plugs corresponding to the requirements of the NEMA TS2 Standard. The address pins or jumper plugs shall control the BIU mode of operation. BIUs shall be capable of being interchanged with no additional programming.

For the terminal facility, contain all field wires within one or two rows of horizontally-mounted Marathon heavy duty terminal blocks. Terminate all field output circuits on an unfused terminal block with a minimum rating of 10 amps. Use mechanical connector lugs rated for copper wire. Angle the lower section of the terminal block out from the back of the cabinet at approximately a 45 degree angle.

Identify all field input/output (I/O) terminals by permanent alphanumeric labels. All labels shall use standard nomenclature per the NEMA TS2 Standard.

All field flash sequence programming at the field terminals shall be able to be accomplished with the use of only a screwdriver.

Wire field terminal blocks to use three positions per vehicle or overlap phase (green, yellow, red).

Wire one RC network in parallel with each flash transfer relay coil.

Permanently label all logic-level, NEMA-controller and MMU input and output terminations on the terminal facility. Identify the function of each terminal position on the cabinet drawings.

Terminal blocks for DC signal interfacing shall have a number 6-32 x 7/32 inch screw as minimum. Functions to be terminated shall be as specified in the listing of Input/ Output Terminals in Section 5 of the NEMA TS2 Standard.

Conform all terminal facility and cabinet wiring to the WSEC. The green/ walk, yellow, and red/ don't walk load switch outputs shall be minimum 16 gauge wire. The MMU (other than AC power), controller I/O, and logic ground shall be minimum 22 gauge wire. All wire colors shall be consistent in all cabinets furnished in one order.

B.6 Vehicle Detection Interface Panel

Provide a 32-position interface panel or two 16-position panels. Each interface panel shall allow for the connection of 32 or 16 independent field loops, respectively. The panels shall have barrier strip type terminals using 8-32 screws and be rated for 20 inch pounds of torque. Provide a ground bus terminal between each loop pair terminal to provide a termination for the loop lead-in cable ground wire. Secure the interface panels to a mounting plate attached to the left interior side wall of the cabinet.

Provide a cable consisting of 20 AWG twisted pair wires to enable connection to and from the interface panel to a detector rack. The twisted pair wires shall be color-coded wires. Provide a cable of sufficient length to allow the detector rack to be placed on either shelf.

Identify all termination points by a unique number silk screened on the panel.

B.7 Lighting Control Panel

Provide an intersection lighting control panel as described. The intersection lighting control panel shall consist of an aluminum panel 0.125 inches thick and approximately 5 inches by 10 inches. Determine the actual panel size by the cabinet's mounting rail placement. Attach to the panel a 2 pole-30 amp contactor-120vac coil (Square D #8910DPA32V02 or equal), and a heavy duty six position terminal block (Marathon DJ1606 or equal). Use wire sizes 10AWG for power and load wiring, and 16AWG for control wires. Wire the terminal strip as follows:

1. Control coil
2. L1 in
3. L2 in
4. Neutral in and control coil
5. L1 out
6. L2 out

Protect each output by a MOV (V150LA20A) wired between the output and neutral. Include a photo control (Intermatic #K4021C or equal). Mount the photo control just above the cabinet door and approximately 12 inches from the right side of the cabinet. Wire the photo control to a 3 position terminal switch using 16AWG wire color coded to match the photo control wiring connected to the intersection lighting control panel.

B.8 Conductors and Cabling

All conductors in the cabinet shall be copper 22 AWG or larger. All 14 AWG and smaller wire shall conform to MIL-W-16878/1, Type B, 600V, 19-strand tinned copper. The wire shall have a minimum of 0.010 inches thick PVC insulation without clear nylon jacket and rated to 105 degrees Celsius. All 12 AWG and larger wire shall be UL listed THHN/THWN 90 degrees Celsius, 600V, 0.020 inches thick PVC insulation, and clear nylon jacketed.

Provide controller and MMU cables of sufficient length to allow the units to be placed on either cabinet shelf in the operating mode. Connecting cables shall be sleeved in a braided nylon mesh. Exposed tie-wraps and interwoven cables are unacceptable.

Provide the cabinet configuration with enough SDLC RS-485 Port 1 communication cables to allow full capabilities of that cabinet. Each communication cable connector shall be a 15-pin metal shell D subminiature type. The cable shall be a shielded cable suitable for RS-485 communications. Secure all connecting cables and wire runs by mechanical clamps. Stick-on type clamps are not acceptable.

Pre-wire the terminal facility for a Type 16 MMU.

All wiring shall be neat in appearance. Stow excess cable behind the terminal facility or below the shelves in order to allow easy access to the terminal facility and cabinet components. All cabinet wiring shall be continuous from its point of origin to its termination point. Butt type connections/splices are not acceptable.

Wire the grounding system in the cabinet into three separate circuits: AC Neutral, Earth Ground, and Logic Ground.

Opto-isolate all pedestrian pushbutton inputs from the field to the controller through the BIU and operate at 12 VAC.

Hook or loop all wire, size 16 AWG or smaller, at solder joints around the eyelet or terminal block post prior to soldering to ensure circuit integrity. Lap joint soldering is not acceptable.

B.9 Cabinet Switches

Locate the following switches on a maintenance panel on the inside of the cabinet door:

a. Controller On/Off
b. Cabinet Light
c. Stop Time (Three Position)
d. Manual Detector Switches (Three Position)

Position	Switch Label	Function
Upper	Stop Time	Place stop time on the controller
Center	Run	Remove the stop time input to the controller
Lower	Normal	Connects the MMU to the controller stop time input

Locate the following switches behind the police access door:

a. Signal/Off
b. Flash/Normal
c. Hand/ auto
d. Coiled hand control and cable

The above switches shall function as follows:

Off: Signals Dark
Signal: Signals On and operating as follows:

Auto	Hand
Flash:	Signals Flash Signals Flash
Normal:	Signals Normal Signals Advance by use of hand control

Provide manual detector switches. Provide a minimum of 16 vehicle detector switches, and four pedestrian detector switches. The switches shall be spring loaded and automatically return to the center position. Wire the vehicle detector switches to detector BIU slot 1. Wire the pedestrian switches to the T&F BIU slot 1. The switches shall operate as follows:

Position	Function
Upper	Detector Disabled
Center	Detector Enabled
Lower	Detector Called

B.10 Power Panel

B.10.1 Design

The power panel shall consist of a separate module, securely fastened to the interior right side wall of the cabinet. Wire the power panel to provide the necessary power to the cabinet, controller, MMU, cabinet power supply, and all auxiliary equipment.

Manufacture the power panel from 0.090-inch, 5052-H32 aluminum. Panel layout shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools.

Provide a light, tough, transparent, weather-resistant, non-yellowing, thermoplastic cover, rigidly mounted over the full power panel, with access holes for circuit breakers and other equipment, and open on the sides for ventilation.

B.10.2 Bus Bar

Provide a minimum 20-position neutral bus bar capable of connecting three #12 AWG wires per position.

B.10.3 Circuit Breakers

House in the power panel the following vertically mounted, single pole, 120 volts AC, 60 Hertz, circuit breakers, with the ON position being up:

- One 30-amp signal breaker. This breaker shall supply power for all cabinet functions not powered through one of the other breakers or fuses listed below.
- Streetlights will be powered from outside the cabinet in the meter breaker pedestal. This breaker shall feed a signal bus supplied through a solid state bus relay and a radio interference line filter. The bus relay, in all cases, shall be a solid state contactor and shall not be jack mounted. Breakers shall be thermal magnetic type, UL listed, with a minimum of 22,000 amp interrupting capacity.
- One 15-amp auxiliary breaker. This breaker shall supply power to the fan and heater.
- One 10-amp breaker. This breaker shall supply power for control equipment: controller, MMU, and cabinet power supply.
- One 20-amp circuit breaker for future use.

Power the cabinet light through the GFI fuse, not a circuit breaker.

B.10.4 Radio Interference Suppressor

Equip each control cabinet with a single radio interference suppressor (RIS) of sufficient ampere rating to handle the load requirements. Install the RIS at the input power point. The RIS shall minimize interference in both the broadcast and the aircraft frequencies, and shall provide a maximum attenuation of 50 DB over a frequency range from 200 KHZ to 75 MHZ, when used in connection with normal installations. The RIS shall be hermetically sealed in

a substantial metal case filled with a suitable insulating compound. The terminals shall be nickel-plated brass studs of sufficient external length to provide space to connect two #8 AWG wires and shall be so mounted that they cannot be turned in the case. Ungrounded terminals shall be properly insulated from each other, and shall maintain a surface leakage distance of not less than 6.35 mm between any exposed current conductor and any other metallic parts. The terminals shall have an insulation factor of 100-200 mega ohms dependent upon external conditions. The RIS shall be rated at minimum 50 amperes. Design the RIS for operation on 115 VAC +/-10%, 60HZ, single- phase circuits, and to meet the standards of UL and Radio Manufacturer's Association.

B.10.5 Bus Relay
Provide a normally-open, 60 amp, solid state relay.

B.10.6 Surge Protector
Install a plug-in type EDCO SHA-1250, or Atlantic/Pacific approved equal, surge protector across the load terminal of the 10-amp circuit breaker. Install a General Electric Varistor, catalog #V130PA20A, at the load terminals of the circuit breaker from the hot line to the grounded current carrying neutral conductor. Provide one additional uninstalled surge protector for every 20 cabinets delivered.

B.10.7 Power receptacles
Mount a 120 VAC 20 amp, NEMA 5-20R GFCl convenience duplex outlet at each of these two locations:

- On the interior right side wall above the power panel. The outlet shall be fully operational and fuse protected.
- Near the power panel where it will not interfere with power panel maintenance.

This outlet is to be wired by field installation personnel.

B.10.8 Suppressors and RC Network
Provide a suppressor for each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, to protect the controller's solid state devices from excessive voltage surges. Such suppressors shall be in addition to the surge protector at the input power point. Wire one RC network in parallel with each inductive device.

B.11 Load Switches
Provide 16 solid state load switches conforming to the requirements of Section 6.2 of the NEMA TS2 Standard.

B.12 Flashers
Provide one solid state flasher conforming to the requirements of section 6.3 of the NEMA TS2 Standard.

B.13 Flash Transfer Relays
Provide four flash transfer relays conforming to the requirements of section 6.4 of the NEMA TS2 Standard.

B.14 Cabinet Power Supply
Supply one cabinet power supply, meeting the requirements of Section 5.3.5 of the NEMA TS2 Standard. Provide LED indicators for the 12 VDC, 12 VAC, and 24 VDC outputs. Provide jack plugs on the front panel for access to the +24 VDC for test purposes.

B.15 Bus Interface Units (BIU)
Provide three BIUs conforming to the requirements of section 8 of the NEMA TS2 Standard. Provide two BIUs with the main panel and one BIU with one of the detector racks.

B.16 Shop Drawings
Submit two sets of 22X34-inch detailed printed shop/drawings of the control cabinet, equipment layout drawings, and wiring diagrams of all equipment installed in the controller cabinet to the city for review and approval before manufacturing the cabinet.

Also provide all drawings as .dgn or dwg files. Revise the files and drawings in accordance to city's comments and resubmit, both printed and .dgn/.dwg files. The city will complete its review within five work days from receipt of the cabinet design.

B.17 Manuals
At the time of the cabinet delivery, furnish the following:

- One set of installation, operations, and maintenance manuals per cabinet for each type of equipment and their replacement parts. The manuals shall as a minimum include the following information: a) table of contents, b) operating procedure, c) step-by-step maintenance and trouble-shooting information for the entire assembly, d) part numbers, and e) maintenance checklists.
- Two sets of cabinet wiring diagrams per cabinet.

B.18 Cabinet Delivery
Deliver the fully wired and equipped cabinets and manuals to the City of Madison Traffic Engineering Electrical Shop, 1120 Sayle Street, Madison, WI, 53704. Delivery shall be on a business day between 8:00 AM and 2:00 PM. Call the City of Madison Traffic Engineering Electrical Shop (Dennis Rowe, (608) 266-9034) a minimum of one 24-hour business day ahead of the desired delivery time to schedule the delivery and confirm the City of Madison's business days.

B.19 Vendor Warranty
The vendor shall warrant the performance and construction of the fully-wired cabinet to meet the requirements of this specification, and shall warrant all wiring parts, components, and appurtenances against defects in design, material and workmanship for a period of one year from the date of installation. In the event defects and failures become apparent during this time, the vendor shall repair and/or replace all defective parts or appurtenances at no additional expense to the city. This specification is to construe that any part, or parts, that fail to function properly shall be replaced at no charge to the city.

C Construction
Traffic signal cabinet will be installed by City of Madison personnel.

D Measurement
The department will measure Traffic Signal Control Cabinet by each unit, acceptably completed and delivered to the City of Madison.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.276	Traffic Signal Control Cabinet	Each

Payment is full compensation for furnishing and delivering all materials to the City of Madison, 1120 Sayle Street.

93. Traffic Signal Controller, Item SPV.0060.277.

A Description
This special provision describes furnishing a traffic signal controller with auxiliary equipment to the City of Madison.

B Materials
Furnish the following:

1. Econolite Cobalt controller with HTR, data key, and Ethernet.
2. FSK TLM 25 pin for this controller.
3. Econolite TIO board with harness.
4. D connector interface harness and board.

C Construction
Traffic signal controller will be installed by City of Madison personnel.

D Measurement
The department will measure Traffic Signal Controller by each unit, acceptably completed and delivered to the City of Madison.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.277	Traffic Signal Controller	Each

Payment is full compensation for furnishing and delivering the signal controller, and all auxiliary equipment, to the City of Madison, 1120 Sayle Street.

94. Traffic Signal Ethernet Switch, Item SPV.0060.278.

A Description

This special provision describes furnishing and installing an ethernet switch in an existing traffic signal cabinet, as specified in standard spec 651, 655, 670, 674, and 675, as shown on the plans, and as provided hereinafter.

B Materials

Furnish Cisco IE-2000-8TC-G-L Ethernet switches as shown in the plans. Provide all necessary cables between the ethernet switch and device or devices as shown in the plans.

C Construction

Install the traffic signal ethernet switch in an existing traffic signal cabinet. Connect it to devices as shown on the plans, according to the manufacturer's recommendation, and as directed by the engineer.

Contact Mike Christoph at the City of Madison Traffic Engineering shop at (608) 266-9031 a minimum of seven working days in advance to coordinate installing equipment in existing traffic signal cabinet.

D Measurement

The department will measure Traffic Signal Ethernet Switch as each individual traffic signal ethernet switch, 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.0060.278	Traffic Signal Ethernet Switch	Each

Payment is full compensation for furnishing and installing an ethernet switch, all necessary incidental wiring and hardware, making all necessary connections.

95. Malfunction Management Unit, Item SPV.0060.279.

A Description

This special provision describes furnishing a shelf-mountable, 16-Channel, solid-state MMU with Ethernet capability to the City of Madison.

B Materials

Provide one shelf-mountable, 16 channel, solid-state MMU with Ethernet capability. The MMU shall meet the requirements of Section 4 of the NEMA TS2 Standard. The MMU shall be capable of the following:

- Detecting simultaneously active inputs of Green (Walk), Yellow, or Red (Don't Walk) on the same channel.
- Determining if the field signal input states detected as active or inactive by the MMU correspond with the data provided by the Controller Unit.

- Monitoring an optional external watchdog output from a Controller Unit or other external cabinet device.
- Monitoring an intersection with up to four approaches using the Flashing Yellow Arrow (for protected/permissive left and right turn movements).
- Event logging for the following; AC Line log, Prior/Previous Faults log, and Monitor Reset Log. All log entries shall include a date and time stamp.
- All monitor functions shall be capable of being programmed through the front panel, without the need for computers or special programs cards.
- A built-in Diagnostic Wizard shall be provided that displays detailed diagnostic information regarding the fault being analyzed. This mode shall provide a concise view of the signal states involved in the fault, pinpoint faulty signal inputs, and provide guidance on how the technician should isolate the cause of the malfunction.

The MMU shall have an LCD display that allows for viewing of log files and field indications, as well as the viewing and setting of date and time and configuration parameters.

C Construction
Malfunction Management Unit will be installed by City of Madison personnel.

D Measurement
The department will measure Malfunction Management Unit by each unit, acceptably completed and delivered to the City of Madison.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.279	Malfunction Management Unit	Each

Payment is full compensation for furnishing and delivering the Malfunction Management Unit to the City of Madison, 1120 Sayle Street.

96. Street Light Removal, Item SPV.0060.280.

A Description
This special provision describes removing and salvaging a base mounted light, direct bury light pole, transformer base, arm, and luminaire.

B (Vacant)

C Construction
Contact Jerry Schippa, (608) 267-1969, at least seven days prior to removing any street lights on the City of Madison lighting system or traffic signals maintained by the City of Madison. Arrange a meeting to document the existing condition of all street lighting materials that will be affected by construction activities.

The City of Madison will provide the following information.

1. Identify all items to be salvaged or disposed
2. Identify existing feed-point locations and circuit breaks.

When removing existing street lights, carefully remove and 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 and signal heads 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 pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.280	Street Light Removal	Each

Payment is full compensation for removals, salvaging and disposal as required above.

97. Lighting Control Cabinet, Item SPV.0060.281.

A Description

This special provision describes furnishing and installing a lighting control cabinet with all electrical components and wiring assembled.

B Materials

B.1 Contactors

Furnish 8-pole, 30-amp, 600-V electrically held contactors with 120-V control coil in NEMA 1 enclosure as required for the proposed circuits. Engrave "ALL NIGHT" or "MIDNIGHT" identification on cover of respective enclosures.

B.2 Photocell

Furnish a button type photocell and install as shown on the detail. Apply silicone caulk to maintain the watertight integrity of the enclosure. The photocell shall be rated for 120V, 1500W with 30-60 second delay between "on-off" operations.

B.3 Panel

Furnish a 120/240-volt, 100A main circuit breaker, single-phase, 20-circuit panel board in a NEMA 1 enclosure. Provide copper ground and split neutral bus bars in addition to copper bus bars. Provide bolt-on, thermal-magnetic circuit breakers that clearly indicate ON, OFF, or TRIPPED position in the panel. Provide double pole breakers as required for all multiwire branch circuits.

B.4 Time Clock
Furnish a time clock with an 8-year lithium battery time backup, -40° F to 120° F operating range, 40-year program schedule retention, LCD type, daylight saving time, and leap year correction. Program as required by the City of Madison.

B.5 Selector Switches
Furnish "Hand-Off-Auto" switches to control each circuit separately. Provide a "Hand-Off-Auto" legend plate for each switch. Engrave "ALL NIGHT" and "MIDNIGHT" above each appropriate operator. Mount the switches in a horizontal manner in a NEMA 1 enclosure.

B.6 Cabinet Enclosure
Provide a NEMA 4X enclosure made from .125-inch Type 5052-H32 aluminum. The doorframe shall be double flanged and all exterior seams shall be ground smooth. Door handle shall be 3/4-inch diameter stainless steel with three point latching system and hasp. Main door shall be sealed with a closed-cell neoprene gasket. Main door hinge shall be continuous 0.075-inch thick stainless steel with a 0.25-inch stainless steel hinge pin.

Provide an aluminum-mounting panel at back (interior) of enclosure. Provide a weatherproof pad lock with 2-3/8-inch wide body, repinnable/replacable cylinder, and five keys. There shall be no louvers or Corbin main door lock. Applicable code working clearances shall be maintained between equipment mounted within the enclosure.

B.7 Surge Arrester
Furnish a surge suppressor to protect the panel board. The surge suppressor shall provide 6 modes of surge protection, meet UL1449 Second Edition with 32Ka per phase and 48KA system peak surge current, contain LED line indicators, and approximate dimensions of 4.54-inch X 2.58-inch X 0.22-inch. Connect the surge suppressor to the branch circuit breaker as indicated on the plans.

B.8 Field Wiring Termination Blocks
All connections from the field wiring to equipment in the lighting control cabinet shall be made through termination blocks. Provide quantity of channel mount, NEMA type single terminal blocks as indicated on plans that are capable of holding #12 to #1/0 wire with solderless box lugs, for power, neutral and grounding connections. Mount the terminal blocks on a mounting channel of appropriate length with end anchors and an end barrier. Each terminal block shall have a label indicating the appropriate circuit number, neutral ('N') or ground ('G') wire connected to block; handwritten numbers and letters are not acceptable means of identification. Make connections from the underground field wiring to the equipment in the lighting control cabinet through distribution blocks.

B.9 Convenience GFI Receptacle and Cabinet Light Fixture
Furnish a 20 ampere, 120 commercial grade GFI duplex receptacle within a galvanized steel outlet box with cover. 150 watt, 250 volt commercial grade lamp holder with galvanized steel box and 60 watt incandescent bulb. Furnish switch to turn on cabinet light by opening the cabinet door.

B.10 Incidental Materials
Secure all wiring using screw attachment type straps; adhesive type shall not be allowed.

C Construction
Assemble the control cabinet as shown on the plans. Pretest the cabinet prior to shipment to the site. Mount all equipment to panel in enclosure. Train the cables in straight horizontal and vertical directions and be parallel next to and adjacent to other cables whenever possible. Mount the cabinet to the concrete base per the manufacturer's requirements. The work under this bid item includes connection and termination to the feeder system wiring.

D Measurement
The department will measure Lighting Control Cabinet 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.0060.281	Lighting Control Cabinet	Each

Payment is full compensation for furnishing and installing photo control, contactors, panel, distribution blocks, surge arrestor, enclosure, grounding, wiring and electrical components; mounting to the concrete base.

98. Seeding Mixture, Range Pasture, Item SPV.0085.001; Seeding Mixture, Short Grass Prairie, Item SPV.0085.002; Seeding Mixture, Detention Basin, Item SPV.0085.004.

A Description
This work consists of preparing seed beds, furnishing, and sowing specialty seed mixtures in accordance the applicable provisions of standard spec 630, as shown on the plans, and as hereinafter provided.

B Materials
B.1 General
Provide all seed according to standard spec 630.2. Provide documentation of seed source (supplier) and final proposed seed mixtures to the engineer a minimum of 30 calendar days prior to use for review. Obtain engineer's approval of each of the supplier(s) and mixes, in writing, prior to installation on this project.

Ensure that none of the seed mixes contain Birdsfoot Trefoil or Crown Vetch.

B.2 Range Pasture Mix
Provide a seed mixture at areas shown as Range Pasture Mix in the plans, conforming to the following species and mixture proportions:

- 34% Premium Endophyte-free Tall Fescue
- 25% Climax Timothy
- 15% Alsike Clover
- 12% Premium Medium-maturing Orchardgrass
- 9% Premium Tetraploid Perennial Ryegrass
- 5% Premium Forage Kentucky Bluegrass

B.3 Short Grass Prairie

Provide a seed mixture at areas shown as Short Grass Prairie in the plans, conforming to the following species and mixture proportions:

Scientific Name	Common Name	% Mix by Weight	PLS Grams/1 lb. Mix
Grasses			
Bouteloua curtipendula	Side Oats Grama	27.31	124
Schizachyrium scoparium	Little Bluestem	25.55	116
Sporobolus heterolepis	Prairie Dropseed	7.05	32
Wildflowers			
Agastache foeniculum	Lavender Hyssop	0.88	4
Allium cernuum	Nodding Pink Onion	2.64	12
Aster azureus	Sky Blue Aster	0.88	4
Aster laevis	Smooth Aster	0.88	4
Coreopsis lanceolata	Lanceleaf Coreopsis	1.76	8
Dodecatheon meadia	Shootingstar	0.88	4
Echinacea pallida	Pale Purple Coneflower	5.29	24
Echinacea purpurea	Purple Coneflower	3.52	16
Eryngium yuccifolium	Rattlesnake Master	2.64	12
Liatris pycnostachya	Prairie Blazingstar	2.64	12
Parthenium integrifolium	Wild Quinine	0.88	4
Penstemon digitalis	Smooth Penstemon	0.88	4
Rudbeckia hirta	Black-Eyed Susan	1.76	8
Rudbeckia triloba	Brown-Eyed Susan	0.88	4
Solidago rigida	Stiff Goldenrod	0.88	4
Tradescantia ohiensis	Spiderwort	1.76	8
Zizia aurea	Golden Alexanders	1.32	6
Legumes			
Astragalus canadensis	Canada Milk Vetch	0.88	4
Dalea candida	White Prairie Clover	3.52	16
Dalea purpurea	Purple Prairie Clover	4.41	20
Lespedeza capitata	Roundhead Bushclover	0.88	4

Do not include any additional cover crop or nurse crop as part of the Range Pasture or Short Grass Prairie seed mixes.

B.4 Detention Basin Seed Mix

Seed shall be native ecotypes. No improved vanet1es are allowed. Seed source shall be native ecotypes from Southeast Minnesota, Eastern Iowa, Southern Wisconsin, or Northern Illinois.

VARIETY	% BY WT.
FORBS (42.86%)	
Sweet Flag	1.43
Mud Plantain	.71
Nodding Onion	1.43
Canada Anemone	.36
Swamp Milkweed	5.00
New England Aster	.71
Flat-topped Aster	.34
False Aster	.34
Turtlehead	.57
Joe Pye Weed	.57
Boneset	.34
Cream/Bottle Gentian Mix	.71
Sneezeweed	.71
Early Sunflower	.71
Rose Mallow	2.86
Southern Blue Flag	2.86
Prairie Blazing Star	3.57
Great Blue LobeIla	.71
Marsh Betony	.71
Obedient Plant	.71
Mountain Mint	.7J
Black-eyed Susan	1.43
Sweet Black-eyed Susan	.36
Brown-eyed Susan	1.43
Compass Plant	2.86
Cup Plant	1.43
Prai rie Dock	2.14
Riddell's Goldenrod	.71
Bog Goldenrod	.34
Purple Meadow Rue	2.14
Blue Vervain	.71
Common Ironweed	1.43
Culver's Root	.34
Golden Alexanders	1.43
GRASSES (57.4%)	
Big Bluestem	8.57
American Sloughgrass	7.71

VARIETY	% BY WT.
Fringed Brome	5.14
Blue Joint Grass	.34
Bebb's Oval Sedge	1.43
Bristly Sedge	1.43
Porcupine Sedge	1.43
Common Hop Sedge	1.43
Common Fox Sedge	1.43
Brown Fox Sedge	1.43
Canada Wild Rye	5.14
Virginia Wild Rye	5.14
Reed Manna Grass	1.43
Common Rush	.71
Inland Rush	.29
Switch Grass	1.43
Dark-green Bulrush	.71
Wool Grass	.37
Great Bulrush	.7J
Indian Grass	9.43
Cord Grass	J .43

C Construction

Sow seeding mixtures according to standard spec 630.3.1(3) with a preference given to performing the Short Grass Prairie seeding after October 15 and with a preference given to performing Range Pasture seeding between September 1- October 1.

Dormant seeding after November 15 may be an option but would require additional coordination and instruction from the engineer. Dormant seeding must be approved, in writing, by the engineer.

Do not apply fertilizer to areas to be seeded with Seed Mixture, (Type).

Utilize Method C for Seeding Mixture, Shortgrass Prairie and perform seeding according to standard spec 630.3.3.3(3).

Seeding rate for Short Grass Prairie of 10 PLS pounds per acre and apply at a rate not less than 150 seeds per square foot.

Utilize Method A for Seeding Mixture, Range Pasture and perform seeding according to standard spec 630.3.3.3(3). Seed at 1/4" seeding depth.

Seeding rate for Range Pasture Mix of 50 pounds per acre.

Provide an initial germination and establishment period for the Seeding Mixture, (Type) according to Special Provision Section "Seeding Mixture (Type) Maintenance".

Guarantee the germination and vigorous growth of all Seeding Mixture, (Type). If germination and vigorous growth does not occur, contractor will be held responsible for making repairs, overseeding and/or re-seeding all areas that have not adequately germinated and demonstrated vigorous growth as directed by the engineer.

D Measurement
The department will measure Seeding Mixture (Type) by the pound, acceptably completed and according to standard spec 630.4.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.001	Seeding Mixture, Range Pasture	LB
SPV.0085.002	Seeding Mixture, Short Grass Prairie	LB
SPV.0085.004	Seeding Mixture, Detention Basin	LB

Payment is full compensation for providing, handling, and storing all seed; for providing the required culture and inoculating seed as specified; for preparing the seed bed, sowing, covering and firming the seed; and for work during the establishment period.

99. No Mow Lawn Seed, Item SPV.0085.003.

A Description
This work consists of furnishing and installing a No Mow Lawn Seed at the locations shown on the plans, accordance with standard spec 630, and as hereinafter provided.

B Materials
Seed shall conform to the following formulation as manufactured by the Prairie Nursery of Westfield, Wisconsin. Any substitution must have prior approval of the engineer.

NO MOW WITH ANNUAL RYE	**ORIGIN/GERM**
SR5130 Chewings Fescue-Festuca commutata-23.75%	OR-85%
Sheep Fescue-Festuca Ovina-23.44%	Canada-85%
Chariot Hard Fescue-Festuca longifolia-11.94%	OR-85%
Heron Hard Fescue-Festuca rubra-11.85%	OR-85%
Sea Link Creeping Red Fescue-Festuca rubra-11.82%	OR-85%
SR5250 Creeping Red Fescue-Festuca rubra-11.68%	OR-85%
Annual Ryegrass-Lolium multiflorum-3.95%	OR-90%

1.53% Inert matter
.02% other crop seed
.02% Weed Seed

C Construction
Do not complete seeding later than September 15 without written approval from the engineer.

Apply a seeding rate for the No Mow Lawn Seed as recommended by the seed mix provider and approved by the engineer. The plans estimate using a rate of 5 lbs/1000 sq. ft.; notify the engineer if a different rate is recommended by seed supplier.

D Measurement
The department will measure No Mow Lawn Seed by the pound, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.003	No Mow Lawn Seed	LB

Payment is full compensation for providing, handling, and storing all seed; for providing the required culture and inoculating seed as specified and as needed; and for preparing the seed bed, sowing, covering and firming the seed; for furnishing and installing all materials, including but not limited to seed.

100. Concrete Curb and Gutter 24-Inch Type D Special, Item SPV.0090.001.

A Description
Perform work according to the applicable provisions of standard spec 601 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Curb and Gutter (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.0090.001	Concrete Curb and Gutter 24-Inch Type D Special	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.

101. Sign Post, Item SPV.0090.003; Reflective Sign Post, Item SPV.0090.004.

A Description

This special provision describes furnishing and installing new sign posts, reflective sign posts, and or powder coated sign posts for signs. All signposts shall be round tubular steel and installed as shown in the plans.

B Materials

All materials shall conform to the standard specifications for hot rolled carbon sheet steel, commercial quality, ASTM A-570-GR-33 for zinc coated tubing to resist corrosion. The tube shall be 2-inch, schedule-40 and shall include end cap. Reflective sign post shall have two sheets of engineer grade yellow sheeting completely around pipe as shown in the plans.

C Construction

Install the signposts 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 final grade. Install all signs in a true vertical position conforming to the latest edition of the Manual on Uniform Traffic Control Devices. Also, locate all underground utilities prior to placing sign posts. Cut off excess length of post in the field to provide the desired sign clearance.

D Measurement

The department will measure (Type) Sign Post per length shown in the miscellaneous quantities by the linear 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.0090.003	Sign Post	LF
SPV.0090.004	Reflective Sign Post	LF

Payment is full compensation for furnishing and installing all necessary posts, reflective sheeting, finials, hardware and anchors. All materials damaged during construction shall be replaced with new items at no cost to the department.

102. Railing Steel Pedestrian B-13-847, Item SPV.0090.005; Railing Steel Pedestrian B-13-848, Item SPV.0090.006; Railing Steel Pedestrian R-13-309, Item SPV.0090.007; Railing Steel Pedestrian R-13-310, Item SPV.0090.008.

A Description

This special provision describes fabricating, galvanizing, coating and installing railing according to standard spec 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. Galvanize and coat railing assemblies with a two-coat system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B1 Coating System

B1.1 Galvanizing

Fabricate railings to meet the requirements of ASTM A385. After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Drill vent holes in members as required to facilitate galvanizing and drainage. Show location and size of vent holes on the shop drawings. Remove all burrs at component edges, corners and at holes and chamfer sharp edges before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed according to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when coated will produce unacceptable aesthetic and/or visual qualities, will not be permitted. Water quenching and chromate or other passivating treatments will not be permitted.

B1.2 Two Coat System

After galvanizing, coat all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints with a two coat system as hereinafter provided.

Clean all galvanized surfaces to be coated per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. Brush blast clean the cleaned surface per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation (1 mil minimum, 1.5 mils maximum) for adhesion of the tie coat. Remove wet storage stains prior to blasting per SSPC-SP16. Perform brush blasting at an angle of 30 to 60 degrees to the surface using air pressure no greater than 50 psi, and a soft abrasive such as Garnet. Steel shot and angular iron blasting grit will not be permitted. Brush blast the surface to produce a matte silver appearance. When brush blasting do not fracture the galvanized finish or remove any dry film thickness. Prior to application of the tie-coat, remove visible deposits of oil, grease and other contaminates from the surface per SSPC-SP1, and clean the brush blasted surface of dust, dirt and loose residue according to standard spec 517.

After cleaning and within 8 hours of blasting, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat per manufacturer's recommendations, matching the specified color shown on the plans. Use an approved top coat that is resistant to the effects of the sun and is suitable for a marine environment. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the coating manufacturer reviews the process to be used for surface preparation and application of the coating system with the coating applier. The review shall include a visit to the facility performing the work if requested by the coating manufacturer. Provide written confirmation, from the coating manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified coating manufacturers and products given below. An equivalent system may be used with the written approval of the engineer.

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
Sherwin Williams 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 847-330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5 Macropoxy 646	2.0 to 4.0	6
	Tie 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 to the project leader. 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 coating 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, thoroughly inspect all materials to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. Handle coated railing according to standard spec 517. If coating is damaged, 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 and conforming to ASTM A780. If damage is excessive, replace the railing assembly at no additional cost to the owner. 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 Pedestrian (structure) 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.0090.005	Railing Steel Pedestrian B-13-847	LF
SPV.0090.006	Railing Steel Pedestrian B-13-848	LF
SPV.0090.007	Railing Steel Pedestrian R-13-309	LF
SPV.0090.008	Railing Steel Pedestrian R-13-310	LF

Payment for Railing Steel Pedestrian is full compensation for providing, fabricating, transporting, and erecting the railing; for galvanizing and painting steel railing; for metal shims under the bases; and for providing and placing the anchor bolts.

103. Split Rail Fence, Item SPV.0090.010.

A Description
This special provision describes the furnishing and erecting of the split rail fence at the locations shown on the plans according to the details of the plans.

B Materials
Materials used in the work shall meet the requirements as specified below:

Wood posts and rails shall be #1 grade Western Red Cedar. The rails shall be 10 feet in length with a circumference of 12 inches and weigh 24 pounds. Posts shall be 6 feet 6 inches in length with a circumference of 18 inches and weigh 37 pounds. The posts shall conform to the dimensions described with a tolerance of plus two inches for length. Posts shall have pre-drilled holes for rails.

C Construction
Excavate post holes to the required depth and location as shown on the plans. Backfill shall be of suitable material, placed and compacted in layers about the post until the post is firmly embedded, plumb and true to alignment. If rock is encountered, necessary drilling or other means of excavation shall be employed.

D Measurement
The department will measure Split Rail Fence 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.0090.010	Split Rail Fence	LF

Payment is full compensation for furnishing all materials, for erecting fence, including all hauling, clearing and grubbing; for excavation of post holes, setting posts, placing rails; for removal and disposal of all debris, excess excavation and surplus materials.

104. Storm Sewer Pipe Reinforced Concrete Class IV 48-Inch Special Half Section, Item SPV.0090.011.

Perform the work under this item as shown in the plans and according to the applicable provisions of standard spec 523 and as detailed.

105. Landscape Protection Fence, Item SPV.0090.012.

A Description
This special provision describes furnishing and installing Landscape Protection Fence as shown on the plans and as hereinafter provided.

B Materials

Fence

Provide galvanized-steel chain-link fencing fabricated from minimum 2-inch opening, 0.148-inch diameter wire chain link fabric; with pipe posts, minimum 1.9-inch OD line posts, and 2-3/8-inch OD Corner and pull posts; with 1-5/8-inch OD top rails and 0.177-inch diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system. 4 feet height.

Signage

Provide shop fabricated, rigid plastic or metal sheet with attachment holes pre-punched and reinforced; legibly printed with nonfading lettering and as follows:
Size and Text: Landscape Protection Zone – Do Not Enter
Lettering: 3-inch high minimum, white characters on red background
The signage is considered incidental to the Landscape Protection Fence item and will not be paid for separately.

C Construction

Install Landscape Protection Fence along edges of protection zones in a manner that will prevent people from easily entering protected area. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation.

Erect fence before any construction activities commence and preserve in place until construction has concluded. Install and remove without harm to trees, shrubs, bark mulch bed(s) or other landscape materials or signage. If any landscape areas are disturbed or damaged, notify the engineer immediately.

Install fence to comply with ASTM F 567 and with manufacturer's written instructions. Set or drive posts into ground one-third the total height of the fence without concrete footings. Where a post is located on existing pavement or concrete to remain, provide appropriate means of post support acceptable to engineer.

Install signage in visible, prominent locations in a manner approved by the engineer. Install one sign spaced approximately every 20 feet and secured to fence.

Maintain Landscape Protection Fence and signage in good condition as acceptable to the engineer and remove only when construction operations are complete, equipment has been removed from the site, and final site and landscape restoration is underway.

D Measurement

The department will measure Landscape Protection Fence 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.0090.012	Landscape Protection Fence	LF

Payment is full compensation for providing, handling, and storing all material; for preparing the site, installation, and maintenance; for furnishing and installing all materials.

106. Select Fill for Sanitary Sewer, Item SPV.0090.201.

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 according 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.0090.201	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.

107. Rock Excavation Water Main, Item SPV.0090.203.

A Description
This special provision describes providing rock excavation according to standard spec 205 and as detailed herein.

B (Vacant)

C Construction
Classify rock excavation water main according to standard spec 205.2.3, except include rock boulders with a volume of a 1/2 cubic yard or more.

If rock, hardpan, or fragmented material is encountered, excavate the trench to a depth of at least 6 inches below the bottom of the pipe, including 6 inches below any bells or joints, and 3 feet greater than the outside diameter of the pipe, 1 1/2 feet on either side.

Place granular material under and around the pipe according to Granular Backfill for Water Main.

Keep the rock excavation dewatered until the pipe joints are secured and the pipes are backfilled.

Dispose of any surplus excavation.

D Measurement
The department will measure Rock Excavation Water Main by the linear foot, acceptably completed, along the centerline of the utility trench where rock excavation is required, regardless of the vertical depth from the top of rock to the bottom of the excavated rock.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.203	Rock Excavation Water Main	LF

Payment is full compensation for furnishing all rock excavation, dewatering and disposal of surplus material. Backfill will be paid separately.

108. Water Main, 6-Inch, Item SPV.0090.204; 8-Inch, Item SPV.0090.205; 12-Inch, Item SPV.0090.206.

A Description
This special provision describes furnishing and installing water main (size) according to Article 704.3 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

B Materials
Furnish materials according to Article 702 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

C Construction
Install water main according 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.0090.204	Water Main, 6-Inch	LF
SPV.0090.205	Water Main, 8-Inch	
SPV.0090.206	Water Main, 12-Inch	

Payment is full compensation for furnishing all materials, excavation, dewatering, bedding, laying, jointing, select fill backfilling, and maintenance of surface; for furnishing all special connections to existing mains, fittings, bends, tees, and appurtenances.

109. Water Main Insulation, Item SPV.0090.207.

A Description
This special provision describes furnishing and installing Styrofoam insulation in order to insulate water mains and/or water service laterals according to Article 704.17 of the City of Madison Standard Specification for Public Works Construction – Latest Edition.

B Materials
Provide insulation according to Article 702 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 according to Article 703 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.0090.207	Water Main Insulation	LF

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

110. Remove Sanitary Sewer Pipe, Item SPV.0090.208.

A Description

Remove sanitary sewer pipe within the Right of Way as called for on the plan set according to Article 203 of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. "Pipe to be removed that is in the same trench as a new pipe will not be compensated as remove pipe and will be considered to be incidental to the new pipe installation." The same trench will be considered to be any pipe located with 3' horizontally of the pipe being installed. This includes unidentified pipe that is smaller than 10 inches in diameter. If the pipe to be removed ends along a pipe run, as opposed to ending at a structure, the contractor will end the removal with a saw cut of the existing pipe and plug the remaining end as directed by the engineer. Plugging the structure or pipe to which the pipe being removed was connected will be compensated for under a separate bid item (Abandon Sanitary Sewer - Pipe Plug, Item SPV.0060.214). If the contractor, for his convenience, decides to remove a section of pipe to a full section, the additional removal will not be given consideration for additional compensation.

B (Vacant)

C Construction

Contractor shall saw cut the pipe ends at the pipe removal limits if the pipe as a whole is not called for removal. All pipe removed shall be disposed of by the contractor. All trenches, holes and pits resulting from the removal or abandoning of pipe and other miscellaneous structures will be filled with satisfactory soil or select fill, placed in layers not more than 12 inches in thickness. Select backfill will be required for any structure or pipe within the roadway that will not be filled with another structure or pipe. All fill material required will be considered incidental to the removal or abandonment. Each layer will be thoroughly compacted by means of approved tampers, rollers or vibrators. Water will not be used to expedite settlement of backfill except with the approval of the engineer; this provision shall not be construed to require an excavation to be dewatered before placing backfill, if backfilling can be performed in such manner as to displace the water or prevent its entrapment in the backfill.

D Measurement

The department will measure Remove Sanitary Sewer Pipe by the linear foot, measured along the centerline of the sanitary sewer pipe, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.208	Remove Sanitary Sewer Pipe	LF

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work. Payment will include the Select Fill material required to backfill the trench created by pipe being removed.

111. Sanitary Sewer Pipe PVC, 8-Inch, Item SPV.0090.210; 10-Inch, Item SPV.0090.212.

A Description

This special provision describes installing Sanitary Sewer Pipe PVC (size) 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 set.

Provide elastomeric or solvent cement joints as recommended by the manufacturer.

Assemble solvent cement joints using solvent cement obtained from the pipe manufacturer, which conforms to the requirements of ASTM D2564.

The assembled joint will be required to pass the performance tests as required in ASTM D3212. Sewer mains deeper than 12’ will be required to meet the standards or ASTM D3034 SDR-26.

C Construction

Install the sanitary sewer pipe according 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/water main/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 according 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 according to Article 501 of the City Standard Specifications for Public Works Construction - Latest Edition.

D Measurement

The department will measure Sanitary Sewer Pipe PVC, (size) in length by the linear foot, acceptably completed.

Sanitary Sewer Pipe PVC, (Size) will be measured through sanitary sewer structures, from the center of sanitary sewer casting to center of sanitary sewer casting. Sanitary Sewer Pipe PVC (Size) 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.0090.210	Sanitary Sewer Pipe PVC, 8-Inch	LF
SPV.0090.212	Sanitary Sewer Pipe PVC, 10-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.

112. Sanitary Sewer Pressure Pipe (C900), 10-Inch, Item SPV.0090.211.

A Description

Work under this item will include installing Pressure sewer pipe (10”) at the alignment and grades shown on the plan set.

Conduct a low pressure air test as specified in Article 501.3(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition on all sections of the sewer mainline. A passing test is required in order to be acceptable. Include all costs associated with the testing of the gravity main in the contract unit price bid for this item.

Maintain the normal flow of wastewater at all times during replacement of the existing sanitary sewer main with the new sanitary sewer main. Payment for furnishing all bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout the sewer construction, is under SPV.0105.200 Wastewater Control.

B Materials

Provide all sewer pipe and fittings of solid-wall Poly (Vinyl Chloride) (PVC) conforming to the requirements of the Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, AWWA C900 Class 150, DR-18.

Provide joints with integral bell with elastomeric gaskets, or couplings with elastomeric gaskets. Provide solvent cement as recommended by the manufacturer.

C Construction

Install sewer pipe according to all applicable provisions of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Remove all abandon or existing material located within 3' of the new sanitary sewer alignment. Removal of material (including existing sanitary sewer/water main/etc) is incidental to this bid item.

Use Ductile Iron Wye pressure rated fittings to install new laterals to the new main as called for on the plans; provide and place according to Article 503 of Standard Specifications for Public Works Construction – Latest Edition.

D Measurement

The department will measure Sanitary Sewer Pressure Pipe (C900), 10-Inch by the linear foot, acceptably completed, to the nearest whole foot of each of the various types, classes and sizes of pipe installed at the various depths, measured along the centerline of the pipe center to center of junctions and fittings. The quantity to be paid for includes construction through Sewer Access Structures, from center of Sewer Access Structure casting to center of Sewer Access Structure casting. Main extensions continuing through Sewer Access Structures will be measured from center of Sewer Access Structure casting to the end of pipe. The depths of installation will be measured in feet from the invert of the sewer pipe to the elevation of the existing ground. There will be no deductions from the measured lengths for wye installations.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.211	Sanitary Sewer Pressure Pipe (C900), 10-Inch	LF

Payment is full compensation for furnishing all materials, except wyes, 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.

113. Electrical Wire Lighting 14-3 UF Grounded, Item, SPV.0090.250.

A Description

This special provision describes furnishing and installing electrical wire lighting, 14-3 type UF cable according to standard spec 655 and these specifications.

B Material

Furnish type UF cable with ground including the number and size of conductors as the plans show. Use cable conforming to ANSI/UL 493.

C Construction

Furnish and install one cable to each LED luminaire from base of pole to the luminaire.

D Measurement

The department will measure Electrical Wire Lighting 14-3 Grounded by the linear foot acceptably completed, measured from the splice with the system lighting circuit in the pole base to the connection terminals in the luminaire.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.250	Electrical Wire Lighting 14-3 Grounded	LF

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

114. Loop Detector Lead-In Cable Special, Item, SPV.0090.251.

A Description

This special provision describes furnishing and installing loop detector lead in cable according to standard spec 655.

B Materials

Furnish 0.25 inch diameter, 4-conductor, #18 AWG, waterproof, shielded, polypropylene insulation cable, with HDPE outer jacket. Meeting IMSA specifications. Provide loop detector lead in cable to be smooth on the outside without any ripples or ribbing from cable wires.

C Construction

Furnish and install one cable for every two loops from each loop handhole to the intersection control cabinet via the most direct route, without intermediate splicing. Most of the loops will be new and are shown on the plan. Install cable for some existing loops. Verify cable needs with the City of Madison Traffic Engineering staff before completing intersection wiring.

D Measurement
The department will measure Loop Detector Lead-In Cable Special by the linear foot, acceptably completed, measured from the splice with the loop lead in wire along the centerline of the conduit to its connection with terminals in the control cabinet.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.251	Loop Detector Lead-In Cable Special	LF

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

115. Fiber Optic Cable 72-Count, Item SPV.0090.252.

A Description
This special provision describes furnishing and installing 72-count as specified in standard spec 651, 655, 670, and 678, as shown on the plans, and as provided hereinafter.

B Materials
Furnish single mode (SM), lt armored, loose-tube 72 count fiber optic cable rated for outdoor use.

All fiber optic cable glass shall be supplied by the same manufacturer and shall be part of a fiber optic cable utilizing loose tube construction with the following properties:

Parameters	**Single Mode**
Type	Step Index
Core Diameter	8.3 μm (nominal)
Cladding Diameter	125 ± 1.0 μm
Core to Cladding Offset	<0.8 μm
Coating Diameter	245 ± 10 μm
Cladding Non-Circularity	≤1.0%
Proof Tensile Test	0.7 Gpa
Attenuation	@ 1310 nm ≤ 0.4 dB/km, @ 1550 nm ≤ 0.3 dB/km
Chromatic Dispersion Zero Dispersion	1310 ± nm (centered on a nominal operating wavelength of 1310)
Zero Dispersion Slope	≤ 0.092 ps/nm^2/km
Maximum Dispersion	≤ 2.8 ps/nm^2/km at 1285 – 1330 nm
Cut-Off Wavelength	1260 nm

C Construction
Follow all manufacturer's recommended installation procedures. Contact Mike Christoph at the City of Madison Traffic Engineering shop at (608) 266-9031 a minimum of seven working days in advance to coordinate installing equipment in existing traffic signal cabinet.

D Measurement
The department will measure Fiber Optic Cable-72-Count 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.0090.252	Fiber Optic Cable 72-Count	LF

Payment is full compensation for furnishing and installing the fiber optic cable.

116. Survey Project 5992-09-31, Item SPV.0105.001.

A Description
This special provision describes modifying standard spec 105.6 and 650 and as follows to define the requirements for construction staking for this contract.

Replace standard spec 105.6.2 with the following:

The department will not perform any construction staking for this contract. Obtain engineer's approval prior to performing all survey required to lay out and construct the work under this contract.

The survey includes establishing horizontal and vertical position for all aspects of construction including but not limited to storm sewer, subgrade, base, curb, gutter, curb and gutter, pipe culverts, drainage structures, all structures (bridge, retaining wall, box culvert) layout, pavement, pavement markings (temporary and permanent), barriers (temporary and permanent), street lighting, electrical installations, supplemental control, slope stakes, traffic signals, parking lots, paths, utilities, conduit, landscaping elements, installation of community sensitive design elements, traffic control items, fencing/railing, etc.

The department may choose to perform quality assurance surveys during the project. These quality assurance surveys do not relieve the responsibility for performing all survey work required to lay out and construct the work under this contract.

Delete standard spec 650.1.

B (Vacant)

C Construction

Replace standard spec 650.3.1 (5) and 650.3.1 (6) with the following:

Perform survey work using global positioning or conventional methods. Establish additional benchmarks and control points as necessary to support the method of operation, or as the engineer directs. Do not use global positioning methods to establish the following:

1. Concrete pavement vertical locations.
2. Curb, gutter, and curb and gutter vertical locations.
3. Storm Sewer layout horizontal or vertical locations, including but not limited to structure centers, offsets, access openings, rim and invert elevations.

Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. This includes, but is not limited to:

1. Raw data files
2. Digital stakeout reports
3. Control check reports
4. Supplemental control files (along with method used to establish coordinates and elevation)
5. Calibration report

Make the survey notes and computations available to the engineer within 24 hours as the work progresses unless a longer period is approved by the engineer.

Replace standard spec 650.3.3.1 with the following:

Under the Survey Project bid item, global positioning system (GPS) machine guidance for conventional subgrade staking on all or part of the work may be substituted. The engineer may require reverting to conventional subgrade staking methods for all or part of the work at any point during construction if, in the engineer's opinion, the GPS machine guidance is producing unacceptable results.

Replace standard spec 650.3.3.3.4.1 with the following:

The department will provide the contractor staking packet as described in the Construction and Materials Manual (CMM) 7.10. At any time after the contract is awarded, the available survey and design information may be requested. The department will provide that information within 5 business days of receiving the contractor’s request. The department incurs no additional liability beyond that specified in standard spec105.6 or standard spec 650 by having provided this additional information.

Supplement standard spec 650.3.3.3.6.2 with the following:

Record all subgrade elevation checks and submit a hard copy to the engineer within 24 hours or as requested by the engineer.

D Measurement
Replace standard spec 650.4 with the following:

The department will measure Survey Project 5992-09-31 as a separate single lump sum unit of work, acceptably completed.

E Payment
Replace standard spec 650.5 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.001	Survey Project 5992-09-31	LS

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract. The department will not make final payment for any staking item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 24 hours of completing this work. The department will deduct from payments due the contractor for the additional costs specified in 105.6. No additional payments will be made for restaking due to construction disturbance and knock-outs.

117. Detention Pond Maintenance, Item SPV.0105.002.

A Description
This special provision describes maintaining seeding at detention ponds.

B Materials
Provide any necessary replacement seed, topsoil or erosion control materials in kind.

C Construction
Begin maintenance of detention ponds immediately upon installation of the seed bed and maintain through project completion.

Perform all maintenance activities under the supervision of a qualified landscape maintenance specialist with a minimum of five years of experience performing landscape maintenance on projects of a similar size and scope. Submit qualification data of relevant project experience and certification as a Landscape Industry Certified Technician for the qualified landscape maintenance specialist to the engineer.

Provide maintenance activities necessary to keep the detention pond seeded areas in a healthy and flourishing condition including, but not limited to the following general maintenance requirements:

- Mowing for general weed control. Controlled burning of seeded areas is not permitted. Remove all trash and debris prior to mowing.
- Hand application of post-emergence herbicide according to standard spec 632.2.12 to eradicate perennial weeds. Treat only on windless days using gloved hand wiping method. Do not broadcast herbicide. Do not hand pull weeds. Eradicate weed species provided in standard spec 630.3.3.6.
- Fill any washouts, gullies or rills caused by site erosion with topsoil and reseed in kind.
- Replace any non-growing seeded areas as determined by the engineer.

Submit a written report to engineer documenting each maintenance visit. The report shall document all maintenance activities performed including, but not limited to:

- Time and date of maintenance visit
- List of staff members present for maintenance visit
- Duration of maintenance visit
- Description of maintenance activities performed during maintenance visit
- Condition of plantings at time of maintenance visit

Identification of any adverse conditions affecting plantings and/or landscape materials, including a proposed course of action for correcting adverse conditions.

In addition to the general maintenance requirements, specific detention pond maintenance activities and number of visits will vary depending on the calendar year. Perform the following required maintenance activities and visits as outlined below between April 15 and October 15 of each growing season.

Growing Season

Mowing:
Mow all vegetation using a flail type mower to a height of 6 inches once vegetation has reached 10-12 inches in height. If vegetation has reached a height greater than 12 inches prior to mowing, all vegetation cuttings must be raked and removed from the site. For all mowings, carefully bag and remove all cuttings of seed-bearing weeds from the site to prevent dispersal of weed seeds. Mow all vegetation 5 times at each detention pond in the first growing season.

Weeding:
Monitor the establishment of the native seeding and for the presence of weeds. Eradicate any perennial weeds by spot mowing with a string trimmer or hand applying herbicide by the gloved hand wiping method. Visit, provide written documentation and perform necessary weeding maintenance activities at each detention pond every two weeks during the first growing season. A minimum of 12 visits are required at each pond during the first growing season.

Any adjustments to the maintenance activities and time periods provided above shall be approved in writing by the engineer.

If the qualified landscape maintenance specialist fails to perform any of the required maintenance visits, as specified above, the department will assess daily damages in an amount the special provisions specify for Landscape Planting Surveillance and Care Cycles to cover the cost of performing the work with other forces. The department will assess these damages for each day maintenance visits remain incomplete, except when the engineer extends the required time period.

D Measurement
The department will measure Detention Pond Maintenance as a lump sum unit of work, completed according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.002	Detention Pond Maintenance	LS

Payment is full compensation for furnishing all required equipment, maintenance visits, written documentation of all visits; for herbicide; and for maintaining and replacing seed, erosion control and landscape materials.

118. Construction Site Maintenance – Mowing, SPV.0105.003.

A Description
Work consists of keeping the project site clean and kept up by mowing permanently seeded or sodded areas within the project limits for the duration of the project.

B (Vacant)

C Construction
Set mower height at 3 inches. Mow turf when growth height is at 6 inches maximum.

D Measurement
The department will measure Construction Site Maintenance – Mowing by the lump sum, 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.0105.003	Construction Site Maintenance – Mowing	LS

Payment for Construction Site Maintenance – Mowing bid item is full compensation for transporting mower equipment, fuel and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

119. Salvage, Store and Re-Set Landscape Cobbles, Item SPV.0105.004.

A Description
This special provision describes carefully removing, salvaging, safely storing and re-setting landscape cobbles that form the edge condition of an existing planting bed as shown on the plans and as hereinafter provided.

B Materials
Existing rounded granite fieldstone cobbles, approximately 8-14" x 8-14" each.

C Construction
Carefully remove existing rounded granite fieldstone cobbles that form the outside edge of the decorative landscape bed to the extent necessary to install Landscape Protection Fence and to ensure that existing stone cobble material is not damaged or destroyed during construction.

Inventory cobbles and document the total quantity of cobbles salvaged.

Stack landscape cobbles on a wooden palette, remove from the project site and store in a safe, secure location of the contractor's designation.

After construction is complete and landscape restoration efforts commence, return palletized cobbles to the site and re-install in a manner consistent with existing installation in the same location.

D Measurement
The department will measure Salvage, Store and Re-Set Landscape Cobbles by the lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.004	Salvage, Store and Re-Set Landscape Cobbles	LS

Payment is full compensation for providing, handling, and storing all material; for preparing the site, removing, palletizing, transporting, storing and returning materials to the site; and for furnishing and installing all materials.

120. Wastewater Control 300 GPM, Item SPV.0105.200.

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 300 gallons per minute for bid item Wastewater Control 300 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 according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.200	Wastewater Control 300 GPM	LS

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

121. Construction Staking Sanitary Sewer, Item SPV.0105.201.

A Description
Preform work according to the applicable provisions of standard spec 650.

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 according 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 according 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.0105.201	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.

122. Construction Staking Water Main, Item SPV.0105.202.

A Description
Preform work according to the applicable provisions of standard spec 650.

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 according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.202	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.

123. Project Dewatering (Sanitary Sewer), Item SPV.0105.203.

A Description

This section describes dewatering the site during construction or working with the water on-site in a manner that allows the project to be constructed according to the plans and specifications. This item includes removal of any water entering a trench or excavation including but not limited to groundwater, surface water runoff and/or trench dewatering.

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, or alternate method approved by the engineer, to settle solids prior to discharge into the storm sewer for clean water and into the designated sanitary sewer for potentially contaminated water.

Provide all equipment and personnel necessary to conduct dewatering operations as required for the proper completion of the work. Prepare a dewatering plan and submit it to the engineer for review and approval prior to starting dewatering operations. The plan shall include a description of the proposed dewatering methods and maps or drawings indicating the location of the dewatering facilities and points of surface discharge of the water.

The contractor is solely responsible for choosing a method of water control that is compatible with the constraints defined. The contractor is responsible for the adequacy of the water control system and will take all necessary measures to ensure that the water control operation will not endanger or damage any existing adjacent utility or structure.

Design, install and operate the method or methods of water control in such a manner as to provide satisfactory working conditions and to maintain the progress of work. Design the methods and systems so as to avoid settlement or damage to adjacent property according to the applicable legislative statutes and judicial decisions of the State of Wisconsin. All required pumping, drainage and disposal of water will be done 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.

Review and approval of the dewatering plan does not relieve the contractor of the dewatering requirements stated in these specifications. The engineer assumes no liability for the performance or safety of the dewatering system.

B Materials

Obtain all applicable State of Wisconsin permits for all groundwater control wells including, if necessary, the Wisconsin Department of Natural Resources (WDNR). Drill and seal all wells according to requirements of the WDNR for installing and abandoning wells. According 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 according 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

File a copy of the permit with the City of Madison 48 hours prior to commencement of dewatering.

C Construction

The contractor shall be solely responsible for choosing a method of groundwater control which is compatible with the constraints defined. The contractor shall be 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.

Water shall not be allowed in trenches while pipe is being laid.

The method or methods shall be designed, installed and operated in such a manner to provide satisfactory working conditions and to maintain the progress of work. Design the methods and systems so as to avoid settlement or damage to adjacent property according to the applicable legislative statutes and judicial decisions of the State of Wisconsin. Perform all required pumping, drainage and disposal of groundwater without damaging adjacent property or structures, or the operations of other contractors and without interfering with the access rights of public or private parties.

No masonry shall be installed in water nor shall water be allowed to rise over masonry or concrete if 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.

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 a "quick" condition at the trench bottom. Where silty sands or other impervious soils are encountered at and/or below the pipe zone, the dewatering equipment must be adequate to relieve the groundwater pressure below the impervious soil layer and accomplish sufficient drainage of the impervious soils to provide a stable 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 into the storm sewer system.

Notify the engineer at least three days in advance of any proposed changes to the dewatering plan.

Properly remove and/or abandon dewatering wells. Remove and/ or abandon wells according to all state and local regulations.

Obtain permission to use any storm sewers, or drains, for groundwater disposal purposes from the City of Madison. It shall be the contractors' responsibility to identify and obtain any permits required for the discharge of groundwater to the surface or to a sewerage system. Do not cause flooding by over-loading or blocking up the flow in the drainage facilities, and leave the facilities unrestricted and as clean as originally found. Repair all damage to facilities or restore as directed by the City of Madison Engineering Department, at no cost to the department.

Any flooding or erosion damage caused by dewatering operations is the responsibility of the contractor. If flooding or erosion damage occurs, take immediate steps to eliminate those conditions and to correct any damage. The control of all surface and subsurface water, ice, and snow are considered part of the dewatering. Erosion control shall be exercised at all times, including the placement of silt fences, sedimentation basins and any other devices necessary for proper control.

Provide stand-by equipment to maintain continuous dewatering in the event of mechanical breakdown to part of the system.

The contractor is responsible for removal and/or abandonment of dewatering wells. Removal and/or abandonment shall conform to all state and local regulations.

D Measurement
The department will measure Project Dewatering as a single complete lump sum unit of work, completed according to the contract and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.203	Project Dewatering(Sanitary Sewer)	LS

Payment is full compensation for furnishing all work necessary for pumping, settling and discharging water; for paying required permit fees; and for eliminating and correcting all flooding or erosion damage caused by dewatering operations. No disposal fees are required by the City of Madison for discharge to the storm sewer system. The contractor shall pay all other permit fees.

124. Optical Signal Preempt, Item SPV.0105.250.

A Description
This special provision describes furnishing and installing optical signal preempt equipment for the three signalized intersections. The acceptability of alternate equipment rests solely with the City of Madison Traffic Engineering Division.

B Materials
Provide the following material:

1. Two channel discriminator for each of three intersections
2. Optical detectors, eight total.
3. Card rack for each intersection, three total.
4. Detector cable as necessary.
5. Cables and auxiliary equipment as necessary for a complete operating system.

C Construction
Install detectors on the top horizontal member of monotube arms, between the first and second traffic signal head, and as otherwise shown on the plan or directed by Madison Traffic Engineering.

The detectors will generally be on the far side of the intersection, and aimed at approaching traffic, as further directed by Madison Traffic Engineering staff. Install detector cable from the detector to the control cabinet at each intersection, using the shortest path.

All installation methods to be consistent with the manufacturer's instructions. Card rack and discriminator installation, as well as cabinet connections, will be made by City of Madison Traffic Engineering staff.

D Measurement
The department will measure Optical Signal Preempt as a single lump sum unit of work for optical signal preempt, 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.0105.250	Optical Signal Preempt	LS

Payment is full compensation furnishing and installing detectors and cable; for furnishing and delivering discriminators, card racks, cables and miscellaneous materials to the city Traffic Engineering Field Office, 1120 Sayle Street.

125. Temporary Traffic Signals (CTH PD & South High Point), Item SPV.0105.251; Temporary Traffic Signals (CTH PD & Maple Grove), Item SPV.0105.252.

A Description

This special provision describes installing temporary traffic signals for intersections, using overhead electrical wiring to temporary traffic signal poles and temporary supports, according to standard spec 661 and as amended herein.

The City of Madison traffic signal personnel will perform the traffic signal inspection.

B Materials

Furnish and use materials that are according to standard spec 661.2 and as amended herein.

Furnish and install Optical signal preempt for the temporary signals. The northbound and southbound approach directions each need to be detected and brought back individually to the signal control cabinet.

B.1 Luminaires

Furnish and install luminaire arms and luminaries conforming to the pertinent requirements of standard spec 657 and 659. The luminaries shall be 250 watt, full cutoff, high-pressure sodium and shall be furnished with photo electric cells to turn the luminaire on and off.

B.2 Signal Poles and Signal Faces

Furnish new or used poles and traffic signal standards for use in temporary signals conforming to the pertinent requirements of standard spec 657 and 661. Furnish signal faces according to standard spec 661.2.2.2.

B.3 Pedestrian Push Buttons

Furnish pedestrian push buttons conforming to standard spec 658.

B.4 Signal Cabinet

Furnish new or equivalent to new materials as specified in standard spec 661.2 and as follows:

B.5 Controller
Furnish a new or equivalent to new Econolite ASC3-2100 controller with Telemetry Module. The controller shall be compatible with the City of Madison closed loop system (CLS).

B.6 Conflict Monitor
Furnish a new or equivalent to new NEMA+ 12-Channel Signal Conflict Monitor, with LCD display, and an Ejector Tab card release on side of card.

Provide keys to the temporary signal control cabinet to the City of Madison in addition to other required keys according to standard spec 661.2.1.

C Construction
C.1 General
The City of Madison will load the timing programs into the controller. Do not use new permanent signal conduit for temporary signal wiring. Provide horizontal and vertical clearance between sidewalks and guy wires.

Arrange for all required electrical service modifications with the utility. Pay all utility company installation costs for modifications required to maintain the Temporary Traffic Signal. The City of Madison will pay for energy costs.

Locate and avoid all underground and aboveground utilities and structures. Install temporary supports as required to avoid conflicts with proposed curb and gutter, sidewalk, and traffic signal poles. The engineer will approve the final location of wood poles prior to installation.

Use of self-supporting poles will likely be required due to limited right-of-way limitations and depending on contractor operations.

Maintain temporary signals throughout the construction of the project, until such time that the new signals are operational and have been accepted by, and turned over to the city.

C.2 Existing City Equipment
City forces will remove all existing signal equipment after temporary signals are in place. Contact Michael Christoph at (608) 266- 9031 to coordinate signal removals.

C.3 Signal Heads
Install signal heads for the same vehicle travel direction at a minimum of 11 feet from each other. Provide pedestrian signals for each crosswalk open to pedestrians and locate them so that they are clearly visible to pedestrians prior to and during their crossing. Move signal heads as necessary or as directed by the engineer.

C.4 Pedestrian Push Buttons
Install pedestrian push buttons for pedestrian crossings. Mount push buttons so that they are wheelchair accessible from temporary crosswalks. Install pedestrian push buttons as required by the MUTCD chapter 4.

C.5 Luminaires
Orient luminaries as shown on the plans to illuminate both traffic lanes and sidewalks on both sides of the respective street.

C.6 Cabinet
Provide a representative of the supplier of their cabinet on site at the time of the turn on. Install equipment in the cabinet as follows:

C.6.1 Controller
Install the controller and ensure that it is operational as part of the City of Madison closed loop system.

C.7 Maintenance
When a signal installation is not in operation, hood, turn, or take down the signal head(s) to clearly indicate that the signal is not in operation. (See MUTCD 4D-1).

C.8 Pre-emption Hardware, Cable, and Equipment
Install detector cards, sensors, cables, and all required ancillary equipment, appurtenances and mounting hardware at the temporary signals to provide a fully functioning pre-emption system. Arrange testing of the pre-emption system with Mike Christoph, (608) 266-9031, before turn-on of the temporary signal.

C.9 Contractor Qualifications
Demonstrate the ability to operate all required traffic signal equipment listed in this special provision for the engineer and the City of Madison prior to starting work. Provide proof of the ability to obtain all required traffic signal equipment listed in this special provision to the engineer and the City of Madison prior to starting work.

D Measurement
The department will measure Temporary Traffic Signals (Location), completed according to the contract and accepted, as a single complete lump sum unit of work, and according to standard spec 661.4.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.251	Temporary Traffic Signals (CTH PD & South High Point)	LS
SPV.0105.252	Temporary Traffic Signals (CTH PD & Maple Grove)	LS

Payment is full compensation according to standard spec 661.5.

126. Wall Modular Block Gravity LRFD, Item SPV.0165.001.

A Description

This special provision describes designing, furnishing materials and erecting a permanent earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years minimum.

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Modular Block Gravity Wall systems (Modular Block Gravity Walls). Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The 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 facing units shall be furnished to the engineer at least 14 days prior to the project delivery.

The department maintains a list of pre-approved Modular Block Gravity Wall systems. To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid opening date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared according to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section 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 submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit electronically to the engineer and Bureau of Structures for review and acceptance. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and

calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the Modular Block Gravity Wall shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 6th Edition 2012*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined according to Table 11.5.7-1 LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer.

Walls shall be designed for a minimum live load surcharge of 100 psf according to Chapter 14 of the WisDOT LRFD Bridge Manual or as shown 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 Ratio (CDR) for sliding, eccentricity, and bearing checks is provided by the department and are provided on the wall plans.

The design of the Modular Block Gravity Wall by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. Internal stability shall also be considered at each block level. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. The width of the modular block from front face to back face of the wall shall be included in the design computations and shown on the wall shop drawings. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

Facing units shall be designed according to AASHTO LRFD 11.10.2.3.

The minimum embedment of the wall shall be 1 foot 6 inches, or as given on the contract plan. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad. Additional embedment may be detailed by the contractor, but will not be measured for payment.

The leveling pad shall be as wide as the proposed blocks plus 6-inches, with 6-inches of the leveling pad extending beyond the front face of the blocks.

Wall facing units shall be installed on concrete leveling pads or base aggregate leveling pad. The bottom row of blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad.

The concrete leveling pad shall be as wide as the proposed blocks plus six inches, with six inches of the leveling pad extending beyond the front face of the blocks. The minimum thickness of the leveling pad shall be 6-inches. A concrete leveling pad is required for the following scenarios:

a. When the wall height measured from the top of the leveling pad to the top of the wall exceeds 5 feet at any point along the entire wall length.
b. A structure number has been assigned (such as R-XX-XXX), regardless of wall height.

A base aggregate leveling pad shall be used when a concrete leveling pad is not required. The base aggregate leveling pad shall be as wide as the blocks plus 12 inches, and the modular blocks shall be centered on the leveling pad. The minimum thickness of the leveling pad shall be 12-inches after compaction. The leveling pad shall be made from base aggregate dense 1 1/4-inch in conformance with standard spec 305.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing

Wall facing units shall consist of precast modular concrete blocks. All units shall incorporate a mechanism or devices that develop a mechanical connection between vertical block layers. Units that are cracked, chipped, or have other imperfections according to ASTM C1372, or have excessive efflorescence shall not be used within the wall. A single block type and style shall be used throughout each wall. The color and surface texture of the block shall be as given on the plan or chosen by the engineer.

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall unless a cast-in-place concrete cap is shown on the plans. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and appearance that complement the remainder of the wall. The vertical dimension of the cap shall not be less than 3 1/2 inches. Expansion joints shall be placed in the cap to correspond with each 24 inch change in vertical wall height and at maximum spacing of 10 feet.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer according to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. The minimum allowed thickness of any other portions of the block is 1 3/4 inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

Cementitious materials and aggregates for modular blocks shall conform to the requirements of ASTM C1372 Section 4.1 and 4.2. Modular blocks shall meet the following requirements.

Test	Method	Requirement
Compressive Strength (psi)	ASTM C140	5000 min.
Water Absorption (%)	ASTM C140	6 max.
Freeze-Thaw Loss (%) 40 cycles, 5 of 5 samples 50 cycles, 4 of 5 samples	ASTM C1262[1]	 1.0 max.[2] 1.5 max.[2]

[1] Test shall be run using a 3% saline solution.
[2] Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable.

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducting the sampling and testing, the type of block, the date sampled, the name of the person who conducted the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. The tests should have been conducted not more than 18 months prior to delivery. A lot shall not exceed 5000 blocks or fraction thereof produced in day. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at no expense to the department.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. At no expense to the department, the contractor shall remove all rejected blocks from the project.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not conduct freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor shall remove from the project site all blocks from the failed lot not installed in the finished work at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

Wall facing units may consist of precast modular concrete blocks produced by a wet cast process. The concrete blocks shall have a minimum strength of 4000 psi at 28 days. The concrete for the blocks shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the blocks shall meet the requirements of standard spec 501. Wall facing units produced by a wet cast process need not be certified as to absorption and freeze-thaw requirements.

B.3.2 Backfill

Furnish and place backfill for Modular Block Gravity Walls as shown on the plans and as hereinafter provided.

Wall Backfill, Type A, shall comply with the requirements for Coarse Aggregate No. 1 as given in standard spec 501.2.5.4.4. All backfill placed within a zone from the top of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

Backfill placed between retained soil and Type A backfill shall comply with the requirements for Grade 1 Granular Backfill as contained in 209.2.2 of the Standard Specifications. Wall Backfill, Type A, may be used as retained backfill.

B.3.3 Miscellaneous

If plans show sections of cast in place concrete cap or coping, use poured concrete Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

Use a wall leveling pad that consists of poured concrete, Grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

If pins are used to align modular block facing units, they shall consist of a non-degrading polymer, or hot dipping galvanized steel and be made for the express use with the modular block units supplied, to develop mechanical interlock between facing unit block layers. Connecting pins shall be capable of holding the wall in the proper position during

backfilling. Furnish documentation that establishes and substantiates the design life of such devices.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the Modular Block Gravity Wall and the leveling pad shall be according to standard spec 206. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back face of modular blocks. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the wall facing units.

C.2 Compaction

Compact wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the modular blocks.

C.3 Wall Components

Erect wall facing units and other associated elements according to the wall manufacturer's construction guide and to the lines, elevations, batter, and tolerances as shown on the plans. Center the initial layer of facing units on the leveling pad; then level them and properly align them. Fill formed voids or openings in the facing units with wall backfill, Type A. Remove all debris on the top of each layer of facing units, before placing the next layer of facing units.

Install all pins, rods, clips, or other devices used to develop mechanical interlock between facing unit layers according to the manufacturer's directions.

C.4 Geotechnical Information
Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement
The department will measure Wall Modular Block Gravity LRFD by the square foot, acceptably completed, measured as the vertical area within the pay limits the contract plans show. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.001	Wall Modular Block Gravity LRFD	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings and leveling pad; constructing the retaining system including drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, and for performing compaction testing.

Parapets, railings, 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.
(20150824)

127. Pavement Cleanup Project 5992-09-31, Item SPV.0170.001.

A Description
This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site.

B Materials
B.1 Pavement Cleanup
Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Utilize vacuum equipment with a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified herein or approved by the engineer.

C Construction

C.1 Pavement Cleanup

Keep all pavements, curb lanes and gutters both closed and open to public traffic within the job-site boundaries free of dust and debris generated from any activity under the contract. Keep all pavements, curb lanes and gutters adjacent to the project free of dust and debris that are affected by land disturbing, dust generating activities, as defined in the contractor's dust control implementation plan.

Conduct sweepings as the engineer directs or approves, to deal with dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Respond to emergency sweeping requests within 4 hours.

If the vacuum-type sweeper breaks down, a mechanical broom sweeper may be substituted for no more than 24 hours total elapsed time. Repair the vacuum-type sweeper within that 24 hours or substitute a vacuum-type sweeper.

Skid steers with mechanical power brooms may only be utilized on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer.

D Measurement

The department will measure Pavement Cleanup Project 5992-09-31 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 the centerline or reference line of each roadway. 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.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0170.001	Pavement Cleanup Project 5992-09-31	STA

Payment is full compensation for surveillance, mobilization, sweeping, and disposing of materials.

128. Geogrid Reinforcement, Item SPV.0180.001.

A Description

This special provision describes furnishing and installing geogrids for subgrade stabilization, base reinforcement, or pavement structure applications according to the plans, standard spec 645, and as hereinafter provided.

B Materials

Provide geogrid that consists of either single or joined multiple layers of a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. Utilize an insect, rodent, mildew, and rot resistant polymer grid consisting of polyester, polypropylene, polyamide, or polyethylene that maintains dimensional stability during handling, placing, and installation. Install geogrid at least 6.0 feet wide.

Provide geogrid that complies with the following physical properties:

Test	Method	Value [1]
Tensile Strength at 5% Strain, Both Principal Directions (lb/ft)	ASTM D 4595 [2]	450 min.
Flexural Rigidity Both Principal Directions (mg-cm)	ASTM D 1388 [3]	150,000 min.
Aperture Area (in^2)	Inside Measurement [4]	5.0 max
Aperture Dimension (in)	Inside Measurement [4]	0.5 min.

[1] All numerical values represent minimum/maximum average roll values, i.e. the average minimum test results on any roll in a lot should meet or exceed the minimum specified value

[2] The tensile strength (T) of a joined multi-layered geogrid shall be computed using the following equation:

$$T = n(f)t$$

where

n = the number of individual layers in the joined multi-layered geogrid,

t = the tensile strength of a single layer of geogrid as determined using testing method ASTM D4595, and

f = reduction factor based on the number of layers comprising the multi-layered system and determined by the equation f=1.00 - [0.04(n - 1)].

[3] Values shall be determined by Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches ±0.04 inch long. Test specimen widths for differing geogrids shall be variable and equal to one element plus 1/2 the aperture width

on both sides of that element. An element is defined as the minimum number of parallel strands that form a distinguishable repeating pattern.
(4) Aperture Area and Aperture Dimension for joined multi-layer geogrids shall be determined based on measurement of a single layer of the geogrid.

Protect the geogrid from ultraviolet radiation and from damage due to shipping and handling. Keep the geogrid dry until it is installed. The geogrid rolls shall be clearly marked to identify the material contained.

Deliver a sample of the geogrid material to the engineer at least 10 days prior to its incorporation into the work. At the same time, furnish a manufacturer's Certified Report of Test or Analysis that verifies that the geogrid delivered for use on the work meets the above requirements. Samples of geogrid for test purposes will be obtained from the job site for each 10,000 square yards or portions thereof used on the contract.

C Construction

Prior to placement of the geogrid, bring the indicated placement surface to the required lines, grades, and dimensions as shown on the plans. Smooth and shape the surface to eliminate any rocks, clods, roots, or other items that may cause damage to the geogrid during placement or covering.

Place the geogrid on the prepared surface at the locations and to the limits as shown on the plans. After placement, pull the geogrid taut and secure it using pins, clips, staples, or other devices to prevent movement or displacement. Place parallel strips of geogrid with a minimum overlap of 24 inches. Lap butt joints between roll ends a minimum of 12 inches. Fasten all lapped sections together by using ties, straps, clips, or other devices to develop a secure joint that meets the approval of the engineer. Do not operate vehicles or construction equipment directly on the geogrid.

Cover small rips, tears, or defects in the geogrid with an additional section of geogrid; secure the additional geogrid in place so it overlaps the damaged area by at least 3 feet in all directions. Remove and replace geogrid sections with large rips, tears, defects, or other damage at the direction of the engineer.

After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the special provisions. Placing, spreading, and compacting of this material shall comply with the applicable sections of the standard specifications or special provisions except that the initial lift of material placed on the geogrid must be at least 4 inches. Place, spread, and compact the required backfill material so the geogrid is not displaced or damaged. The engineer may require changes in equipment and operations to prevent such damage or displacement.

D Measurement

The department will measure Geogrid Reinforcement by the square yard of surface area upon which the geogrid has been placed and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.001	Geogrid Reinforcement	SY

Payment is full compensation for furnishing, transporting, and installing the geogrid and for furnishing and installing all devices and materials necessary to join or secure the geogrid in place.

Repair or replacement of damaged or defective geogrid is considered incidental to item.

129. Erosion Mat, Class I, Type B for Short Grass Prairie, Item SPV.0180.002.

A Description

This special provision describes furnishing and installing Erosion Control Mat, Class I, Type B of the product and manufacturer listed below for all areas to be seeded with Seeding Mixture, Short Grass Prairie as shown on the plans and as hereinafter provided.

B Materials

Provide Class 1, Type B, double net wood fiber erosion control mat from the WisDOT Erosion Control PAL for Multi-modal applications, current edition.

Provide 6-inches long, 100% biodegradable anchoring stakes, as listed in the WisDOT Erosion Control PAL for Multi-modal applications, current edition, under 'Anchoring Devices for Class I, Urban Erosion Mat'.

C Construction

Install according to all manufacturer's written instructions and immediately after seeding occurs. Contractor shall take care not to disturb newly seeded areas when applying erosion control mat.

D Measurement

The department will measure Erosion Mat, Class I, Type B for Short Grass Prairie 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.0180.002	Erosion Mat, Class I, Type B for Short Grass Prairie	SY

Payment is full compensation for providing, handling, and storing all material; for preparing the site, installation, and staking; for furnishing and installing all materials.

130. Shredded Hardwood Bark Mulch, 3” Depth, Item SPV.0180.003.

A Description

This special provision describes furnishing and installing Shredded Hardwood Bark Mulch, 3” Depth according to the applicable sections of standard spec 627 and as hereinafter provided.

B Materials

Provide Shredded Hardwood Bark Mulch, 3” Depth 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 according to standard spec 632.3.9 to a depth of 3 inches over entire area of bed disturbed by construction activities.

Provide an additional 1” topdressing of mulch for all adjacent landscape planting beds to ensure uniform appearance of all beds, both disturbed and undisturbed, at the conclusion of the landscape restoration. This additional topdressing is considered incidental to the Shredded Hardwood Bark Mulch, 3” Depth item.

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, 3” 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.0180.003	Shredded Hardwood Bark Mulch, 3” Depth	SY

Payment is full compensation for furnishing and installing all materials.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __2__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __2__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3

DISADVANTAGED BUSINESS ENTERPRISE [DBE] PROGRAM IMPLEMENTATION

1. Description

a. The federal DBE program requirements outlined in the Code of Federal Regulations at 49 CFR Part 26 apply to this Wisconsin Department of Transportation contract. WisDOT is a recipient of federal funds and this contract includes federal funds. United States Department of Transportation Federal DBE Program requires the following provisions:

(1) Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE regulations will be considered a material breach of contract. This is non-negotiable. If a contractor fails to carry out the DBE program and Title VI nondiscrimination requirements of its contracts, the following sanctions will be assessed depending upon the facts, reasoning, severity and remedial efforts of the contractor: termination of contract, withholding payment, assessment of monetary sanctions, assessment of liquidated damages and/or suspension/debarment proceedings that may result in the disqualification of the contractor from bidding for a designated period of time.

(2) The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the federal fund recipient's [DOT] written consent. Unless [WisDOT] consent is provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

b. The Wisconsin Department of Transportation [WisDOT] is committed to the compliant administration of the DBE Program. Each WisDOT Secretary affirms this commitment with his/her signed assurance. http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/policy-statement.pdf

(1) The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:
   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

(2) Wisconsin DOT identifies the assigned DBE goal in its contract advertisements and posts the contract DBE goal on the cover of the bidding proposal. The contractor can meet the assigned, specified contract DBE goal by subcontracting work to a DBE or by procuring services or materials from a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

(3) For more comprehensive information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

2. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

a. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.

b. **DBE:** A small business certified as disadvantaged business enterprise (DBE) under the federal DBE program and included on the Wisconsin UCP DBE Directory deemed ready, willing and able.

c. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.

d. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.

e. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.

f. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. The bid percentage should demonstrate the efforts of the prime contractor prior to bid. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. WisDOT Interpretation of Federal DBE Program Provision

Prime contractors must utilize the specific DBEs listed to perform the work and/or supply the materials for which each is listed on the Commitment to Subcontract to DBE Form [DT1506] and approved by WisDOT's DBE office to execute its contract. The approved Commitment to Subcontract to DBE Form [DT1506] becomes a contract document/record.

a. **Department's DBE Evaluation Process**
WisDOT evaluates DBE using the Commitment to Subcontract to DBE, payments to subcontractors and contract documentation. The prime contractor shall list the specific DBE certified firms and items of work s/he intends to use toward the fulfillment of the assigned DBE contract goal. The prime contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved Form DT1506.

b. **Documentation Submittal**
The contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506]. Effective January 1, 2017, the contractor will be required to submit the documentation within 5 business days after bid opening. All necessary supporting documentation including Attachment 'A' forms and/or Good Faith Efforts Form

[DT1202] must be submitted no later than 2 business days from contractor's initial submission of the DT 1506. The contractor must provide a signed Attachment 'A' form to the DBE office within the time limit in order to receive authorization for contract execution; the DBE office reserves the right accept alternate documentation in lieu of the signed form in extenuating circumstances. Documentation must be submitted to the DBE Office by email at DBE_Alert@dot.wi.gov (DBE_Alert@dot.wi.gov) or by postal mail ATTN: DBE Office, PO Box 7965, Madison, WI 53707-7965.

(1) **Bidder Meets DBE Goal**
If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage calculation. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

(2) **Bidder Does Not Meet DBE Goal**

i. If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Efforts Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith efforts submission.

ii. The department will evaluate the bidder's good faith effort request and notify the bidder of one of the following:

(a) If the department grants a good faith efforts, the bid is eligible for contract execution with respect to DBE commitment.

(b) If the department rejects the good faith efforts request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith efforts request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

c. **Bidder Fails to Submit Documentation**
If the contractor fails to furnish the Commitment to Subcontract to DBE Form [DT1506] within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

5. Department's Criteria for Good Faith Effort

Appendix A of 49 CFR Part 26, is the guiding regulation concerning good faith efforts. However, the federal regulations do not explicitly define "good faith" but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own practices to create a process for making a determination of adequate good faith. WisDOT evaluates good faith on a contract basis just as each contract award is evaluated individually.

The department will only approve a contractor's good faith efforts if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith efforts will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

a. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

b. Prime Contractors should:

(1) Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT- approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

(2) Prime contractors may request assistance with DBE outreach and follow-up by contacting the department's DBE Support Services Office by phone or email request at least 14 days prior to the bid letting date. Requesting assistance with outreach is not a decisive factor in the review Good faith effort evaluation. Phone numbers are 414-438-4584 and/or 414-659-0487; Fax: 414-438-5392; E-mail: DOTDBESupportServices@dot.wi.gov.

(3) Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, as required by federal rules. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

i. Solicit quotes from certified DBE firms who match 'possible items to subcontract' using all reasonable and available means. Additionally, forward copies of solicitations highlighting the work areas for which you are seeking quotes to DOTDBESupportServices@dot.wi.gov.

ii. SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.

(a) Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

(b) Solicit quotes at least 10 calendar days prior to the letting date, at least two Fridays before the letting, to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking if they need help organizing their quote, assistance confirming equipment needs, or other assistance supporting their submission of a competitive quote for their services.

(c) Second solicitation should take place within 5 calendar days. Email and SBN are the preferred delivery of the follow-up solicitation.

iii. Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

iv. When potential exists, the contractor should advise interested DBE firms on how to obtain bonding, line of credit or insurance if requested.

v. Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

(a) Email to all prospective DBE firms in relevant work areas.

(b) Phone call log to DBE firms who express interest via written response or call.

(c) Fax/letter confirmation

(d) Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

c. Evaluate DBE quotes Documentation is critical if a prime does not utilize the DBE firm's quote for any reason.

(1) Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE by phone and email regarding their ability to perform the work indicated in the UCP directory listed as their work area by NAICS code. Only the work area and/or NAICS code listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.

(2) In striving to meet an assigned DBE contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

(3) **Special Circumstance** - Evaluation of DBE quotes with tied bid items. “Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as ‘all or none’ quote to the prime.” When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms’ quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

i. Compare bid items common to both quotes, noting the reasonableness in the price comparison.
ii. Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

d. Immediately after notification of contract award, the prime submits all **'Commitment to Subcontract'** forms to the DBE Office. Prime contractor has 5 days to submit the completed form for the DBE firms it intends to use on the contract for DBE credit. If the goal is not met in full, the prime contractor must provide the following information along with WisDOT form DT1202: Certificate of Good Faith Efforts.

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact.
(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.
(3) Photocopies or electronic copies of all written solicitations to DBE's. A printed copy of SBN solicitation is acceptable.
(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.
(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

The prime contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved Commitment to Subcontract to DBE Form [DT1506]. If the prime contractor utilizes another contractor, including the use of its own workforce, to perform the work assigned to a DBE on the approved DT1506, the prime contractor will not be entitled to payment for that work. Any changes to DBE after the approval of the DT1506 must be reviewed and approved by the DBE office prior to the change.

6. Use of Joint Checks

The *use of joint checks is allowable if it is a commonly recognized business practice in* the material industry. A joint check is defined as a two-party check between a DBE, a prime contractor and the regular dealer of materials supplier who is neither the prime nor an affiliate of the prime. Typically, the prime contractor issues one check as payor to the DBE subcontractor and to the supplier jointly (to guarantee payment to the supplier) as payment for the material/supplies used by the DBE in cases where the prime has submitted the DBE and material for DBE credit. The DBE subcontractor gains the opportunity to establish a direct contracting relationship with the supplier to potentially facilitate a business rapport that results in a line of credit or increased partnering opportunities.

The cost of material and supplies purchased by the DBE is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE must be responsible for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and "paying for the material itself." See 49 CFR 26.55(c)(1).

The approval to use joint checks constitutes a commitment to provide further information to WisDOT, upon request by staff. WisDOT will allow the use of joint checks when the following conditions are met:

a. The Prime must request permission to use joint checks from the DBE Office by submitting the Application to Use Joint Checks.
   (1) Request should be made when the DBE Commitment form or Request to Sublet is submitted; the request will not be considered if submitted after the DBE Subcontractor starts its work.
   (2) Approval/Permission must be granted prior to the issuance of any joint checks.
   (3) The payment schedule for the supplier must be presented to the DBE office before the first check is issued.
   (4) The joint check for supplies must be strictly for the cost of supplies.

b. DBE subcontractor is responsible to furnish and/or install the material/work item. The DBE subcontractor shall not be an 'extra participant' in the transaction; the DBE's role in the transaction cannot be limited solely to signing the check(s) to release payment to the material supplier. At a minimum, the DBE subcontractor's tasks should include the following.
   (1) The DBE subcontractor (not the prime/payor) negotiates the quantities, price and delivery of materials;
   (2) The DBE subcontractor consents to sign/release the check to the supplier by signing the Application to Use Joint Checks after establishing the conditions and documentation of payment within the subcontract terms or in a separate written document.

c. The Prime contractor/payor acts solely as a guarantor,
   (1) The prime agrees to furnish the check used for the payment of materials/supplies under the contract.
   (2) The prime contractor/payor cannot require the subcontractor to use a specific supplier or the prime contractors negotiated unit price.

7. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith effort submission. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so requested. Failure to appeal within 7 calendar days after receiving the department's written denial notice of a good faith effort evaluation constitutes a forfeiture of the bidder's right of appeal. A contract cannot be executed without documentation that the DBE provisions have been fulfilled.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 5 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

8. Department's Criteria for DBE Participation

Directory of DBE firms

a. The only resource for DBE certified firms certified in the state of Wisconsin is the Wisconsin Unified Certification Program [UCP] DBE List. Wisconsin Department of Transportation maintains a current list of certified DBE firms titled Wisconsin UCP DBE Directory on the website at:
   http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx

b. The DBE office is also available to assist at 414-438-4583 or 608-267-3849.

9. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine whether the work that is committed and/or contracted to a DBE certified firm can be counted for DBE credit by referencing the work type and NAICS code listed for the DBE firm on the Wisconsin UCP DBE Directory.

g. It is the prime contractor’s responsibility to assess the DBE firm’s ability to perform the work for which s/he is committing/contracting the DBE to do. Note that the department encourages the prime contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

10. Commercially Useful Function

a. Commercially useful function is evaluated after the contract has been executed, while the DBE certified firm is performing its work items. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved.

b. The department uses Form DT1011: DBE Commercially Useful Function Review and Certification to evaluate whether the DBE is performing a commercially useful function. WisDOT counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

c. A DBE is performing a commercially useful function if the following conditions are met:
   (1) For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
   (2) For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

11. Credit Evaluation for Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

12. Credit Evaluation for Manufacturers, Suppliers, Brokers

The department will calculate the amount of DBE credit awarded to a prime using a DBE firm for the provisions of materials and supplies on a contract-by-contract basis. The department will count the material and supplies that a DBE provides under the contract for DBE credit based on whether the DBE is a manufacturer, supplier or broker. Generally, DBE crediting measures and evaluates the DBE owner's role, responsibility and contribution to the transaction: maximum DBE credit when the DBE manufactures materials or supplies; DBE credit decreases when the DBE solely supplies material and minimal credit is allotted when the DBE's role is administrative or transactional.

It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

a. Manufacturers
   (1) A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.
   (2) If the materials or supplies are obtained from a DBE manufacturer, count **100%** percent of the cost of the materials or supplies toward DBE goals.

b. Regular Dealers of Material and/or Supplies
   (1) A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.
   (2) If the materials or supplies are purchased from a DBE regular dealer, count **60%** percent of the cost of the materials or supplies toward DBE goals.
   (3) At a minimum, a regular dealer must meet the following criteria to be counted for DBE credit:
      i. The DBE firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
      ii. The DBE firm must both own and operate distribution equipment for the product--bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt. If some of the distribution equipment is leased, the lease agreement must accompany the DBE Commitment form for evaluation of the dealer's control before the DBE office approves the DBE credit.

c. Brokers, Transaction Expediters, Packagers, Manufacturers Representatives
   (1) No portion of the cost of the materials, supplies, services themselves will count for DBE credit; however, WisDOT will evaluate the fees or commissions charged when a prime purchases materials, supplies or services from a DBE certified firm which is neither a manufacturer nor a regular dealer, namely: brokers, packagers, manufacturers' representatives or other persons who arrange or expedite transactions.
   (2) Brokerage fees have historically been calculated as **10%** of the purchase amount.
   (3) WisDOT may count the amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site.
   (4) The evaluation will review the contract need for the item/service, review the sub-contract or invoice for the item/service, compare the fees customarily allowed for similar services to determine whether they are reasonable.

When DBE suppliers are contracted, additional documentation must accompany the DT1506 and Attachment 'A' forms. An invoice or bill-of-sale that includes the company names of the bidder and the DBE supplier and documentation of the calculations used as the basis for the purchase agreement, subcontract or invoice. *WisDOT recognizes that the amount on the Attachment 'A' form may be more or less than the amount on the invoice*. Please respond to the following questions and submit with your DBE Commitment Form.

1. What is the product or material?
2. Is this item in the prime's inventory or was the item purchased when contract was awarded?
3. Which contract line items were referenced to develop this quote?
4. What is the amount of material or product used on the project?

13. Credit Evaluation for DBE Primes

Wisconsin DOT calculates DBE credit based on the amount and type of work performed by DBE certified firms. If the prime contractor is a DBE certified firm, the department will only count the work that DBE prime contractor performs with its own forces for DBE credit. We will also calculate DBE credit for the work performed by any other DBE certified subcontractor, DBE certified supplier, DBE certified manufacturer on that contract in that DBE's approved work areas/NAICS code. Crediting for manufacturers and suppliers is calculated consistent with paragraph 12 of this document and 49 CFR Part 26.

14. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces for DBE credit.

15. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will count for credit the portion of the work performed by the DBE protégé firm.

b. DBE credit will be evaluated and confirmed by the DBE Office for any contracts on which the mentor protégé team identifies itself to the DBE Office as a current participant of the Mentor Protégé Program.

c. Refer to WisDOT's Mentor Protégé guidelines for guidance on the number of contracts and amount of DBE credit that can be counted on any WisDOT project.

16. DBE Replacement or Termination

Contractual Requirement

The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent from the Department's DBE Office. If the Department does not provide consent to replace or terminate a DBE firm, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

Contractor Considerations

a. A prime contractor cannot terminate and/or replace a DBE subcontractor listed on the approved Commitment to Subcontract to DBE Form [DT1506] without prior written consent from the DBE Office. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

b. If a prime contractor feels it is necessary to replace or terminate a DBE firm that has been approved for DBE credit toward its contract, s/he will be required to provide reasons and documentation to support why the prime cannot fulfill the contractual commitment that it made to the Department regarding the DBE utilization.

c. Prime contractor is required to make affirmative efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the assigned DBE contract goal.

d. In circumstances when a DBE subcontractor fails to complete its work on the contract for any reason or is terminated from a contract, the prime contractor is expected to make affirmative efforts to maintain its commitment to the assigned DBE goal.

e. The DBE firm should communicate with the prime contractor regarding its schedule and capacity in the context of the contract. If the DBE anticipates that it cannot fulfill its subcontract, s/he shall advise the prime contractor and suggest a DBE that may replace their services or provide written consent to be released from its subcontract.

(1) Before the prime contractor can request to terminate or substitute a DBE firm; s/he must:
   i. Make every effort to fulfill the DBE commitment by working with the listed DBE to ensure that they are fully knowledgeable of your expectations for successful performance on the contract. Document these efforts in writing.
   ii. If those efforts fail, provide written notice to the DBE subcontractor of your *intent to* request to terminate and/or replace the firm including the reason(s) you want to pursue this action.
   iii. Copy the DBE Office on all correspondence related to changing a DBE firm who has been approved for DBE credit on a contract including the preparation and coordination efforts with the DBE on the contract.
   iv. Clearly state the amount of time the DBE firm has to remedy and/or respond to your notice of intent to replace/terminate their firm from the contract. The DBE shall be allowed five days to respond, in writing. **EXCEPTION:** The prime contractor must provide a verifiable reason for a response period shorter than five days. For example a WisDOT project manager must verify that waiting 5 days for a DBE performing traffic control work to respond would affect the public safety.
   v. The DBE subcontractor must forward a written response to the prime contractor and copy the DBE Office. The written response must outline why it objects to the proposed termination of its subcontract and list the reasons that WisDOT should not approve the request for their firm to be replaced or removed from the contract.

The Request to Replace or Terminate a DBE

The prime contractor must provide a written request to replace or terminate a DBE firm that has been approved for DBE credit on a WisDOT contract. The written request can be an email or printed document delivered by email or fax; at minimum, the request must contain the following:

1. Contract ID number.
2. Wisconsin DOT Contract Project Manager name and contact information.
3. DBE name and work type and/or NAICS code.
4. Contract's progress schedule.
5. Reason(s) for requesting that the DBE be replaced or terminated.
6. Attach/include all communication with the DBE to deploy/address/resolve work completion,

WisDOT will review your request and any supporting documentation that you submit to evaluate whether the circumstance and the reasons constitute a good cause for replacing or terminating the DBE that was approved for DBE credit on that contract.

Examples of Good Causes to Replace a DBE according to the federal DBE program guidelines {49 CFR part 26.53}

- The listed DBE subcontractor fails or refuses to execute a written contract.
- The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor.
- The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements.
- The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness.
- The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- You have determined that the listed DBE subcontractor is not a responsible contractor.
- The listed DBE subcontractor voluntarily withdraws from the project and provides to you written notice of its withdrawal.
- The listed DBE is ineligible to receive DBE credit for the type of work required.
- A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract.

Evaluation and Response to the Request
If WisDOT determines that your reasons comply with the good cause standards; the DBE office will send the prime contractor and the WisDOT project manager an email stating that we concur with the reasons and approve the replacement or termination.

If WisDOT determines that your reasons do not comply with the good cause standards of the federal DBE program, the DBE Office will send the prime contractor an email that includes *the requirement* to utilize the committed DBE, *remedial actions* to support the completion of the contractual commitment, a list of available WisDOT support services *and administrative remedies that may be invoked* for failure to comply with federal DBE guidelines for DBE replacement.

The Wisconsin Department of transportation contact for all actions related to replacing a DBE is the DBE Program Chief and/or the DBE Program Engineer which can be reached at DBE_Alert@dot.wi.gov or by calling 608-267-3849.

17. DBE Utilization beyond the approved DBE Commitment Form DT1506

If the Prime/subcontractor increases the scope of work for a participating DBE or adds a DBE subcontractor that was not on the approved Form DT1506 at any time after contract award, s/he should follow these steps so that the participation can be accurately credited toward the DBE goal.

a. Send an email to the DBE Engineer at DBE_Alert@dot.wi.gov describing the work to be performed by the new DBE including the proposed schedule or duration, DBE name and contact information. You may also call the DBE Engineer at 414-659-0487 to notify him of the change verbally.
If the scope change added work for a participating DBE; list the date and reason for the scope change.

b. Forward a complete, signed Attachment 'A' form to the DBE Office at DBE_Alert@dot.wi.gov. A complete Attachment A includes DBE contact information, signature, subcontract value and proper description of the work areas to be performed by the DBE.
The DBE office will confirm the DBE participation and revise the DT1506 based on the email/discussion and attach the new/revised Attachment A to the Contract record/documentation.

18. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors that were committed to equal work items, in the original contract.

19. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO:	DBE FIRMS
FROM:	POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR
SUBJECT:	**REQUEST FOR DBE QUOTES** **LET DATE & TIME**
DATE:	MONTH DAY YEAR
CC:	DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternatives are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have someone contact me at this number

Prime Contractor 's Contact Person	DBE Contractor Contact Person
Phone:	Phone
Fax:	Fax
Email:	Email

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternatives are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance.
- Participate in speed networking and mosaic exercises as arranged by DBE office.
- Host information sessions not directly associated with a bid letting.
- Participate in a formal mentor protégé or joint venture with a DBE firm.
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings.
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods.
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you.
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs.
- Participate on advisory and mega-project committees.
- Sign up to receive the DBE Contracting Update.
- Consider membership in relevant industry or contractor organizations.
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities.
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively.
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal.
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract.
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities.
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a

contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription.
Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.

2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request.
    d. Add attachments to sub-quotes.

3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing.

4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses.
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively.
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency).

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.

2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes.
    c. Add attachments to a sub-quote.

3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.

4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on a per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder.
    c. Add attachments to a sub-quote.
    d. Add unsolicited work items to sub-quotes that you are responding to.

5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime.
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses.

6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588.

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISIONS 5

Fuel Cost Adjustment

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.1100	Backfill Granular Grade 1	CY	0.23
209.1500	Backfill Granular Grade 1	Ton	0.115
209.2100	Backfill Granular Grade 2	CY	0.23
209.2500	Backfill Granular Grade 2	Ton	0.115
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $1.50 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

(1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.

(2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.

(3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.

(4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1 \right) x\ Q\ x\ BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

440.3.5.2 Corrective Actions for Localized Roughness

Replace paragraph two with the following effective with the September 2016 letting:

(2) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without physically riding that work. The engineer will not direct corrective action on bridges without authorization from the department's bureau of structures.

450.3.1.1.4 Recording Truck Loads

Replace the entire text with the following effective with the December 2016 letting:

(1) If not using automatic batch recording, install a digital recorder as part of the platform truck or storage silo scales. Ensure that the recorder can produce a printed digital record of at least the gross or net weights of delivery trucks. Provide gross, tare, net weights, load count, and the cumulative tonnage; the date, time, ticket number, WisDOT project ID, and mix 250 number; and the mix type including the traffic, binder, and mix designation codes specified in 460.3.1. Ensure that scales cannot be manually manipulated during the printing process. Provide an interlock to prevent printing until the scales come to rest. Size the scales and recorder to accurately weigh the heaviest loaded trucks or tractor-trailers hauling asphaltic mixture. Ensure that recorded weights are accurate to within 0.1 percent of the nominal capacity of the scale.

(2) Ensure that tickets identify additives not included in the mix design submittal. Indicate on the ticket if the mixture will be placed under a cold weather paving plan and identify the warm mix additive and dosage rate required under 450.3.2.1.2.2.

455.3.2.1 General

Replace paragraph one with the following effective with the December 2016 letting:

(1) Apply tack coat only when the air temperature is 32 F or more unless the engineer approves otherwise in writing. Before applying tack coat ensure that the surface is reasonably free of loose dirt, dust, or other foreign matter. Do not apply to surfaces with standing water. Do not apply if weather or surface conditions are unfavorable or before impending rains.

460.2.1 General

Replace the entire text with the following effective with the December 2016 letting:

(1) Furnish a homogeneous mixture of coarse aggregate, fine aggregate, mineral filler if required, SMA stabilizer if required, recycled material if used, warm mix asphalt additive or process if used, and asphaltic material. Design mixtures conforming to table 460-1 and table 460-2 to 4.0% air voids to establish the aggregate structure.

(2) Determine the target JMF asphalt binder content for production from the mix design data corresponding to 3.0% air voids (97% Gmm) target at the design the number of gyrations (Ndes). Add liquid asphalt to achieve the required air voids at Ndes.

(3) For SMA, determine the target JMF asphalt binder content for production from the mix design data corresponding to 4.0% air voids (96% Gmm) target at Ndes.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the December 2016 letting:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent[1]	+1.3/-1.0	+1.0/-0.7
VMA in percent[2]	- 0.5	- 0.2

[1] For SMA, JMF limits are +/-1.3 and warning limits are +/-1.0.

[2] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace paragraph one with the following effective with the December 2016 letting:

(1) The contractor may request adjustment of the JMF according to CMM 8-36.6.13.1. Have an HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have a certified Hot Mix Asphalt, Mix Design, Report Submittals technician review the proposed adjustment and, if acceptable, issue a revised JMF.

460.2.8.3.1.6 Acceptable Verification Parameters

Replace paragraph one with the following effective with the December 2016 letting:

(1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:

- Va is within a range of 2.0 to 4.3 percent. For SMA, Va is within a range of 2.7 to 5.3 percent.
- VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.

460.3.3.1 Minimum Required Density

Replace paragraph one with the following effective with the December 2016 letting:

(1) Compact all layers of HMA mixture to the density table 460-3 shows for the applicable mixture, location, and layer.

TABLE 460-3 MINIMUM REQUIRED DENSITY[1]

LOCATION	LAYER	PERCENT OF TARGET MAXIMUM DENSITY		
		MIXTURE TYPE		
		LT and MT	HT	SMA[5]
TRAFFIC LANES[2]	LOWER	93.0[3]	93.0[4]	___
	UPPER	93.0	93.0	___
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	93.0[3]	93.0[4]	___
	UPPER	93.0	93.0	___
SHOULDERS & APPURTENANCES	LOWER	91.0	91.0	___
	UPPER	92.0	92.0	___

[1] The table values are for average lot density. If any individual density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer may investigate the acceptability of that material.

[2] Includes parking lanes as determined by the engineer.

[3] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[4] Minimum reduced by 1.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[5] The minimum required densities for SMA mixtures are determined according to CMM 8-15.

460.5.2.1 General

Replace paragraph six with the following effective with the December 2016 letting:

(6) If during a QV dispute resolution investigation the department discovers mixture with 1.5 > Va > 5.0 or VMA more than 1.0 below the minimum allowed in table 460-1, and the engineer allows that mixture to remain in place, the department will pay for the quantity of affected material at 50 percent of the contract price.

460.5.2.3 Incentive for HMA Pavement Density

Replace paragraph one with the following effective with the December 2016 letting:

(1) If the lot density is greater than the minimum specified in table 460-3 and all individual air voids test results for that mixture placed during the same day are within 2.5 - 4.0 percent, the department will adjust pay for that lot as follows:

INCENTIVE PAY ADJUSTMENT FOR HMA PAVEMENT DENSITY[1]

PERCENT LOT DENSITY ABOVE SPECIFIED MINIMUM	PAY ADJUSTMENT PER TON[2]
From -0.4 to 1.0 inclusive	$0
From 1.1 to 1.8 inclusive	$0.40
More than 1.8	$0.80

[1] SMA pavements are not eligible for density incentive.

[2] The department will prorate the pay adjustment for a partial lot.

501.2.6 Fly Ash

Replace the entire subsection with the following effective with the December 2016 letting:

501.2.6.1 General

(1) Fly ash is defined as a finely divided residue resulting from the combustion of coal in a base loaded electric generating plant, transported from the boiler by flue gases, and later collected, generally by precipitators. Use fly ash in concrete manufactured by facilities and processes known to provide satisfactory material.

(2) Test fly ash using a recognized laboratory, as defined in 501.2.2(1), starting at least 30 days before its proposed use, and continuing at ASTM-required frequencies as the work progresses. The manufacturer shall test the chemical and physical properties listed in tables 1 and 2 of ASTM C618 at the frequencies and by the test methods prescribed in ASTM C311.

(3) Use only one source of fly ash for a bid item of work under the contract, unless the engineer directs or allows otherwise in writing.

(4) Prequalify any proposed fly ash source as follows: The contractor shall obtain a copy of the certified report of tests or analysis made by a qualified independent laboratory, recognized by the department under 501.2.2, showing full and complete compliance with the above specification from the fly ash manufacturer and furnish it to the engineer. Provide this report to the engineer at least 14 calendar days before using the fly ash.

(5) The manufacturer shall retain test records for at least 5 years after completing the work, and provide these records upon request.

501.2.6.2 Class C Ash

(1) Conform to ASTM C618 class C except limit the loss on ignition to a maximum of 2 percent.

501.2.6.3 Class F Ash

(2) Furnish a class F fly ash from a source listed on the department's approved product list, and conform to ASTM C618 class F except limit the loss on ignition to a maximum of 2 percent.

502.3.7.8 Floors

Replace paragraph sixteen with the following effective with the September 2016 letting:

(16) The finished bridge floor shall conform to the surface test specified in 415.3.10. The engineer will not direct corrective grinding without authorization from the department’s bureau of structures.

503.3.2.1.1 Tolerances

Increase the "length of beam" max tolerance for prestressed concrete I-type girders from 3/4" to 1 1/2" effective with the December 2016 letting:

PRESTRESSED CONCRETE I-TYPE GIRDERS

Length of beam..... +/- 1/8" per 10', up to a max of +/- 1 1/2"

517.3.1.7.3 Epoxy System Intermediate and Protective Coats

Replace paragraph one with the following effective with the December 2016 letting:

(1) Mask the faying surfaces of bolted field splices and the top of the top flanges where welding the stud shear connectors during coat application. On all other areas including the outside surfaces of splice plates, ensure that the dry film thickness conforms to the following:

1. For the white intermediate coat, 3.5 mils to 8 mils.
2. For the protective coat, sufficient thickness to provide a uniform color and appearance but not less than 3 mil or more than 6 mils.

Errata

Make the following corrections to the standard specifications:

Throughout the contract:
Update all references to the construction rental rate "Blue Book" to reference "EquipmentWatch" rates.

105.13.4 Content of Claim

(1) Include the following 5 items in the claim.

1. A concise description of the claim.
2. A clear contractual basis for the claim. This should include reference to 104.2 on revisions to the contract and as appropriate, specific reference to contract language regarding the bid items in question.
3. Other facts the contractor relies on to support the claim.
4. A concise statement of the circumstances surrounding the claim and reasons why the department should pay the claim. Explain how the claimed work is a change to the contract work.
5. A complete breakdown of the costs used to compile the claim. Include copies of all EquipmentWatch equipment rental rate sheets used, with the applicable number highlighted.

109.4.5.5.1 General

(2) The department will pay for use of contractor-owned equipment the engineer approves for force account work at published rates. The department will pay the contractor expense rates, as modified in 109.4.5.5, given in EquipmentWatch Cost Recovery (formerly Rental Rate Blue Book) . Base all rates on revisions effective on January 1 for all equipment used in that calendar year.

http://equipmentwatch.com/estimator/

109.4.5.5.2 Hourly Equipment Expense Rates (Without Operators)

(1) The contractor shall determine, and the department will confirm, hourly equipment expense rates as follows:

HEER = [RAF x ARA x (R/176)] + HOC

Where:

HEER = Hourly equipment expense rate.
RAF = EquipmentWatch regional adjustment factor.
ARA = EquipmentWatch age rate adjustment factor.
R = Current EquipmentWatch monthly rate.
HOC = EquipmentWatch estimated hourly operating cost.

(2) The EquipmentWatch hourly operating cost represents all costs of equipment operation, including fuel and oil, lubrication, field repairs, tires, expendable parts, and supplies.

109.4.5.5.3 Hourly Equipment Stand-By Rate

(1) For equipment that is in operational condition and is standing-by with the engineer's approval, the contractor shall determine, and the department will confirm, the hourly stand-by rate as follows:

HSBR = RAF x ARA x (R/176) x (1/2)

Where:

HSBR = Hourly stand-by rate.
RAF = EquipmentWatch regional adjustment factor.
ARA = EquipmentWatch age rate adjustment factor.
R = Current EquipmentWatch monthly rate.

(2) The department will limit payment for stand-by to 10 hours or less per day up to 40 hours per week. The department will not pay the contractor for equipment that is inoperable due to breakdown. The department will not pay for idle equipment if the contractor suspends work or if the contractor is maintaining or repairing the equipment.

109.4.5.5.4 Hourly Outside-Rented Equipment Rate

(1) If the contractor rents or leases equipment from a third party for force account work, the contractor shall determine, and the department will confirm, the hourly outside-rented equipment rate as follows:

HORER = HRI + HOC

Where:

HORER = Hourly outside-rented equipment rate

HRI = Hourly rental invoice costs prorated for the actual number of hours that rented equipment is operated solely on force account work

HOC = EquipmentWatch hourly operating cost.

109.2 Scope of Payment

Correct errata to clarify that work under the contract is included in payment unless specifically excluded.

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the contract including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
   - The nature of the work.
   - The action of the elements.
   - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

204.3.2.2.1 General

Correct errata by removing the reference to 490 which was deleted effective with the 2017 spec.

(1) Under the Removing Pavement bid item, remove concrete pavements, concrete alleys, concrete driveways, or rigid base including all surfaces or other pavements superimposed on them.

657.2.2.1.1 General

Correct errata by eliminating the reference to department provided arms in the last sentence.

(1) Furnish shop drawings as specified in 506.3.2, except submit 5 copies with the materials list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the outside diameters of the pole at the butt, top, and splice locations the plans show. Show the width, depth, length, and thickness of all material, and list pertinent ASTM specification designations and metal alloy designations together with the tensile strength of metallic members. Provide tightening procedures for arm-to-pole connections on the shop drawings.

657.2.2.1.4 Poles Designed Under Legacy Standards

Correct errata by deleting the entire subsection to eliminate redundant language.

657.2.2.2 Trombone Arms

Correct errata by changing the reference from 657.2.2.1.3 to 657.2.2.1.2.

(1) Design aluminum trombone arms as specified in 657.2.2.1.2 based on the completed maximum loading configuration the plans show. Furnish shop drawings conforming to 657.2.2.1.1 that show the width, depth, length, and thickness of all members. Also list the ASTM alloy designation and strength of each aluminum member on the shop drawings.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

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

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

Non-discrimination Provisions

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the contractor under the contract until the contractor complies; and/or
b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Effective August 2015 letting

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

http://wisconsindot.gov/rdwy/cmm/cm-02-28.pdf

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://wisconsindot.gov/hcciDocs/contracting-info/ws4567.doc

Effective February 2016 letting

Cargo Preference Act Requirement

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) *Agreement Clauses.* "Use of United States-flag vessels:"

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees—"

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Effective with February 2017 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. Prevailing Wage Rates, Hours of Labor, and Payment of Wages
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Wage Rate Distribution
V. Additional Classifications

I. PREVAILING WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) attached hereto and made a part hereof furnishes the prevailing wage rates pursuant to Section 84.062 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 84.062, Stats. Apprentices shall be paid at rates not less than those prescribed in their apprenticeship contract.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 16.856 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly base rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half:

January 1
Last Monday in May
July 4
First Monday in September
Fourth Thursday in November
December 25
The day before if January 1, July 4 or December 25 falls on a Saturday, and

The day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, euclid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 84.062 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous and accessible place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 84.062 of the Wisconsin Statutes.

b. A copy of the U.S. Department of Labor (Davis-Bacon, Minimum Wage Rates).

c. A copy of the contractor's Equal Employment Opportunity Policy.

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. WAGE RATE REDISTRIBUTION

A contractor or subcontractor performing work subject to a Davis-Bacon wage determination may discharge its minimum wage obligations for the payment of both straight time wages and fringe benefits by (1) paying both in cash, (2) making payments or incurring costs for bona fide fringe benefits, or (3) by a combination thereof. Thus, under the Davis-Bacon a contractor may offset an amount of monetary wages paid in excess of the minimum wage required under the determination to satisfy its fringe benefit obligations. *See* 40 USC 3142(d) and 29 CFR 5.31.

V. ADDITIONAL CLASSIFICATIONS

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5(a)(1)(ii)). The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination.

The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

a. The work to be performed by the classification requested is not performed by a classification in the wage determination; and

b. The classification is utilized in the area by the construction industry; and

c. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

General Decision Number: WI170010 02/03/2017 WI10

Superseded General Decision Number: WI20160010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	02/03/2017

BRWI0001-002 06/01/2016

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.84	20.95

BRWI0002-002 06/01/2016

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.04	19.70

BRWI0002-005 06/01/2016

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC,

FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 35.07	20.51

BRWI0003-002 06/01/2016

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0004-002 06/01/2016

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.59	21.49

BRWI0006-002 06/01/2016

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.04	19.75

BRWI0007-002 06/01/2016

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.54	20.95

BRWI0008-002 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.98	20.62

BRWI0011-002 06/01/2016

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.22	20.57

BRWI0019-002 06/01/2015

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.36	16.51

BRWI0034-002 06/01/2015

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.86	17.22

CARP0087-001 07/01/2012

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 33.34	16.73

CARP0252-002 07/02/2012

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes

CARPENTER

CARPENTER	$ 30.48	15.80
MILLWRIGHT	$ 32.11	15.80
PILEDRIVER	$ 30.98	15.80

CARP0252-010 07/02/2012

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 30.48	15.80
Millwright	$ 32.11	15.80
Pile Driver	$ 30.98	15.80

CARP0264-003 06/01/2008

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 30.52	14.41

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* CARP0361-004 05/01/2016

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 34.57	18.16

CARP2337-001 06/01/2008

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 27.25	19.46
Zone B	$ 24.47	19.46

ELEC0014-002 05/30/2016

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN

COUNTIES

	Rates	Fringes
Electricians:	$ 32.00	19.28

ELEC0014-007 05/30/2016

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer Installer/Technician	$ 24.35	13.15

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2016

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 37.71	30%+10.02

ELEC0158-002 05/30/2016

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
Electricians:	$ 30.50	29.50% + 9.57

ELEC0159-003 05/30/2016

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
Electricians:	$ 36.50	20.39

ELEC0219-004 06/01/2015

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 31.16	18.34
Electrical contracts under $180,000	$ 28.96	18.26

ELEC0242-005 05/29/2016

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 34.92	25.05

ELEC0388-002 06/01/2013

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 28.96	24.85% + 9.70

ELEC0430-002 06/01/2016

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 36.07	21.84

ELEC0494-005 06/01/2016

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 36.01	24.00

ELEC0494-006 06/01/2014

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 29.64	20.54

ELEC0494-013 06/01/2015

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 16.47	14.84
Technician	$ 26.00	17.70

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

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ELEC0577-003 05/30/2016

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO

COUNTIES

	Rates	Fringes
Electricians:	$ 30.68	17.28

ELEC0890-003 06/01/2016

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 32.45	26.10% + $10.56

ELEC0953-001 07/01/2015

	Rates	Fringes
Line Construction:		
(1) Lineman	$ 42.14	32% + 5.00
(2) Heavy Equipment Operator	$ 40.03	32% + 5.00
(3) Equipment Operator	$ 33.71	32% + 5.00
(4) Heavy Groundman Driver	$ 26.78	14.11
(5) Light Groundman Driver	$ 24.86	13.45
(6) Groundsman	$ 23.18	32% + 5.00

ENGI0139-005 06/01/2016

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 39.27	21.80
Group 2	$ 38.77	21.80
Group 3	$ 38.27	21.80
Group 4	$ 38.01	21.80
Group 5	$ 37.72	21.80
Group 6	$ 31.82	21.80

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, tower cranes, and derricks with or without attachments with a lifting capacity of over 100 tons; or cranes, tower cranes, and derricks with boom, leads and/or jib lengths measuring 176 feet or longer.

GROUP 2: Cranes, tower cranes and derricks with or without attachments with a lifting capacity of 100 tons or less; or cranes, tower cranes, and derricks with boom, leads, and/or jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminious paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader; hydraulic backhoe (tractor type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller over 5 tons; percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self- propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning plants; generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; Oiler, pump (over 3 inches); Drilling Machine Tender.

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2016

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 30.86	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 33.15	25.42

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2015

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 32.85	21.84

IRON0498-005 06/01/2008

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 34.34	25.72

IRON0512-008 05/01/2015

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.50	23.45

IRON0512-021 05/01/2015

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 31.04	23.45

LABO0113-002 06/01/2016

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 27.51	20.35
Group 2	$ 27.66	20.35
Group 3	$ 27.86	20.35
Group 4	$ 28.01	20.35
Group 5	$ 28.16	20.35
Group 6	$ 24.00	20.35

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/01/2016

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.76	20.35
Group 2	$ 26.86	20.35
Group 3	$ 26.91	20.35
Group 4	$ 27.11	20.35
Group 5	$ 26.96	20.35
Group 6	$ 23.85	20.35

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/01/2016

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.57	20.35
Group 2	$ 26.72	20.35
Group 3	$ 26.92	20.35
Group 4	$ 26.89	20.35
Group 5	$ 27.22	20.35

Group 6	$ 23.71	20.35

LABORERS CLASSIFICATIONS:

GROUP 1: General laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/01/2016

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 30.67	16.55
Group 2	$ 30.77	16.55
Group 3	$ 30.82	16.55
Group 4	$ 31.02	16.55
Group 5	$ 30.87	16.55
Group 6	$ 27.30	16.55

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer;

Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/01/2016

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 30.95	16.41
Group 2	$ 31.05	16.41
Group 3	$ 31.10	16.41
Group 4	$ 31.30	16.41
Group 5	$ 31.15	16.41
Group 6	$ 27.30	16.41

LABORERS CLASSIFICATIONS:

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

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* PAIN0106-008 05/02/2016

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 29.86	16.35
Spray, Sandblast, Steel	$ 30.46	16.35
Repaint:		
Brush, Roller	$ 28.36	16.35
Spray, Sandblast, Steel	$ 28.96	16.35

PAIN0108-002 06/01/2016

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 32.74	18.70
Spray & Sandblast	$ 33.74	18.70

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2016

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 30.42	22.19
Brush	$ 30.07	22.19
Spray & Sandblast	$ 30.82	22.19

PAIN0802-002 06/01/2016

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND, ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 27.50	17.72

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2016

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 24.39	11.72

PAIN0934-001 06/01/2016

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 32.74	18.70
Spray	$ 33.74	18.70
Structural Steel	$ 32.89	18.70

PAIN1011-002 06/01/2016

FLORENCE COUNTY

	Rates	Fringes

Painters:.....$ 24.56 11.93

PLAS0599-010 06/01/2016

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2016

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 26.63	19.85
3 or more Axles; Euclids Dumptor & Articulated, Truck Mechanic	$ 26.78	19.85
WELL DRILLER	$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the

most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination

* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

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.

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0010	201.0105 Clearing	57.000 STA	_____.____	_____.____
0020	201.0120 Clearing	251.000 ID	_____.____	_____.____
0030	201.0205 Grubbing	57.000 STA	_____.____	_____.____
0040	201.0220 Grubbing	251.000 ID	_____.____	_____.____
0050	203.0100 Removing Small Pipe Culverts	7.000 EACH	_____.____	_____.____
0060	203.0500.S Removing Old Structure Over Waterway (station) 001. STA. 151+23.39 WB	LS	LUMP SUM	_____.____
0070	204.0100 Removing Pavement	115.000 SY	_____.____	_____.____
0080	204.0110 Removing Asphaltic Surface	5,900.000 SY	_____.____	_____.____
0090	204.0115 Removing Asphaltic Surface Butt Joints	2,600.000 SY	_____.____	_____.____
0100	204.0150 Removing Curb & Gutter	9,900.000 LF	_____.____	_____.____
0110	204.0155 Removing Concrete Sidewalk	3,800.000 SY	_____.____	_____.____
0120	204.0165 Removing Guardrail	125.000 LF	_____.____	_____.____
0130	204.0195 Removing Concrete Bases	16.000 EACH	_____.____	_____.____
0140	204.0210 Removing Manholes	5.000 EACH	_____.____	_____.____
0150	204.0220 Removing Inlets	33.000 EACH	_____.____	_____.____
0160	204.0245 Removing Storm Sewer (size) 001. 12-INCH	285.000 LF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0170	204.0245 Removing Storm Sewer (size) 002. 15-INCH	100.000 LF	_____.____	_____.____
0180	204.0245 Removing Storm Sewer (size) 003. 18-INCH	200.000 LF	_____.____	_____.____
0190	204.0245 Removing Storm Sewer (size) 004. 21-INCH	225.000 LF	_____.____	_____.____
0200	204.0245 Removing Storm Sewer (size) 005. 24-INCH	960.000 LF	_____.____	_____.____
0210	204.0245 Removing Storm Sewer (size) 006. 30-INCH	20.000 LF	_____.____	_____.____
0220	204.0245 Removing Storm Sewer (size) 007. HE 29-INCH x 45-INCH	185.000 LF	_____.____	_____.____
0230	204.9060.S Removing (item description) 001. AND SALVAGING DANE COUNTY PARKS SIGNS	2.000 EACH	_____.____	_____.____
0240	204.9060.S Removing (item description) 002. AND SALVAGING ICE AGE TRAIL SIGNS	2.000 EACH	_____.____	_____.____
0250	204.9090.S Removing (item description) 001. BOULDER RETAINING WALL	185.000 LF	_____.____	_____.____
0260	205.0100 Excavation Common	123,327.000 CY	_____.____	_____.____
0270	205.0200 Excavation Rock	47,159.000 CY	_____.____	_____.____
0280	206.1000 Excavation for Structures Bridges (structure) 001. B-13-847	LS	LUMP SUM	_____.____
0290	206.2000 Excavation for Structures Culverts (structure) 001. B-13-848	LS	LUMP SUM	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0300	206.3000 Excavation for Structures Retaining Walls (structure) 001. R-13-309	LS	LUMP SUM	_____.____
0310	206.3000 Excavation for Structures Retaining Walls (structure) 002. R-13-310	LS	LUMP SUM	_____.____
0320	209.0300.S Backfill Coarse Aggregate (size) 001. NO 1	125.000 CY	_____.____	_____.____
0330	210.1500 Backfill Structure Type A	7,960.000 TON	_____.____	_____.____
0340	210.2500 Backfill Structure Type B	430.000 TON	_____.____	_____.____
0350	211.0100 Prepare Foundation for Asphaltic Paving (project) 001. 5992-09-31	LS	LUMP SUM	_____.____
0360	213.0100 Finishing Roadway (project) 001. 5992-09-31	1.000 EACH	_____.____	_____.____
0370	305.0110 Base Aggregate Dense 3/4-Inch	1,400.000 TON	_____.____	_____.____
0380	305.0120 Base Aggregate Dense 1 1/4-Inch	59,000.000 TON	_____.____	_____.____
0390	311.0110 Breaker Run	200.000 TON	_____.____	_____.____
0400	312.0110 Select Crushed Material	65,100.000 TON	_____.____	_____.____
0410	415.0090 Concrete Pavement 9-Inch	35.000 SY	_____.____	_____.____
0420	416.0170 Concrete Driveway 7-Inch	400.000 SY	_____.____	_____.____
0430	416.0270 Concrete Driveway HES 7-Inch	150.000 SY	_____.____	_____.____
0440	440.4410 Incentive IRI Ride	10,200.000 DOL	1.00000	10,200.00

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0450	450.4000 HMA Cold Weather Paving	6,900.000 TON	_____.____	_____.____
0460	455.0605 Tack Coat	3,600.000 GAL	_____.____	_____.____
0470	460.2000 Incentive Density HMA Pavement	12,780.000 DOL	1.00000	12,780.00
0480	460.4110.S Reheating HMA Pavement Longitudinal Joints	28,050.000 LF	_____.____	_____.____
0490	460.5223 HMA Pavement 3 LT 58-28 S	1,900.000 TON	_____.____	_____.____
0500	460.6223 HMA Pavement 3 MT 58-28 S	11,300.000 TON	_____.____	_____.____
0510	460.6424 HMA Pavement 4 MT 58-28 H	6,900.000 TON	_____.____	_____.____
0520	465.0110 Asphaltic Surface Patching	180.000 TON	_____.____	_____.____
0530	465.0120 Asphaltic Surface Driveways and Field Entrances	150.000 TON	_____.____	_____.____
0540	465.0125 Asphaltic Surface Temporary	1,800.000 TON	_____.____	_____.____
0550	465.0310 Asphaltic Curb	970.000 LF	_____.____	_____.____
0560	465.0315 Asphaltic Flumes	80.000 SY	_____.____	_____.____
0570	502.0100 Concrete Masonry Bridges	450.000 CY	_____.____	_____.____
0580	502.3100 Expansion Device (structure) 001. B-13-847	 LS	LUMP SUM	_____.____
0590	502.3200 Protective Surface Treatment	255.000 SY	_____.____	_____.____
0600	502.4205 Adhesive Anchors No. 5 Bar	56.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0610	504.0100 Concrete Masonry Culverts	167.000 CY	_____.____	_____.____
0620	504.0500 Concrete Masonry Retaining Walls	1,125.000 CY	_____.____	_____.____
0630	505.0400 Bar Steel Reinforcement HS Structures	93,560.000 LB	_____.____	_____.____
0640	505.0600 Bar Steel Reinforcement HS Coated Structures	116,040.000 LB	_____.____	_____.____
0650	506.8005.S Prefabricated Steel Truss Pedestrian Bridge LRFD (structure) 001. B-13-847	LS	LUMP SUM	_____.____
0660	511.1300 Temporary Shoring (location) 001. STA 118+70 'WB' - 132+61 'WB'	13,500.000 SF	_____.____	_____.____
0670	516.0500 Rubberized Membrane Waterproofing	102.000 SY	_____.____	_____.____
0680	517.1000 Painting Epoxy System Steel Truss (structure) 001. B-13-847	LS	LUMP SUM	_____.____
0690	517.1015.S Concrete Staining Multi-Color (structure) 001. B-13-847	3,020.000 SF	_____.____	_____.____
0700	517.1015.S Concrete Staining Multi-Color (structure) 002. R-13-309	4,630.000 SF	_____.____	_____.____
0710	517.1015.S Concrete Staining Multi-Color (structure) 003. R-13-310	6,160.000 SF	_____.____	_____.____
0720	517.1050.S Architectural Surface Treatment (structure) 001. B-13-847	2,440.000 SF	_____.____	_____.____
0730	517.1050.S Architectural Surface Treatment (structure) 002. R-13-309	3,410.000 SF	_____.____	_____.____
0740	517.1050.S Architectural Surface Treatment (structure) 003. R-13-310	5,040.000 SF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0750	520.8000 Concrete Collars for Pipe	19.000 EACH	_____.____	_____.____
0760	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH	_____.____	_____.____
0770	522.1015 Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	1.000 EACH	_____.____	_____.____
0780	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	2.000 EACH	_____.____	_____.____
0790	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	2.000 EACH	_____.____	_____.____
0800	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	1.000 EACH	_____.____	_____.____
0810	522.1048 Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	3.000 EACH	_____.____	_____.____
0820	601.0409 Concrete Curb & Gutter 30-Inch Type A	100.000 LF	_____.____	_____.____
0830	601.0411 Concrete Curb & Gutter 30-Inch Type D	15,000.000 LF	_____.____	_____.____
0840	601.0600 Concrete Curb Pedestrian	480.000 LF	_____.____	_____.____
0850	602.0410 Concrete Sidewalk 5-Inch	44,000.000 SF	_____.____	_____.____
0860	602.0515 Curb Ramp Detectable Warning Field Natural Patina	800.000 SF	_____.____	_____.____
0870	603.8000 Concrete Barrier Temporary Precast Delivered	5,100.000 LF	_____.____	_____.____
0880	603.8125 Concrete Barrier Temporary Precast Installed	6,500.000 LF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0890	604.0400 Slope Paving Concrete	56.000 SY	_____.____	_____.____
0900	606.0200 Riprap Medium	170.000 CY	_____.____	_____.____
0910	606.0300 Riprap Heavy	30.000 CY	_____.____	_____.____
0920	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	670.000 LF	_____.____	_____.____
0930	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	1,092.000 LF	_____.____	_____.____
0940	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	128.000 LF	_____.____	_____.____
0950	608.0421 Storm Sewer Pipe Reinforced Concrete Class IV 21-Inch	48.000 LF	_____.____	_____.____
0960	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	3,173.000 LF	_____.____	_____.____
0970	608.0427 Storm Sewer Pipe Reinforced Concrete Class IV 27-Inch	246.000 LF	_____.____	_____.____
0980	608.0430 Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	876.000 LF	_____.____	_____.____
0990	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	233.000 LF	_____.____	_____.____
1000	608.0442 Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	38.000 LF	_____.____	_____.____
1010	608.0448 Storm Sewer Pipe Reinforced Concrete Class IV 48-Inch	83.000 LF	_____.____	_____.____
1020	611.0410 Reconstructing Catch Basins	5.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1030	611.0612 Inlet Covers Type C	4.000 EACH	_____.____	_____.____
1040	611.2003 Manholes 3-FT Diameter	4.000 EACH	_____.____	_____.____
1050	611.2004 Manholes 4-FT Diameter	32.000 EACH	_____.____	_____.____
1060	611.2005 Manholes 5-FT Diameter	6.000 EACH	_____.____	_____.____
1070	611.2006 Manholes 6-FT Diameter	5.000 EACH	_____.____	_____.____
1080	611.2007 Manholes 7-FT Diameter	1.000 EACH	_____.____	_____.____
1090	611.3230 Inlets 2x3-FT	56.000 EACH	_____.____	_____.____
1100	611.8110 Adjusting Manhole Covers	7.000 EACH	_____.____	_____.____
1110	611.8120.S Cover Plates Temporary	8.000 EACH	_____.____	_____.____
1120	611.9800.S Pipe Grates	1.000 EACH	_____.____	_____.____
1130	612.0406 Pipe Underdrain Wrapped 6-Inch	4,640.000 LF	_____.____	_____.____
1140	614.0905 Crash Cushions Temporary	6.000 EACH	_____.____	_____.____
1150	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
1160	620.0300 Concrete Median Sloped Nose	215.000 SF	_____.____	_____.____
1170	621.0100 Landmark Reference Monuments	3.000 EACH	_____.____	_____.____
1180	623.0200 Dust Control Surface Treatment	88,000.000 SY	_____.____	_____.____
1190	624.0100 Water	2,000.000 MGAL	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1200	625.0100 Topsoil	54,600.000 SY	_____.____	_____.____
1210	625.0500 Salvaged Topsoil	22,500.000 SY	_____.____	_____.____
1220	627.0200 Mulching	8,500.000 SY	_____.____	_____.____
1230	628.1104 Erosion Bales	24.000 EACH	_____.____	_____.____
1240	628.1504 Silt Fence	3,200.000 LF	_____.____	_____.____
1250	628.1520 Silt Fence Maintenance	6,240.000 LF	_____.____	_____.____
1260	628.1905 Mobilizations Erosion Control	14.000 EACH	_____.____	_____.____
1270	628.1910 Mobilizations Emergency Erosion Control	7.000 EACH	_____.____	_____.____
1280	628.1920 Cleaning Sediment Basins	13.000 CY	_____.____	_____.____
1290	628.2008 Erosion Mat Urban Class I Type B	34,500.000 SY	_____.____	_____.____
1300	628.2027 Erosion Mat Class II Type C	600.000 SY	_____.____	_____.____
1310	628.2031 Erosion Mat Class III Type A	1,500.000 SY	_____.____	_____.____
1320	628.7005 Inlet Protection Type A	108.000 EACH	_____.____	_____.____
1330	628.7015 Inlet Protection Type C	120.000 EACH	_____.____	_____.____
1340	628.7020 Inlet Protection Type D	8.000 EACH	_____.____	_____.____
1350	628.7504 Temporary Ditch Checks	1,600.000 LF	_____.____	_____.____
1360	628.7555 Culvert Pipe Checks	30.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1370	628.7560 Tracking Pads	30.000 EACH	_____.____	_____.____
1380	629.0210 Fertilizer Type B	45.000 CWT	_____.____	_____.____
1390	630.0140 Seeding Mixture No. 40	150.000 LB	_____.____	_____.____
1400	630.0200 Seeding Temporary	210.000 LB	_____.____	_____.____
1410	631.0300 Sod Water	825.000 MGAL	_____.____	_____.____
1420	631.1000 Sod Lawn	16,600.000 SY	_____.____	_____.____
1430	632.0101 Trees (species) (size) (root) 001. Juniper Hill Dundee 5' Ht B&B	4.000 EACH	_____.____	_____.____
1440	632.0101 Trees (species) (size) (root) 002. Juniper Mountbatten 5' Ht B&B	3.000 EACH	_____.____	_____.____
1450	632.0101 Trees (species) (size) (root) 003. Spruce Black Hills 7' Ht B&B	2.000 EACH	_____.____	_____.____
1460	632.0101 Trees (species) (size) (root) 004. Hawthorn Winter King 2.5" Cal B&B	1.000 EACH	_____.____	_____.____
1470	632.0201 Shrubs (species) (size) (root) 001. Spirea Goldflame CG #3	2.000 EACH	_____.____	_____.____
1480	632.9101 Landscape Planting Surveillance and Care Cycles	20.000 EACH	_____.____	_____.____
1490	633.5200 Markers Culvert End	1.000 EACH	_____.____	_____.____
1500	637.2210 Signs Type II Reflective H	696.300 SF	_____.____	_____.____
1510	637.2215 Signs Type II Reflective H Folding	104.440 SF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1520	638.2102 Moving Signs Type II	5.000 EACH	_____.____	_____.____
1530	638.2602 Removing Signs Type II	65.000 EACH	_____.____	_____.____
1540	638.3000 Removing Small Sign Supports	57.000 EACH	_____.____	_____.____
1550	640.1303.S Pond Liner Clay	1,000.000 CY	_____.____	_____.____
1560	642.5201 Field Office Type C	1.000 EACH	_____.____	_____.____
1570	642.6001 Field Laboratory	1.000 EACH	_____.____	_____.____
1580	643.0100 Traffic Control (project) 001. 5992-09-31	1.000 EACH	_____.____	_____.____
1590	643.0300 Traffic Control Drums	97,100.000 DAY	_____.____	_____.____
1600	643.0410 Traffic Control Barricades Type II	5,500.000 DAY	_____.____	_____.____
1610	643.0420 Traffic Control Barricades Type III	17,000.000 DAY	_____.____	_____.____
1620	643.0500 Traffic Control Flexible Tubular Marker Posts	700.000 EACH	_____.____	_____.____
1630	643.0600 Traffic Control Flexible Tubular Marker Bases	700.000 EACH	_____.____	_____.____
1640	643.0705 Traffic Control Warning Lights Type A	34,200.000 DAY	_____.____	_____.____
1650	643.0715 Traffic Control Warning Lights Type C	12,900.000 DAY	_____.____	_____.____
1660	643.0800 Traffic Control Arrow Boards	565.000 DAY	_____.____	_____.____
1670	643.0900 Traffic Control Signs	23,000.000 DAY	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1680	643.1000 Traffic Control Signs Fixed Message	310.000 SF	_____.____	_____.____
1690	643.1050 Traffic Control Signs PCMS	920.000 DAY	_____.____	_____.____
1700	643.2000 Traffic Control Detour (project) 001. 5992-09-31	1.000 EACH	_____.____	_____.____
1710	643.3000 Traffic Control Detour Signs	9,700.000 DAY	_____.____	_____.____
1720	644.1410.S Temporary Pedestrian Surface Asphalt	4,000.000 SF	_____.____	_____.____
1730	644.1420.S Temporary Pedestrian Surface Plywood	100.000 SF	_____.____	_____.____
1740	644.1430.S Temporary Pedestrian Surface Plate	100.000 SF	_____.____	_____.____
1750	644.1601.S Temporary Curb Ramp	20.000 EACH	_____.____	_____.____
1760	644.1616.S Temporary Pedestrian Safety Fence	10,000.000 LF	_____.____	_____.____
1770	645.0105 Geotextile Type C	290.000 SY	_____.____	_____.____
1780	645.0120 Geotextile Type HR	400.000 SY	_____.____	_____.____
1790	646.0106 Pavement Marking Epoxy 4-Inch	8,900.000 LF	_____.____	_____.____
1800	646.0116 Pavement Marking Epoxy 6-Inch	15,500.000 LF	_____.____	_____.____
1810	646.0126 Pavement Marking Epoxy 8-Inch	3,300.000 LF	_____.____	_____.____
1820	646.0600 Removing Pavement Markings	18,000.000 LF	_____.____	_____.____
1830	647.0156 Pavement Marking Arrows Epoxy Type 1	2.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1840	647.0166 Pavement Marking Arrows Epoxy Type 2	25.000 EACH	_____.____	_____.____
1850	647.0206 Pavement Marking Arrows Bike Lane Epoxy	16.000 EACH	_____.____	_____.____
1860	647.0306 Pavement Marking Symbols Bike Lane Epoxy	16.000 EACH	_____.____	_____.____
1870	647.0356 Pavement Marking Words Epoxy	16.000 EACH	_____.____	_____.____
1880	647.0456 Pavement Marking Curb Epoxy	370.000 LF	_____.____	_____.____
1890	647.0576 Pavement Marking Stop Line Epoxy 24-Inch	420.000 LF	_____.____	_____.____
1900	647.0606 Pavement Marking Island Nose Epoxy	15.000 EACH	_____.____	_____.____
1910	647.0726 Pavement Marking Diagonal Epoxy 12-Inch	485.000 LF	_____.____	_____.____
1920	647.0763 Pavement Marking Crosswalk Paint 6-Inch	1,750.000 LF	_____.____	_____.____
1930	647.0766 Pavement Marking Crosswalk Epoxy 6-Inch	1,025.000 LF	_____.____	_____.____
1940	647.0776 Pavement Marking Crosswalk Epoxy 12-Inch	1,680.000 LF	_____.____	_____.____
1950	647.0955 Removing Pavement Markings Arrows	2.000 EACH	_____.____	_____.____
1960	647.0965 Removing Pavement Markings Words	1.000 EACH	_____.____	_____.____
1970	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	16,100.000 LF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1980	649.0402 Temporary Pavement Marking Paint 4-Inch	54,760.000 LF	_____.____	_____.____
1990	649.0801 Temporary Pavement Marking Removable Tape 8-Inch	270.000 LF	_____.____	_____.____
2000	649.0802 Temporary Pavement Marking Paint 8-Inch	4,430.000 LF	_____.____	_____.____
2010	649.1100 Temporary Pavement Marking Stop Line 18-Inch	780.000 LF	_____.____	_____.____
2020	649.1802 Temporary Pavement Marking Arrows Paint	25.000 EACH	_____.____	_____.____
2030	649.2002 Temporary Pavement Marking Words Paint	24.000 EACH	_____.____	_____.____
2040	649.2100 Temporary Raised Pavement Markers Type I	6.000 EACH	_____.____	_____.____
2050	650.6500 Construction Staking Structure Layout (structure) 001. B-13-847	LS	LUMP SUM	_____.____
2060	650.6500 Construction Staking Structure Layout (structure) 002. B-13-848	LS	LUMP SUM	_____.____
2070	650.6500 Construction Staking Structure Layout (structure) 003. R-13-309	LS	LUMP SUM	_____.____
2080	650.6500 Construction Staking Structure Layout (structure) 004. R-13-310	LS	LUMP SUM	_____.____
2090	652.0215 Conduit Rigid Nonmetallic Schedule 40 1 1/4-Inch	40.000 LF	_____.____	_____.____
2100	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	22,241.000 LF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
2110	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	1,429.000 LF	_____.____	_____.____
2120	652.0325 Conduit Rigid Nonmetallic Schedule 80 2-Inch	2,261.000 LF	_____.____	_____.____
2130	652.0335 Conduit Rigid Nonmetallic Schedule 80 3-Inch	1,788.000 LF	_____.____	_____.____
2140	652.0800 Conduit Loop Detector	1,817.000 LF	_____.____	_____.____
2150	653.0905 Removing Pull Boxes	2.000 EACH	_____.____	_____.____
2160	654.0110 Concrete Bases Type 10	7.000 EACH	_____.____	_____.____
2170	655.0230 Cable Traffic Signal 5-14 AWG	1,710.000 LF	_____.____	_____.____
2180	655.0240 Cable Traffic Signal 7-14 AWG	1,078.000 LF	_____.____	_____.____
2190	655.0250 Cable Traffic Signal 9-14 AWG	418.000 LF	_____.____	_____.____
2200	655.0260 Cable Traffic Signal 12-14 AWG	2,589.000 LF	_____.____	_____.____
2210	655.0615 Electrical Wire Lighting 10 AWG	8,740.000 LF	_____.____	_____.____
2220	655.0620 Electrical Wire Lighting 8 AWG	9,938.000 LF	_____.____	_____.____
2230	655.0630 Electrical Wire Lighting 4 AWG	29,814.000 LF	_____.____	_____.____
2240	655.0800 Loop Detector Wire	4,906.000 LF	_____.____	_____.____
2250	656.0200 Electrical Service Meter Breaker Pedestal (location) 001. CTH PD MEDIAN	LS	LUMP SUM	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
2260	656.0200 Electrical Service Meter Breaker Pedestal (location) 002. SOUTH HIGH POINT	LS	LUMP SUM	_____.____
2270	656.0200 Electrical Service Meter Breaker Pedestal (location) 003. CTH PD	LS	LUMP SUM	_____.____
2280	656.0200 Electrical Service Meter Breaker Pedestal (location) 004. CTH PD-MUIR FIELD	LS	LUMP SUM	_____.____
2290	657.0100 Pedestal Bases	11.000 EACH	_____.____	_____.____
2300	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	39.000 EACH	_____.____	_____.____
2310	657.0420 Traffic Signal Standards Aluminum 13-FT	11.000 EACH	_____.____	_____.____
2320	658.0500 Pedestrian Push Buttons	23.000 EACH	_____.____	_____.____
2330	658.5069 Signal Mounting Hardware (location) 001. SOUTH HIGH POINT & CTH PD	LS	LUMP SUM	_____.____
2340	658.5069 Signal Mounting Hardware (location) 002. COUNTRY GROVE/MUIR FIELD & CTH PD	LS	LUMP SUM	_____.____
2350	658.5069 Signal Mounting Hardware (location) 003. MAPLE GROVE & CTH PD	LS	LUMP SUM	_____.____
2360	690.0150 Sawing Asphalt	8,700.000 LF	_____.____	_____.____
2370	690.0250 Sawing Concrete	160.000 LF	_____.____	_____.____
2380	715.0502 Incentive Strength Concrete Structures	10,452.000 DOL		_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
2390	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	1,400.000 HRS	5.00000	7,000.00
2400	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	875.000 HRS	5.00000	4,375.00
2410	SPV.0035 Special 001. TOPSOIL SPECIAL	11.000 CY	_____.____	_____.____
2420	SPV.0060 Special 001. INLET COVER TYPE H SPECIAL	80.000 EACH	_____.____	_____.____
2430	SPV.0060 Special 002. INLET COVERS TERRACE TYPE 3 SPECIAL	2.000 EACH	_____.____	_____.____
2440	SPV.0060 Special 003. TERRACE INLET TYPE 3 SPECIAL	4.000 EACH	_____.____	_____.____
2450	SPV.0060 Special 004. MANHOLE COVER TYPE J MODIFIED	16.000 EACH	_____.____	_____.____
2460	SPV.0060 Special 005. PRECAST SIGN POST BASE	109.000 EACH	_____.____	_____.____
2470	SPV.0060 Special 006. SIGN POST BASE FOR CONCRETE INSTALLATION	1.000 EACH	_____.____	_____.____
2480	SPV.0060 Special 008. LOCATE AND REFERENCE PROPERTY CORNERS	42.000 EACH	_____.____	_____.____
2490	SPV.0060 Special 009. RESET PROPERTY CORNERS	42.000 EACH	_____.____	_____.____
2500	SPV.0060 Special 010. REMOVE & REPLACE MAILBOXES	22.000 EACH	_____.____	_____.____
2510	SPV.0060 Special 011. TEMPORARY INLET COVER	16.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
2520	SPV.0060 Special 013. ROCK EXCAVATION FOR CONCRETE BASES	6.000 EACH	_____.____	_____.____
2530	SPV.0060 Special 014. INLET COVER TYPE H-S SPECIAL	8.000 EACH	_____.____	_____.____
2540	SPV.0060 Special 015. UTILITY LINE OPENING (ULO)	30.000 EACH	_____.____	_____.____
2550	SPV.0060 Special 016. DECORATIVE MEDALLION	2.000 EACH	_____.____	_____.____
2560	SPV.0060 Special 017. MEDALLION CONCRETE STAINING MULTI-COLOR	2.000 EACH	_____.____	_____.____
2570	SPV.0060 Special 091. STORM SEWER PLUG	1.000 EACH	_____.____	_____.____
2580	SPV.0060 Special 101. POND OUTLET CONTROL MANHOLE	2.000 EACH	_____.____	_____.____
2590	SPV.0060 Special 200. SANITARY SEWER TAP	2.000 EACH	_____.____	_____.____
2600	SPV.0060 Special 201. HYDRANTS	14.000 EACH	_____.____	_____.____
2610	SPV.0060 Special 202. WATER VALVE, 6-INCH	8.000 EACH	_____.____	_____.____
2620	SPV.0060 Special 203. WATER VALVE, 8-INCH	2.000 EACH	_____.____	_____.____
2630	SPV.0060 Special 204. WATER VALVE, 12-INCH	9.000 EACH	_____.____	_____.____
2640	SPV.0060 Special 205. CUT-IN OR CONNECT-TO EXISTING WATER SYSTEM	3.000 EACH	_____.____	_____.____
2650	SPV.0060 Special 206. ADJUST WATER VALVE BOX	34.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
2660	SPV.0060 Special 208. TEMPORARY WATER MAIN CONNECTION	3.000 EACH	_____.____	_____.____
2670	SPV.0060 Special 209. EXCAVATE TRENCH FOR LIVE TAP	3.000 EACH	_____.____	_____.____
2680	SPV.0060 Special 210. ADJUST MMSD SPECIAL	3.000 EACH	_____.____	_____.____
2690	SPV.0060 Special 211. ADJUST SAS SPECIAL	7.000 EACH	_____.____	_____.____
2700	SPV.0060 Special 212. SANITARY SEWER INTERNAL CHIMNEY SEAL	1.000 EACH	_____.____	_____.____
2710	SPV.0060 Special 213. ADJUST SEWER ACCESS STRUCTURE SPECIAL	1.000 EACH	_____.____	_____.____
2720	SPV.0060 Special 214. ABANDON SANITARY SEWER-PLUG PIPE	2.000 EACH	_____.____	_____.____
2730	SPV.0060 Special 215. SANITARY SEWER ACCESS STRUCTURE (4-FOOT DIAMETER)	2.000 EACH	_____.____	_____.____
2740	SPV.0060 Special 250. ELECTRICAL PULL BOX TYPE 1	41.000 EACH	_____.____	_____.____
2750	SPV.0060 Special 251. ELECTRICAL PULL BOX TYPE 3	9.000 EACH	_____.____	_____.____
2760	SPV.0060 Special 252. ELECTRICAL PULL BOX TYPE 5	7.000 EACH	_____.____	_____.____
2770	SPV.0060 Special 253. ELECTRICAL PULL BOX TYPE 7	2.000 EACH	_____.____	_____.____
2780	SPV.0060 Special 254. ELECTRIC UTILITY ACCESS STRUCTURE	6.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
2790	SPV.0060 Special 255. CONCRETE BASES TYPE G	7.000 EACH	_____.____	_____.____
2800	SPV.0060 Special 256. CONCRETE BASES TYPE LB-2	8.000 EACH	_____.____	_____.____
2810	SPV.0060 Special 257. CONCRETE BASES TYPE LB-3	50.000 EACH	_____.____	_____.____
2820	SPV.0060 Special 258. CONCRETE BASES TYPE LB-8	1.000 EACH	_____.____	_____.____
2830	SPV.0060 Special 259. CONCRETE BASES TYPE M	4.000 EACH	_____.____	_____.____
2840	SPV.0060 Special 260. CONCRETE BASES TYPE P	3.000 EACH	_____.____	_____.____
2850	SPV.0060 Special 261. CONCRETE BASE OFFSET	1.000 EACH	_____.____	_____.____
2860	SPV.0060 Special 262. CONCRETE BASE TYPE G BASE SPREAD FOOTING	1.000 EACH	_____.____	_____.____
2870	SPV.0060 Special 263. POLES ALUMINUM 20-FT STREET LIGHT	8.000 EACH	_____.____	_____.____
2880	SPV.0060 Special 264. POLES 30-FT 11 GAUGE	54.000 EACH	_____.____	_____.____
2890	SPV.0060 Special 265. POLES 20-FOOT 7 GAUGE	1.000 EACH	_____.____	_____.____
2900	SPV.0060 Special 266. TRANSFORMER BASES 16-INCH STEEL	11.000 EACH	_____.____	_____.____
2910	SPV.0060 Special 267. LED LUMINAIRE AND MOUNTING BRACKET TYPE 1	10.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
2920	SPV.0060 Special 268. LED LUMINAIRE AND MOUNTING BRACKET TYPE 2	79.000 EACH	_____.____	_____.____
2930	SPV.0060 Special 269. LED LUMINAIRE AND MOUNTING BRACKET TYPE 3	22.000 EACH	_____.____	_____.____
2940	SPV.0060 Special 270. MONTOBUE POLES TYPE 9	7.000 EACH	_____.____	_____.____
2950	SPV.0060 Special 271. TRAFFIC SIGNAL TROMBONE ARMS ALUMINUM 18-FT	1.000 EACH	_____.____	_____.____
2960	SPV.0060 Special 272. MONOTUBE ARMS 30-FT	7.000 EACH	_____.____	_____.____
2970	SPV.0060 Special 273. TRAFFIC SIGNAL HEADS 12-INCH 3-SECTION VERTICAL	44.000 EACH	_____.____	_____.____
2980	SPV.0060 Special 274. TRAFFIC SIGNAL HEADS 16-INCH PEDESTRIAN WITH COUNTDOWN	18.000 EACH	_____.____	_____.____
2990	SPV.0060 Special 275. BACKPLATES SIGNAL FACE 3-SECTION 12-INCH	44.000 EACH	_____.____	_____.____
3000	SPV.0060 Special 276. TRAFFIC SIGNAL CONTROL CABINET	3.000 EACH	_____.____	_____.____
3010	SPV.0060 Special 277. TRAFFIC SIGNAL CONTROLLER	3.000 EACH	_____.____	_____.____
3020	SPV.0060 Special 278. TRAFFIC SIGNAL ETHERNET SWITCH	3.000 EACH	_____.____	_____.____
3030	SPV.0060 Special 279. MALFUNCTION MANAGEMENT UNIT	3.000 EACH	_____.____	_____.____
3040	SPV.0060 Special 280. STREET LIGHT REMOVAL	9.000 EACH	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3050	SPV.0060 Special 281. LIGHTING CONTROL CABINET	4.000 EACH	_____.____	_____.____
3060	SPV.0085 Special 001. SEEDING MIXTURE, RANGE PASTURE	18.000 LB	_____.____	_____.____
3070	SPV.0085 Special 002. SEEDING MIXTURE, SHORT GRASS PRAIRIE	8.000 LB	_____.____	_____.____
3080	SPV.0085 Special 003. NO MOW LAWN SEED	3,900.000 LB	_____.____	_____.____
3090	SPV.0085 Special 004. SEEDING MIXTURE, DETENTION BASIN	110.000 LB	_____.____	_____.____
3100	SPV.0090 Special 001. CONCRETE CURB AND GUTTER 24-INCH TYPE D SPECIAL	14,700.000 LF	_____.____	_____.____
3110	SPV.0090 Special 003. SIGN POST	420.000 LF	_____.____	_____.____
3120	SPV.0090 Special 004. REFLECTIVE SIGN POST	1,148.000 LF	_____.____	_____.____
3130	SPV.0090 Special 005. RAILING STEEL PEDESTRIAN B-13-847	450.000 LF	_____.____	_____.____
3140	SPV.0090 Special 006. Railing Steel Pedestrian B-13-848	77.000 LF	_____.____	_____.____
3150	SPV.0090 Special 007. RAILING STREEL PEDESTRIAN R-13-309	650.000 LF	_____.____	_____.____
3160	SPV.0090 Special 008. RAILING STEEL PEDESTRIAN R-13-310	442.000 LF	_____.____	_____.____
3170	SPV.0090 Special 010. SPLIT RAIL FENCE	153.000 LF	_____.____	_____.____
3180	SPV.0090 Special 011. STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 48-INCH SPECIAL HALF SECTION	54.000 LF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3190	SPV.0090 Special 012. Landscape Fence Protection	25.000 LF	_____.____	_____.____
3200	SPV.0090 Special 201. SELECT FILL FOR SANITARY SEWER	464.000 LF	_____.____	_____.____
3210	SPV.0090 Special 203. ROCK EXCAVATION WATER MAIN	600.000 LF	_____.____	_____.____
3220	SPV.0090 Special 204. WATER MAIN, 6-INCH	205.000 LF	_____.____	_____.____
3230	SPV.0090 Special 205. WATER MAIN, 8-INCH	291.000 LF	_____.____	_____.____
3240	SPV.0090 Special 206. WATER MAIN, 12-INCH	2,556.000 LF	_____.____	_____.____
3250	SPV.0090 Special 207. WATER MAIN INSULATION	232.000 LF	_____.____	_____.____
3260	SPV.0090 Special 208. REMOVE SANITARY SEWER PIPE	412.000 LF	_____.____	_____.____
3270	SPV.0090 Special 210. SANITARY SEWER PIPE PVC, 8-INCH	52.000 LF	_____.____	_____.____
3280	SPV.0090 Special 211. SANITARY SEWER PRESSURE PIPE (C900), 10-INCH	350.000 LF	_____.____	_____.____
3290	SPV.0090 Special 212. SANITARY SEWER PIPE PVC 10-INCH	62.000 LF	_____.____	_____.____
3300	SPV.0090 Special 250. ELECTRICAL WIRE LIGHTING 14-3 UF GROUNDED	3,765.000 LF	_____.____	_____.____
3310	SPV.0090 Special 251. LOOP DETECTOR LEAD-IN CABLE SPECIAL	5,486.000 LF	_____.____	_____.____
3320	SPV.0090 Special 252. FIBER OPTIC CABLE 72-COUNT	6,280.000 LF	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3330	SPV.0105 Special 001. SURVEY PROJECT 5992-09-31	LS	LUMP SUM	_____.____
3340	SPV.0105 Special 002. DETENTION POND MAINTENANCE	LS	LUMP SUM	_____.____
3350	SPV.0105 Special 003. CONSTRUCTION SITE MAINTENANCE-MOWING	LS	LUMP SUM	_____.____
3360	SPV.0105 Special 004. Salvage Store And Re-Set Landscape Cobbles	LS	LUMP SUM	_____.____
3370	SPV.0105 Special 200. WASTEWATER CONTROL 300 GPM	LS	LUMP SUM	_____.____
3380	SPV.0105 Special 201. CONSTRUCTION STAKING SANITARY SEWER	LS	LUMP SUM	_____.____
3390	SPV.0105 Special 202. CONSTRUCTION STAKING WATER MAIN	LS	LUMP SUM	_____.____
3400	SPV.0105 Special 203. PROJECT DEWATERING (SANITARY SEWER)	LS	LUMP SUM	_____.____
3410	SPV.0105 Special 250. OPTICAL SIGNAL PREEMPT	LS	LUMP SUM	_____.____
3420	SPV.0105 Special 251. TEMPORARY TRAFFIC SIGNALS (CTH PD & SOUTH HIGH POINT)	LS	LUMP SUM	_____.____
3430	SPV.0105 Special 252. TEMPORARY TRAFFIC SIGNALS (CTH PD & MAPLE GROVE)	LS	LUMP SUM	_____.____
3440	SPV.0165 Special 001. WALL MODULAR BLOCK GRAVITY LRFD	615.000 SF	_____.____	_____.____
3450	SPV.0170 Special 001. PAVEMENT CLEANUP PROJECT 5992-09-31	171.000 STA	_____.____	_____.____

Proposal ID: 20170314012 Project(s): 5992-09-31, 5992-09-32

Federal ID(s): WISC 2017101, N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
3460	SPV.0180 Special 001. GEOGRID REINFORCEMENT	8,800.000 SY	_____.____	_____.____
3470	SPV.0180 Special 002. EROSION MAT, CLASS I, TYPE B FOR SHORT GRASS PRAIRIE	3,800.000 SY	_____.____	_____.____
3480	SPV.0180 Special 003. Shredded Hardwood Bark Mulch 3" Depth	6.000 SY	_____.____	_____.____
	Section: 0001		Total:	_____.____

Total Bid: _____.____

PLEASE ATTACH SCHEDULE OF ITEMS HERE