HIGHWAY WORK PROPOSAL

Proposal Number: Ø 4

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Dane	1206-07-74	WISC 2016 249	Mount Horeb - Madison CTH PD to Raymond Rd Stg 2/Phase 1	USH 18
Dane	1206-08-74		Mount Horeb - Madison CTH PD to Raymond Rd (Phase 1 Utls)	USH 18

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

Proposal Guaranty Required, $ 640,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: July 12, 2016 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 subject to federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Earthwork, base course, concrete pavement, HMA pavement, concrete curb and gutter, concrete barrier wall, concrete sidewalk, MGS guardrail, storm sewer, pavement marking, erosion control, lighting, landscaping, and Structures C-13-115, R-13-264, R-13-265, R-13-269, R-13-271 and S-13-447.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

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

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

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

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

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

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

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

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

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

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

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

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

Bidder

Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

Table of Contents

Article	Description	Page #
1.	General.	7
2.	Scope of Work.	7
3.	Prosecution and Progress.	7
4.	Traffic.	17
5.	Holiday and Special Event Work Restrictions.	43
6.	Hauling Restrictions.	45
7.	General Requirements for Incident Management.	45
8.	Notice to Contractor - General.	46
9.	Notice to Contractor - Construction Safety.	50
10.	Notice to Contractor – Airport Operating Restrictions – Site Specific.	54
11.	Contract Award and Execution.	57
12.	Other Contracts.	62
13.	General Provisions for Storm Sewer.	62
14.	General Provisions for City of Fitchburg Municipal Utilities (Water Main and Sanitary Sewer).	64
15.	Municipality Acceptance of Sanitary Sewer and Water Main Construction.	66
16.	Timely Decision Making Manual.	66
17.	Utilities.	66
18.	Notice to Contractor – Contamination Beyond Construction Limits.	81
19.	Health and Safety Requirements for Workers Remediating Petroleum Contamination.	82
20.	Coordination with Businesses and Residents.	82
21.	Environmental Protection, Dewatering.	83
22.	Erosion Control.	83
23.	Clearing and Grubbing.	84
24.	Clearing and Grubbing - Emerald Ash Borer.	84
25.	Removing and Abandoning Miscellaneous Structures.	86
26.	Sealing Pipes.	86
27.	Abandoning Sewer, Item 204.0291.S.	86
28.	Removing Flag Pole, Item 204.9060.S.001.	87
29.	Removing Business Sign and Base, Item 204.9060.S.002.	88
30.	Removing Private Light, Item 204.9060.S.003.	88
31.	Removing Inlet Covers, Item 204.9060.S.050.	89
32.	Removing Apron Endwalls, Item 204.9060.S.051.	89
33.	Removing Retaining Wall, Item 204.9090.S.001.	90
34.	Removing Gate House, Item 204.9105.S.001	90
35.	Removing Weigh Station Shed, Item 204.9105.S.002.	91
36.	Removing Storm Sewer Outlet Control Structure, Item 204.9105.S.050.	92
37.	Removing Gabion Structure, Item 204.9105.S.051.	92
38.	Backfill Coarse Aggregate Size No 1, Item 209.0300.S.001	93

39. Roadway Excavation. 93
40. Borrow. 93
41. QMP Base Aggregate. 94
42. Base Aggregate Dense 1 1/4-Inch. 102
43. Concrete Pavement. 102
44. QMP HMA Pavement Nuclear Density. 103
45. HMA Pavement 3 MT 58-28 S, Item 460.6223; HMA Pavement 4 MT 58-28 H, Item 460.6424. 110
46. Asphaltic Curb. 114
47. Railing Steel Pedestrian Type C3 R-13-264. 114
48. Concrete Staining R-13-264, Item 517.1010.S.001; R-13-265, Item 517.1010.S.002; R-13-269, Item 517.1010.S.003; R-13-271, Item 517.1010.S.004; S-13-447, Item 517.1010.S.005; Concrete Barrier Wall, Item 517.1010.S.006. 117
49. Architectural Surface Treatment R-13-264, Item 517.1050.S.001; R-13-265, Item 517.1050.S.002; R-13-269, Item 517.1050.S.003; R-13-271, Item 517.1050.S.004; S-13-447, Item 517.1050.S.005. 119
50. Traffic Signals-Signal Housings. 121
51. Concrete Barrier Temporary Precast Delivered. 121
52. Concrete Barrier Temporary Precast Installed. 121
53. Riprap. 121
54. Adjusting Manhole Covers. 121
55. Cover Plates Temporary, Item 611.8120.S. 122
56. Pipe Grates, Item 611.9800.S. 123
57. Drain Slotted Vane, Item 611.9900.S. 123
58. General Requirements for Storm Sewer Manholes. 124
59. Fence Safety, Item 616.0700.S. 124
60. Stone or Rock Ditch Checks, Item 628.7515.S. 125
61. Landscape Planting Surveillance and Care Cycles. 126
62. Sod Lawn. 127
63. Furnishing and Planting Plant Materials. 128
64. Signs Reflective. 132
65. Removing Signs (type); Removing Small Sign Supports. 132
66. Blue Specific Service Signs. 133
67. Field Facilities. 133
68. Nighttime Work Lighting-Stationary. 134
69. Temporary Pedestrian Surface Asphalt, Item 644.1410.S. 136
70. Temporary Curb Ramp, Item 644.1601.S. 137
71. Temporary Pedestrian Safety Fence, Item 644.1616.S. 138
72. Pavement Marking Late Season, Item 646.0900.S. 139
73. Removing Pavement Markings. 139
74. Temporary Pavement Marking. 140
75. Install Conduit Into Existing Item, Item 652.0700.S. 140
76. General Provision for Traffic Signals. 141
77. Anchor Assemblies Light Poles on Structures, Item 657.6005.S. 141
78. Temporary Traffic Signals for Intersections CTH PD and Fitchrona Rd, Item 661.0200.001 142

79. Seismograph, Item 999.1000.S. 143
80. Crack and Damage Survey, Item 999.1500.S. 144
81. Pond Clay Liner, Item SPV.0035.050. 145
82. Planting Mixture, Item SPV.0035.500. 148
83. Topsoil Special, Item SPV.0035.501. 149
84. Abandon Existing Sanitary Sewer – Slurry, Item SPV.0035.600. 150
85. Roadway Embankment, Item SPV.0035.700. 151
86. Excavation Special, Item SPV.0035.701. 152
87. Portable Changeable Message Sign (PCMS) Cellular Communications, SPV.0045.700. 157
88. Utility Line Opening (ULO), Item SPV.0060.001. 159
89. Concrete Flume, Item SPV.0060.002. 159
90. Posts Round Tubular Steel 2 3/8-Inch x 8-FT, Item SPV.0060.003; 10-FT, Item SPV.0060.004; 12-FT, Item SPV.0060.005. 160
91. V-Loc Base, Item SPV.0060.006. 161
92. Asphaltic Median Sloped Nose, Item SPV.0060.007. 161
93. Covering Signs, Item SPV.0060.008. 162
94. Department Owned Crash Cushion Temporary, Item SPV.0060.009. 163
95. Concrete Bases Type 10 Special, Item SPV.0060.010. 164
96. Manholes 9-FT Diameter, Item SPV.0060.050. 165
97. Manhole EB607, Item SPV.0060.051; EB8001, Item SPV.0060.052; EB830, Item SPV.0060.053; F4400, Item SPV.0060.054; NR750, Item SPV.0060.055. 166
98. Inlet WW1478, Item SPV.0060.056. 167
99. Inlet Covers 2X3-FT, Item SPV.0060.057. 168
100. Pyramidal Inlet Grate 6X6, Item SPV.0060.058; 6X12, Item SPV.0060.059. 168
101. Infiltration Basin Spillway, Item SPV.0060.060. 169
102. Storm Sewer Check Valve 12-Inch, Item SPV.0060.061. 170
103. Apron Endwalls for Culvert Pipe Reinforced Concrete 78-Inch, Item SPV.0060.062. 171
104. Concrete Cutoff Wall, Item SPV.0060.063. 171
105. Covering and Locating Storm Sewer, Item SPV.0060.064. 172
106. Storm Sewer Tap, Item SPV.0060.065. 173
107. Clay Anti-Seepage Collar, Item SPV.0060.066. 174
108. Cover Plates, Item SPV.0060.067. 176
109. Restrictor Plate, Item SPV.0060.068. 177
110. Stop Gate, Item SPV.0060.069. 178
111. Inlet Covers, Flat Temporary, Item SPV.0060.070. 179
112. Drain Slotted Vane 6-FT, Item SPV.0060.071. 179
113. Rock Excavation for Concrete Bases, Item SPV.0060.072. 180
114. Remove and Salvage Existing City-Owned Light Pole Assembly, Item SPV.0060.100. 181
115. Relocate and Modify Existing Lighting Cabinet, Item SPV.0060.101. 182
116. Luminaires Utility LED-City of Fitchburg, Item SPV.0060.102. 183
117. Luminaires Area LED, Item SPV.0060.103. 184
118. Luminaires Decorative LED, Item SPV.0060.104. 185
119. Aluminum Light Pole, Item SPV.0060.105. 186

120. Lighting Control Cabinet–City of Fitchburg, Item SPV.0060.106. 186
121. Concrete Control Cabinet Bases Special, Item SPV.0060.107. 188
122. Aluminum Transformer Base Breakaway, Item SPV.0060.108. 188
123. Concrete Light Pole, Item SPV.0060.109. 189
124. Pull Boxes, Polymer Concrete 12x12-Inch, Item SPV.0060.110; 17x30-Inch, Item SPV.0060.111. 189
125. Loop Detector Splice, Item SPV.0060.150. 190
126. Pull Box Type I, Item SPV.0060.151; Type III, Item SPV.0060.152; Type V, Item SPV.0060.153. 191
127. Pull Box Non-Conductive 24x36-Inch, Item SPV.0060.154; Pull Box Non-Conductive 24x42-Inch, Item SPV.0060.155. 192
128. Concrete Base Type G, Item SPV.0060.156; Type LB-3, Item SPV.0060.157; Type LB-8, Item SPV.0060.158; Type P, Item SPV.0060.159. 193
129. Transformer Base Steel, 16-Inch, Item SPV.0060.160; 20-Inch, Item SPV.0060.161. 195
130. Traffic Signal Trombone Arms, 15-FT, Item SPV.0060.162. 195
131. Pole 30-FT, 7 Gauge, Item SPV.0060.163; Pole 30-FT, 11 Gauge, Item SPV.0060.164. 197
132. Install Video Detection Camera, Item SPV.0060.165. 200
133. 8-Count Fiber Optic Connector 1,400-FT, Item SPV.0060.166. 202
134. Remove Existing WisDOT-Owned Light Pole Assembly, Item SPV.0060.167. 203
135. Remove Existing WisDOT-Owned Lighting Cabinet, Item SPV.0060.168. 203
136. Remove and Salvage Existing Blank Out Sign, Item SPV.0060.169. 204
137. Perennials, Allium, 'Summer Beauty', CG, 1 Gal., Item SPV.0060.500; Feather Reed Grass, 'Overdam', CG, 1 Gal., Item SPV.0060.501; Gayfeather, Spiked 'Kobold', CG, 1 Gal., Item SPV.0060.502; Prairie Dropseed, 'Tara', CG, 1 Gal., Item SPV.0060.503. 205
138. Fire Hydrants, Item SPV.0060.600. 206
139. Remove Existing Hydrant, Item SPV.0060.601. 207
140. Water Valve, 6-Inch, Item SPV.0060.602; 8-Inch, Item SPV.0060.603; 10-Inch, Item SPV.0060.604; 12-Inch, Item SPV.0060.605. 208
141. Adjust Existing Valve Box, Item SPV.0060.606. 209
142. Remove Existing Valve Box, Item SPV.0060.607. 209
143. Remove Existing Water Valve Manhole, Item SPV.0060.608. 210
144. Connect to Existing Water Main, Item SPV.0060.609. 211
145. Abandon Existing Water Main, Item SPV.0060.610. 212
146. Live Tap, Item SPV.0060.611. 212
147. Adjust Water Curb Box, Item SPV.0060.612. 213
148. Remove Existing Curb Box, Item SPV.0060.613. 214
149. Temporary Water Main Connection, Item SPV.0060.614. 214
150. Reconstruct Existing Sanitary Sewer Structure, Item SPV.0060.615. 215
151. Sanitary Sewer Structure, 4-Foot Diameter, Item SPV.0060.616; 5-Foot Diameter, Item SPV.0060.617. 216
152. Remove Existing Sanitary Sewer Structure, Item SPV.0060.619. 217
153. Reconstruct Bench and Flowlines, Item SPV.0060.620. 218
154. Sanitary Sewer Lateral Electronic Marker, Item SPV.0060.621. 219

155. Fluorocarbon Gaskets, Item SPV.0060.622..... 219
156. Fire Hydrant Weep Hole Plugs, Item SPV.0060.623. 220
157. Clay Trench Dikes, Item SPV.0060.624..... 220
158. Sanitary Sewer Monitoring Manhole 6-Foot Diameter, Item SPV.0060.625..... 222
159. Sanitary Lateral Cleanout, Item SPV.0060.626..... 223
160. Baseline CPM Progress Schedule, Item SPV.0060.700; CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.701. 223
161. Street Sweeping, Item SPV.0075.001..... 234
162. Seeding Mixture Detention Pond, Wet Sedge Meadow, Item SPV.0085.001; Short Grass Prairie, Item SPV.0085.002. 234
163. Construction Fence Temporary, Item SPV.0090.001..... 237
164. Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate, Item SPV.0090.002. 238
165. Salvage Timber Curb, Item SPV.0090.003. 239
166. Salvage Boulder Wall, Item SPV.0090.004..... 240
167. Fence Wood Salvaged, Item SPV.0090.005..... 240
168. Concrete Barrier Precast 12.5-FT, Item SPV.0090.006..... 241
169. Surcharge Earth Embankment, Item SPV.0090.007..... 242
170. Sawing Curb Head, Item SPV.0090.008. 245
171. Construction Staking Pedestrian Surface, Item SPV.0090.009. 245
172. Concrete Curb 4-Inch Sloped 12-Inch Type A, Item SPV.0090.010; Concrete Curb and Gutter 32-Inch Special, Item SPV.0090.011; Concrete Curb and Gutter 56-Inch Special; Item SPV.0090.012; Concrete Curb and Gutter 24-Inch Type D, Item SPV.0090.013. 246
173. Concrete Barrier Special, Item SPV.0090.014. 247
174. Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 38x60-Inch, Item SPV.0090.050; 43x68-Inch, Item SPV.0090.051. 248
175. Storm Sewer Pipe PVC 6-Inch, Item SPV.0090.052; 8-Inch, Item SPV.0090.053; 12-Inch, Item SPV.0090.054; 15-Inch, Item SPV.0090.055. 248
176. Galvanized Pipe Railing, Item SPV.0090.200..... 249
177. Water Main, 6-Inch, Item SPV.0090.600; 8-Inch, Item SPV.0090.601; 10-Inch, Item SPV.0090.602; 12-Inch, Item SPV.0090.603..... 250
178. Steel Casing Pipe, 24-Inch, Item SPV.0090.604. 251
179. Steel Casing Pipe, 36-Inch, Item SPV.0090.605. 253
180. Granular Backfill for Water Main, Item SPV.0090.606..... 256
181. Copper Water Service, 1-Inch, Item SPV.0090.607; 1.5-Inch, Item SPV.0090.608; 2-Inch, Item SPV.0090.609. 256
182. Water Main Insulation, Item SPV.0090.610..... 257
183. Sanitary Sewer Pipe, 8-Inch Item SPV.0090.611; 10-Inch, Item SPV.0090.612, 15-Inch, Item SPV.0090.613. 258
184. Granular Backfill for Sanitary Sewer, Item SPV.0090.614..... 259
185. Sanitary Sewer Lateral, 4-Inch, Item SPV.0090.615; 6-Inch, Item SPV.0090.616..... 260
186. Rock Excavation Water Main, Item SPV.0090.617. 261
187. Research and Locate Existing Property Monuments, Item SPV.0105.001. 262
188. Verify and Replace Existing Property Monuments, Item SPV.0105.002..... 263
189. Construction Staking Supplemental Features, Item SPV.0105.003. 264

190. Pond D Haul Road, Item SPV.0105.004 265
191. Pond D Spillway, Item SPV.0105.050 266
192. Bioretention Basin B, Item SPV.0105.051; C, Item SPV.0105.052 267
193. Box Culvert Inlet Modifications, Item SPV.0105.053. 270
194. Utility Support, Item SPV.0105.054. 270
195. Install Department Furnished Vehicle Detection, USH 18 and CTH PD, Item SPV.0105.150; USH 18 and Williamsburg Way, Item SPV.0105.151. 272
196. Remove and Transport Traffic Signals, Fitchrona Road, Item SPV.0105.152 273
197. Traffic Control Utility Crossings, Item SPV.0105.153. 274
198. EVP Detector, Item SPV.0105.154 276
199. Bioretention Maintenance, Item SPV.0105.500. 277
200. Detention Pond Maintenance, Item SPV.0105.501. 279
201. Construction Staking Water Main, Item SPV.0105.600. 282
202. Construction Staking Sanitary Sewer, Item SPV.0105.601. 283
203. Water for Seeded Areas, Item SPV.0120.001 283
204. Water for Detention Ponds, Item SPV.0120.002. 284
205. Sidewalk Pavement, Item SPV.0165.001. 285
206. Colored and Stamped Concrete 5-Inch, Item SPV.0165.002. 286
207. Temporary Pedestrian Surface Special, Item SPV.0165.003. 289
208. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, R-13-264, Item SPV.0165.004; R-13-265, Item SPV.0165.005; R-13-269, Item SPV.0165.006; R-13-271, Item SPV.0165.007 290
209. Salvage and Replace Landscaping Stone, Item SPV.0165.008. 305
210. Geogrid Reinforcement, Item SPV.0180.001. 305
211. Shredded Hardwood Bark Mulch, Item SPV.0180.500. 308
212. Native Vegetated Mat, Type A, Item SPV.0180.501; Type B, Item SPV.0180.502; Type C, Item SPV.0180.503. 309
213. Aggregate Fines, Item SPV.0195.001. 316
214. Cold Patch, Item SPV.0195.700. 317
215. Excavation, Hauling, and Disposal of Contaminated Soil and Management of Contaminated Groundwater, Item SPV.0195.701. 318

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1206-07-74, Mount Horeb-Madison, CTH PD to Raymond Rd, Stg 2/Phase 1; Project 1206-08-74, Mount Horeb-Madison, CTH PD to Raymond Rd (Phase 1 Utls), USH 18, Dane County Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2016 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 (20151210)

2. Scope of Work.

The work under this contract shall consist of earthwork, base course, concrete pavement, HMA pavement, concrete curb and gutter, concrete barrier wall, concrete sidewalk, MGS guardrail, storm sewer, pavement marking, erosion control, lighting, landscaping, structures (C-13-115, R-13-264, R-13-265, R-13-269, R-13-271, and S-13-447) 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.

The contract time for completion, as well as the interim completion dates, are based on an expedited work schedule and may require extra work hours, forces, equipment and coordination. Included in this Prosecution and Progress article are interim and final completion dates. These dates indicate that work efforts will require multiple or concurrent

controlling operations to occur at the same time. This information is included to assist the contractor and its subcontractors; do not interpret this information as a demonstration of specified means and methods or work periods other than interim and final completion dates.

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

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

Northern Long-eared Bat (Myotis septentrionalis)
Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees and structures (bridges, culverts, buildings). Evaluation of the Federal Highway Administration's Range-Wide Biological Assessment and Programmatic Informal Consultation process, and/or consultation with the United States Fish and Wildlife Service (USFWS) has determined the project will have "no effect" on northern long-eared bats. If additional construction activities beyond what was originally specified are required to complete the work, such as additional tree clearing, approval from the WisDOT Regional Environmental Coordinator (REC) is required prior to initiating these activities.

The species and all active roosts are protected by the Federal Endangered Species Act. If an individual or active roost is encountered during construction or clearing operations, stop work and notify the engineer and the WisDOT REC.

Although the project has been determined to have no effect to the NLEB, it is preferred to perform clearing during the inactive period for the NLEB. Therefore, where possible perform clearing operations within the project corridor between October 1 and March 31, both dates inclusive. Coordinate clearing operations outside this period with the engineer prior to performing the work.

Perform clearing along Fitchrona Road (existing Kapec Road) from Kapec Road to King James Way, along the west side of Verona Road north of Williamsburg Way, and at the Salt Shed Site between October 1 and March 31, both dates inclusive.

B Construction Schedule of Operations
Prepare a CPM schedule according to standard spec 108.4 and these special provisions.

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

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

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

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

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

D Work Restrictions

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

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

Do not perform the following operations concurrently; the water main as shown in the utility plan KING JAMES WAY, the construction activities on Kapec Road shown in CTH PD UTILITY CROSSING - STG. 1, PH. 3, and the storm sewer shown in KAPEC ROAD STORM SEWER CONNECTION, PH. 1.

Closure of Verona Road as shown in CTH PD - STAGE 1, PHASE 4A shall not take place concurrently with CTH PD bidirectional traffic as shown in CTH PD UTILITY CROSSING - STG. 1, PH. 1 AND CTH PD UTILITY CROSSING - STG. 1, PH. 2.

Do not close or remove the Military Ridge Path adjacent to Verona Road until the Military Ridge Path storm sewer crossing and asphalt paving operations as shown in EAST VERONA RD FRONTAGE RD- STG. 1, PH.1 are complete.

Do not construct water main as shown in the utility plan KING JAMES WAY concurrently with construction activities on Kapec Road as shown in CTH PD UTILITY CROSSING - STG. 1, PH. 3.

Place storm sewer along the K Ramp and adjacent to R-13-271 prior to beginning construction of R-13-271.

Install Video Detection Camera as shown in the plans for Nesbitt Road prior to beginning construction activities that will impact existing traffic loop detectors on Nesbitt Road.

Do not close the Williamsburg Way and Anton Drive intersection between Friday, September 30, 2016 and Sunday, October 2, 2016, both dates inclusive.

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

Keep Verona Road and 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 existing edges of pavement as approved by the engineer. Provide ingress and egress locations to the engineer 10 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). Ingress and egress to/from Pond A directly to/from Verona Road is not permitted.

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

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

Maintain Verona Road traffic in existing lane configurations until Stage 2 work begins in 2017. Do not place concrete barrier temporary precast on Verona Road in 2016 except as shown in the plans for VERONA ROAD - STAGE 1.

E Interim and Final Completion of Work

Nesbitt Road

Complete all improvements to Nesbitt Road including but not limited to all removals, grading, base aggregate dense, asphalt pavement, curb and gutter, concrete sidewalk, concrete driveways, pavement marking, signing, lighting, storm sewer, sanitary sewer, water main, landscaping, and all restoration as shown in the plans prior to 12:01 AM on November 19, 2016.

If the contractor fails to complete all removals, grading, base aggregate dense, asphalt pavement, curb and gutter, concrete sidewalk, concrete driveways, pavement marking, signing, lighting, storm sewer, sanitary sewer, water main, landscaping, and all restoration as shown in the plans prior to 12:01 AM on November 19, 2016 the department will assess the contractor $5,000 in interim liquidated damages for each day that Nesbitt Road remains incomplete after 12:01 AM, November 19, 2016. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM, November 19, 2016.

CTH PD Utility Crossings - Stage 1, Phase 1 and Stage 1, Phase 2
Complete all the utility crossings of CTH PD as indicated in the Traffic article of the these special provisions and shown in the plans in CTH PD UTILITY CROSSING - STG. 1, PH. 1 and CTH PD UTILITY CROSSING - STG. 1, PH. 2, including but not limited to all removals, grading, base aggregate dense, asphalt pavement, pavement marking, storm sewer, water main, sanitary sewer, and all restoration as shown in the plans within 8 consecutive calendar days.

If the contractor fails to complete all removals, grading, base aggregate dense, asphalt pavement, pavement marking, storm sewer, water main, sanitary sewer and all restoration as indicated in the Traffic article of these special provisions and as shown in the plans in CTH PD UTILITY CROSSING - STG. 1, PH. 1; and CTH PD UTILITY CROSSING - STG. 1, PH. 2; within 8 consecutive calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day CTH PD utility crossings remains incomplete after 8 consecutive calendar days. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 8 consecutive calendar days.

Anton Drive
Complete all improvements to Anton Drive as indicated in the Traffic article of these special provisions for Williamsburg Way - Stage 1, Phase 2A and as shown in the plans in WILLIAMSBURG WAY - STG. 1, PH. 2A including but not limited to, all removals, grading, base aggregate dense, asphalt pavement, curb and gutter, pavement marking, signing and storm sewer as shown in the plans within 14 consecutive calendar days.

If the contractor fails to complete all removals, grading, base aggregate dense, asphalt pavement, curb and gutter, pavement marking, signing and storm sewer as indicated in the Traffic article of these special provisions for Williamsburg Way - Stage 1, Phase 2A and shown in the plans in WILLIAMSBURG WAY - STG. 1, PH. 2A within 14 consecutive calendar days the department will assess the contractor $5,000 in interim liquidated damages for each calendar day Anton Drive remains incomplete after 14 consecutive calendar days. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 14 consecutive calendar days.

Williamsburg Way
Complete all improvements to Williamsburg Way including but not limited to all removals, grading, base aggregate dense, asphalt pavement, curb and gutter, concrete sidewalk, concrete driveways, pavement marking, signing, lighting, storm sewer, sanitary sewer, water main, landscaping and all restoration (including the interior portion of the roundabout) as shown in the plans prior to 12:01 AM on November 19, 2016.

If the contractor fails to complete all removals, grading, base aggregate dense, asphalt pavement, curb and gutter, concrete sidewalk, concrete driveways, pavement marking, signing, lighting, storm sewer, sanitary sewer, water main, landscaping and all restoration (including the interior portion of the roundabout) as shown in the plans prior to 12:01 AM on November 19, 2016 the department will assess the contractor $5,000 in interim liquidated damages for each day that Williamsburg Way remains incomplete after 12:01 AM, November 19, 2016. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM, November 19, 2016.

Kapec Road - Storm Sewer Connection, Phase 1
Complete improvements to Kapec Road as shown in the plans in KAPEC ROAD STORM SEWER CONNECTION, PH. 1 including but not limited to all removals, storm sewer, grading, base aggregate dense, asphalt pavement, curb and gutter, and sidewalk within 5 consecutive calendar days.

If the contractor fails to complete all removals, storm sewer, grading, base aggregate dense, asphalt pavement, curb and gutter, and sidewalk to Kapec Road as shown in the plans in KAPEC ROAD STORM SEWER CONNECTION, PH. 1 within 5 consecutive calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains incomplete after 5 consecutive calendar days. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 5 consecutive calendar days.

CTH PD (McKee Road) - Stage 1, Phase 4A
Complete all work associated with CTH PD (McKee Road) - Stage 1, Phase 4A as indicated in the Traffic article of these special provisions and as shown in the plans in CTH PD - STG. 1, PH. 4A, including but not limited to all sawing, removals, excavation, storm sewer, water main, electrical conduit, grading, base aggregate dense, asphalt pavement and pavement marking within a maximum duration of 30 consecutive hours between 10:00 PM Friday and 5:00 AM Monday.

If the contractor fails to complete all sawing, removals, excavation, storm sewer, water main, electrical conduit, grading, base aggregate dense, asphalt pavement and pavement marking as indicated in the Traffic article of these special provisions and as shown in the plans in CTH PD - STG. 1, PH. 4A within a maximum duration of 30 consecutive hours between 10:00 PM Friday and 5:00 AM Monday, the department will administer reduction assessments for the road not being open to traffic under the Failing to Open Road to Traffic administrative item according to Section B of Article 4, Traffic, of these Special Provisions.

East Verona Road Frontage Road - Stage 1, Phase 1
Complete all improvements to the Military Ridge Path as indicated in the Traffic article of these special provisions and as shown in the plans in EAST VERONA RD FRONTAGE RD - STG. 1, PH. 1 including but not limited to sawing, removals, excavation, storm sewer, grading, base aggregate dense, and asphalt pavement within the specified path closure times and within 2 consecutive calendar days.

If the contractor fails to complete all sawing, removals, excavation, storm sewer, grading, base aggregate dense, and asphalt pavement as indicated in the Traffic article of these special provisions and as shown in the plans for the Military Ridge Path in EAST VERONA RD FRONTAGE RD - STG. 1, PH. 1 within 2 consecutive calendar days, the department will assess the contractor $2,000 in interim liquidated damages for each calendar day that the work remains incomplete after 2 consecutive calendar days. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 2 consecutive calendar days.

Military Ridge Path Removal
Complete all removals of the Military Ridge Path adjacent to Verona Road from Station 890+00 VR to Station 917+50 VR including but not limited to all removals, grading, landscaping, and all restoration as shown in the plans prior to 12:01 AM on November 19, 2016.

If the contractor fails to complete all removals, grading, landscaping, and all restoration as shown in the plans prior to 12:01 AM on November 19, 2016 the department will assess the contractor $2,000 in interim liquidated damages for each day that Military Ridge Path remains incomplete after 12:01 AM, November 19, 2016. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM, November 19, 2016.

Sanitary Sewer and Water Main
Complete all sanitary sewer and water main at all project locations shown in the plans, except for locations shown in CTH PD - STG. 2, PH. 1 within the existing parking lot of Parcel 5 of Transportation Project Plat 1206-07-30, between Station 107+85 EB and Station 108+10 EB, and FITCHRONA ROAD - STG. 2, PH. 2, prior to 12:01 AM on November 19, 2016.

If the contractor fails to complete sanitary sewer and water main installation at all project locations shown in the plans, except for locations shown in CTH PD - STG. 2, PH. 1 within the existing parking lot of Parcel 5 of Transportation Project Plat 1206-07-30, between Station 107+85 EB and Station 108+10 EB, and FITCHRONA ROAD - STG. 2, PH. 2, prior to 12:01 AM on November 19, 2016, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains incomplete after 12:01 AM, November 19, 2016. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM, November 19, 2016.

Parcel 8 Drive Through - Water Main Disturbance
Complete all improvements to the Parcel 8 drive through as shown in the UTILITY PLAN - NESBITT ROAD including but not limited to all sawing, removals, excavation, water main, grading, base aggregate dense, curb and gutter, asphalt pavement and restoration within 10 consecutive calendar days.

If the contractor fails to complete all sawing, removals, excavation, water main, grading, base aggregate dense, curb and gutter, asphalt pavement and restoration as shown in the UTILITY PLAN - NESBITT ROAD within 10 consecutive calendar days, the department will assess the contractor $1,000 in interim liquidated damages for each calendar day that the work remains incomplete after 10 consecutive calendar days. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 10 consecutive calendar days.

Install Department Furnished Vehicle Detection
Complete the installation, integration, and make fully operational department furnished vehicle detection at USH 18/151 and CTH PD and USH 18/151 and Williamsburg Way as detailed in these special provisions within article Install Department Furnished Vehicle Detection, USH 18 and CTH PD, USH 18 and Williamsburg Way, prior to 12:01 AM on November 19, 2016.

If the contractor fails to complete the installation, integration, and make fully operational department furnished vehicle detection at USH 18 and CTH PD and USH 18 and Williamsburg Way as detailed in these special provisions within article Install Department Furnished Vehicle Detection, USH 18 and CTH PD, USH 18 and Williamsburg Way, prior to 12:01 AM on November 19, 2016, the department will assess the contractor $1,000 in interim liquidated damages for each calendar day that the work remains incomplete after 12:01 AM, November 19, 2016. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM, November 19, 2016.

East Verona Road Frontage Road - Stage 2, Phase 1
Complete improvements to the intersection of the East Verona Road Frontage Road and Williamsburg Way as indicated in the Traffic article of these special provisions and as shown in the plans in EAST VERONA RD FRONTAGE RD - STG. 2, PH. 1 including but not limited to sawing, removals, excavation, storm sewer, grading, base aggregate dense, asphalt pavement, and asphaltic curb between 8:00 PM Monday through 6:00 AM Friday.

If the contractor fails to complete all sawing, removals, excavation, storm sewer, grading, base aggregate dense, asphalt pavement, and asphaltic curb as indicated in the Traffic article of these special provisions and as shown in the plans in EAST VERONA RD FRONTAGE RD - STG. 2, PH. 1 between 8:00 PM Monday through 6:00 AM Friday, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains incomplete after 6:00 AM Friday. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond

6:00 AM Friday. Damages will be assessed under administrative item Failing to Open Road to Traffic.

East Verona Road Frontage Road - Stage 2, Phase 5
Complete all improvements along Williamsburg Way from Verona Road to Station 103+00 WW as indicated in the Traffic article of these special provisions and as shown in the plans in EAST VERONA RD FRONTAGE RD - STG. 2, PH. 5 including but not limited to all sawing, removals, excavation, grading, base aggregate dense, asphalt pavement, pavement marking, signing, and restoration within 21 consecutive calendar days.

If the contractor fails to complete all sawing, removals, excavation, grading, base aggregate dense, asphalt pavement, pavement marking, signing, and restoration as indicated in the Traffic article of these special provisions and as shown in the plans in EAST VERONA RD FRONTAGE RD - STG. 2, PH. 5 within 21 consecutive calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains incomplete after 21 consecutive calendar days. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 21 consecutive calendar days.

Parcel 5, Transportation Project Plat 1206-07-30, Parking Lot
Complete all improvements on and directly adjacent to Parcel 5 (TPP 1206-07-30) located at 6169 McKee Road as indicated in the Traffic article of these special provisions during Stage 2 including but not limited to all sawing, removals, grading, base aggregate dense, asphalt pavement, curb and gutter, concrete sidewalk, concrete driveway, storm sewer, water main, landscaping and all restoration as shown in the plans within 30 consecutive calendar days and prior to 12:01 AM, May 20, 2017.

If the contractor fails to complete all sawing, removals, grading, base aggregate dense, asphalt pavement, curb and gutter, concrete sidewalk, concrete driveway, storm sewer, water main, landscaping and all restoration as indicated in the Traffic article of these special provisions during Stage 2 within 30 consecutive calendar days and prior to 12:01 AM, May 20, 2017 the department will assess the contractor $5,000 in interim liquidated damages for each calendar day all improvements on and directly adjacent to Parcel 5 (TPP 1206-07-30) remains incomplete after 30 consecutive calendar days. The department will assess the contractor $5,000 in interim liquidated damages for each calendar day all improvements on and directly adjacent to Parcel 5 (TPP 1206-07-30) remains incomplete beyond 12:01 AM, May 20, 2017. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 30 consecutive calendar days and beyond 12:01 AM, May 20, 2017. Interim liquidated damages will be assessed separately for the 30 calendar day timeframe and the interim completion date.

Nakoma Heights Parking Lot
Complete all improvements to the Nakoma Heights Parking Lot as shown in the plans including but not limited to sawing, removals, excavation, grading, base aggregate dense, storm sewer, concrete curb and gutter, concrete sidewalk, asphalt pavement, pavement marking, and restoration within 30 consecutive calendar days.

If the contractor fails to complete all sawing, removals, excavation, grading, base aggregate dense, storm sewer, concrete curb and gutter, concrete sidewalk, asphalt pavement, pavement marking, and restoration within 30 consecutive calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains incomplete after 30 consecutive calendar days, an entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 30 consecutive calendar days.

Fitchrona Road - Stage 2, Phase 2
Complete all improvements to Fitchrona Road between Station 52+50 FR and 59+00 FR, including improvements to Kapec Road between Station 71+11 KR and 72+92 KR and as shown in the plans in FITCHRONA ROAD - STG. 2, PH. 2, including but not limited to all sawing, removals, grading, storm sewer, sanitary sewer, water main, base aggregate, curb and gutter, sidewalks, driveways, asphalt pavement, pavement marking, signing and restoration within 35 consecutive calendar days.

If the contractor fails to complete all sawing, removals, grading, storm sewer, sanitary sewer, water main, base aggregate, curb and gutter, sidewalks, driveways, asphalt pavement, pavement marking, signing and restoration as shown in the plans in FITCHRONA ROAD - STG. 2, PH. 2 within 35 consecutive calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains incomplete after 35 consecutive calendar days, an entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 35consecutive calendar days.

Fitchrona Road/CTH PD - Stage 2, Phase 1
Complete all improvements to the Fitchrona Road and CTH PD intersection adjacent to the westbound lanes of CTH PD between Station 77+50 WB and Station 82+00 WB as indicated in the Traffic article of these special provisions and shown in the plans in FITCHRONA/CTH PD - STG. 2, PH. 1, including but not limited to all sawing, removals, grading, storm sewer, base aggregate, curb and gutter, and asphalt pavement within 14 consecutive calendar days.

If the contractor fails to complete all sawing, removals, grading, storm sewer, base aggregate, curb and gutter, and asphalt pavement adjacent to the westbound lanes of CTH PD between Station 77+50 WB and Station 82+00 WB as indicated in the Traffic article of these special provisions and shown in the plans in FITCHRONA/CTH PD - STG. 2, PH. 1 within 14 consecutive calendar days, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the work remains incomplete after 14 consecutive calendar days, an entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 14 consecutive calendar days.

Stage 2 Roadway Work Completion Date
Complete all work specified in the contract prior to 12:01 AM August 12, 2017 except for fall plantings.

If the contractor fails to complete all work specified in the contract, except fall plantings, prior to 12:01 AM August 12, 2017, the department will assess the contractor $10,000 in liquidated damages for each calendar day that the work remains incomplete after 12:01 AM August 12, 2017. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

Project Completion Date
Complete all work specified in the contract prior to 12:01 AM October 28, 2017.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all work specified in the contract prior to 12:01 AM October 28, 2017, the department will assess the contractor $5,000 in liquidated damages for each calendar day that the work remains incomplete after 12:01 AM October 28, 2017. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

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

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

4. Traffic.

A General
Perform work conforming to the requirements of standard spec 643, the Manual on Uniform Traffic Control Devices (MUTCD) and as hereinafter provided.

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

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

Replace standard spec 104.6.1 (2) with the following:

> Maintain, at no cost to the department, only those facilities or portions of facilities, including the roadbed surfaces, on which construction has begun or been completed, or has been damaged by the contractor's operations or has been damaged due to the contractor's negligence or noncompliance with the requirements of the contract. Maintain the pavement structure, pavement markings, and traffic signs for the entire project once construction operations begin. The department will pay for materials that

engineer deems necessary to maintain these items at contract unit prices, or as extra work.

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

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

Fitchburg Fire Station Number 2 is adjacent to the project at 5415 King James Way. Coordinate with the Fire Department to maintain emergency access at all times during construction. Provide the Fire Department with 7 calendar days advance notice of all work that may affect their access to any portion of CTH PD, Verona Road and Williamsburg Way. Provide confirmation of the work affecting access to the Fire Department 3 calendar days in advance of the closure and again the day prior to the closure.

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

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

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

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

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators, beam guard or temporary concrete barriers in place along the traveled roadways

without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

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

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

- Do not park or store any vehicle, piece of equipment, or construction materials within the clear zone without approval of the engineer.
- All construction vehicles and equipment entering or leaving live traffic lanes must yield to through traffic, bicyclists and pedestrians.
- All construction vehicles and equipment entering or leaving live traffic lanes along Verona Road must utilize acceleration or deceleration lanes of sufficient length to allow merge speeds of 45 MPH prior to merging with Verona Road traffic. Provide and utilize temporary deceleration and acceleration lanes to/from the work zones. Construction of the temporary lanes is incidental to other items of work. All construction access is subject to approval of the engineer.
- Equip all vehicles and equipment entering or leaving the live traffic lanes with a high-intensity rotating, flashing, oscillating, or strobe lights according to Section 6G.02 of the Manual of Uniform Traffic Control Devices (FHWA, 2009).
- Maintain vehicle and pedestrian access at all times to buildings within the limits of construction. Provide temporary sidewalk, crosswalk, bicycle access and bus access as described in the special provisions under bid items Temporary Pedestrian Surface Asphalt, Temporary Pedestrian Surface Special and Sidewalk Pavement and as detailed in the plans. Provide temporary sidewalk, crosswalk, bicycle access and bus access according to the current Americans with Disabilities Act Accessibility Guidelines (ADAAG), which are free from mud, sand, and other construction debris. Provide temporary curb ramps throughout construction operations as described in the special provisions under bid item Temporary Curb Ramp, according to the ADAAG.
- Additional intermediate construction staging or staging gaps, not shown on the plans, may be necessary to maintain continuous property access. If the contractor coordinates the closure of any access to a business or private property with the owner(s), provide written documentation of coordination with the owner(s) to the engineer 48 hours in advance of the closure.
- Do not deliver and store materials and equipment within open travel lanes, open side roads, bike paths, pedestrian paths, or sidewalks during any stage of construction. Temporary lane closures and/or halting of traffic within open roadways and pedestrian paths require flaggers and will not be permitted outside the lane closure hours defined within this article. Flagging operations will be incidental to the work item being performed for the contract according to standard spec 104.6.1(4).
- Do not use any existing median maintenance crossovers for construction activities.

Upon switching traffic to any permanent or temporary roadways or combination thereof, designate a representative to monitor the condition of the traffic and roadways for a period of not less than eight consecutive hours after traffic is switched and prior to beginning any work on the next stage or phase. Monitoring the switched traffic is incidental to bid item Traffic Control Surveillance and Maintenance. Should the permanent or temporary roadways or combination thereof show any signs of distress, failure, or lack of drainage immediately notify the engineer. Following a traffic switch, should traffic begin to utilize lanes or intersections incorrectly from that shown on the plans immediately notify the engineer.

Do not use flag persons to direct, control, or stop USH 18/151 (Verona Road) or CTH PD (McKee Road), unless provided written approval from the engineer.

Provide flag persons and associated advanced signing according to the MUTCD and the plans for temporary halting of traffic on the side roads. All flagging operations are incidental to the contract work item being performed according to standard spec 104.6.1(4).

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

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

Wisconsin Lane Closure System Advance Notification
Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction ≤16')	MINIMUM NOTIFICATION
Lane and shoulder closures	14 calendar days
Full roadway closures	14 calendar days
System and service ramp closures	14 calendar days
Full system and service ramp closures	14 calendar days
Detours	14 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction >16')	MINIMUM NOTIFICATION
Lane and shoulder closures	3 business days
System and service ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly progress meetings in order to manage closures nearing their completion date.
108-057 (20150630)

In addition to the closure types and required minimum advance notifications provided in Table 108-1, the following minimum advance notifications are also required for the closure type listed:

- Rolling Closure: 14 calendar days prior to closure, with updates 7 calendar days and 3 calendar days prior to the closure.
- Traffic Switch: 14 calendar days prior to the anticipated switch, with updates 7 calendar days and 3 calendar days prior to the switch.
- Detours, as provided in table 108-1, apply to vehicular, pedestrian and bicycle detours.

Place portable changeable message signs for all closure types noted above a minimum of 7 calendar days in advance of the closure, switch or detour. Place portable changeable message signs a minimum of 14 calendar days prior to starting work on Verona Road and a minimum of 7 calendar days prior to starting work elsewhere. These timeframes may be adjusted by the engineer.

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

General traffic operations during all stages
Maintain two lanes of traffic in each direction at all times on Verona Road and CTH PD except as described in Section B of this article.

Maintain a minimum lane width of 11 feet on Verona Road and CTH PD at all times during construction. When restricted to one lane maintain a minimum clear width to traffic control devices of 16 feet on Verona Road.

Shoulder closures on Verona Road are allowed to complete construction for various stages of the project. Perform shoulder closures according to Section B of this article.

During daytime construction operations on the local side roads, except as shown in the plans, maintain at least one lane open to local traffic through the use of flaggers. Maintain a minimum width of 11 feet and a drivable surface utilizing a minimum of base aggregate dense for open lane(s). Open the roadway to 22 feet when flaggers and work operations are not present on the local side roads. For Williamsburg Way the 11 foot and 22 foot dimensions may be reduced to 10 feet and 20 feet respectively.

Maintain two-way pedestrian and bicycle access on the Capital City Trail and Military Ridge Path at all times, except as described in Section B of this article.

B Specified Lane Closure Times and Lane Closure Assessments
A summary of nightly allowable lane closure times by location/direction are as follows:

USH 18/151 (Verona Road) and CTH PD						
Description			**Direction**	**Through Lanes**	**Start**	**End**
Sunday Night	to	Friday Morning	Eastbound/ Westbound	Single	8:00 PM	5:00 AM
Friday Night	to	Sunday Morning	Eastbound/ Westbound	Single	8:00 PM	10:00 AM

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

USH 18/151 (Verona Road) and CTH PD		
Time Period in excess of specified time	Reduction per lane of traffic and per direction of traffic	Cumulative reduction per lane of traffic and per direction of traffic
0 to 15 minutes	$750	$750
15 to 30 minutes	$1,500	$2,250
30 to 45 minutes	$2,250	$4,500
45 to 60 minutes	$3,000	$7,500

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

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

B.1 Restrictions
Nesbitt Road may be closed to through traffic (open to local traffic only) between CTH PD and Limestone Lane until 12:01 AM on November 19, 2016 for roadway reconstruction and utility installation as indicated in the Prosecution and Progress article. Maintain property access as described in Section F of this article.

CTH PD Utility Crossings may utilize bidirectional traffic for a maximum of 8 consecutive calendar days to install storm sewer, sanitary sewer lateral, and water main as indicated in the Prosecution and Progress article. The bidirectional traffic is anticipated to take place

during CTH PD UTILITY CROSSING - STG. 1, PH. 1 and CTH PD UTILITY CROSSING - STG. 1, PH. 2. Single lane closures of CTH PD will be permitted nightly during the times specified above in Section B. Implementation of the all-way stop controlled intersections at the affected existing signalized intersections along CTH PD will be permitted during the times specified below. If the contractor closes lanes of traffic prior to or fails to open lanes of traffic by the specified times, reductions will begin immediately upon exceeding the specified closure and will be based upon 15 minute increments for assessments to the contractor as provided above in Section B.

CTH PD Utility Crossings - Signalized Intersections Revised To Four-Way Stops						
Description			**Direction**	**Intersection Control**	**Start**	**End**
Sunday Night	to	Friday Morning	Eastbound/ Westbound	All-Way Stop	10:00 PM	5:00 AM
Friday Night	to	Sunday Morning	Eastbound/ Westbound	All-Way Stop	10:00 PM	8:00 AM

Notify the Fitchburg Fire Station Number 2 at 5415 King James Way 14 calendar days in advance of CTH PD UTILITY CROSSING - STG. 1, PH. 2 when Kapec Road is closed to CTH PD. Provide confirmation of the work with the Fire Department 7 and 3 calendar days in advance of the closure and again the day prior to the closure. Coordinate with the Fire Department to maintain emergency access to CTH PD during the work.

Anton Drive may be closed between Williamsburg Way and Station 111+75 AD for a maximum of 14 consecutive calendar days for roadway reconstruction and utility installation as indicated in the Prosecution and Progress article. This closure is anticipated to take place during WILLIAMSBURG WAY - STG. 1, PH. 2A. Do not close the Williamsburg Way and Anton Drive intersection between Friday September 30, 2016 and Sunday October 2, 2016, both dates inclusive.

Maintain access to and from Williamsburg Way to parcel 36 until the end of completion of WILLIAMSBURG WAY - STG. 1, PH. 2A. Provide, at a minimum, a base course access capable of accommodating two way traffic and maintained from rutting. The access may be moved between approximately Station 95+50 WW and 96+50 WW as necessary to accommodate construction. Provide 30 calendar day and 14 calendar day notice to the owner prior to beginning work on the driveway. Provide 7 calendar notice to the owner if the driveway is moved to accommodate construction.

Williamsburg Way, between Frontier Lane and Verona Road, may be closed to through traffic for one night, during the hours specified for USH 18/151 (Verona Road) and CTH PD in Section B of this article, to complete the final surface layer of HMA pavement within the construction limits. This closure is anticipated to take place during WILLIAMSBURG WAY - STAGE 1, PHASE 4A.

Kapec Road may be closed between Station 72+00 and Station 53+50 FR for the KAPEC ROAD STORM SEWER CONNECTION, PH. 1 for a maximum of 5 consecutive calendar days for storm sewer installation as indicated in the Prosecution and Progress article. This closure is anticipated to take place to provide the ability to maintain drainage for the proposed subgrade of Fitchrona Road to the west. This closure shall not take place concurrently with the water main as shown in the utility plan KING JAMES WAY and the construction activities on Kapec Road shown in CTH PD UTILITY CROSSING - STG. 1, PH. 3.

Verona Road may be closed for a maximum duration of 30 consecutive hours between 10:00 PM Friday and 5:00 AM Monday south of CTH PD to install storm sewer, water main, and electrical conduit crossings under Verona Road as indicated in the Prosecution and Progress article. This closure is anticipated to take place during CTH PD - STG. 1, PH. 4A. Verona Road traffic will be maintained from the east to CTH PD for local access. Closure of Verona Road as shown in CTH PD - STAGE 1, PHASE 4A shall not take place concurrently with CTH PD bidirectional traffic as shown in CTH PD UTILITY CROSSING - STG. 1, PH. 1 and CTH PD UTILITY CROSSING - STG. 1 PH. 2.

The Military Ridge Path may be closed for a maximum of 2 consecutive calendar days for storm sewer installation and asphalt paving operations along the Military Ridge Path, near Pond D as indicated in the Prosecution and Progress article. Closures hours are 9:00 AM to 4:00 PM each day. Maintain the existing path width and a drivable surface utilizing a minimum of base aggregate dense when opened to traffic during non-work hours. This closure is anticipated to take place during EAST VERONA RD FRONTAGE RD - STG. 1, PH. 1. Contact the City of Fitchburg Department of Public Works, the City of Madison Engineering Department and the Dane County Highway Department 30 calendar days, 14 calendar days and 7 calendar days prior to the closure. Do not close or remove the Military Ridge Path adjacent to Verona Road until the Military Ridge Path storm sewer crossing and asphalt paving operations as shown in EAST VERONA RD FRONTAGE RD- STG. 1, PH.1 are complete.

Complete all improvements to the Parcel 8 Drive Through within 10 consecutive calendar days as indicated in the Prosecution and Progress article. Provide 30 calendar day and 14 calendar day notice to the owner prior to beginning work on the drive through.

The East Verona Road Frontage Road may be closed between 8:00 PM Monday and 6:00 AM Friday for storm sewer installation and temporary asphalt paving operations at the East Verona Road Frontage Road and Williamsburg Way intersection as indicated in the Prosecution and Progress article. This closure is anticipated to take place during EAST VERONA RD FRONTAGE RD - STAGE 2, PHASE 1.

Complete all work, including but not limited to storm sewer, water main, subgrade, base course, concrete curb and gutter, concrete driveways, HMA pavement along the East Frontage Road from Station 38+72.49 EF to Station 40+00 EF to establish permanent access to parcel 13 prior to closing the East Frontage Road and parcel 13 access to the existing cul-de-sac.

Williamsburg Way, between Verona Road and Station 103+00 WW, may be closed for 21 consecutive calendar days for roadway reconstruction between Verona Road and the newly constructed East Verona Road Frontage Road as indicated in the Prosecution and Progress article. This closure is anticipated to take place during EAST VERONA RD FRONTAGE RD - STG. 2, PH. 5.

Fitchrona Road between Station 52+50 FR and 59+00 FR, including improvements to Kapec Road between Station 71+11 KR and 72+92 KR may be closed to through traffic (open to local traffic only) for 35 consecutive calendar days for roadway reconstruction and utility installation. This closure is anticipated to take place during FITCHRONA ROAD - STG. 2, PH. 2. Maintain property access as described in Section F of this article.

Complete all work along County PD between Station 77+50 WB and 82+00 within 14 consecutive calendar days as indicated in the Prosecution and Progress article. This closure is anticipated to take place during FITCHRONA/CTH PD - STG. 2, PH. 1.

Complete the parking lot for Parcel 5 of Transportation Project Plat 1206-07-30 at 6169 McKee Road within 30 consecutive calendar days as indicated in the Prosecution and Progress article. The work shall take place during Stage 2 and cannot take place prior to March 1, 2017. Complete all contract work within the parking lot within 30 consecutive calendar days and no later than May 19, 2017. Maintain a minimum 20 foot wide truck access and a fire lane within the parking lot at all times during the work. Provide 30 calendar day and 14 calendar day notice to the owner prior to beginning work on the parking lot.

Complete all contract work within the Nakoma Heights parking lot within 30 consecutive calendar days as indicated in the Prosecution and Progress article. Maintain the minimum number of parking stalls as provided in the plans for each phase of the parking lot reconstruction. Provide 30 calendar day and 14 calendar day notice to the owner and residents of the Nakoma Heights apartments prior to beginning work on the parking lot. Notice includes, but is not limited to, posting signs near the parking lot and near the apartments and placing notifications on vehicles in advance of the reconstruction work.

C Rolling Closures

Rolling closures involve slowing traffic for a brief period and then allowing traffic to proceed behind a line of law enforcement vehicles that will coordinate the procession through the work site.

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

Arrange the implementation of the rolling closures according to the notification required in Section A of this article and through the engineer and Jeff Gustafson with the Southwest Region Office, (608) 516-6400. Provide final confirmation of the scheduled rolling closure to the engineer 3 calendar days in advance of the closure.

D Advance Notifications

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

E Pedestrian and Bicycle Access

Maintain pedestrian and bicycle access, according to the current ADAAG, along Verona Road, CTH PD, and all local side roads by means of existing sidewalk, Temporary Pedestrian Surface Asphalt bid item, Temporary Pedestrian Surface Special bid item, Sidewalk Pavement bid item, Temporary Curb Ramp bid item, or new sidewalk at a minimum width of 5 feet, for all abutting businesses and properties and a minimum width of 8 feet for the Capital City Trail and Military Ridge Path. Keep a minimum width of 5 feet of existing sidewalk as long as practicable to maintain pedestrian access. Place Temporary Pedestrian Safety Fence along the sidewalks, bike paths or bus stops as shown in the plans and as directed by the engineer. Provide bus stop or temporary bus stop locations as shown in the plans, as directed by the engineer or as requested by the City of Madison Transit Department.

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

F Property Access

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

G Clear Zone Working Restrictions

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

Store materials and equipment a minimum of 30 feet from the edge of the traveled way of USH 18/151 (Verona Road). Equipment may be parked and materials stored closer than 30 feet on Verona Road if it is protected by a concrete barrier temporary precast.

Store materials and equipment a minimum of 10 feet from the edge of the traveled way for CTH PD (McKee Road) and all local roads that are open to traffic. Equipment may be parked and materials stored closer than 10 feet on CTH PD if it is protected by a concrete barrier temporary precast.

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

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

H Snowplowing, Winter Work Operations and Winter Maintenance

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

During winter months park equipment at distances, as provided in Section G of this Article, from the edge of the traveled way to prevent damage to equipment from snow plowing operations. Do not store equipment or materials within the work zone which may interfere with sight distances along any roadway.

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

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

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

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

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

I Freeway Service Team (FST)

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

J Roadside Hazard Protection During Construction

Conduct existing hazard protection removals including but not limited to concrete barrier walls and beamguard in several phases to allow timely installation of temporary or permanent hazard protection. Bridge pier columns, parapets, concrete barrier walls and sign bridge footings are to remain protected at all times throughout construction. Remove existing hazard protection concurrently with the placement of the concrete barrier temporary precast so that the bridge pier columns, parapets, concrete barrier walls and sign bridge footings remain protected at all times. Complete placement of new beamguard to a point to provide protection for the bridge pier columns, parapets, concrete barrier walls and sign bridge footings before the temporary or permanent concrete barrier is placed.

K Traffic Control Operations

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

STAGE 1 - 2016

Verona Road:

Stage 1:

Traffic

- Eastbound and westbound Verona Road reduced to single lane in each direction during off peak night hours.
- Inside shoulder closures for eastbound and westbound Verona Road during day.
- Single left turn lane closures on CTH PD during single lane closures of Verona Road.
- Upon completion of Stage 1 work, Verona Road traffic to be maintained in existing lanes until Stage 2 work begins in 2017.

Construction

- Complete grading, storm sewer, base aggregate, concrete barrier temporary precast placement, and HMA paving of Verona Road median between Station 871+90VR and 902+45VR.
- Install epoxy edge line pavement marking Station 871+90VR and 902+45VR LT and RT.
- Complete grading, base aggregate, and HMA paving in Verona Road median Station 906+40VR to 932+25VR.

Nesbitt Road:

Traffic

- Roadway closed to through traffic (open to local traffic only) between Limestone Lane and CTH PD (McKee Road).
- Access to businesses within the construction zone to be maintained at all times.

Construction

- Construct portions of Pond A outside of westbound Verona Road clear zone and storm sewer from Pond A to CTH PD.
- Construct all items of work on Nesbitt Road, including storm sewer, water main, sanitary sewer, grading, base, sidewalks, curb and gutter, final pavement surface, and restoration.

Williamsburg Way:

Stage 1, Phase 1

Traffic

- Williamsburg Way and Anton Drive traffic maintained in existing lanes.
- Shoulder closures used on Williamsburg Way and northbound Anton Drive.

Construction

- Construct proposed sidewalk and driveways from Station 90+00 WW to 94+62 WW LT.
- Construct pedestrian curb ramp at Station 90+25 WW RT.
- Construct Temporary Pedestrian Surface Special along east side of Anton Drive.
- Install storm sewer and proposed sidewalk from Station 110+93 AD RT to 98+50 WW RT.

Pedestrians

- Maintained on existing sidewalks on south side of Williamsburg Way west of Anton Drive and north side of Williamsburg Way east of Anton Drive. Also maintained on existing sidewalk on west side of Anton Drive.
- Refer to Williamsburg Way Pedestrian Routing for additional details.

Stage 1, Phase 2A

Traffic

- Anton Drive closed to traffic between Williamsburg Way and Station 111+75 AD. Access to businesses to be maintained to and from Anton Drive from south of the closure.
- Williamsburg Way two way traffic is maintained on the north side of the existing roadway. No access to Anton Drive from Williamsburg Way is provided.

Construction

- Construct Anton Drive south of Williamsburg Way, including surface pavement to Station 112+30 AD.
- Construct south portion of roundabout, placing temporary pavement for use in future phases. Pave only lower layer HMA pavement.
- Median island curb and gutter is not constructed to allow for traffic patterns in future phases.
- Construct southern portion of truck apron in roundabout.
- Remove Temporary Pedestrian Surface Special from Station 109+13 AD to 110+93 AD RT after proposed sidewalk is installed and available for pedestrian use.

Pedestrians

- Williamsburg Way pedestrians maintained on north side of roadway using a combination of newly constructed and existing sidewalk.
- Anton Drive pedestrians maintained on east side of Anton Drive using Temporary Pedestrian Surface Special and newly constructed sidewalk in the southeast portion of the roundabout.
- Refer to Williamsburg Way Pedestrian Routing for additional details.

Stage 1, Phase 2B

Traffic

- Williamsburg Way traffic remains in the same location as Stage 1 Phase 2A.
- Anton Drive is open to traffic with stop control at Williamsburg Way.

Construction
- Construct remaining portions of south half of Williamsburg Way.
- Install temporary asphalt in medians for use in later phases.

Pedestrians
- Maintained on all portions of the project on newly constructed sidewalk with the exception of the north side of Williamsburg Way east of Anton Drive where existing sidewalk is utilized.
- Crosswalks across Williamsburg Way at Anton Drive remain closed. Access across Williamsburg Way maintained at east and west ends of project.
- Refer to the Williamsburg Way Ped./Bicycle Routing plan sheet for additional details.

Stage 1, Phase 3

Traffic
- Williamsburg way two way traffic is maintained on the newly constructed southern portion of Williamsburg Way, utilizing new pavement and temporary asphaltic surface in roundabout and median islands.
- Anton Drive and Williamsburg Way intersection functions as a one way stopped controlled tee intersection.
- Access to Williamsburg Way Court is maintained through the work zone.
- Anton Drive remains open to two way traffic on new roadway constructed in Phase 2A.

Construction
- Construct north half of Williamsburg Way.
- Stage construction of Williamsburg Way Court and business driveways to maintain access to businesses, including fuel truck access.
- Construct northern portion of roundabout truck apron for use in Phase 4.
- Install permanent signing for roundabout.

Pedestrians
- Maintained on new sidewalks in southeast, southwest, and northwest portions of the project.
- Access to residents and businesses on north side is maintained from the west on sidewalks constructed in Phase 1.
- Crosswalks across Williamsburg Way at Anton Drive remain closed. Access across Williamsburg Way maintained at east and west ends of project.
- Refer to the Williamsburg Way Ped./Bicycle Routing plan sheet for additional details.

Stage 1, Phase 4

Traffic

- Maintained in final lane configurations utilizing roundabout traffic patterns at Williamsburg Way and Anton Drive intersection.
- Shoulder closures used to complete curb and gutter construction in medians.
- Williamsburg Way and Anton Drive will be closed to traffic for one night for final surface paving on Williamsburg Way and roundabout.

Construction

- Adjust storm sewer structures to final grade and complete curb and gutter.
- Complete truck apron in roundabout.
- Complete curb and gutter placement in median islands.
- Place final surface layer of HMA pavement.

Pedestrians

- Maintained on newly constructed sidewalks in all locations of the project.
- Crosswalks across Williamsburg Way at Anton Drive remain closed. Access across Williamsburg Way maintained at east and west ends of project.
- Refer to the Williamsburg Way Ped./Bicycle Routing plan sheet for additional details.

Stage 1, Phase 4 Closure

Traffic

- Williamsburg Way and Anton Drive will be closed to traffic for one night for final surface paving on Williamsburg Way and roundabout.

Construction

- Place final surface layer of HMA pavement.

Pedestrians

- Maintained on newly constructed sidewalks in all locations of the project.
- Crosswalks across Williamsburg Way at Anton Drive remain closed. Access across Williamsburg Way maintained at east and west ends of project.
- Refer to the Williamsburg Way Ped./Bicycle Routing plan sheet for additional details.

CTH PD (McKee Road):

Stage 1, Phase 1 (Station 88+00 EB to 99+50 EB)

Traffic

- Maintained on existing CTH PD travel lanes.
- Single lane closures on eastbound CTH PD during off peak hours as needed.

Construction

- Install erosion control on project.
- Construct temporary pedestrian surface asphalt Station 88+00 EB to 98+50 EB.

Pedestrians

- Maintained on existing sidewalks.
- Refer to CTH PD Ped./Bicycle Routing plans for additional details.

Stage 1, Phase 2

Traffic

- CTH PD traffic maintained in existing lanes.
- Single lane closures on CTH PD during off peak hours as needed. Turning movements maintained.
- Coordinate storm sewer and water main crossings of Nesbitt Road with Nesbitt Road construction to maintain access to businesses on Nesbitt Road.

Construction

- Install storm sewer and water main on south side of CTH PD.
- Install storm sewer from Pond A to CTH PD.
- Install sanitary sewer on north side of CTH PD, including the lateral at Station 104+40 EB LT across the westbound lanes of CTH PD.
- Replace sidewalk and curb and gutter removed for sanitary sewer installation on the north side of CTH PD.
- Restore disturbed areas prior to winter shut down.

Pedestrians

- Maintained on temporary pedestrian surface asphalt on south side CTH PD west of Verona Road.
- Maintained on existing sidewalk on the south side of CTH PD east of Verona Road.
- Refer to CTH PD Ped./Bicycle Routing plans for additional details.

Stage 1, Phase 3

Traffic

- CTH PD traffic maintained in existing lanes.
- Single westbound lane closure as needed during off peak times.

Construction

- Install storm sewer at Station 102+00 EB LT
- Construct temporary pedestrian surface asphalt Station 101+50 EB to 108+00 EB LT.

Pedestrians

- Maintained on existing sidewalk on south side of CTH PD.

- Refer to CTH PD Ped./Bicycle Routing plans for additional details.

Stage 1, Phase 4A

Traffic

- CTH PD traffic is maintained in its existing lanes.
- Eastbound and westbound Verona Road open to traffic north of CTH PD, maintaining access to CTH PD.
- Full closure of Verona Road south of CTH PD.
- Verona Road through traffic utilizes existing alternate route.
- Westbound left and eastbound right turn lanes closed on CTH PD.
- Entrance ramp to eastbound USH 18/151 from Old County Rd PB closed.
- Entrance ramp to eastbound USH 18/151 from East Verona Ave closed.
- The alternate route is implemented.

Construction

- Install water main, storm sewer and electrical conduit near Station 902+50 VR across Verona Road.
- Re-lay storm sewer removed for water main installation.
- Install base aggregate and finished HMA pavement upon completion of underground installations.

Pedestrians

- Maintained on temporary pedestrian surface asphalt on south side of CTH PD west of Verona Road.
- Maintained on temporary pedestrian surface asphalt on north side of CTH PD east of Verona Road.

Stage 1, Phase 4B (Station 101+00 EB to 105+00 EB, 902+00 VR to 903+00 VR)

Traffic

- CTH PD and Verona Road traffic maintained in existing lanes.
- Single off peak eastbound and westbound lane closures as needed for construction.

Construction

- Install water main and storm sewer on south side of CTH PD
- Do not impact existing parking lot of Parcel 5 of Transportation Project Plat 1206-07-30 at 6169 McKee Road.
- Complete curb and gutter replacement and restoration in median and west side of Verona Road at Station 902+50 VR.

Pedestrians

- Maintained on temporary pedestrian surface asphalt on north side of CTH PD.
- Traffic control for sidewalk closures to remain in place until permanent sidewalk is installed during Stage 2 on south side of CTH PD.

- Refer to CTH PD Ped./Bicycle Routing plan sheets for additional details.

CTH PD Utility Crossings:

Stage 1, Phase 1

Traffic

- Single lane closures both eastbound and westbound CTH PD between Fitchrona Road and Commerce Park Drive.
- Eastbound CTH PD traffic crosses over into the westbound roadway at Fitchrona Road to travel bidirectional with westbound CTH PD traffic. Eastbound CTH PD traffic crosses over to eastbound lanes at Commerce Park Drive.
- Northbound Fitchrona Road right turn lane and through left turn lane closed. Traffic maintained using Fitchrona Road left turn lane.
- Fitchrona Road, Nesbitt Road, Verona Road, and Commerce Park Drive intersections with CTH PD will operate as all-way stop control and signals will be maintained in an all red flash mode.
- Nesbitt Road closed to all traffic (including local access).

Construction

- Install water main across the eastbound lanes of CTH PD near Station 79+50 EB.
- Install electrical conduit across the eastbound lanes of CTH PD near Station 80+10 EB.
- Install storm sewer across the eastbound lanes of CTH PD near Station 93+10 EB.
- Install storm sewer and electrical conduit across the eastbound lanes of CTH PD near Station 98+75 EB.
- Install storm sewer, electrical conduit and water main across the eastbound lanes of CTH PD near Station 101+90 EB.
- Complete the installation of the sanitary sewer at Station 104+40 EB.
- Install backfill, base aggregate and HMA pavement upon completion of underground installation.

Pedestrians

- Maintained on temporary pedestrian surface asphalt on south side of CTH PD west of Verona Road.
- Maintained on temporary pedestrian surface asphalt on north side of CTH PD east of Verona Road.

Stage 1, Phase 2

Traffic

- Single lane closures both eastbound and westbound CTH PD between Fitchrona Road and Commerce Park Drive.

- Westbound CTH PD traffic crosses over into the eastbound roadway at Commerce Park Drive to travel bidirectional with eastbound CTH PD traffic. Westbound CTH PD traffic crosses over to westbound lanes at Fitchrona Road.
- Fitchrona Road inside left turn lane closed.
- Kapec Road closed to through traffic. Access from CTH PD onto Kapec Road will not be permitted. Access for emergency vehicles to be maintained at all times.
- Fitchrona Road, Nesbitt Road, Verona Road, and Commerce Park Drive intersections with CTH PD will operate under all-way stop control and signals will be maintained in an all red flash mode.
- Nesbitt Road is closed to through traffic.

Construction

- Install remaining water main across the westbound lanes of CTH PD near Station 79+50 EB.
- Install remaining electrical conduit across the westbound lanes of CTH PD near Station 80+10 EB.
- Install remaining storm sewer across the westbound lanes of CTH PD near Station 93+10 EB.
- Install remaining storm sewer and electrical conduit across the westbound lanes of CTH PD near Station 98+75 EB.
- Install remaining storm sewer, electrical conduit and water main across the westbound lanes of CTH PD near Station 101+90 EB.
- Install base aggregate and HMA pavement upon completion of underground installation.

Pedestrians

- Maintained on temporary pedestrian surface asphalt on south side of CTH PD west of Verona Road.
- Maintained on temporary pedestrian surface asphalt on north side of CTH PD east of Verona Road.

<u>Stage 1, Phase 3</u>

Traffic

- CTH PD traffic maintained on existing roadway.
- Fitchrona Road traffic maintained on existing roadway.
- Nesbitt Road closed to through traffic.
- Kapec Road closed to through traffic. Access for emergency vehicles to be maintained at all times.

Construction

- Install storm sewer on Kapec Road.

Pedestrians

- Maintained on west side and east side existing sidewalk on Kapec Road.

East Verona Road Frontage Road:

Stage 1, Phase 1

Traffic

- East Verona Road Frontage Road traffic maintained on existing roadway.
- Maintain one lane open at all times with flagging operations for underground utility crossings of the East Verona Road Frontage Road.
- Military Ridge Path closed for installation of storm sewer.
- Access to driveways shall be maintained during water main installation.

Construction

- Install storm sewer, water main, and sanitary sewer located within the East Verona Road Frontage Road limits.
- Construct Pond D.

STAGE 2 - 2017

Verona Road:

Stage 2, Phase 1 (Station 875+25VR to 893+90VR)

Traffic

- Eastbound and westbound Verona Road traffic maintained on a combination of existing roadway and median widening.
- Eastbound and westbound Verona Road traffic reduced to single lane during off peak nighttime hours on median widening constructed during Stage 1.

Construction

- Saw and remove portions of existing roadway between Station 875+25VR to 893+90VR LT.
- Install Steel Plate Beam Guard Class A along westbound Verona Road between Station 875+25VR to 893+90VR LT.
- Complete aggregate shoulder at beam guard locations.
- Install remaining concrete barrier temporary precast required for work outside of travelled way.
- Complete all work on A, B, D, E, F, and K ramps and remainder of Pond A.

CTH PD (McKee Road):

Stage 2, Phase 1A (Station 88+50 EB to 99+00 EB)

Traffic

- CTH PD eastbound traffic maintained in existing lanes.

- Eastbound single lane closures as needed for construction.

Construction

- Complete roadway grading, curb and gutter, sidewalk, concrete pavement, and HMA pavement.

Pedestrians

- Maintained on temporary pedestrian surface installed in Stage 1 Phase 1.
- Refer to CTH PD Ped./Bicycle Routing plan sheets for additional details.

Stage 2, Phase 1B (Station 88+50 EB to 99+00 EB)

Traffic

- CTH PD eastbound traffic maintained in existing lanes.
- Eastbound single lane closures as needed for construction.

Construction

- Remove temporary pedestrian surface asphalt.
- Complete grading and HMA pavement between existing back of curb and roadway constructed in Phase 1A.

Pedestrians

- Maintained on sidewalk constructed in Stage 2 Phase 1A.
- Refer to CTH PD Ped./Bicycle Routing plan sheets for additional details.

Stage 2, Phase 1 (Station 101+00 EB to 114+00 EB)

Traffic

- Eastbound CTH PD traffic is maintained in existing lanes.
- Eastbound single lane closures as needed for construction.
- Commercial driveway construction to be staged to maintain access at all times.

Construction

- Install storm sewer and water main along south side of CTH PD.
- Complete roadway grading, curb and gutter, sidewalk, driveways, and pavements along the south side of CTH PD.

Pedestrians

- Maintained on temporary pedestrian surface on north side of CTH PD constructed in Stage 1 Phase 3A.
- Upon completion of sidewalk on south side of CTH PD, utilize Stage 1 Phase 3A traffic control to remove temporary pedestrian surface and restore area.
- Refer to CTH PD Ped./Bicycle Routing plan sheets for additional details.

Fitchrona Road/CTH PD:

Stage 2, Phase 1

Traffic

- Westbound CTH PD traffic maintained on existing lanes and existing westbound left turn lane.
- Westbound CTH PD dual left turn lane reduced to a single lane.
- Eastbound CTH PD traffic maintained on existing lanes.
- Eastbound single lane closures as needed for construction.
- Eastbound CTH PD right turn lane closed during off peak hours as needed for construction.
- Northbound Fitchrona Road restricted to single left turn lane.

Construction

- Complete roadway grading, storm sewer, curb and gutter, and asphalt paving adjacent to westbound CTH PD lanes from Station 77+50 WB to 82+00 WB
- Complete curb and gutter and concrete sidewalk in SW quadrant of intersection.
- Begin storm sewer, roadway grading, curb and gutter, sidewalk, and HMA pavement on SE quadrant of intersection.

Pedestrians

- Maintained on existing sidewalk on south side of CTH PD and west side of Fitchrona Road.
- Refer to Fitchrona Road/CTH PD Ped. Routing plan sheet for additional details.

Stage 2, Phase 2

Traffic

- Westbound CTH PD traffic maintained on existing lanes.
- Eastbound CTH PD traffic maintained on existing lanes.
- Eastbound single lane closures as needed for construction.
- Northbound Fitchrona Road restricted to single left turn lane.
- Northbound Fitchrona Road right turn to eastbound CTH PD is closed during construction operations during off peak hours. Access provided via Limestone Lane and Hardrock Road.

Construction

- Complete construction of right turn lane in SE quadrant of intersection.
- Continue construction of Fitchrona Road north of CTH PD.

Pedestrians

- Maintained on south side of CTH PD on new and existing sidewalks and along west side of Fitchrona Road on existing sidewalks.
- Refer to Fitchrona Road/CTH PD Ped. Routing plan sheet for additional details.

Stage 2, Phase 3

Traffic

- Eastbound and westbound CTH PD traffic maintained in existing lanes.
- Single eastbound lane closures during night time hours as needed for construction.
- Single westbound left turn lane closures during night time hours as needed for construction.
- Northbound Fitchrona Road restricted to single left turn lane.

Construction

- Construct curb and gutter, concrete sidewalks, traffic signals, and HMA pavement in median islands of CTH PD.

Pedestrians

- Maintained on new and existing sidewalks on east and west side of Fitchrona Road and south side of CTH PD.
- Refer to Fitchrona Road/CTH PD Ped. Routing plan sheet for additional details.

Fitchrona Road (Station 52+50 FR to 59+00 FR)

Stage 2, Phase 1

Traffic

- Maintained on existing Kapec Road between King James Way intersections.
- East/south shoulder/parking lane closed.

Construction

- Grade and install sidewalk extension along east side of Kapec Road and south side of Fitchrona Road.

Pedestrians

- Maintained on existing sidewalk along the west side of Kapec Road and north side of Fitchrona Road.
- Refer to Fitchrona Road Ped./Bicycle Routing plan sheet for additional details.

Stage 2, Phase 2

Traffic

- Fitchrona Road and Kapec Road closed to through traffic between King James Way and Anton Drive.
- Access to businesses maintained during construction.

Construction

- Construct Fitchrona Road between Station 52+50 FR and 59+00 FR.
- Construct Kapec Road between Station 71+11 KR and 72+92 KR.

Pedestrians

- Maintained on new sidewalks on the east side of Kapec Road and south side of Fitchrona Road.
- Refer to Fitchrona Road Ped./Bicycle Routing plan sheet for additional details.

East Verona Road Frontage Road:

Stage 2, Phase 1

Traffic

- East Verona Road Frontage Road closed to traffic between approximately Station 48+50 EF to 61+00 EF.
- Eastbound Verona Road right turn lane to Williamsburg Way closed.
- Westbound Verona Road left turn lane to Williamsburg Way closed.
- Eastbound Williamsburg Way closed east of Verona Road. No access to East Frontage Road from Verona Road.
- Access to Verona Road East Frontage Road north of Williamsburg Way provided from Chalet Gardens Road.
- Access to Verona Road East Frontage Road south of Williamsburg Way provided from Sprocket Drive.

Construction

- Install storm sewer from across Williamsburg Way and East Frontage Road intersection.
- Install temporary asphaltic surface upon completion of storm sewer installation.

Stage 2, Phase 2

Traffic

- East Verona Road Frontage Road traffic maintained on existing roadway.
- East Verona Road Frontage Road closed to traffic between approximately Station 61+00 EF to 72+25 EF.
- Access to Verona Road from East Frontage Road to be maintained.
- Bike and pedestrian traffic on Capital City Trail to be maintained on existing, temporary, and proposed path using phasing as detailed in the traffic control plans.

Construction

- Install storm sewer between approximately Station 61+87 EF and 73+12 EF.
- Construct East Verona Road Frontage Road between approximately Station 62+87 EF to 73+12 EF.
- Construct temporary asphaltic surface connection from approximately Station 62+05 EF to 62+87 EF.

Stage 2, Phase 3

Traffic

- Complete all work from Station 38+72.49 EF to Station 40+00 EF to establish permanent access to parcel 13 prior to closing the East Frontage Road.
- Close East Verona Road Frontage Road to all traffic from approximately Station 39+50 EF to Williamsburg Way.
- Access to businesses within work zone to be provided from Sprocket Drive and the private drive at Williamsburg Way.
- Access to Verona Road from East Verona Road Frontage Road north of Williamsburg Way to be maintained.

Construction

- Install remaining storm sewer from Williamsburg Way to the south.
- Install remaining water main from approximately Station 39+00 EF to 41+00 EF.
- Complete retaining wall R-13-271.
- Construct East Verona Road Frontage Road from south limits to Station 52+00 EF.

Stage 2, Phase 4

Traffic

- Close East Verona Road Frontage Road between approximately Station 52+00 EF to 60+50 EF.
- East Verona Road Frontage Road access to Verona Road from north of Williamsburg Way maintained on existing roadway.
- Access to East Frontage Road south of Williamsburg Way provided from Sprocket Drive.

Construction

- Install storm sewer between approximately Station 52+00 EF to 60+50 EF.
- Construct East Frontage Road between Station 52+00 EF to 60+50 EF.

Stage 2, Phase 5

Traffic

- East Verona Road Frontage Road closed to all traffic between approximately Station 48+50 EF to 61+00 EF.
- Eastbound Verona Road right turn lane to Williamsburg Way closed.
- Westbound Verona Road left turn lane to Williamsburg Way closed.
- Eastbound Williamsburg Way closed east of Verona Road. No access to East Frontage Road from Verona Road.
- Access to Verona Road East Frontage Road north of Williamsburg Way provided from Chalet Gardens Road.
- Access to Verona Road East Frontage Road south of Williamsburg Way provided from Sprocket Drive.

Construction

- Complete storm sewer and pond construction on East Verona Road Frontage Road.
- Complete construction of Williamsburg Way between Verona Road and Station 103+00 WW.
- Complete construction of East Verona Road Frontage Road between Station 60+50 EF and 63+00 EF.

Stage 2, Phase 6

Traffic

- East Verona Road Frontage Road traffic maintained on new roadway from south limits to Station 71+00 EF and existing roadway from Station 73+25 EF to north limits using flagging for single lane closure moving operations.

Construction

- Complete milling and HMA paving of East Verona Road Frontage Road between Station 71+00 EF to north limits.

East Frontage Road Parking Lot (Station 79+25 EF to 86+00 EF)

Traffic

- East Verona Road Frontage Road traffic maintained on existing roadway using southbound shoulder closure on East Verona Road Frontage Road with flagging for signal lane closure moving operations.
- Parking lot construction phased to maintain the minimum number of parking stalls as detailed in the parking lot phasing plans.

Construction

- Construct East Verona Road Frontage Road parking lot according to the plans.
- Complete East Verona Road Frontage Road parking lot prior to Stage 2 Phase 6 paving.

5. Holiday and Special Event Work Restrictions.

Holidays

Work is permitted however lane closures and delivery of materials will not be permitted on any portion of the highway carrying USH 18/151 (Verona Road) or CTH PD (McKee Road) during the following holiday periods:

2016

- Labor Day Holiday – From noon Friday, September 2, 2016 to 5:00 AM Tuesday, September 6, 2016
- Thanksgiving Day Holiday – From noon Wednesday, November 23, 2016 to 5:00 AM Monday, November 28, 2016
- Christmas Day and New Year's Holiday – From noon Friday, December 23, 2016 to 5:00 AM Tuesday, January 3, 2017

2017

- Easter Holiday – From noon Friday, April 14, 2017 to 5:00 AM Monday, April 17, 2017
- Memorial Day Holiday – From noon Friday, May 26, 2017 to 5:00 AM Tuesday, May 30, 2017
- Independence Day Holiday – From noon Friday, June 30, 2017 to 5:00 AM Wednesday, July 5, 2017
- Labor Day Holiday – From noon Friday, September 1, 2017 to 5:00 AM Tuesday, September 5, 2017
- Thanksgiving Day Holiday – From noon Wednesday, November 22, 2017 to 5:00 AM Monday, November 27, 2017

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

Special Events

Do not perform work on, nor haul materials of any kind along or across any portion of USH 18/151, CTH PD and all local roads included in the contract, except those local roads that are closed or closed to through traffic, and entirely clear the traveled way and shoulders of such portions of the roadways of equipment, barricades, signs, lights and any other material that might impede the free flow of traffic during the following special event periods:

2016

- Epic's Users Group Meeting, September 19-22, 2016

From 5:00 AM to 10:00 AM Monday through Thursday

2017

- Midwest Horse Fair, April 21-23, 2017

From 5:00 AM to 10:00 AM Friday and Saturday

- 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

- Shake the Lake, Date Pending

From 9:00 PM to 2:00 AM

- Elver Park Fireworks, Date Pending

From 9:00 PM to 2:00 AM

- Epic's Users Group Meeting, September 25-28, 2017

From 5:00 AM to 10:00 AM Monday through Thursday

Wisconsin Badgers Football Home Games - From a maximum of four hours prior to scheduled kickoff to three hours immediately after the end of the game, at the discretion of the engineer. The engineer, in coordination with the department's traffic engineer, will have the ability to allow work activities based upon changes to game day schedule and game day traffic. Home games in 2016 and 2017 are scheduled on the following dates:

2016

- Saturday, September 10, 2016
- Saturday, September 17, 2016
- Saturday, October 15, 2016
- Saturday, October 29, 2016
- Saturday, November 12, 2016
- Saturday, November 26, 2016

2017

- Saturday, September 2, 2017
- Saturday, September 9, 2017
- Saturday, September 30, 2017
- Saturday, October 14, 2017
- Saturday, October 21, 2017
- Saturday, November 11, 2017
- Saturday, November 18, 2017

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

6. Hauling Restrictions.

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

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

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

7. General Requirements for Incident Management.

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

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

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

City of Fitchburg Police Department, Chief Thomas Blatter	(608) 270-4300
City of Madison Police Department, Chief Michael C. Koval	(608) 266-4022
City of Verona Police Department, Chief Bernard Coughlin	(608) 845-7623
City of Fitchburg Fire Department, Acting Chief Chad Grossen	(608) 278-2980
City of Madison Fire Department, Chief Steven Davis	(608) 266-4420
City of Verona Fire Department, Chief Joseph Giver	(608) 845-9401
Fitch-Rona EMS, Chief Brian Myrland	(608) 497-2909
City of Fitchburg Department of Public Works, Director Cory Horton	(608) 270-4260
Dane County Department of Public Works, Deputy Commissioner Pamela Dunphy	(608) 266-4036
Wisconsin State Patrol, Captain Jason L. Zeeh	(608) 846-8500
Wisconsin Department of Transportation, Jeff Gustafson	(608) 516-6400

8. Notice to Contractor - General.

Parcel 4

Schedule a meeting with the Parcel 4 of plat 1206-07-30 (Midwest Decorative Stone located at 6149 McKee Road) property owner and engineer a minimum of 14 calendar days prior to starting work adjacent to the parcel. Do not store equipment within the temporary limited easement of parcel 4 when not in use. Do not disturb the displays or the existing sign within the temporary limited easement area. When parking equipment, when not in use near parcel 4, park equipment in such a manner that will not block the view of the signing for parcel 4.

Meet with the property owner and engineer a minimum of 14 calendar days prior to any work on the driveway for the parcel (temporary or permanent). The owner would like to limit the amount of time the driveway is closed to accommodate construction activities. The owner has been made aware the driveway may be constructed half at a time.

Parcel 4 Contact: John and Deborah Paul, (608) 273-9787, midweststone@tds.net

Parcel 5
Schedule a meeting with the Parcel 5 of plat 1206-07-30 (General Beverage located at 6169 McKee Road) property owner and engineer a minimum of 14 calendar days prior to starting work adjacent to or within the parcel.

Meet with the property owner and engineer a minimum of 14 calendar days prior to any work within or on the driveway for the parcel (temporary or permanent). The owner would like to limit the amount of time the driveway is closed to accommodate construction activities. The owner has been made aware the driveway may be constructed half at a time. The owner would also like to be made aware of any drainage work within the parcel. The owner has been made aware that storm sewer will connect to an existing inlet within the parking area on the west side of the parcel.

Parcel 5 Contact: Joel Minkoff, (608) 271-1234, jminkoff@genbev.com

Parcel 7
Schedule a meeting with the Parcel 7 property owner and engineer a minimum of 10 calendar days prior to starting work adjacent to or within the parcel. Parcel 7 anticipates reconstruction of their private property to be concurrent with this project. Provide the owner with a schedule for work associated with Nesbitt Road. Coordinate access to the parcel with the owner as they anticipate revisions to access locations as part of their reconstruction activities.

Parcel 7 Contacts: Dick Zontag, (608) 225-8186, dick@jungseed.com
Bob Poch (Keller Inc.), (920) 427-4458, bpoch@kellerbuilds.com

Parcel 24
Schedule a meeting with the Parcel 24 property owner and engineer a minimum of 30 calendar days prior to starting work adjacent to or within the parcel. Parcel 24 includes a gate house that will be removed as part of this contract. Provide the owner with a schedule for the removal of the gate house to allow the owner to salvage any items from within the gate house area as well as disconnect any utilities and wiring to the gate house. Provide the owner with an additional confirmation of the work schedule 7 calendar days prior to the work beginning.

Parcel 24 Contact: Lisa Briquelet, (608) 273-5014, lisa.briquelet@thermofisher.com

Parcel 46
Schedule a meeting with the Parcel 46 property owner and engineer a minimum of 14 calendar days prior to starting work adjacent to the parcel. Parcel 46 contains satellite dishes with signals that may be sensitive to interference from equipment operating within several hundred feet of the satellite dishes. When operating equipment near the parcel, if interference is caused by the equipment, as notified by the engineer or owner, remove or repair the equipment immediately so interference is not caused with the signal.

Parcel 46 Contact: Jamie Childs, (608) 209-3214, James.Childs@charter.com

Existing Adaptive Signal System
Install new conduit system, containing the proposed 8-Count Fiber Optic Connecter 1,400 feet between the Metropolitan Unified Fiber Network (MUFN) vault (EXCV-1) and the traffic signal cabinet at Commerce Park Drive (EXCB-2) before the existing communication line is impacted by storm sewer installation. Same-day splice over between the existing fiber and new fiber is required to minimize the downtime for the adaptive signal system. Contact Mike Christoph a minimum 14 calendar days in advance to coordinate installation of any fiber splices into the Metropolitan Unified Fiber Network.

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

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

Clearing
The City of Fitchburg may remove and transplant some of the existing trees and plantings within the median and terraces of CTH PD between Fitchrona Road and Commerce Park Drive. Contact the city 30 days prior to clearing the trees and plantings within the median and terraces of CTH PD to allow the city the option to remove the trees and plantings with their own forces. Contact Cory Horton, Director of Public Works, City of Fitchburg, WI, (608) 270-4260.

American Transmission Company (ATC) (electric) has overhead facilities within the project area. The existing overhead facility is a double circuit line with one 138kV and one 69 kV circuit. These facilities are anticipated to be energized during construction. Use caution when operating around ATC foundations and overhead facilities. See the Utilities article for information on requesting a line outage of ATC's 138 kV and 69 kV facilities.

Sanitary Sewer Coordination
Contact MMSD, Eric Hjellen, (608) 222-1201, Ext. 348, upon completion of General Beverage's sanitary lateral connection (existing Manhole 220) to the new sanitary sewer and the abandonment of the city's existing sanitary connection to MMSD's manhole on eastbound CTH PD near General Beverage. MMSD's contractor will then fill and abandon their existing 42-inch sanitary sewer main along eastbound CTH PD. Once MMSD's contractor has finished the abandonment complete the bench and flowline work in the existing sanitary manhole 220.

Department-Owned Concrete Barrier Temporary Precast
Department-owned concrete barrier temporary precast is located within five miles of the project site as part of WisDOT project 1206-07-84. Approximately 5,500 linear feet of concrete barrier temporary precast will be available from project 1206-07-84 by October 10, 2016 and an additional 6,200 linear feet will be available for use in 2017. This concrete barrier temporary precast should be utilized in lieu of furnishing contractor owned concrete barrier temporary precast whenever possible. Coordinate available quantities and dates of availability with Chris Fredrick of WisDOT at (608) 884-7130.

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

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

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

Right-of-Way Access
Prior to entry onto any parcel shown in Transportation Project Plat (TPP) 1206-07-25 or 1206-07-30 contact Jamie Brud, WisDOT Real Estate at (608) 246-3825 or (608) 884-1225 to verify that the parcel is available for entry.

Project Aesthetics
The retaining walls and sign structure for this project utilize the same concrete formliner and concrete staining color scheme as shown in the plans and as previously used on WisDOT projects 1206-07-77, 1206-07-78 and 1206-07-84. Coordinate the concrete formliners and concrete stain colors for this project to ensure a similar and consistent appearance with the

previous projects. Inconsistent appearance of concrete formliners and concrete staining colors shall be removed.

Pond D Construction
Notify the Wisconsin Department of Natural Resources, Rob Davis, (608) 275-3316, a minimum of 10 calendar days prior to starting construction within Pond D including any work on the existing outlet control structure within Pond D. Provide Rob notification of completion of Pond D including work on the existing outlet control structure a minimum of 5 calendar days after work completion. Provide access to the pond and outlet control structure as requested by the Wisconsin Department of Natural Resources. Maintain a copy of the contract documents on site during all work operations associated with the pond and existing outlet control structure.

During the construction of the Pond D storm sewer connection to the existing Arrowhead West Pond, it is intended the existing Arrowhead West Pond be drained by gravity to fill Pond D to allow work on the new outlet control structure within the existing Arrowhead West Pond. Contact the City of Fitchburg, Rick Eilertson at (608) 270-4264; 45, 30 and 15 days in advance of draining the existing Arrowhead West Pond. The City of Fitchburg may perform pond maintenance while the pond is drained and at the same time as work takes place on the new outlet control structure within the existing Arrowhead West Pond.

The city may be an interested party in receiving waste material along the west side of the Military Ridge Path, between the path and the existing Arrowhead West Pond. Contact Cory Horton, Director of Public Works, City of Fitchburg, WI, (608) 270-4260.

Potential Waste Site
The department owns property approximately 2.5 miles south of CTH PD, along the west side of USH 18/151, north of the existing exit ramp and east of Maple Grove Drive. The area will be cleared and grubbed as part of this project (see Erosion Control - Salt Shed Site). The site can be used for a potential waste site for this project according to the department's site plans for accommodating a salt shed at the site. Coordinate with the engineer prior to using the waste site.

Fitchrona Road Earthwork
WisDOT Verona Road Project 1206-07-84 may place approximately 2,000 cubic yards of material within the right-of-way between Stations 38+00 FR and 40+75 FR prior to the bid letting for this project. This material is not accounted for on the cross sections or within the earthwork quantities.

9. Notice to Contractor - Construction Safety.

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

Definitions

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

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

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

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

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

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

General Requirements

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

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

Safety Representative Requirements

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

Each SR and alternate SR shall have training, knowledge and experience in construction safety and health, including but not limited to a current OSHA 10-hour Occupational Safety

and Health Training Course in Construction Safety and Health. Provide evidence of SR certifications, qualifications and training to the PSO.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

a. Written Safety Plan for Work Activities to be Performed.
b. Names of Safety Representatives and copies of their OSHA 10-Hour Occupational Safety and Health Training Course in Construction Safety and Health training cards.
c. Names of Competent Persons and Qualified Persons (if required by OSHA for the work performed).
d. Reports of inspections of the job sites, materials, and equipment [29 CFR 1926.20(b)(2)].
e. Documentation that the SR has communicated and distributed materials from the Construction Safety Awareness Training to their site workers. At a minimum this will include a dated sign-in sheet with the names and signatures of the workers trained. The department will provide a sign-in sheet template electronically.
f. Project site OSHA 300 Log (no worker names)[29 CFR 1904.29].
g. Project site OSHA 301 Incident Report (no worker names) [29 CFR 1904.29].

h. Hazard Communication Program [29 CFR 1926.59].
    i. Hazardous Chemical Inventory.
    ii. Location of Safety Data Sheets (SDSs).
    iii. Hazard Warning Symbols.
    iv. Information and training requirements.
i. Exposure Monitoring results (if monitoring is required under a specific OSHA standard-no worker names).
j. Crane operator certifications (if applicable).
k. Fall Protection Plan (if applicable) [29 CFR 1926.500-.503 and 1926.104].
l. Confined Space Entry Procedures (if applicable). [29 CFR 1926.1200-.1213].
m. Lockout/Tagout Procedures (if applicable). [29 CFR 1926.417 and .702].
n. Respiratory Protection Program (if applicable) [29 CFR 1926.103 and 1910.134(c)]
o. Emergency Action Plan [29 CFR 1926.35]
    i. Emergency escape procedures and emergency escape route assignments.
    ii. Procedures to be followed by employees who remain to operate critical equipment before they evacuate.
    iii. Procedures to account for all employees after emergency evacuation has been completed.
    iv. Rescue and medical duties for those employees who are to perform them;
        - First Aid and Medical Treatment Procedures [29 CFR 1926.50]
        - Equipment and Supplies
        - Names of persons certified in first aid
        - Location of the nearest medical facility.
    v. The preferred means of reporting fires and other emergencies.
    vi. Prime contractor's alarm system.
    vii. Names or regular job titles of persons who can be contacted for further information or explanation of duties under the plan.
p. Fire Protection Program (if applicable) [29 CFR 1926.150].
q. Fire Prevention Plan and Hot Work Permit procedures (if applicable) [29CFR 1926.352].

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

The Federal Aviation Administration (FAA) has height restrictions surrounding select airports. The department has obtained Temporary Determination of No Hazard to Air Navigation for all temporary structure (i.e. mobile cranes and bucket trucks) erections associated with retaining wall, sign structure and light pole construction. This project was separated into 500 foot segments with a determination for each segment at the following locations. A copy of the determination can be obtained through the engineer.

Aeronautical Study Number	Station Range	Structure	Proposed Ground Elevation	Temporary Structure Height (AGL)	Object
2016-AGL-3667-OE	882+00 VR-887+00 VR	Bucket Truck	995	60	Light Pole 886+65 VR RT
2016-AGL-3668-OE	887+00 VR-892+00 VR	Mobile Crane	995	65	R-13-265 95+00 A
2016-AGL-3669-OE	892+00 VR-897+00 VR	Bucket Truck	1004	65	Light Pole 93+80 A RT
2016-AGL-3670-OE	897+00 VR-902+00 VR	Mobile Crane	993	65	R-13-264 96+90 D
2016-AGL-3671-OE	907+00 VR-912+00 VR	Mobile Crane	1003	75	R-13-269 112+00 B
2016-AGL-3672-OE	912+00 VR-917+00 VR	Mobile Crane	1004	75	R-13-269 113+25 B
2016-AGL-3673-OE	917+00 VR-922+00 VR	Mobile Crane	1010	65	R-13-269 117+20 K
2016-AGL-3674-OE	922+00 VR-927+00 VR	Mobile Crane	1018	80	S-13-447
2016-AGL-3675-OE	927+00 VR-932+00 VR	Mobile Crane	1018	70	R-13-271 49+00 EF
2016-AGL-3676-OE	932+00 VR-937+00 VR	Bucket Truck	1028	50	Light Pole 56+50 EF RT
2016-AGL-3677-OE	937+00 VR-942+00 VR	Bucket Truck	1034	60	Light Pole 139+00 F RT
2016-AGL-3678-OE	942+00 VR-947+00 VR	Bucket Truck	1031	40	Light Pole 142+30 F RT
2016-AGL-3679-OE	947+00 VR-952+00 VR	Bucket Truck	1033	50	Light Pole 70+85 EF RT
2016-AGL-3680-OE	28+00 FR-33+00 FR	Bucket Truck	1061	55	Signal Pole 78+20 EB LT

Aeronautical Study Number	Station Range	Structure	Proposed Ground Elevation	Temporary Structure Height (AGL)	Object
2016-AGL-3681-OE	33+00 FR-38+00 FR	Bucket Truck	1060	50	Light Pole 37+50 FR LT
2016-AGL-3682-OE	38+00 FR-43+00 FR	Bucket Truck	1061	50	Light Pole 40+00 FR RT
2016-AGL-3683-OE	43+00 FR-48+00 FR	Bucket Truck	1052	50	Light Pole 45+30 FR RT
2016-AGL-3684-OE	48+00 FR-53+00 FR	Bucket Truck	1032	50	Light Pole 50+25 FR RT
2016-AGL-3685-OE	53+00 FR-59+00 FR	Bucket Truck	1016	50	Light Pole 55+00 FR RT
2016-AGL-3686-OE	Anton Drive	Bucket Truck	1044	55	Light Pole 112+00 AD RT

As a condition of the Determinations, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, it shall be installed and maintained according to FAA Advisory circular 70/7460-1 L.

Notify the manager of Verona Airport (Robin Slotten) at (608) 845-7239 at least 3 business days prior to any temporary structure being erected and again when the temporary structure is removed from the site. Lower any temporary structure (construction equipment) to the ground when not in use and during the hours between sunset and sunrise.

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

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

The temporary determinations expire on October 11, 2017 unless extended, revised, or terminated by the issuing office. If an extension is needed, the contractor must request an extension to the effective period of the determination. The request must be postmarked or delivered, to the office below, at least 30 days prior to the expiration date:

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

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

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

Determinations include temporary construction equipment such as the equipment noted above, which may be used during actual construction. Equipment shall not exceed the overall heights as indicated in the determination. The contractor must request separate notice to the FAA if equipment has a height greater than the determination. The contractor shall submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA a minimum of 45 days before beginning construction operations that propose to use equipment that will exceed the elevations provided within the department completed filings. If required, the FAA will return FAA Form 7460-2, Notice of Actual Construction or Alteration, with a determination. The contractor shall complete and send FAA Form 7460-2, Part 1 to the FAA at least 48 hours prior to starting the actual construction or alteration of a structure. Additionally, the contractor shall submit Part 2 no later than 5 days after the structure has reached its greatest height.

Contact Justin Hetland, Airspace Safety Program Manager, Bureau of Aeronautics at (608) 267-5018 (Justin.Hetland@dot.wi.gov) with any questions. Refer to the following FAA website for instructions to complete the form and the required information.
http://oeaaa.faa.gov/oeaaa/external/portal.jsp

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

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

11. Contract Award and Execution.

Supplement standard spec 103 as follows:

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

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

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

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

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

1. Contractor responses to the attached Project Questionnaire.
2. Department presentation of the use of Critical Path Method (CPM) scheduling on the project and presentation of the department's Master Program Schedule to the contractor.
3. Contractor presentation of its conceptual work plan for the project.
4. Department and contractor discussion of the level of detail and features in the Initial Work Plan and the Baseline CPM Progress Schedule.

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

General Information
If a Joint Venture, provide information for each member of the Joint Venture.
Provide the following information about the company:

- Firm Name
- Address
- Telephone and facsimile numbers; e-mail address
- Contracting Specialties
- Years performing work in contracting specialties
- Geographic areas served

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

Construction Engineering

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

Subcontractors

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

Permanent Material Suppliers

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

Quality Control (where applicable)

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

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

Organization Chart

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

Work Rules

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

Maintenance of Traffic

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

Construction

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

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

103.9.2.2 Cost Reduction Incentives

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

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

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

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

103.9.2.3 Utility Coordination

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

1. At a minimum, the following key personnel will attend the Utility Coordination Meeting.
   - Department's Utility Coordinator
   - Contractor's Project Manager, Foreman, Supervisor
   - Designer Team's Utility Coordinator
   - Key Utility Company Representative(s)
2. At a minimum, the Utility Coordination Meeting will include a review of the following:
   - Summary of all required utility relocations on the project
   - Special provisions addressing utility work
   - Sharing of contact information
   - Scheduling of work for utility relocation(s) including critical milestones and staging for the work
   - Contractor's work schedule and anticipated conflicts with the utility's construction schedule.

103.9.2.4 Submittals

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

1. Review the project special provisions.

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

3. Develop a schedule for submittals.

103.9.2.5 Baseline CPM

See article for Baseline CPM Progress Schedule, Item SPV.0060.700 and CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.701.

103.9.2.6 Work Force Opportunities

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

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

103.9.2.7 Notice to Proceed

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

12. Other Contracts.

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

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

1. Project 1206-07-84 and 1206-07-85, Mount Horeb-Madison, Verona Road to Seminole Highway, USH 18, Dane County. This is the 2014 - 2016 Verona Road/Beltline project.
2. CTH PD, Meriter Way to Maple Grove Road. This project is sponsored by the City of Madison, along CTH PD and is anticipated to take place in 2017.
3. Carling Drive, Lovell Lane to the East Verona Road Frontage Road. This project is sponsored by the City of Fitchburg and City of Madison and is anticipated to take place in 2017.

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

13. General Provisions for Storm Sewer.

Construct all storm sewer according to the pertinent provisions of standard spec 607, 608, 610 and 611 as shown on the plans and as follows.

Prior to ordering drainage pipes and structures, verify related drainage information in the plan with the engineer. This includes all information obtained from the bid item Utility Line Opening (ULO).

Seal the joints for reinforced concrete pipe with either mastic or internal rubber gaskets as described in standard spec 607.2. The use of mortar as a pipe joint method is prohibited.

Lay all storm sewer on a 6-inch minimum thick bed of Base Aggregate Dense 1 ¼-Inch according to standard spec 305.2.1 or when water is encountered, size No. 1 coarse concrete aggregate according to standard spec 501.2.5.4. Bedding for pipe is included with the installation costs of the round or elliptical pipe.

Submit a dewatering plan with the ECIP for approval. Dewatering is incidental to all storm sewer pipe installation.

Construct all structures using reinforced concrete. Concrete brick and block options are prohibited.

Construct all structures (manholes and inlets) on a 12-inch minimum thick bed of Base Aggregate Dense 1 ¼-Inch according to standard spec 305.2.1 or when water is encountered, size No. 1 coarse concrete aggregate according to standard spec 501.2.5.4. Bedding for structures is included with the installation costs of the structure.

Do not use station and offset for inlet structures, as given on the storm plans, exclusively for final layout of the structure. Determine the curb line in the area of the inlet prior to pouring the inlet structure to assure proper location of the inlet relative to the curb line.

Center all castings on the structure unless otherwise noted.

Steps are not required in storm sewer structures.

The costs to connect storm sewer to existing structures or pipes and the costs to plug pipes for future use including tapping the hole, placing the pipe and sealing the joint, furnishing and installing a plugging device will be paid for separately by bid items Storm Sewer Tap, Covering and Locating Storm Sewer and Concrete Collars for Pipe, where shown on the plans or directed by the engineer.

Carefully remove and stockpile all existing inlet, manhole, and catch basin covers that are not being adjusted and reused on the project at a location on the right-of-way outside the construction limits for pickup by City of Fitchburg personnel. Contact Mark Hodel, City of Fitchburg Department of Public Works at (608) 444-6322, or mark.hodel@fitchburgwi.gov, at least 3 business days in advance to schedule pickup.

Remove from the right-of-way and properly dispose of all frames or grates and all other material that the City of Fitchburg does not pickup.

14. General Provisions for City of Fitchburg Municipal Utilities (Water Main and Sanitary Sewer).

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

The 2016 Edition of the City of Fitchburg Standard Specifications for Public Works Construction, Latest Edition are available on the city website at:

http://www.fitchburgwi.gov/DocumentCenter/View/10074

The 2016 Edition of the City of Madison Standard Specifications for Public Works Construction, Latest Edition are available on the city website at:

http://www.cityofmadison.com/business/pw/specs.cfm

These above provided website locations may change. Confirm the latest edition of the specifications with the City of Fitchburg and the City of Madison.

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

Construct the water main and sanitary sewer in stages according to the traffic control plans and in proper coordination with construction activities adjacent to the water main and sanitary sewer.

Contact the owner of a parcel with sanitary sewer or water main lateral work 5 business days prior to the work. Provide an update to the property owner of the anticipated work on the lateral and potential service interruption a minimum of 48 hours prior to the work. Conduct construction operations in a manner that will cause the least interference and inconvenience to the parcel including, but not limited to, performing the construction operations during nighttime hours. Additional intermediate construction staging of the sanitary sewer and water main laterals, not shown on the plans, may be necessary to cause the least interference and inconvenience to the parcel.

As construction staging and sequence allows, disinfect the new water mains. Contact the engineer and the City of Fitchburg prior to flushing and testing all newly installed water mains. Coordinate as necessary with the City of Fitchburg for these operations. After the water main has passed bacteriological and pressure testing, install replacement water services and make connections to the existing water system.

Keep valves at connections of the new water main to the existing water main closed until the new water main has passed all testing. Where new valves need to be opened to fill the new water main for testing and flushing, sequence construction to preclude backflow of any water from the new water main to the existing water main. Provide safe bacteriological results to the City of Fitchburg for all service lines after connection to the new 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, and the pipe abandoned in place. This work is considered incidental to the new water main.

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

Pipe to be removed that is in the same trench as a new pipe shall not be compensated as remove pipe and shall be considered to be incidental to the new pipe installation.

Existing Water and Sanitary Sewer Service Laterals
The horizontal location and size of all laterals indicated on the plans is taken from surveys, approximate measurements, and the City of Fitchburg'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 or installing new sanitary wyes. Follow the plans to determine which services are to be abandoned, reconnected, extended, or replaced to the property line.

Location of Existing Facilities
The horizontal and vertical location and size of all existing water mains and sanitary sewers indicated on the plans is taken partially from surveys, approximate measurements, and the City of Fitchburg'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 and City of Fitchburg of locations where alterations of the lines and grades shown are necessary so that an acceptable solution can be determined.

Testing and Acceptance
Submit testing results as required by the City of Fitchburg Standard Specifications for Public Works Construction-Latest Edition to the engineer and the City of Fitchburg. Final acceptance of water main, sanitary sewer, backfill materials, bedding, and abandonments will be provided by the City of Fitchburg.

Allow the City of Fitchburg to sample/test materials as requested.

Provide complete copies of required submittals to the engineer and City of Fitchburg as follows:

Shop Drawings:	One PDF or hard copy
Sampling/Testing Results:	One PDF or hard copy

E-mail or deliver the submittals and testing results to Tracy Foss, City of Fitchburg, 5520 Lacy Road, Fitchburg, WI 53711, tracy.foss@fitchburgwi.gov.

The City of Fitchburg will review and return shop drawings to the contractor within one week of date of receipt.

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

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

16. Timely Decision Making Manual.

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

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

Timely Decision Making Manual (TDM)

105-005 (20151210)

17. Utilities.

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

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

Additional detailed information regarding the location of the relocated utility facilities is available on the permits issued to the utility companies. View these permits at the SW Regional Office during normal working hours. Contact the Regional Utility Permit Coordinator, Mark Goggin at (608) 789-5955 or by email at Mark.Goggin@dot.wi.gov.

Alliant Energy (Alliant) (electric) has overhead and underground facilities within the project area. Alliant anticipates their facility relocation work will take place beginning June 1, 2016 and be completed by December 1, 2016. The anticipated proposed relocations are as follows:

- Alliant's existing overhead crossing of CTH PD (McKee Road) at approximately Station 89+25 EB and Station 93+45 EB will be removed.
- Alliant's existing overhead facilities on the south side of CTH PD (McKee Road) from approximately Station 92+95 EB to Station 102+40 EB will be removed.
- Alliant's existing overhead facilities along the east and west side of Nesbitt Road from approximately Station 10+00 NR to Station 17+30 NR and along the west side of USH 18/151 (Verona Road) from approximately Station 898+25 VR to Station 902+45 VR will be removed.
- Use of Alliant's existing underground facilities along the east side of USH 18/151 (Verona Road) from approximately Station 894+90 VR to Station 903+53 VR will be discontinued and the existing underground facilities will be left in place.
- Alliant's existing overhead facilities along the east side of USH 18/151 (Verona Road) from approximately Station 903+90 VR to Station 916+75 VR will be removed.
- The existing power pole at approximately Station 916+75 VR RT will remain. Alliant's overhead crossing of USH 18/151 (Verona Road) at approximately Station 914+67 VR will be removed.
- Use of Alliant's existing underground facilities along the north side of CTH PD (McKee Road) from approximately Station 94+77 EB to Station 98+70 EB will be discontinued. The existing underground facilities will remain in place. Alliant anticipates use of the underground facilities to be discontinued December 1, 2016.
- Alliant's existing overhead crossing of USH 18/151 (Verona Road) at approximately Station 888+97 VR will be removed.
- Alliant's existing power pole at approximately Station 876+00 VR 46' RT will be removed.
- Use of Alliant's existing underground facilities along the west side of USH 18/151 (Verona Road) from approximately Station 905+05 VR to the north will be discontinued and left in place.

Underground facilities are proposed jointly with AT&T and Charter Communications under the proposed sidewalk on the west side of Nesbitt Road from approximately Station 10+05 NR to Station 24+10 NR with crossings of Nesbitt Road at approximately Station 10+05 NR, 15+78 NR, and Station 23+50 NR. The crossing of Nesbitt Road at approximately Station 15+78 NR continues to the east under USH 18/151 (Verona Road). Underground facilities are proposed along the east side of Nesbitt Road from approximately Station 23+50 NR to the north, with a crossing of CTH PD (McKee Road) at approximately Station 93+50

EB. From the crossing of CTH PD (McKee Road), the proposed underground facilities continue north under the sidewalk on the east side of Kapec Road to approximately Station 66+00 KR with a crossing of Kapec Road at approximately Station 66+00 KR. The proposed underground facilities are anticipated to be approximately 5 feet below existing ground from approximately Station 10+05 NR to Station 19+00 NR, approximately 6 feet below existing ground from approximately Station 19+00 NR to Station 21+00 NR, approximately 4 feet below existing ground from approximately Station 21+00 NR to Station 23+00, and approximately 5 feet below existing ground from approximately Station 23+00 NR to Station 24+00 NR. The proposed underground facilities are anticipated to be approximately 7 feet below existing ground at storm sewer structures NR716 and NR731 and approximately 8 feet below existing ground at storm sewer structure NR722. The proposed crossing of CTH PD at approximately 93+50 EB is anticipated to be approximately 10 feet below existing ground. The proposed underground facilities under the sidewalk on the east side of Kapec Road are anticipated to be approximately 3 feet below existing ground. Alliant anticipates this work to be completed by August 1, 2016.

Underground facilities are proposed along the east side of USH 18/151 (Verona Road) approximately 2 feet off right of way from approximately Station 895+00 VR to Station 903+20 VR. The proposed underground facilities are anticipated to be approximately 3 feet below existing ground. The proposed facility continues east under the proposed sidewalk on the south side of CTH PD (McKee Road) at an approximately depth of 3 feet below existing ground from approximately Station 101+86 EB to an approximate depth of 10 feet below existing ground at approximately Station 103+48 EB where the facilities continue north and cross CTH PD (McKee Road) at a depth of approximately 10 feet below existing ground at approximately Station 103+50 EB. Alliant anticipates this work to be completed by October 1, 2016.

Underground facilities are proposed jointly with AT&T and Charter Communications in easement along the east side of USH 18/151 (Verona Road) from approximately Station 905+40 VR to Station 916+90 VR with a crossing of USH 18/151 (Verona Road) at approximately Station 916+90 VR. The proposed underground facilities are anticipated to be approximately 3 feet below existing ground from approximately Station 905+40 VR to Station 914+00 VR and be approximately 6 feet below existing ground from approximately Station 914+00 VR to Station 916+90 VR. The proposed crossing of USH 18/151 (Verona Road) is anticipated to be approximately 8 feet below existing ground at an elevation of 998.0. Alliant anticipates this work to be completed by October 1, 2016.

New power poles will be placed on the east and west side of USH 18/151 (Verona Road) at approximately Station 875+65 VR 140’ LT and Station 876+15 VR 155’ RT.

Contact Alliant 1 week prior to the items discussed below:

- If 3 feet of undisturbed soil cannot be maintained adjacent to Alliant's power poles during excavation.
- Construction of retaining wall R-13-264.
- Construction of the proposed 54-inch storm sewer on the east side of the D Ramp at approximately Station 94+70 D.
- Construction of the proposed water main on the east side of USH 18/151 (Verona Road) at approximately Station 917+00 VR.

Support Alliant facilities when trench widths exceed 10 feet.

Contact Alliant 2 weeks prior to working near Alliant facilities. Coordinate operations with Alliant. Contact Jason Hogan (608) 458-4871. Invite Jason Hogan to the weekly construction meetings.

American Transmission Company (ATC) (electric) has overhead facilities within the project area. ATC anticipates their facility relocation work will take place beginning December 1, 2016 and be completed by March 31, 2017. The anticipated proposed relocations are as follows:

ATC's existing power poles along the south side of CTH PD (McKee Road) from approximately Station 75+60 EB and Station 113+85 EB will be removed and relocated. New power poles will be placed at approximately the following stations:

- Station 75+54 EB 32.5' RT
- Station 77+88 EB 32.5' RT
- Station 80+40 EB 34' RT
- Station 83+20 EB 35' RT
- Station 85+58 EB 36' RT
- Station 87+70 EB 35' RT
- Station 90+55 EB 66' RT
- Station 94+00 EB 77' RT
- Station 96+94 EB 87' RT
- Station 101+59 EB 66' RT
- Station 105+94 EB 60' RT
- Station 110+32 EB 59' RT
- Station 113+74 EB 47' RT

ATC's overhead facility is a double circuit line with one 138 kV circuit and one 69 kV circuit. ATC recommends to assume both circuits are 138 kV and maintain OSHA safe working clearance from the ATC circuits based on the latest OSHA requirements with respect to a 138 kV circuit. It is the contractor's responsibility to determine OSHA requirements.

To request an outage of ATC facilities contact Matt Dopp, ATC Construction Manager, at (608) 225-5983 to obtain ATC's Transmission Facility Outage Agreement form and for instructions on how to start the agreement process. Early coordination increases the opportunity for the requested outage to be granted. Peak loads are common during summer months and outage requests during these months are rarely allowed.

Contact ATC at least three days in advance of the following:

- Grade change (cut or fill) within 1 foot of an ATC facility.
- Excavations up to 3 feet deep within 10 feet of an ATC facility.
- Excavations greater than 3 feet deep within 20 feet of an ATC facility.
- Grade change in excess of 1 foot of change from the WisDOT plans within 20 feet of an ATC facility (including overhead wires).
- Directional bore or plowing work within 10 feet of an ATC facility.

ATC has identified the following items as those that will require coordination between the WisDOT contractor and ATC with regard to the contractor's construction operations. Discussions should occur at least 1 week in advance of the follow:

- Any retaining wall or sign structure that requires construction equipment or the structure itself to be at least 10 feet closer to ATC's facility than the proposed at-rest position of the installed retaining wall or sign structure.
- Any light, temporary light, traffic signal, temporary traffic signal, or other overhead structure that requires construction equipment or the structure itself to be at least 5 feet closer to ATC's facility than the proposed at-rest position of the install structure.
- Any storm sewer and water main construction that occurs within 20 feet of ATC's existing power pole structures prior to them being relocated.

Exercise caution when working near ATC's transmission facilities. Any contact with or damage to ATC's facilities must be reported immediately to either Matt Dopp, ATC Construction Manager, at (608) 225-5983 or Doug Vosberg, ATC Maintenance Specialist, at (608) 438-7650.

Coordinate operations with ATC as necessary. Invite Matt Dopp, ATC Construction Manager, to the weekly construction meetings.

AT&T Wisconsin (AT&T) (communication) has overhead and underground facilities within the project area. AT&T anticipates their facility relocation will take place beginning May 9, 2016 and is anticipated to be completed by September 1, 2016. The anticipated proposed relocations are as follows:

- Use of AT&T's existing underground facilities along the east side of Nesbitt Road from approximately Station 10+05 NR to Station 24+00 NR along with the crossing of Nesbitt Road at approximately Station 24+75 NR will be discontinued. The existing underground facilities will remain in place.

- Use of AT&T's existing underground facilities crossing CTH PD (McKee Road) at approximately Station 89+90 EB will be discontinued. The existing underground facilities will remain in place.
- Use of AT&T's existing underground facilities on the south side of CTH PD (McKee Road) from approximately Station 93+80 EB to Station 94+90 EB and the crossing of CTH PD (McKee Road) at approximately 94+81 EB will be discontinued. The existing underground facilities will remain in place.
- The existing overhead facilities attached to Alliant power poles along Nesbitt Road from approximately Station 10+05 NR to Station 900+50 VR will be removed.
- Use of AT&T's existing underground facilities along the west side of USH 18/151 (Verona Road) from approximately Station 900+50 VR to the north will be discontinued. The existing underground facilities will remain in place.
- Use of AT&T's existing underground facilities along the south side of CTH PD (McKee Road) from approximately Station 105+05 EB to Station 115+75 EB will be discontinued. The existing underground facilities will remain in place.
- Use of the existing underground facilities crossing CTH PD at approximately Station 107+50 EB will be discontinued. The existing underground facilities will remain in place.
- Use of AT&T's existing facilities along the east side of USH 18/151 (Verona Road) from approximately Station 910+20 VR to Station 955+75 VR will be discontinued.
- The existing underground facility along the west side of the East Verona Road Frontage Road from approximately Station 58+40 EF to Station 76+50 EF and the crossing of the East Verona Road Frontage Road at approximately Station 56+90 EF will be removed.
- Use of the existing underground facilities along the north side of Williamsburg Way from approximately Station 102+05 WW to Station 106+05 WW will be discontinued. The existing underground facilities will remain in place.
- The existing underground facilities crossing CTH PD at approximately Station 89+33 EB will be removed. The existing conduit will remain in place.
- The existing underground facilities crossing Kapec Road at approximately Station 64+63 KR will be removed. The existing conduit will remain in place.
- Use of the existing underground facilities along the east side of Fitchrona Road from approximately Station 27+73 FR to 30+00 FR will be discontinued. The existing underground facilities will remain in place.
- Use of the existing underground facilities crossing Fitchrona Road at approximately Station 29+80 FR will be discontinued. The existing underground facilities will remain in place.

Underground facilities are proposed to run jointly with Alliant and Charter under the proposed sidewalk on Nesbitt Road from approximately Station 10+05 NR to Station 24+10 NR and crossing CTH PD (McKee Road) as described elsewhere in these special provisions.

Underground facilities are proposed along the north side of CTH PD (McKee Road) from approximately Station 93+17 EB to Station 94+83 EB. The proposed underground facilities are anticipated to be approximately 6 feet below existing ground.

Underground facilities are proposed to cross CTH PD (McKee Road) at approximately Station 106+65 EB with a proposed hand hole at approximately Station 106+65 EB LT. From the proposed crossing, the proposed underground facilities continue to the east under the existing curb and gutter. Contact AT&T 7 days prior to construction of the proposed sanitary sewer on the north side of CTH PD (McKee Road) at approximately Station 106+65 EB for AT&T to have a representative on site. The depth of the proposed crossing of CTH PD (McKee Road) is anticipated to vary between approximately 6 and 8 feet below finished ground. Contact AT&T for additional information.

A manhole is proposed at approximately Station 106+11 EB 70' LT. From the proposed manhole, underground facilities are proposed to the south of the existing bridge pier from approximately Station 106+11 EB to Station 106+90 EB. The proposed underground facility runs along the east side of the Military Ridge Path from approximately Station 106+90 EB to Station 107+85 EB. Underground facilities are proposed approximately 5 feet north of the proposed curb and gutter flag line on the south side of CTH PD (McKee Road) from approximately Station 107+85 EB to Station 115+75 EB. The depth of the proposed facilities is anticipated to vary between approximately 3 and 8 feet below finished ground. Contact AT&T for additional information.

Underground facilities are proposed to run jointly with Alliant and Charter along the east side of USH 18/151 (Verona Road) from approximately Station 910+25 VR to Station 916+60 VR as described elsewhere in these special provisions.

Underground facilities are proposed jointly with Charter Communications, MG&E Electric, and ExteNet Systems along the east side of the existing East Verona Road Frontage Road from approximately Station 916+60 VR to Station 921+37 VR. The proposed underground facilities cross the proposed East Verona Road Frontage Road at approximately Station 41+35 EF and continue to the north to approximately Station 66+95 EF along the back of the proposed sidewalk. From approximately Station 66+95 EF to Station 76+60 EF the proposed underground facility runs in the terrace on the east side of the East Verona Road Frontage Road. Pedestals are proposed at approximately Station 43+68 EF, Station 45+18 EF, Station 50+10 EF, Station 60+74 EF, Station 62+37 EF, and Station 66+22 EF. Hand holes are proposed at approximately Station 916+58 VR, Station 60+78 EF, and Station 76+62 EF. The depth of the proposed facilities is anticipated to vary between approximately 3 and 15 feet below finished ground. Contact AT&T for additional information.

Underground facilities are proposed along the right of way line on the south side of CTH PD from approximately Station 89+35 EB to Station 92+95 EB at a depth of approximately 4 feet below existing ground.

Underground facilities are proposed along the back of the proposed sidewalk along the east side of Fitchrona Road from approximately Station 27+73 FR to Station 30+00 FR with a crossing of Fitchrona Road at approximately Station 29+72 FR. The depth of the proposed facilities is anticipated to be approximately 3.5 feet.

AT&T will adjust their existing underground facility as necessary at approximately 111+05 WW during construction to avoid conflicts with the proposed storm sewer construction. Contact AT&T 7 days prior to the storm sewer construction. The adjustment is anticipated to take 1 day to complete if necessary.

AT&T will adjust their existing underground facilities as necessary along the west side of the East Verona Road Frontage Road from approximately Station 79+50 EF to Station 81+00 EF to avoid conflicts with the parking lot construction. Contact AT&T 7 days prior to the parking lot construction. The adjustments are anticipated to take 3 days to complete if necessary.

Contact AT&T 7 days prior to construction of the proposed 78-inch storm sewer along Nesbitt Road at approximately Station 10+35 NR so AT&T can have a representative on site during construction.

Contact AT&T 7 days prior to working near AT&T facilities. Coordinate operations with AT&T. Contact Carol Anason (608) 252-2385. Invite Carol Anason to the weekly construction meetings.

City of Fitchburg (sanitary sewer) has existing underground facilities located within the project area. Relocation of the existing underground facilities will be accomplished as part of project 1206-08-74 with this contract. Coordinate operations with the City of Fitchburg. Contact Tracy Foss (608) 270-4272. Invite Tracy Foss to the weekly construction meetings.

City of Fitchburg (street lights) has existing light poles and underground electric facilities located within the project area. The existing light poles and underground electric facilities in conflict with the project will be relocated at part of project 1206-07-74 with this contract. Coordinate operations with the City of Fitchburg. Contact Holly Powell (608) 270-4263. Invite Holly Powell to the weekly construction meetings.

City of Fitchburg (water) has existing underground facilities located within the project area. Relocations of the existing underground facilities will be accomplished as part of project 1206-08-74 with this contract. Coordinate operations with the City of Fitchburg. Contact Tracy Foss (608) 270-4272. Invite Tracy Foss to the weekly construction meetings.

City of Madison (communication) has underground facilities located within the project area. Relocations of the existing underground facilities will be accomplished as part of project 1206-07-74 with this contract. Coordinate operations with the City of Madison. Contact Brian Smith (608) 261-9625. Invite Brian Smith to the weekly construction meetings.

Charter Communications (Charter) (communication) has existing overhead and underground facilities located within the project area. Charter anticipates their facility relocations will take place beginning on May 9, 2016 and is anticipated to be completed by September 1, 2016. The anticipated proposed relocations are as follows:

- Charter's existing underground facilities along the east side of Nesbitt Road from approximately Station 10+05 NR to Station 24+00 NR will be removed.
- Charter's existing underground facilities crossing CTH PD (McKee Road) at approximately Station 93+50 EB will be removed.
- The existing overhead facilities attached to Alliant power poles along Nesbitt Road from approximately Station 10+05 NR to Station 898+25 VR will be removed.
- The existing overhead facilities attached to MG&E Electric power poles on the north side of CTH PD (McKee Road) from approximately Station 108+00 EB to Station 113+32 EB and the crossing of CTH PD (McKee Road at approximately Station 107+58 EB will be removed.
- The existing overhead facilities attached to Alliant and MG&E Electric power poles on the east side of USH 18/151 (Verona Road) from approximately Station 905+97 VR to Station 943+17 VR will be removed.
- Use of the existing underground facilities crossing USH 18/151 (Verona Road) at approximately Station 917+30 VR will be discontinued. The existing underground facilities will remain in place.
- Use of the existing underground facilities along the east side of the existing East Verona Road Frontage Road from approximately Station 917+35 VR to Station 60+95 EF will be discontinued. The existing facilities will remain in place.
- The existing underground crossing of Verona Road at approximately Station 948+85 VR will be removed.

Underground facilities are proposed to run jointly with Alliant and AT&T under the proposed sidewalk on Nesbitt Road from approximately Station 10+05 NR to Station 24+10 NR and crossing CTH PD (McKee Road) as described elsewhere in these special provisions.

Underground facilities are proposed to run jointly with Alliant and AT&T along the east side of USH 18/151 (Verona Road) from approximately Station 908+25 VR to Station 916+60 VR as described elsewhere in these special provisions.

Underground facilities are proposed to run jointly with AT&T, MG&E Electric, and ExteNet along the back of sidewalk on the east side of the East Verona Road Frontage Road from approximately Station 916+60 VR to Station 64+15 EF as described elsewhere in these special provisions.

Overhead facilities are proposed attached to MG&E Electric power poles on the east side of the East Verona Road Frontage Road from approximately Station 64+15 EF to Station 69+50 EF. Underground facilities are proposed jointly with ExteNet to cross USH 18/151 (Verona Road) at approximately Station 948+25 VR. A vault it proposed at approximately Station 69+10 EF 36' RT. The depth of the proposed facilities is anticipated to be approximately 78 inches below existing ground.

Underground facilities are proposed jointly with MG&E Electric crossing USH 18/151 (Verona Road) at approximately Station 920+00 VR as described elsewhere in these special provisions.

Underground facilities are proposed jointly with Alliant crossing USH 18/151 (Verona Road) at approximately Station 916+90 VR as described elsewhere in these special provisions.

A representative from Charter must be present any time construction work is conducted within 10 feet of Charter's facilities. Contact Charter 5 days prior to beginning work within 10 feet of Charter facilities. Contact Charter 5 days before removing or adjusting any Charter facilities to verify the facility is no longer in use. Does not assume an unmarked facility is abandoned.

If excavation is within 2 feet of the outer edge of a Charter facility in any direction, only hand excavation, air cutting, and vacuum excavation are permitted.

The maximum unsupported exposed length for a Charter facility is 5 feet. Support the facility with sand bags or padded skids when required. At no time should Charter facilities be used as a brace to support equipment or materials.

Perform backfill and compaction in the presence of a Charter representative and to the satisfaction of the representative. Provide a minimum of 6-inches of fine loose earth or sand with no sharp gravel, rock hard clods, or other debris on all sides of the facility. Place the remaining backfill over the pipeline in a manner that doesn't disturb the previously placed padding material around the facility or causes damage to the facility. Compact the backfill by hand until 18-inches of cover over the facility is achieved. Compact the surrounding disturbed areas around the facility to the same degree of compaction as over the facility.

Contact Charter 5 days prior to working near Charter facilities. Coordinate operations with Charter. Contact Glen Jakusz (608) 209-3202. Invite Glen Jakusz to the weekly construction meetings.

ExteNet Systems (ExteNet) (communication) has existing overhead facilities located within the project area. ExteNet anticipates their facility relocation will take place beginning May 9, 2016 and is anticipated to be completed by September 1, 2016. The anticipated proposed relocations are as follows:

The existing overhead facilities attached to MG&E Electric power poles from on the west side of the East Verona Road Frontage Road from approximately Station 48+45 EF to Station 64+15 EF will be removed.

Underground facilities are proposed jointly with AT&T, MG&E Electric, and Charter along the back of the proposed sidewalk on the east side of the East Verona Road Frontage Road from approximately Station 50+20 EF to Station 64+15 EF as described elsewhere in these special provisions with a node pole proposed in the terrace at approximately Station 50+20 EF.

Underground facilities are proposed jointly with Charter to cross USH 18/151 (Verona Road) at approximately Station 948+25 VR as described elsewhere in these special provisions. A vault is proposed at approximately 69+10 EF 36' RT.

Contact ExteNet NOC at (866) 892-5327 a minimum of 24 hours prior to construction to coordinate working within 10' of ExteNet's facilities.

Coordinate operations with ExteNet. Contact Lili Giertz (920) 395-7136. Invite Lili Giertz to the weekly construction meetings.

MG&E Gas (gas/petroleum) has existing underground facilities located within the project limits. MG&E Gas anticipates their facility relocations will take place beginning June 1, 2016 and is anticipated to be completed by September 1, 2016. The anticipated proposed relocations are as follows:

- Use of the existing 6 inch steel underground facilities along the west side of Nesbitt Road from approximately Station 10+30 NR to Station 18+15 NR and along the west side of Verona Road from approximately Station 897+25 VR to Station 924+75 VR will be discontinued. The existing facilities will remain in place.
- Use of the existing 2 inch steel underground facilities along the south side of CTH PD (McKee Road) from approximately Station 92+75 EB to Station 99+40 EB will be discontinued. The existing facilities will remain in place.
- Use of the existing 12 inch steel, 400 pound per square inch (psi), underground facilities along and under the eastbound lanes of CTH PD (McKee Road) from approximately Station 86+50 EB to Station 112+50 EB will be discontinued. The existing facilities will remain in place.
- Use of the existing 6 inch plastic and 4 inch steel underground facilities along the east side of USH 18/151 (Verona Road) from approximately Station 905+15 VR to Station 962+45 VR and the crossings of USH 18/151 (Verona Road) at approximately Station 906+40 VR, Station 922+25 VR and Station 959+05 VR will be discontinued. The existing facilities will remain in place.
- Use of the existing 2 inch steel underground facilities along the south side of Williamsburg Way from approximately Station 102+10 WW to Station 104+50 WW and the crossing of the East Verona Road Frontage Road at approximately Station 54+74 EF will be discontinued. The existing facilities will remain in place.
- Use of the existing 2 inch steel underground facilities under the east side of Kapec Road from approximately Station 62+00 KR to Station 54+25 FR and the crossing of CTH PD (McKee Road) at approximately Station 92+10 EB will be discontinued. The existing facilities will remain in place.
- Use of the existing 4 inch plastic underground facilities along the east side of Anton Drive from approximately Station 110+60 AD to Station 111+65 AD will be discontinued. The existing facilities will remain in place.
- Use of the existing 6 inch plastic underground facilities on the north side of CTH PD from approximately Station 103+10 EB to Station 106+80 EB will be discontinued. The existing facilities will remain in place.

- Use of the existing 4-inch plastic underground facilities on the north and south side of Williamsburg Way from approximately Station 95+00 WW to Station 95+30 WW and the crossing of Williamsburg Way at approximately Station 95+30 WW will be discontinued. The existing facilities will remain in place.

Underground 60 psi facilities are proposed along the west side of Nesbitt Road behind the back of sidewalk in easement from approximately Station 10+30 NR to Station 24+42 NR where the underground facility will continue to the west along the southern right of way of CTH PD (McKee Road) to approximately Station 86+90 EB where it will connect to existing facilities. Underground 60 psi facilities are proposed to cross CTH PD at approximately Station 91+50 EB. The depth of the proposed facilities along Nesbitt Road and the south side of CTH PD are anticipated to be approximately 3 feet below finished ground. The depth of the proposed facilities crossing CTH PD are anticipated to be approximately 4 feet below finished ground and approximately 1.5 feet below the proposed storm sewer on the south side of CTH PD.

Underground 400 psi and 60 psi facilities are proposed to run behind the back of sidewalk in easement on the south side of Fitchrona Road from approximately Station 53+60 FR to the east. Underground 400 psi and 60 psi facilities are proposed behind the back of sidewalk in easement on the east side of Kapec Road from approximately Station 71+25 KR to Station 72+80 KR and cross Kapec Road at approximately Station 71+25 KR to the west side of Kapec Road behind the existing sidewalk and continue to the south to CTH PD. The depth of the proposed facilities is anticipated to be approximately 3 feet below finished ground.

Underground 400 psi and 60 psi facilities are proposed along the east side of the East Verona Road Frontage Road behind the back of sidewalk from approximately Station 38+00 EF to Station 41+60 EF with a crossing of the East Verona Road Frontage Road at approximately Station 41+75 EF and a crossing of USH 18/151 (Verona Road) at approximately Station 922+25 VR. The depth of the proposed facilities is anticipated to be at an elevation of approximately 1009.0 at the crossing of the East Verona Road Frontage Road and vary between approximately 1009.0 and 1016.0 at the crossing of USH 18/151 (Verona Road). The depth of the proposed facilities is anticipated to be approximately 3 feet below finished ground along the east side of the East Verona Road Frontage Road. Contact MG&E Gas for additional information.

Underground 60 psi facilities are proposed along the east side of the East Verona Road Frontage Road behind the back of sidewalk from approximately Station 51+10 EF to Station 62+50 EF. The depth of the proposed facilities is anticipated to be approximately 3 feet below finished ground in cut locations and approximately 3 feet below existing ground in fill locations.

Underground 60 psi facilities are proposed along the north side of CTH PD 1 foot off the right of way from approximately Station 103+95 EB to Station 106+80 EB where the facility will connect to existing facilities on the north side of CTH PD. MG&E Gas will adjust the existing 60 psi facility on the north side of CTH PD from approximately Station 106+80 EB to the east as needed. Please contact MG&E Gas 3 days prior to the need for the adjustment.

Adjustments are anticipated to be completed in 1 day. The depth of the proposed facilities is anticipated to be approximately 3 feet below finished ground. The depth of the existing facilities to remain varies between approximately 3 feet and 5 feet. Contact MG&E Gas for additional information.

Underground 400 psi facilities are proposed approximately 1 foot off the proposed southern right of way along CTH PD from approximately Station 107+15 EB to Station 112+50 EB. The depth of the proposed facilities is anticipated to be approximately 6 feet below finished ground and approximately 1.5 feet below the proposed storm sewer from approximately Station 107+15 EB to Station 110+45 EB and at the proposed storm sewer crossing at approximately Station 112+50 EB.

Underground 60 psi facilities are proposed along the east side of Anton Drive from approximately Station 110+60 AD to Station 111+65 AD. The depth of the proposed facilities is anticipated to be approximately 3 feet below finished ground. Underground 60 psi facilities are proposed to cross Williamsburg Way at approximately Station 95+00 WW. The depth of the proposed facilities is anticipated to be at an elevation of approximately 1039.5.

Underground 400 psi facilities are proposed approximately 1 foot off the existing right of way along the north side of CTH PD from approximately Station 77+50 WB to Station 91+50 EB. The depth of the proposed facilities is anticipated to be approximately 4 feet below finished ground.

Contact Shaun Endres of MG&E Gas prior to removing any gas facilities to verify that the facilities have been disconnected and do not carry natural gas. Do not assume that unmarked facilities have been disconnected. At no time is it acceptable to push, pull, cut or drill an unmarked facilities without approval from MG&E Gas. Hand dig within 18 inches of marked gas facilities.

Contact Mike Savage of MG&E Gas at (608) 235-2345 at least one week in advance of the following:

- Construction of the proposed storm sewer at approximately Station 112+40 AD to discuss possible adjustments of MG&E Gas' existing facilities.
- Excavating within 10 feet of 400 psi facilities so MG&E Gas can have a representative on site during the excavation.
- Construction of the sanitary sewer on the north side of CTH PD at approximately 106+80 EB.
- Construction of the proposed storm sewer at approximately Station 56+95 EF.

Coordinate operations with MG&E Gas. Contact Shaun Endres, (608) 213-6708. Invite Shaun Endres to the weekly construction meetings.

MG&E Electric (electric) has existing overhead and underground facilities located within the project area. MG&E Electric anticipates their facility relocations will take place

beginning May 9, 2016 and is anticipated to be completed by September 1, 2016. The anticipated proposed relocations are as follows:

- The existing overhead the crossing of CTH PD (McKee Road) at approximately Station 107+50 EB will be removed.
- Use of the existing underground facilities crossing CTH PD (McKee Road) at approximately Station 113+70 EB will be discontinued. The existing underground facilities will remain in place.
- The existing overhead facilities along the west side of the East Verona Road Frontage Road from approximately Station 917+37 VR to Station 64+15 EF will be removed.
- The existing power pole on the west side of the East Verona Road Frontage Road at approximately Station 74+45 EF will be removed.

Underground facilities are proposed to run jointly with AT&T, Charter, and ExteNet along the back of sidewalk on the east side of the East Verona Road Frontage Road from approximately Station 916+60 VR to Station 64+15 EF as described elsewhere in these special provisions. Pull boxes are proposed in the proposed sidewalk at approximately Station 44+50 EF, Station 52+90 EF, Station 64+10 EF. If adjustments are necessary contact MG&E Electric 10 days prior to the need for the adjustment. The adjustments are anticipated to take 1 day per pull box. A transformer is proposed on the east side of the East Verona Road Frontage Road at approximately Station 56+00 EF. Contact MG&E Electric a minimum of 3 days prior to constructing the proposed storm sewer between manholes WW1482 and WW391 to discuss supporting MG&E Electric underground facilities during construction.

Underground facilities are proposed jointly with Charter crossing USH 18/151 (Verona Road) at approximately Station 920+00 VR. The depth of the proposed facilities is anticipated to vary between elevations of approximately 1008.0 and 1010.0. Contact MG&E Gas for additional information.

The existing power pole on the east side of the East Verona Road Frontage Road at approximately Station 67+60 EF will be relocated approximately 3 feet to the east. The existing power pole on the east side of the East Verona Road Frontage Road at approximately Station 69+35 will be relocated to approximately Station 69+50 EF. A new power pole will be placed on the east side of the East Verona Road Frontage Road at approximately Station 74+50 EF.

Contact MG&E Electric a minimum of 3 days prior to constructing the proposed sanitary sewer at approximately Station 65+72 EF to discuss bracing the existing MG&E Electric power pole during construction.

Contact MG&E Electric a minimum of 3 days prior to constructing the proposed storm sewer at approximately Station 56+95 EF to discuss the proposed construction method and potential support for MG&E Electric's facilities.

Underground facilities are proposed along the back of the proposed sidewalk on the south side of CTH PD (McKee Road) from approximately Station 107+20 EB to Station 107+81 EB. The depth of the proposed facilities is anticipated to be approximately 5.5 feet below existing ground.

Underground facilities are proposed jointly with AT&T along the south side of CTH PD (McKee Road) from approximately Station 106+75 EB to Station 113+75 EB. A switch gear and transformer are proposed at approximately Station 110+40 EB and a pedestal is proposed at approximately Station 113+95 EB behind the proposed sidewalk. The switch gear and transformer may be constructed after work on CTH PD is completed. Contact MG&E Electric for additional information.

Contact MG&E Electric prior to cutting/removing facilities to verify they are de-energized.

Contact MG&E Electric 5 days prior to working near MG&E Electric facilities.

Coordinate operations with MG&E Electric. Contact Rich Parker, (608) 252-7379. Invite Rich Parker to the weekly construction meetings.

Madison Metropolitan Sewerage District (MMSD) (sanitary sewer) has existing underground facilities located within the project limits. MMSD anticipates their facility relocations will take place beginning August 1, 2016 and is anticipated to be completed by December 1, 2016. The anticipated proposed relocations are as follows:

Use of the existing underground facilities along the south side of CTH PD (McKee Road) from approximately Station 100+75 EB to Station 107+42 EB will be discontinued. Use of the existing underground facilities along the east side of USH 18/151 (Verona Road) from approximately Station 884+70 VR to Station 902+43 VR will be discontinued. The existing underground facilities will be slurry filled after MMSD has completed their relocation work. The existing manholes will be slurry filled to the proposed subgrade.

Underground force main facilities are proposed to cross CTH PD (McKee Road) at approximately Station 106+85 EB with a new structure/vault placed on the north side of CTH PD (McKee Road) at approximately Station 107+42 EB. A new manhole structure will be placed in the median of CTH PD (McKee Road) at approximately Station 107+42 EB to collect the City of Fitchburg sanitary sewer with a crossing of westbound CTH PD (McKee Road) at approximately Station 107+42 EB. This work is anticipated to be completed by August 31, 2016.

Contact MMSD 7 days prior to working near MMSD facilities. Coordinate operations with MMSD. Contact Eric Hjellen, (608) 222-1201. Invite Eric Hjellen to the weekly construction meetings.

Metropolitan Unified Fiber Network (MUFN) (communication) has existing underground facilities located within the project area. MUFN anticipates their facility

relocations will take place in April 2016. The anticipated proposed relocations are as follows:

The existing underground facilities crossing CTH PD (McKee Road) at approximately Station 106+50 EB will be lowered between the existing hand holes on the north and south side of CTH PD. The depth of the proposed facilities is anticipated to vary between 7.5 and 9 feet below existing ground. Contact MUFN for additional information

Contact MUFN 4 days prior to construction of the proposed 38" by 60" elliptical storm sewer at approximately Station 115+55 WW so a representative can be on site during construction.

Contact MUFN 7 days prior to working near MUFN facilities. Coordinate operations with MUFN. Contact Randy Simms, (906) 282-3802. Invite Randy Simms to the weekly construction meetings.

TDS Telecom (communication) has existing underground facilities located at the salt shed area. Contact Todd Ellickson at (608) 664-4419 TDS 3 days prior to clearing and grubbing the salt shed area.

18. Notice to Contractor – Contamination Beyond Construction Limits.

The department completed testing for soil and ground water contamination for locations within this project where excavation is required. Testing indicated that contaminated soil is present at the following site(s):

1. (Site 3, 11) Station 106+00 EB to 107+00 EB 105 feet LT of the reference line at Certco, Inc. (6150 McKee Road and 5301-5321 Verona Road).

2. (Site 6, 9) Station 101+75 L to 102+75 L RT of the reference line at General Beverages Sales (6169 McKee Road).

3. (Site 14, 19) Station 89+25 EB to 91+00 EB 10 feet LT of the reference line at Wingra Stone Company (2975 Kapec Road).

4. (Site 95) Station 931+00 VR to 933+00 VR 45 feet LT of the reference line.

5. (Site 31) Station 94+50 WW to 95+50 WW 50 feet LT of the reference line at PDQ #111(5280 Williamsburg Way).

6. (Site 62) Station 967+00 VR to 968+50 VR 140 feet LT of the reference line at Speedway Station #4132 (4902 Verona Road).

7. Station 38+00 FR to 40+75 FR 30 feet LT and RT of the reference line. Stockpiled material from project 1206-07-84.

The contaminated soils at the above sites are expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations at these locations to ensure that they do not extend beyond the excavation limits indicated in the plans. If contaminated soils are encountered at these sites or elsewhere on the project during excavation, terminate excavation in the area and notify the engineer.

The Hazardous Materials Report is available by contacting:

Name:	Daniel Haak
Address:	TRC Environmental Corporation
	708 Heartland Trail, Suite 3000, Madison, WI 53717
Phone:	(608) 826-3628
Fax:	(608) 826-3941
e-mail:	dhaak@trcsolutions.com

107-100 (20050901)

19. Health and Safety Requirements for Workers Remediating Petroleum Contamination.

Add the following to standard spec 107.1(2):

Soil contamination with gasoline, diesel fuel, fuel oil, or other petroleum related products may be encountered during excavation activities. Prepare a site specific Health and Safety Plan complying with the Occupational Safety and Health Administration (OSHA) standard for Hazardous Waste Operation and Emergency Response (HAZWOPER), 29 CFR 1910.120.

All site workers taking part in remediation activities or who will have the reasonable probability of exposure of safety or health hazards associated with the hazardous material shall have completed Health and Safety training that meets OSHA requirements. Prior to the start of remediation work, submit to the engineer a site specific Health and Safety Plan, and written verification that workers will have completed up-to-date OSHA training.

Develop, delineate, and enforce the health and safety exclusions zones for each contaminated site location pursuant to 29 CFR 1910.120.
107-115 (20150630)

20. Coordination with Businesses and Residents.

The contractor shall arrange and conduct meetings 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 2 weeks' prior notice to the engineer to allow for these notifications.
108-060 (20141107)

21. Environmental Protection, Dewatering.

Supplement standard spec 107.18 as follows:

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

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

The cost of all work and materials associated with water treatment and/or dewatering is incidental to other bid items.

22. Erosion Control.

Supplement standard spec 107.20 with the following:

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

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

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

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

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

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

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

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

Unless otherwise directed by the engineer, drive a tracked vehicle along untracked or newly graded slopes roughly perpendicular to the direction of stormwater runoff flow down the slopes, to reduce the erosive potential, at the end of each day. Tracking is incidental to the cost of grading.

23. Clearing and Grubbing.

Replace standard spec 201.3 (9) as follows:

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

Replace standard spec 201.4.2 (1) with the following:

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

24. Clearing and Grubbing - Emerald Ash Borer.

Supplement standard spec 201.3 with the following:

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

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

- Green ash (F. pennsylvanica) is found throughout the state, but is most common in southern Wisconsin. It may form pure stands or grow in association with black ash,

red maple, swamp white oak, and elm. It grows as an associate in upland hardwood stands, but is most common in and around stream banks, floodplains, and swamps.

- Black ash (F. nigra) is distributed over the entire state but is most frequently found in northern Wisconsin. It is most common in swamps, but is also found in other wet forest types.
- Blue ash (F. quadrangulata) is a threatened species that is currently found only at a few sites in Waukesha County. The species is at the edge of its range in Wisconsin, but is common in states farther south. The species is not of commercial importance. Blue ash twigs are 4-sided.
- White ash (F. americana) tends to occur primarily in upland forests, often with Acer saccharum.
- Includes all horticultural cultivars of these species.

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

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

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

Follow and obey the following DATCP order:

ATCP 21.17 Emerald Ash Borer, Import Controls and Quarantine

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

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

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

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

2. Regulated items.

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

   a) The emerald ash borer, Agrilus planipennis Fairmaire in any living stage.
   b) Ash trees.

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

Regulatory Considerations

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

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

Chipped ash trees

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

25. Removing and Abandoning Miscellaneous Structures.

Supplement standard spec 204.3.1.2 (1) with the following:

Backfill holes resulting from removing guardrail as specified in standard spec 203.3.5 with backfill material conforming to standard spec 209. Backfill material shall be incidental to removing guardrail.

26. Sealing Pipes.

Replace standard spec 204.3.3.2 (3) as follows:

Under the Sealing Pipes bid item, thoroughly clean the ends of the abandoned pipe, and seal them with any grade of concrete specified under standard spec 501.3.1.3.

27. Abandoning Sewer, Item 204.0291.S.

A Description

This special provision describes abandoning existing sewer by filling it with cellular concrete according to the pertinent requirements of standard spec 204 and standard spec 501, as shown in the plans, and as hereinafter provided.

B Materials
Provide cellular concrete meeting the following specifications: 1 part cement, 1 part fly ash, 8 parts sand, or an approved equal, and water. Provide cement meeting the requirements of standard spec 501.2.1 for Type 1 Portland Cement. Provide sand meeting the requirements of standard spec 501.2.5.3 Provide water meeting the requirements of standard spec 501.2.4.

C Construction
Fill the abandoned sewer pipe with cellular concrete as directed by the engineer. In the event that the sewer cannot be completely filled from existing manholes, tap the sewer where necessary and fill from these locations.

D Measurement
The department will measure Abandoning Sewer in volume by the cubic yard according to standard spec 109.1.3.

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0291.S	Abandoning Sewer	CY

Payment is full compensation for furnishing all materials and excavating and backfilling where necessary.
204-050 (20080902)

28. Removing Flag Pole, Item 204.9060.S.001.

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

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Flag Pole as each removing flag pole, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT

204.9060.001	Removing Flag Pole	Each

204-025 (20150630)

29. Removing Business Sign and Base, Item 204.9060.S.002.

A Description
This special provision describes removing business signs and their bases according to the pertinent provisions of standard spec 204, 651, and as hereinafter provided.

B (Vacant)

C Construction
Contact the parcel owner at least 7 days prior to removing any attached private lights and associated conduit and wiring to coordinate disconnecting the power source.

Remove existing lights, conduit, and wiring according to standard specs 204 and 651. Disconnect underground conduit system from light and remove existing wiring and conduit to the right-of-way. Cap conduit and abandon wiring in place beyond right-of-way.

Dispose of surplus materials and restore the site.

D Measurement
The department will measure Removing Business Sign and Base (Parcel) as each removing business sign and base (parcel), acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.002	Removing Business Sign and Base	Each

Payment includes removing lights, conduit, and wiring; for capping conduit; and for disposing of surplus material and restoring the worksite.
204-025 (20150630)

30. Removing Private Light, Item 204.9060.S.003.

A Description
This special provision describes removing private lights and their bases according to the pertinent provisions of standard spec 204, 651 and as hereinafter provided.

B Materials
Provide materials according to standard spec 651.2.

C Construction

Contact the parcel owner at least 10 business days prior to removing any private lights, conduit, or wiring to coordinate disconnecting the power source.

Remove existing lights, conduit, and wiring according to standard specs 204 and 651. Disconnect underground conduit system from light and remove existing wiring and conduit to the right-of-way. Cap conduit and abandon wiring in place beyond right-of-way.

Dispose of removed materials.

D Measurement
The department will measure Removing Business Sign and Base (Parcel) as each removing private light, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.003	Removing Private Light	Each

Payment includes removing lights, conduit, and wiring; for capping conduit; and for disposing of removed materials.
204-025 (20150630)

31. Removing Inlet Covers, Item 204.9060.S.050.

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

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Inlet Covers as each removing inlet covers, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.050	Removing Inlet Covers	Each

204-025 (20150630)

32. Removing Apron Endwalls, Item 204.9060.S.051.

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

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Apron Endwalls as each removing apron endwalls, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.051	Removing Apron Endwalls	Each

204-025 (20150630)

33. Removing Retaining Wall, Item 204.9090.S.001.

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

B (Vacant)

C (Vacant)

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

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.001	Removing Retaining Wall	LF

204-025 (20150630)

34. Removing Gate House, Item 204.9105.S.001.

A Description
This special provision describes removing an existing gate house and all appurtenances.

B (Vacant)

C Construction
Remove the existing gate house and all appurtenances including, but not limited to, the entire gate house structure including any footings, concrete barrier wall, curb and gutter, bollards, ticket dispensers, signs, speakers, wiring, landscaping, landscaping boulders, and other pertinent items associated with the gate house according to the pertinent provisions of standard spec 204 and as hereinafter provided.

D Measurement
The department will measure Removing Gate House as a single lump sum unit of work for each removing gate house, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.001	Removing Gate House	LS

204-025 (20150630)

35. Removing Weigh Station Shed, Item 204.9105.S.002.

A Description
This special provision describes removing an existing 6-foot by 8-foot metal shed and all appurtenances.

B (Vacant)

C Construction
Remove the existing weigh station shed and all appurtenances including, but not limited to, the entire shed structure including any footings, foundations, wiring, and other pertinent items associated with the weigh station shed according to the pertinent provisions of standard spec 204 and as hereinafter provided.

D Measurement
The department will measure Removing Weigh Station Shed as a single lump sum unit of work for each removing weigh station shed, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.002	Removing Weigh Station Shed	LS

204-025 (20150630)

36. Removing Storm Sewer Outlet Control Structure, Item 204.9105.S.050.

A Description
This special provision describes removing storm sewer outlet control structures according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)
Supplement standard spec 204.3.2.1 (2) with the following:

Remove entirely all walls, wiers, foundations, and footings.

D Measurement
The department will measure Removing Storm Sewer Outlet Control Structure as a single lump sum unit of work for each removing storm sewer outlet control structure, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.050	Removing Storm Sewer Outlet Control Structure	LS

204-025 (20150630)

37. Removing Gabion Structure, Item 204.9105.S.051.

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

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Gabion Structure as a single lump sum unit of work for each removing gabion structure, acceptably completed.

E Payment
Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.051	Removing Gabion Structure	LS

204-025 (20150630)

38. 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)

39. Roadway Excavation.

Add the following to standard spec 205.5.2(1):

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

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

40. Borrow.

Replace standard spec 208.1(1) with the following:

This section describes constructing embankments and other portions of the work consistent with the earthwork summary and defines the contract requirements for embankment material

if required by the plans or if the contractor elects to utilize off-site material to complete the roadway embankments.

Delete standard spec 208.2.2(2).

Add the following to standard spec 208.3:

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

Replace standard spec 208.4 with the following:

The department will not measure embankment material from its source.

Replace standard spec 208.5 with the following:

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

41. QMP Base Aggregate.

A Description

A.1 General

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

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

(3) Do not apply this special provision to material placed 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)

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

Revise standard spec 305.2.2.1 as follows:

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

Percentage by weight passing:

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

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

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

43. Concrete Pavement.

Supplement standard spec 415.2.1 with the following:

General

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

Use virgin aggregates only.

Deleterious Substances

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

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0

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

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

Physical Properties

The department will ensure that Los Angeles wear testing conforms to AASHTO T 96, soundness testing conforms to AASHTO T 104 using 5 cycles in sodium sulfate solution on aggregate retained on the No. 4 sieve, and freeze-thaw soundness testing conforms to AASHTO T 103. The percent wear must no exceed 40, the weighted soundness must not exceed 9 percent, and the weighted freeze-thaw average loss must not exceed 12 percent.

Add standard spec 415.3.3 (3) as follows:

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

Add standard spec 415.3.7.1 (7) as follows:

(7) Treat sawed surfaces of transverse and longitudinal joints with a silane concrete sealer found on the department approved products list for Concrete Protective Surface Treatments. Prepare surface by pressure washing all saw slurry from sawed joints and allow to dry thoroughly prior to application of silane sealer. Apply the product directly to the interior of the sawed joint. Do not use the broadcast spray method of application.

Supplement standard spec 415.3.14 with the following:

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

44. QMP HMA Pavement Nuclear Density.

A Description

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

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

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

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

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

B Materials

B.1 Personnel

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

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

B.2 Testing

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

B.3 Equipment

B.3.1 General

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

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

(3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference

blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:

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

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

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

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

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

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

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

B.3.2.2 Correlation Monitoring

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

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

(3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft^3 of its reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge

from the project if the 5-test average is not within 1.5 lb/ft^3 of its reference value established in B.3.2.2(2).

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

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

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

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

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

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

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

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

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

Table 1

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

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

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

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

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

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

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

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

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

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

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

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

B.4.2.2.2 Width of 5 Feet or Less

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

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

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

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

B.4.2.4 Documentation

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

B.4.3 Corrective Action

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

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

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

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

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

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

B.5 Department Testing

B.5.1 Verification Testing

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

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

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

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

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

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

B.5.2 Independent Assurance Testing

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

B.6 Dispute Resolution

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

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

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

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

B.7 Acceptance

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

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

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

E.2 Disincentive for HMA Pavement Density

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

E.3 Incentive for HMA Pavement Density

(1) Delete standard spec 460.5.2.3.

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

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

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

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

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

460-020 (20100709)

45. HMA Pavement 3 MT 58-28 S, Item 460.6223; HMA Pavement 4 MT 58-28 H, Item 460.6424.

A Description

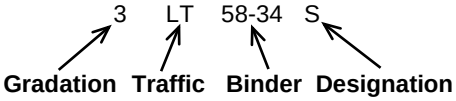
This special provision describes providing HMA pavement including the binder under a combined bid item.

Define gradations, traffic levels, and asphaltic binder designation levels as follows:

GRADATIONS (NMAS)		TRAFFIC VOLUME		DESIGNATION LEVEL	
1	37.5 mm	LT	Low	S	Standard
2	25.0 mm	MT	Medium	H	Heavy
3	19.0 mm	HT	High	V	Very Heavy
4	12.5 mm			E	Extremely Heavy

5 9.5 mm
6 4.75 mm

Construct HMA pavement of the type the bid item indicates encoded as follows:



Conform to standard spec 460 as modified in this special provision.

B Materials

Replace standard spec table 460-1 with the following to change the footnotes to refer to LT and MT mixes instead of E-0.3 and E-3 mixes:

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm (#1)	25.0 mm (#2)	19.0 mm (#3)	12.5 mm (#4)	9.5 mm (#5)	SMA 12.5 mm (#4)	SMA 9.5 mm (#5)
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for LT and MT mixes

[2] 15.5 for LT and MT mixes

Replace standard spec table 460-2 with the following to switch from E mixes to LT, MT, and HT mixes; and change the tensile strength ratio requirements to 0.75 without antistripping additive and 0.80 with antistripping additive:

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	LT	MT	HT	SMA
ESALs x 106 (20 yr design life)	<2.0	2 - <8	>8	> 5 mil
LA Wear (AASHTO T96)				
100 revolutions(max % loss)	13	13	13	13
500 revolutions(max % loss)	50	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12

Mixture type	LT	MT	HT	SMA
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	65/ __	75 / 60	98 / 90	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1 ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	43	45	45
Sand Equivalency (AASHTO T176, min)	40	40	45	50
Gyratory Compaction				
Gyrations for Nini	6	7	8	8
Gyrations for Ndes	40	75	100	65
Gyrations for Nmax	60	115	160	160
Air Voids, %Va (%Gmm Ndes)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% Gmm Nini	<= 91.5[1]	<= 89.0[1]	<= 89.0	___
% Gmm Nmax	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/Pbe)	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 – 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)				
no antistripping additive	0.75	0.75	0.75	0.75
with antistripping additive	0.80	0.80	0.80	0.80
Draindown at Production Temperature (%)	___	___	___	0.30

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

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

[3] For #5 (9.5mm) and #4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For #2 (25.0mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For #1 (37.5mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

Replace standard spec 460.2.8.2.1.7 paragraph six with the following to base payment adjustment on the combined bid item unit price:

(6) The department will reduce payment for nonconforming QMP HMA mixtures, starting from the stop point to the point when the running average is back inside the warning limits, as follows:

PAYMENT FOR MIXTURE*[1] [2]*

ITEM	PRODUCED WITHIN WARNING BANDS	PRODUCED OUTSIDE JMF LIMITS
Gradation	90%	75%
Asphalt Content	85%	75%

Air Voids	70%	50%
VMA	90%	75%

[1] For projects or plants where the total production of each mixture design requires less than 4 tests refer to CMM 8-36.

[2] Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. The department will administer pay reduction under the Nonconforming QMP HMA Mixture administrative item.

Replace standard spec 465.2 with the following:

(1) Under the Asphaltic Surface, Asphaltic Surface Detours, and Asphaltic Surface Patching bid items; submit a mix design. Furnish asphaltic mixture meeting the requirements specified for either type LT or MT mix under standard spec 460.2; except the engineer will not require the contractor to conform to the quality management program specified under standard spec 460.2.8.

(2) Under the other 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

C Construction

Replace standard spec table 460-3 with the following to switch from E mixes to LT, MT, and HT mixes:

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	91.5[3]	92.0[4]	____
	UPPER	91.5	92.0	____
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	91.5[3]	92.0[4]	____
	UPPER	91.5	92.0	____
SHOULDERS & APPURTENANCES	LOWER	89.5	89.5	____
	UPPER	90.5	90.5	____

[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.

D Measurement

Add the following to standard spec 460.4:

The department will measure HMA Pavement (type) conforming to standard spec 460.4.

E Payment

Add the following to standard spec 460.5 to switch from E mixes to LT, MT, and HT mixes; to combine the pavement and binder bid items; and to specify a pay reduction for pavement placed with nonconforming binder:

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

ITEM NUMBER	DESCRIPTION	UNIT
460.6223	HMA Pavement 3 MT 58-28 S	TON
460.6424	HMA Pavement 4 MT 58-28 H	TON

Payment is full compensation for providing HMA Pavement including asphaltic binder.

In addition to any pay adjustment under standard spec 460.2.8.2.1.7(6), the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item. The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

460-025 (20160419)

46. Asphaltic Curb.

Replace standard spec 465.2 (2) with the following:

(2) Under the other 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material, except under the Asphaltic Curb bid item furnish PG58-28 asphaltic material. If the Asphaltic Curb is being placed adjacent to and concurrently with Asphaltic Surface Temporary use Asphaltic Surface Temporary for the asphaltic curb. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

47. Railing Steel Pedestrian Type C3 R-13-264.

A Description

This special provision supplements the standard spec and describes fabricating, galvanizing, coating and installing railing in accordance with standard specs 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Galvanize and coat railing assemblies with a two-coat system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B.1 Coating System

B.1.1 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 in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when 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.

B.1.2 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 in accordance 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	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 314-644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane 133 LH(satin)	4	NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 253-850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA
PPG Protective and Marine Coatings P.O. Box 192610 Little Rock, AR 72219-2610 414-339-5084	Tie	Amercoat 399	3.0 to 5.0	3
	Top	Amercoat 450H	2.0 to 4.0	NA

[1] Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

B.2 Shop Drawings

Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the 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

C.1 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 in accordance 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.

C.2 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.

48. Concrete Staining R-13-264, Item 517.1010.S.001; R-13-265, Item 517.1010.S.002; R-13-269, Item 517.1010.S.003; R-13-271, Item 517.1010.S.004; S-13-447, Item 517.1010.S.005; Concrete Barrier Wall, Item 517.1010.S.006.

A Description

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

B Materials

B.1 Mortar

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

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

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

Acrylic Bonding Admixture:	TK-225 by TK Products

Achro 60 by Thoro Products
Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, as part of the two coat finish system:

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure & Seal EPX by Chem Masters
H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations.

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

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas
Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between the stones produced by the form liner if applicable. Do not apply stain to the structure until the department approves the test panels.

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.001	Concrete Staining R-13-264	SF
517.1010.S.002	Concrete Staining R-13-265	SF
517.1010.S.003	Concrete Staining R-13-269	SF
517.1010.S.004	Concrete Staining R-13-271	SF
517.1010.S.005	Concrete Staining S-13-447	SF
517.1010.S.006	Concrete Staining Concrete Barrier Wall	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.
517-110 (20140630)

49. Architectural Surface Treatment R-13-264, Item 517.1050.S.001; R-13-265, Item 517.1050.S.002; R-13-269, Item 517.1050.S.003; R-13-271, Item 517.1050.S.004; S-13-447, Item 517.1050.S.005.

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

B Materials

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

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

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

C Construction

C.1 Equipment

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

C.2 Form Liner Preparation

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

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

Place adjacent liners less than ¼-inch from each other, attach liner securely to forms 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 R-13-264	SF
517.1050.S.002	Architectural Surface Treatment R-13-265	SF
517.1050.S.003	Architectural Surface Treatment R-13-269	SF
517.1050.S.004	Architectural Surface Treatment R-13-271	SF
517.1050.S.005	Architectural Surface Treatment S-13-447	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)

50. Traffic Signals-Signal Housings.

Replace standard spec 658.2.3.2 (1) as follows:

(1) Furnish polycarbonate resin housings, doors, and visors. Use yellow, Federal Standard 595 -FS13538, housings and dull black door faces and visors. For 16-inch heads, mount a tunnel visor and gasket to the door with stainless steel tabs. Drill the housing for top and bottom pipe mounting.

51. Concrete Barrier Temporary Precast Delivered.

Replace standard spec 603.3.2.2 (1) with the following:

(1) Under the Concrete Barrier Temporary Precast Delivered bid item, furnish and deliver Contractor owned temporary barrier to worksites within the project and remove it upon project completion. Deliver State owned temporary barrier to worksites within the project. Delivering State owned temporary barrier includes pick up, haul, and delivery of State owned temporary barrier located within five miles of the project, to worksites within the project to remain in place upon project completion.

52. Concrete Barrier Temporary Precast Installed.

Replace standard spec 603.3.2.3 (1) with the following:

(1) Under the Concrete Barrier Temporary Precast Installed bid item, install contractor owned and State owned temporary barrier in contract-identified locations or as the engineer directs. Also make contract-identified or engineer-directed moves that do not require trucking and reinstall at those new locations.

53. Riprap.

Replace standard spec 606.2.1 (3) with the following:

The contractor may not substitute waste concrete slabs for stone.

Replace standard spec 606.2.2 with the following:

Grouting rip rap by any means will not be allowed, except where shown on the plans.

54. Adjusting Manhole Covers.

This work shall be according to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.
611-005 (20030820)

55. 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)

56. 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)

57. Drain Slotted Vane, Item 611.9900.S.

A Description

This special provision describes furnishing and installing slotted vane drain as shown on the plans, according to standard spec 611, and as hereinafter provided.

B (Vacant)

C Construction
Prior to encasing the pipe in concrete, cover the upper end of the slotted drain as shown on the plans, or as approved by the engineer.

Prior to construction operations adjacent to the slotted area of the slotted vane drain pipe, cover the slots on the top of the drain. Remove any material entering the pipe at the contractor's expense.

Exercise care to avoid damage to the slotted vane drainpipe. If any section of pipe is damaged or is unsatisfactory as determined by the engineer, replace the drainpipe at contractor's expense.

D Measurement
The department will measure Drain Slotted Vane in units 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
611.9900.S	Drain Slotted Vane	Each

Payment is full compensation for furnishing all materials; hauling and placing the pipe; making connections to existing inlets; furnishing concrete masonry, end plug or cap; and cleaning out and restoring site of work.
611-015 (20030820)

58. General Requirements for Storm Sewer Manholes.

Replace standard spec 611.3.4 with the following:

Steps in storm sewer manholes are not required. Center the storm sewer structure casting on the structure unless otherwise noted in the plans.

59. Fence Safety, Item 616.0700.S.

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

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

Furnish fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh Opening:	1 inch min to 3 inch max
Resin/Construction:	High density polyethylene mesh
Service Temperature:	-60° F to 200° (ASTM D648)
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

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

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.
616-030 (20070510)

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

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

B Materials
Provide materials conforming to size requirements for size no. 2 coarse aggregate for concrete masonry or riprap according to the standard spec 501.2.5.4.4. Railroad ballast or breaker run stone conforming to the following applicable gradations may also be used:

Railroad Ballast

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

Breaker Run Stone

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

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

C Construction

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

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

D Measurement

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

E Payment

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

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

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

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

628-050 (20151210)

61. 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 $800 to cover the cost of performing the work with other forces. The department will assess these damages

for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.
632-005 (20070510)

62. Sod Lawn.

Revise standard spec 631.3.5 as follows:

Change 30 days to 60 days.

Add standard spec 631.3.6 Maintenance as follows:

Provide the engineer with a letter describing the maintenance procedures, schedules and names of personnel performing the maintenance for Sod Lawn.

Maintain Sod Lawn for 60 days after placement. Maintenance includes, but is not limited to, the following: watering, mowing, weeding, protection from insects and diseases, and fertilizing to establish the Sod Lawn free of eroded and bare areas. Watering and fertilizing will be paid for under the appropriate bid items. All other items are incidental to Sod Lawn.

Begin mowing when the grass has reached a height of 3 inches, or as directed by the engineer. Mow the grass to 2 inches in height and at least twice before acceptance. Provide a mower capable of collecting the grass clippings. Dispose of grass clippings off the project site.

Keep sodded areas moist by sprinkling with water for 60 days after placement. Replace areas that the engineer determines are dead or not in healthy growing conditions as soon as conditions permit. Utilize the same Sod Lawn as originally specified. Re-sodding is considered incidental to the contract.

In order to qualify for acceptance, Sod Lawn areas shall have had two mowings before final inspection. Sod Lawn shall be well rooted, practicably free from weeds and be bright in color. Repair and/or replace, as directed by the engineer, areas which fail to meet these requirements, to provide Sod Lawn acceptable to the engineer.

Maintain re-sodded or replaced areas for an additional 30 days.

Replace standard spec 631.5 (2) with the following:

Payment for Sod Lawn, Sod Erosion Control, and Sod Erosion Control Sandy Soil is full compensation for preparing the earth bed; for maintaining and mowing the sod, and for furnishing, placing, staking, and rolling the sod. Payment also includes watering if the contract does not contain the Sod Water bid item.

63. Furnishing and Planting Plant Materials.

Supplement standard spec 632.2.1 with the following:

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

Replace standard spec 632.2.2.8 (1) with the following:

Furnish a list of the sources from which plant materials will be obtained to the engineer. Furnish the list within 15 days of the award of the contract for fall-planted plants and before March 15 for spring-planted plants. Do not alter these lists without the engineer's approval.

Supplement standard spec 632.2.3.4 with the following:

Obtain review and approval of Planting Mixture, according to the bid item Planting Mixture, by the engineer before use on project. The engineer reserves the right to reject planting mixture that does not conform to the specifications and/or does not come with the appropriate material certificates. The engineer may require samples for USDA soil texture classification, pH, % organic matter, nutrient content, caution exchange capacity, soluble salts, and the presence of any materials deleterious to plant growth. Provide testing through a qualified testing laboratory approved by the State of Wisconsin to confirm that topsoil meets the requirements outlined in standard spec 632.2.3.3.

Replace standard spec 632.2.4.2 with the following:

For fertilizer in plant holes, provide water soluble fertilizer contained in a micropore slow release polyethylene packet with a three-year release. Provide packets with two ounces of fertilizer. A single two ounce packet is considered one unit. Fertilizer shall conform to the following minimum requirements:

Nitrogen, not less than ----- 16%
Phosphoric Acid, not less than ----- 8%
Potash, not less than -----8%

For trees: Use a minimum of two units and provide two units per caliper inch of tree trunk diameter. For one-half caliper measurements, round up to the next unit.

For shrubs: Use a minimum of two units and provide one unit per 12 inches of plant height or spread.

For perennials: Use a single unit per plant.

Replace standard spec 632.2.6 with the following:

Provide mulch as specified by bid item Shredded Hardwood Bark Mulch.

Replace standard spec 632.2.7 with the following:

Do not use wrapping on plant material.

Replace standard spec 632.2.9 with the following:

Provide rodent protection for trees designated on plans and as directed by the engineer.

Provide rodent protection for single-stem trees of rigid plastic mesh made of recycled HDPE with an open mesh matrix ¾" by ¾" with each strand approximately 1/8" x 1/8" x 1/8". Provide products that are UV treated with a life expectancy of up to five years. The product shall be at least 48 inches high. Supply the source of rodent protection to the engineer. Install rodent protection for single-stem trees according to manufacturer's written instructions and at a minimum, burying the bottom of the rodent protection 2-3 inches into the adjacent soil grades.

Provide rodent protection for multi-stemmed trees of chicken wire or other similarly rigid, matrix-material with an open mesh matrix ¾" by ¾" or less, 48 inches high. Install rodent protection for multi-stemmed trees such that the entire base of the tree is protected; circumference of rodent protection may vary based on specific characteristics of each tree. Bury the bottom 2-3 inches of the rodent protection into the adjacent soil grades.

Replace standard spec 632.2.10 with the following:

Use 18-inch soft polymer webbing strap with grommets at each of the two ends to secure wire or twine to tree. Supply source of webbing straps to the engineer.

Provide tree stabilization (staking and guying) for all trees unless directed otherwise by the engineer or the City of Fitchburg Forestry Department.

Supplement standard spec 632.3.1 (1) with the following:

Obtain approval from the engineer for any plantings between June 1 and September 1. All additional care and maintenance associated with approved plantings occurring within this timeframe, will be at no cost to the department including, but not limited to, supplemental watering above and beyond the typical, specified landscape maintenance and care cycle schedule.

Supplement standard spec 632.3.1 with the following:

Take care not to damage or disturb adjacent finished landscape and be responsible for seeding, sodding or placing Shredded Hardwood Bark Mulch to repair any and all damage caused to adjacent landscape materials. Repairs shall be at the contractor's expense.

Replace standard spec 632.3.3 with the following:

Stake the locations of all plant holes and obtain approval of staked location from the engineer and the City of Fitchburg Forestry Department before planting.

Supplement standard spec 632.3.4 with the following:

Adequately compact the bottom of the hole to guard against settling. Tamp or water as necessary to create a condition by which plants will not settle in the planting beds. The bottom of the rootball shall be in direct contact with the bottom of the hole.

Replace standard spec 632.3.4 (2) with the following:

Excavate the plant hole to the minimum horizontal dimensions indicated in the Plant Data Table included in the plans or as the engineer directs. The minimum horizontal measurement of the plant hole is to be no less than 24 inches greater than the diameter of the ball, container, or root mass for the full depth of the planting hole for trees.

Replace standard spec 632.3.7 (2) with the following:

Place the plant in the plant hole with its more desirable face towards the most prominent view and hold in a vertical position. Remove the burlap and other wrapping materials including, but not limited to, twine, wire baskets, and plastic ribbon, from the entire root ball of B&B plants unless the engineer determines that removal of said material will be detrimental to plant stability and/or establishment. At a minimum, the wire basket must be completely removed from the top and sides of the rootball. Move and handle only by the ball or container. Set the plant so that, after settling, the plant root collar is at or 2 inches above the surrounding ground level, as specified above in standard spec 632.3.4.

Supplement standard spec 632.3.18.1.2 with the following:

The plant establishment period shall extend to October 15, 2019 for all plant materials. Review all plant materials with the engineer and the City of Fitchburg Forestry Department at conclusion of the establishment period.

Replace standard spec 632.3.19.1 (9) with the following:

Remove all staking, bracing wire material, nursery tags and other plant stabilization or non-biodegradable material at the end of each growing season within the establishment period.

Review all rodent protection measures at the end of each growing season within the establishment period with the engineer.

Supplement standard spec 632.3.19.1(2) with the following:

The interval for a care cycle is 10-14 days between May 15 and October 15. There will be 13 required care cycles in a growing season.

Perform a complete and thorough spring clean-out of all planting beds that contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Perform spring clean-out during the first care cycle of the year (between May 15 and June 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. Spring clean-out includes removal of past-season herbaceous material that was left standing over winter, cutting back ornamental grasses to within 3-inches of the mulched surface, removing any material damaged over the winter by pruning according to the language outlined in standard spec 632, removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, weeding, and any and all other clean-out and maintenance operations as directed by the engineer.

Perform a complete and thorough fall clean-out of all planting beds that contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Perform fall clean-out during the last care cycle of the year (between October 1 and October 15). 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. Fall clean-out includes coordination with the engineer and the City of Fitchburg Forestry Department to determine which herbaceous perennial and ornamental grass material to leave standing through the winter and which to cut back to the ground, removing any material damaged during the growing season by pruning according to the language outlined in standard spec 632, removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, weeding, and any and all other clean-out and maintenance operations as directed by the engineer.

Provide supplemental water during the May 15 and October 15 maintenance period as often as necessary to ensure healthy, growing, and established plant material. Coordinate supplemental water directly with the municipality so the plant material is not being overwatered or under-watered. The contractor will remain solely responsible for plant health and watering maintenance.

Apply an additional 1-2 inches of Shredded Hardwood Bark Mulch immediately prior to the end of the establishment period for planting beds containing Shredded Hardwood Bark Mulch. Work and materials are incidental to Landscape Planting Surveillance and Care Cycles bid item.

64. Signs Reflective.

Supplement standard spec 637 as follows:

In urban areas, where signs overhang a pedestrian or bike path area, provide a minimum mounting height of 8 feet to the bottom of the sign. Where secondary signs are used in urban areas, provide a minimum mounting height of 7 feet to the bottom of the secondary sign when pedestrian or parking movements occur adjacent to the sign.

R4-7 Keep Right signs are to be installed in the median island nose areas and shall be located as close as practical to the beginning of the median nose.

One foot lateral offset from the edge of sign to the face of curb will be allowed at locations designated by the engineer.

Supplement standard spec 638.3.4 as follows:

Return signs that are the property of the City of Fitchburg to the City of Fitchburg Maintenance Facility or to a location as specified by the City of Fitchburg. Stockpile, store, and palletize the signs before delivering them to the City of Fitchburg. Contact Mark Hodel, City of Fitchburg Department of Public Works at (608) 444-6322, or mark.hodel@fitchburgwi.gov, at least 3 business days in advance to coordinate the shipment.

65. Removing Signs (type); Removing Small Sign Supports.

Perform this work according to the pertinent requirements of standard spec 638 and as hereinafter provided.

Existing signs removed under bid item Removing Signs (type) and existing sign supports removed under bid item Removing Small Sign Supports, owned by the City of Fitchburg within their local road system and bike path system, become the property of the City of Fitchburg.

Store the disassembled materials, including signs, sign posts, and hardware (brackets, nuts, washers, bolts and other appurtenances) on the right-of-way, outside the limits of construction at a location approved by the engineer. Store the disassembled materials as follows:

- Signs – Banded and neatly stacked on pallets.
- Posts - Banded and neatly stacked on pallets.
- Hardware – In 5-gallon pails or burlap sacks.

Upon completion of the removal and storage of the signing materials, contact Mark Hodel, City of Fitchburg Department of Public Works at (608) 444-6322, or mark.hodel@fitchburgwi.gov, to schedule delivery of the signing materials to the City of Fitchburg storage facility located at 2373 South Fish Hatchery Road.

66. Blue Specific Service Signs.

Add the following to standard spec 638.3.4:

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

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

67. Field Facilities.

Replace standard spec 642.2.1 (4) with the following:

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

Supplement standard spec 642.2.2.1 (2) with the following:

Provide CAT 5 services with a minimum of six CAT 5 receptacles.

Replace standard spec 642.2.2.1 (3) with the following:

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

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

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

Add standard spec 642.2.2.1 (5) as follows:

Provide a field office having an adjacent hard surface parking facility with a minimum capacity of 16 passenger vehicles.

Replace standard spec 642.2.2.4 with the following:

Under bid item Field Office Type D, furnish a facility with a minimum interior space of 1,500 square feet including a meeting room that is at least 20 feet by 20 feet; furnish indoor

sanitary facilities that are housed within, or directly adjacent to, the field office; clean, maintain, and supply the field office and sanitary facilities weekly; and equip with the following:

- Ten suitable office desks with drawers and locks.
- Ten ergonomically correct office chairs in working condition according to standard spec 642.2.2.1 (4).
- Two four-drawer file cabinets.
- Two four-shelf bookcases.
- Four 2.5 x 5 foot (minimum) tables.
- Four 4 x 8 foot (minimum) tables for the meeting room.
- Twenty, or more, folding chairs.

Add standard spec 642.3 (7) as follows:

(7) Locate the field office to be within 1 mile of the Verona Road-Williamsburg Way intersection.

Add standard spec 642.5 (4) as follows:

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

68. Nighttime Work Lighting-Stationary.

A Description

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

B (Vacant)

C Construction

C.1 General

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

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

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

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

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

4. Electrical power source information.

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

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

7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

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

C.3 Light Level and Uniformity

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

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

C.4 Glare Control

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

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

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

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

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

C.5 Continuous Operation
Provide and have available sufficient fuel, spare lamps, generators, and qualified personnel to ensure that the lights will operate continuously during nighttime operation. In the event of any failure of the lighting system, discontinue the operation until the adequate level of illumination is restored. Move and remove lighting as necessary.

D (Vacant)

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

69. Temporary Pedestrian Surface Asphalt, Item 644.1410.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.

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

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 5-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

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

70. 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)

71. 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)

72. Pavement Marking Late Season, Item 646.0900.S.

A Description
This special provision describes providing and maintaining late season pavement marking as specified in standard spec 646.3.1.4.

B Materials
Use any pavement marking material from the department's approved products list.

C Construction
Provide and maintain late season marking conforming to standard spec 646.3.1.

D Measurement
The department will measure Pavement Marking Late Season by the linear foot of 4-inch wide line acceptably completed. The department will not measure work required because of delays that are not the department's responsibility under standard spec 108.10.3.

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0900.S	Pavement Marking Late Season	LF

Payment for Pavement Marking Late Season is full compensation for providing, maintaining, and removing late season temporary marking; and for resealing areas of protective surface treatment on structures as required in standard spec 646.3.1.1. All costs for late season marking required because of delays that are not the department's responsibility under standard spec 108.10.3 are incidental to the contract.
646-010 (20110615)

73. Removing Pavement Markings.

Perform work according to standard spec 646 and 647 except as hereinafter modified:

Use blast cleaning operations to remove pavement markings on the final pavement surface. Do not remove pavement markings on the final pavement surface by grinding or other methods which may damage the final pavement surface.

74. Temporary Pavement Marking.

Supplement standard spec 649.3.1 (1) with the following:

Apply temporary pavement markings that are sharp, well defined, uniformly reflectorized and within a horizontal alignment as shown on the plans or as the engineer directs. Apply temporary pavement markings within 1 inch per 50 feet of a true line or curve. Remove and replace markings with excessive variation, curvature, wiggle, or non-uniform applications, as directed by the engineer, at no cost to the department.

75. Install Conduit Into Existing Item, Item 652.0700.S.

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

B Materials
Use Conduit Rigid Non-metallic at the sizes and number of conduit detailed in the plans, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the requirements of pertinent provisions of the standard specifications.

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

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

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

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

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

652-070 (20100709)

76. General Provision for Traffic Signals.

This general provision applies to the traffic signal at the CTH PD and Fitchrona Road intersection.

Contact Mike Christoph at the City of Madison Traffic Engineering Shop, (608) 266-9031 a minimum of 7 working days in advance to coordinate installation of new signal cabinet equipment. The City of Madison will install, terminate, and wire the department-furnished traffic control cabinet and its contents.

Perform all work on the lighting and conduit/pull box system according to the Wisconsin Electrical Code, and applicable provisions of standard spec 651, and these special provisions and plans.

Provide stainless steel mounting hardware for all components.

Supplement standard spec 651.2 with the following:

(7) The approved products list is located at:
http://www.dot.wisconsin.gov/business/engrserv/docs/ap0/electrical.pdf

77. Anchor Assemblies Light Poles on Structures, Item 657.6005.S.

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

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

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

D Measurement
The department will measure Anchor Assemblies Light Poles on Structures as a unit for each individual anchor bolt assembly, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
657.6005.S	Anchor Assemblies Light Poles on Structures	Each

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

78. Temporary Traffic Signals for Intersections CTH PD and Fitchrona Rd, Item 661.0200.001.

Supplement standard spec 661.2.2 with the following:

(3) Furnish all materials and equipment as required to operate and maintain a fully functioning temporary traffic signal vehicle detection system. The following methods of temporary traffic signal vehicle detection are allowed:

- Video detection
- Microwave detection
- Combination of multiple options listed above

Furnish materials and equipment capable of providing the detection zones and functionality as shown on the plans. Utilize methods providing true presence detection. Detection equipment placement may require additional pole installations which are considered incidental to the temporary traffic signal bid item.

(4) Provide for an emergency vehicle preemption system compatible with the existing traffic signal operation. Contact Mike Christoph at the City of Madison for operational requirements of the emergency vehicle preemption system.

The use of existing emergency vehicle preemption materials in lieu of a contractor furnished system is incidental to this bid item.

(5) Furnish incidental materials required to install and maintain the temporary signal during all stages as shown on the plans. Incidental materials include, but are not limited to:

- Sheeting for obscuring (bagging) unused and/or existing signal heads
- R10-3E signs for all signalized pedestrian crossings. Furnish with arrow direction as appropriate.

(6) Furnish street lighting equipment including arms, luminaires, cable mounting hardware, wiring and incidentals necessary to provide lighting as shown on the temporary traffic signal plans.

Supplement standard spec 661.3.1 with the following:

(4) Provide equipment specifications and other technical documentation to the engineer for approval 30 calendar days prior to furnishing any detection equipment. Include documentation depicting the operational characteristics of the detection method(s) proposed for each intersection.

Install, adjust, relocate, or remove detection equipment and/or detection zones for each stage of traffic operations shown in the plans, or as modified by changes in field conditions, and as directed by the engineer.

Supplement standard spec 661.3.1.1 with the following:

(5) Rock is present at shallow depths in the Fitchrona Road intersection area, including the proposed temporary signal pole locations. Removal of rock material is incidental to this item.

Soil boring data can be obtained from the department. Contact Mark Vesperman at (608) 884-1227.

79. Seismograph, Item 999.1000.S.

A Description
This special provision describes furnishing a seismograph and employing trained operators to continuously monitor building vibration near parcel 62 during rock excavation.

B Material
Use seismographs as specified in ILHR 7.63, and are continuous strip recorders supplied with all the accessories necessary for making seismographic observations.

C Construction
Monitoring procedures shall be as specified in ILHR 7.64 and the following: Take seismograph readings prior to construction activities to establish an ambient index.

Place the seismograph to continuously monitor all construction activities or as directed by the engineer. If construction activities generate ground vibration in excess of the Peak Particle Velocity Limits as shown in ILHR 7.64, stop the construction operation in progress and consider and implement alternate construction methods.

D Measurement
The department will measure Seismograph as a single complete 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
999.1000.S	Seismograph	LS

Payment is full compensation for furnishing and operating a seismograph, an operator, and accessories.
999-005 (20150630)

80. Crack and Damage Survey, Item 999.1500.S.

A Description
This special provision describes conducting a crack and damage survey of the residences and business located at:

Parcel 5 of Plat 1206-07-30	Parcel 22 of Plat 1206-07-25
General Beverage	Saris Cycling Group
6169 McKee Road	5253 Verona Road
Fitchburg WI 53719	Fitchburg, WI 53711

This Crack and Damage Survey shall consist of two parts. The first part, performed prior to construction activities, shall include a visual inspection, photographs, and a written report describing the existing defects in the building(s) being inspected. The second part, performed after the construction activities, shall also include a visual inspection, photographs, and written report describing any change in the building's condition.

B (Vacant)

C Construction
Prior to any construction activities, thoroughly inspect the building structures for existing defects, including interior and exterior walls. Submit a written report of the inspector's name, date of inspection, descriptions and locations of defects, and photographs. The intent of the written report and photographs is to procure a record of the general physical condition of the building's interior and exterior walls and foundation. The report shall be typed on bond paper and be in text form.

The photographs shall be taken by a professional photographer capable of producing sharp, grain free, high-contrast colored pictures with good shadow details. The photographs shall be 3½ inch by 5 inch color prints, glossy, and mounted in protective storage pages with clear slip-in pockets and clear background. Each sheet shall hold four prints. The back of each photograph shall contain the following information:

ID _____
Building Location _____
View looking _____
Date _____
Photographer _____

Prior to the start of any construction activities pertinent to this survey, submit a copy of the written report and photographs to the engineer.

After the construction activities are complete, conduct another survey in the same manner, take photographs, and submit another written report to the engineer.

In lieu of photographs, a professional videographer may be hired to use a video camera capable of producing a video with the clarity required to perform this work.

D Measurement
The department will measure Crack and Damage Survey as single complete unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
999.1500.S	Crack and Damage Survey	LS

Payment is full compensation for providing the before and after written reports, and for photographs or video.
999-010 (20130615)

81. Pond Clay Liner, Item SPV.0035.050.

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, documenting that the clay from the source meets or exceeds the requirements.

Provide a sample of remolded clay for the hydraulic conductivity test with a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test AASHTO T-99 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 AASHTO T-99. Conduct 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 207.3.6.3 for Standard Compaction. Dewater the site as necessary to achieve the minimum subgrade density.

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. The thickness of the low permeable clay shown on the plans should be measured perpendicular to the surface.

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

Compact the low permeable clay to a minimum of 95% Standard Proctor AASHTO T-99 Maximum Dry Density with a footed compaction equipment having feet at least as long as the loose lift height. Disk, or otherwise mechanically process clay prior to compaction to break up clods and allow moisture content adjustment. Reduce clod sizes so they are no greater than 4-inches. Use compaction equipment utilized having 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 a 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, maintain a minimum moisture content 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.

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

Table 1					
Reference	Number	Test Title	Requirements	Testing Frequency	
				Screening	QA/QC[12]
AASHTO[1]	T99-01	Moisture –Density Relationships of Soils Using a 2.5-kg (5.5 lb) Rammer a 305 mm (12-in.) Drop (Standard Proctor)	NA[11]	1/source	NA
AASHTO	T-88-00	Particle Size Analysis of Soils	P200[3] $\geq$ 50%	2/source	1/lift
AASHTO	T-89-02	Determining the Liquid Limit of Soils	LL[4] $\geq$ 22%	2/source	1/lift
AASHTO	T-90-00	Determining the Plastic Limit and Plasticity Index of Soils	PI[5] $\geq$ 12%	2/source	1/lift
AASHTO	T310-03	In-Place Density and Moisture Content of Soils and Soil-Aggregates by nuclear Methods (Shallow Depth)	DD[6] $\geq$ 95% of the MDD[7]	NA	100'x100' Grid/lift
ASTM[2]	D5084-03	Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	K[8] $\leq$ 1 x 10^{-7} cm/sec	1/source[9]	1/site[10]

Notes:
1. AASHTO = American Association of State Highway and Transportation Officials
2. ASTM = American Society of Testing and Materials
3. P200 = Percent by weight passing the #200 sieve (%)
4. LL = Liquid Limit (%)
5. PI = Plasticity Index (%)
6. DD = Dry Density (pcf)
7. MDD = Maximum Dry Density (pcf) as determined by the Standard Proctor Test
8. K = Hydraulic Conductivity (cm/sec)
9. 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.
10. An undisturbed sample from a thinned walled sampler (Shelby tube)
11. NA = Not applicable.
12. QA/QC = Quality Assurance / Quality Control

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 100-foot x 100-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 Pond 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
SPV.0035.050	Pond Clay Liner	CY

Payment is full compensation for dewatering the site where the low permeable clay is to be placed; testing and sampling; furnishing and placing the low permeable clay; and for performing all tests.

82. Planting Mixture, Item SPV.0035.500.

A Description

This special provision describes furnishing and installing Planting Mixture at the locations shown on the plans and according to the applicable sections of standard spec 632, as shown in the plans, and as hereinafter provided.

B Materials

B.1 Planting Mixture

Provide Planting Mixture consisting of the following blend by volume:

- 2 parts topsoil conforming to standard spec 625.
- 1 part sand conforming to the gradation in standard spec 209.2.2.
- 1 part compost. Provide compost that is either well-rotted shredded leaf mulch, free of disease; or well-rotted, unleached, stable or cattle manure containing no more than 25 percent by volume of straw, sawdust, or other bedding materials and free of toxic substances. Provide compost free of stones, sticks, soil, weed seeds, debris, and other material harmful to plant growth.
- 1 part peat moss conforming to standard spec 632.

C Construction

C.1 Coordination

Deliver Planting Mixture to project site and install within seven days of delivery. Coordinate and schedule the delivery and installation of the Planting Mixture with the delivery and installation of all landscape plant materials.

C.2 Planting Mixture Preparation and Placement
Provide a list of all materials used in Planting Mixture including manufacturers or suppliers (source) and quantities to the engineer.

Remove construction materials, stone, or other debris larger than 2" in length or diameter, debris, slag piles and trash from areas receiving Planting Mixture.

Till or disc subgrades to loosen and de-compact. Obtain the engineer's approval of subgrade preparation including depth excavated, removal of trash materials, and loosening of subgrades before placing any Planting Mixture.

Provide Planting Mixture over entire planting bed area and fine grade to match grades as indicated on plans or to adjacent back of curb or other hardscape surface as indicated on plans, accounting for settling. Place Planting Mixture in 6-inch to 8-inch lifts, watering or tamping to reduce settling potential.

D Measurement
The department will measure Planting Mixture in volume by the cubic yard, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.500	Planting Mixture	CY

Payment is full compensation for excavating, site preparation, and disposing of surplus materials.

83. Topsoil Special, Item SPV.0035.501.

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

B Materials
Furnish topsoil materials according to standard spec 625.

Provide Topsoil Special with a pH range of 6.0 to 7.0.

C Construction
Excavate materials as the plans show or the engineer allows from the tree planting areas according to standard spec 205. Dispose of surplus or unsuitable 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.

Take care not to damage or disturb adjacent landscape materials and be responsible for seeding, sodding or placing Shredded Hardwood Bark Mulch to repair any and all damage caused to adjacent landscape materials with like materials.

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

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.501	Topsoil Special	CY

Payment is full compensation for furnishing all materials; for excavating and disposing of tree planting area materials. Repairs to damaged areas shall be at the contractor's expense.

84. Abandon Existing Sanitary Sewer – Slurry, Item SPV.0035.600.

A Description
This work consists of abandoning sanitary sewer pipe with slurry as shown in the plans and hereinafter provided.

B Materials
Provide slurry conforming to Type A Slurry Mix as specified in Article 301.9 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

C Construction
Provide replacement sanitary sewers and laterals or appropriate bypass pumping prior to abandoning sanitary sewer pipe. These items are not included in this bid item.

Sawcut and remove the ends of the sanitary sewer pipe to be abandoned as necessary to complete the abandonment. The sawcut and removal is incidental to this bid item.

Maintain service in all existing sewers until the replacement sewers or appropriate bypasses, approved by the engineer, have been installed, at which time bulkheads or plugs may be placed.

Plug the downstream end of the sanitary sewer pipe to be abandoned. Fill the entire pipe with concrete slurry. Provide vent holes, as directed by the City of Fitchburg, to verify the slurried pipe is free of air voids.

D Measurement
The department will measure Abandon Existing Sanitary Sewer - Slurry by the cubic yard of abandon existing sanitary sewer pipe - slurry, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.600	Abandon Existing Sanitary Sewer - Slurry	CY

Payment is full compensation for sawing and removing sanitary sewer pipe; for maintaining service; for furnishing all bulkheads and plugs; for furnishing all slurry; for providing any vent holes and cleanup. Replacement sanitary sewer pipe and laterals or appropriate bypass pumping are not included in this bid item.

85. Roadway Embankment, Item SPV.0035.700.

Conform to standard spec 207 modified by this special provision.

A Description

Replace standard spec 207.1(1) with the following:

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

B Materials

Conform to standard spec 207.2.

C Construction

Conform to standard spec 207.3.

D Measurement

Replace standard spec 207.4(1) with the following:

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

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

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

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

E Payment
Replace standard spec 207.5(1) with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.700	Roadway Embankment	CY

The work includes forming, compacting, shaping, sloping, trimming, finishing, maintaining the embankments, and all other incidental work required under this section.

ASP-5 will be applied to this item. The fuel usage factor for this item is 0.23.

86. Excavation Special, Item SPV.0035.701.

A Description
Perform this work according to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

This work includes excavation, segregating, temporarily stockpiling (as required), loading, hauling, and reuse within the project or disposing of excavated materials containing low concentrations of petroleum contained in the soil and/or low concentration of metal and poly aromatic hydrocarbon fill materials, the reuse location that is approved by the department and the Wisconsin Department of Natural Resources (WDNR).

A.2 Notice to the Contractor – Contaminated Soil and Groundwater Locations
The department completed testing for soil and groundwater contamination for locations within this project where excavation is required.

Petroleum-contaminated soil and groundwater (if dewatering is necessary) is potentially present at the following locations:

1. (Site 8) Station 108+50 EB to 110+50 EB, from 25 right of the reference line to construction limits right near PDQ, from 3.5 feet to 5.5 feet below ground surface.
2. (Site 25) Station 111+50 EB to 114+25 EB from 25 feet right of the reference line to construction limits right, from 5 feet to 10 feet below ground surface.
3. (Site 96) Station 107+00 EB to 108+00 EB, from 50 feet left of the reference line to construction limits, from ground surface to 2 feet below ground surface. Station 106+50 EB to 107+25 EB, from 25 feet right of the reference line to construction limits right, from ground surface to 2 feet below ground surface. Construction activity where proposed storm sewer intersects the Cannonball

Trail for the Detention Basin D inlet structure installations, from below paved path to 2 feet below ground surface.

Contaminated soils and/or groundwater and/or underground storage tanks (USTs) may be encountered at other locations within the construction limits. If contaminated soils and/or groundwater and/or USTs are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer and the environmental consultant. Contaminated soil and/or groundwater at other locations shall be managed by the contractor under this contract. USTs will be removed by others.

For further information regarding previous investigation and remediation activities at these sites contact:

Name:	Daniel Haak
Address:	TRC Environmental Corporation 708 Heartland Trail, Suite 3000, Madison, WI 53717
Phone:	(608) 826-3628
Fax:	(608) 826-3941
e-mail:	dhaak@trcsolutions.com

A.3 Coordination

Coordinate work under this Contract with the environmental consultant retained by the department:

Consultant:	TRC Environmental Corporation
Contact:	Mr. Dan Haak
Address:	708 Heartland Trail, Suite 3000, Madison, WI 53717
Phone:	(608) 826-3628
Fax:	(608) 826-3941
e-mail:	dhaak@trcsolutions.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Identifying contaminated soils to be segregated for reuse along the project corridor or hauled to the bioremediation facility;
3. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of contaminated soil from the bioremediation facility if soil is found to not be suitable for reuse.
5. Coordinating abandonment or protection of groundwater monitoring wells along the project corridor.

6. Identifying contaminated groundwater to be pumped for treatment and disposal (if dewatering is necessary). Coordinating groundwater characterization and approval for disposal of contaminated water.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in each of the contaminated areas.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated areas. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed. Do not transport contaminated soil or pump contaminated groundwater offsite without prior approval from the environmental consultant.

A.4 Protection of Groundwater Monitoring Wells

Groundwater monitoring wells may be present within the construction limits. Protect all groundwater monitoring wells to maintain their integrity. If required by the environmental consultant, notify the environmental consultant if groundwater monitoring wells are encountered. Adjust well that do not conflict with utilities, structures, curb and gutter, etc. to be flush with the final grade. For wells that conflict with the previously mentioned items, notify the environmental consultant, and coordinate with the environmental consultant, or for wells that require abandonment, the abonnement or adjustment of the wells by others.

Coordinate with the environmental consultant to ensure that the environmental consultant is present to abandon and/or document the location of the groundwater monitoring well during excavation activities.

A.5 Excavation Management Plan Approval

The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR's concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding the investigations, including waste characterization within the project limits, contact Jennifer Grimes with the department, at (608) 884-1147.

A.6 Health and Safety Requirements

Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with elevated levels of metals, gasoline diesel fuel, fuel oil, or other petroleum related products. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for

Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction

Supplement standard spec 205.3 with the following:

The environmental consultant will periodically examine excavated soil during excavations in the areas of known petroleum or soil contamination within the construction limits.

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated and to ensure that excavations do not extend beyond the minimum required to construct utilities and highway improvements unless expressly directed to do so by the engineer.

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite disposal at a DNR approved landfill or can be beneficially re-used on-site under highway pavements, behind retaining walls, or in back-slopes with at a minimum 6-inch thick clean soil cover. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

On the basis of the results of such field-screening, the material will be designated for disposal as follows:

- Excavation Common consisting of clean soil and/or clean construction and demolition fill (such as clean soil, boulders, concrete, reinforced concrete, bituminous pavement, bricks, building stone, and unpainted or untreated wood), which under NR 500.08 are exempt materials, or
- Low-level contaminated material for reuse as fill within the construction limits, or
- Contaminated soil for off-site treatment and disposal at the WDNR-licensed landfill, or
- Potentially contaminated for temporary stockpiling and additional characterization prior to disposal.

Some material may require additional characterization prior to disposal. Provide for the temporary stockpiling of up to 200 cubic yards of contaminated soil on-site that require additional characterization. Construct and maintain a temporary stockpile of the material

according to NR 718.05(3), including, but not limited to, placement of the contaminated soil/fill material on an impervious surface and covering the stockpile with impervious material to prevent infiltration of precipitation. The department's environmental consultant will collect representative samples of the stockpiled material, laboratory-analyze the samples, and advise the contractor, within 10 business days of the construction of the stockpile, of disposal requirements. The stockpiled material shall be disposed either at the WDNR-licensed disposal facility by the contractor or, if characterized as hazardous waste, by the department. As an alternative to temporarily stockpiling contaminated soil/fill material that requires additional characterization, the contractor has the option of suspending excavation in those areas where such soil is encountered until such time as characterization is completed.

When material is encountered outside the above-identified limits of known contamination that appears to have been impacted with petroleum or chemical products, or when other obvious potentially contaminated materials are encountered or material exhibits characteristics of industrial-type wastes, such as fly ash, foundry sand, and cinders, or when underground storage tanks are encountered, suspend excavation in that area and notify the engineer and the environmental consultant.

Groundwater may be present within the construction limits. Water generated during dewatering operations (if necessary) is expected to be permitted to discharge to the surface except in the contaminated areas. If dewatering of perched groundwater or stormwater is required, allow stormwater to settle for 24 hours after a rain event, after which the water shall be managed as uncontaminated dewatering, unless the environmental consultant has evidence that the water will require treatment and/or off-site disposal.

Contaminated groundwater generated from dewatering activities within the contaminated areas may exceed the surface water discharge limits for petroleum compounds specified in the DNR's "General Permit to Discharge under the Wisconsin Pollutant Discharge Elimination System" for "Contaminated Groundwater from Remedial Action Operations" (WPDES Permit No. WI-0046566-5), Table 3.1.

Pump contaminated water that exceeds surface water discharge limits, as determined by environmental consultant, into temporary holding tanks provided by others or an alternative discharge point as determined by the environmental consultant, as necessary to complete construction. Allow contaminated water encountered, but not requiring removal as a standard course of construction, to remain in-place and do not manage according to this special provision.

The environmental consultant will coordinate approval of contaminated water hauling and disposal. Only pump contaminated groundwater if the environmental consultant is on-site.

Discharging contaminated groundwater to any location other than that approved and provided by the environmental consultant, is at the contractor's cost. If the contractor chooses alternate discharge, at the contractor's cost, obtain DNR concurrence on any

dewatering plans, and provide and operate any and all treatment and discharge equipment required.

Employ construction methods and techniques in a manner that will minimize the need for dewatering, and if dewatering is required, minimize the volume of water generated. Take measures to limit groundwater, surface water, and precipitation from entering and exiting excavations in the areas of contamination. Such measures, which may include berming, ditching, or other means, shall be maintained until construction of utilities in the areas of contamination are complete.

Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities. Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statues, judiciary decisions, and regulations of the State of Wisconsin.

D Measurement

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

Volume will be computed using the method of average end areas and as specified in standard spec 205.4.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.701	Excavation Special	CY

Payment is full compensation for excavating, segregating, hauling, temporary stockpiling (as required), and reuse; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; and for dewatering of soils prior to transport, if necessary.

87. Portable Changeable Message Sign (PCMS) Cellular Communications, SPV.0045.700.

A Description

This special provision describes cellular communications requirements for use with PCMS. Cellular communication allows the department to control PCMS during incidents or other emergencies through Trans Suite software. The department will notify contractor of message changes.

B Materials
Provide a cellular modem and antenna that enables the department to communicate and control PCMS conforming to standard spec 643.2.7.

B.1 Cellular Modem and Antenna
Furnish an EV-DO Cellular modem registered to a 3G or 4G Cellular carrier. The cellular modem must include 1 or more external antennas, 1 or more 10/100 Ethernet ports, and 1 or more db9 Serial RS-232 interfaces. The device must be able to handle -30° C to +75° C and powered by a 12VDC power supply. The cellular modem must have a built-in secure router with NAT, port forwarding and IP pass-through capabilities.

Provide management IP and passwords for the cellular modem to the department.

Access includes IP address, serial port setting, and password(s). Antenna cable shall be continuous without splices. Mount the antenna at the highest practical location on the PCMS.

C Construction
Conform to standard spec 643.3.7. Install cellular modem in a lockable, weatherproof compartment in the PCMS trailer.

A minimum of 14 days prior to deployment, demonstrate to the department that the cellular modem is capable of communications with Trans Suite software.

If remote communications are interrupted or temporarily unavailable, contractor will be notified by the department to change the message.

D Measurement
The department will measure Portable Changeable Message Sign (PCMS) Cellular Communications by the day acceptably completed, measured as the number of calendar days each cellular modem for PCMS is available for exclusive use under the contract. The department will deduct one day for each calendar day the sign communications are required but out of service for more than 2 hours.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.700	Portable Changeable Message Sign (PCMS) Cellular Communications	DAY

Payment is full compensation for providing, operating and maintaining a cellular modem and antenna, and for making message changes if cellular communications are interrupted or temporarily unavailable.

88. Utility Line Opening (ULO), Item SPV.0060.001.

A Description
This work consists of excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown on the plans or as directed by the engineer.

B (Vacant)

C Construction
Perform the excavation in such a manner that the utility in question is not damaged.

Perform the utility line openings as soon as possible and at least 10 days in advance of proposed utility construction to allow any conflicts to be resolved with minimal disruption. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening will be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Provide utility line openings with a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

Notify the utility engineers or their agents of this work a minimum of three working days prior to the work so they may be present when the work is completed. Do not perform utility line openings without the approval of the engineer.

D Measurement
The department will measure Utility Line Opening (ULO) as each individual ULO, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.001	Utility Line Opening (ULO)	Each

Payment is full compensation for the excavation required to expose the utility line, backfilling with existing material removed from the excavation, compacting the backfill material, restoring the site, and for cleanup.

Existing asphaltic pavement removal necessary to facilitate utility line openings will be considered part of or paid for under Utility Line Openings. Replacement pavement, concrete curb, gutter, and sidewalk items will be considered separate from Utility Line Openings and will be measured and paid for separately.

89. Concrete Flume, Item SPV.0060.002.

A Description
Perform work according to the applicable provisions of standard spec 601, as detailed in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Flume as each individual concrete flume, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.002	Concrete Flume	Each

Payment is full compensation for furnishing all foundation excavation and preparation; for providing all materials, including concrete and expansion joints; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site.

90. Posts Round Tubular Steel 2 3/8-Inch x 8-FT, Item SPV.0060.003; 10-FT, Item SPV.0060.004; 12-FT, Item SPV.0060.005.

A Description
Perform work according to the applicable provisions of standard spec 634, as shown in the plans, and as hereinafter provided.

B Materials
Provide sign posts conforming to the standard specification for hot rolled carbon sheet steel, commercial quality, ASTM A-570-GR-33 for zinc coating tubing to resist corrosion. Provide a 2 3/8-inch, schedule-40 sign post at the length shown on the plans, compatible with the V-Loc Base, and a water tight end cap on the top end.

C Construction
Install sign posts at the locations shown on the plans and approved by the engineer. If the finished grade cannot be determined, ask the engineer to identify the finished grade. Install all signs in a true vertical position conforming to the latest edition of the Manual on Uniform Traffic Control Devices. Band signs to the sign posts according to the details in the plans. Also, locate all underground utilities prior to placing sign posts. Cut off excess sign post length in the field to provide the desired sign clearance.

D Measurement
The department will measure Posts Round Tubular Steel 2 3/8-Inch x (Size) as each individual posts round tubular steel 2 3/8-inch, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.003	Posts Round Tubular Steel 2 3/8-Inch x 8-FT	Each
SPV.0060.004	Posts Round Tubular Steel 2 3/8-Inch x 10-FT	Each
SPV.0060.005	Posts Round Tubular Steel 2 3/8-Inch x 12-FT	Each

Payment is full compensation for providing, hauling, and installing the posts; treating cut post ends; providing and installing a water tight top end cap; and providing hardware and anchors.

91. V-Loc Base, Item SPV.0060.006.

A Description
This special provision describes furnishing and installing V-Loc sign post bases at locations shown on the plans and as hereinafter provided.

B Materials
Provide V-Loc Post Anchor for Round 2 3/8-inch Posts as manufactured by Tapco, Tapco SKU: 034-00122.

C Construction
Install bases according to manufacturer's specifications at locations shown on the plans.

Remove and dispose of all excess excavation, surplus material and debris resulting from operations and installation and satisfactorily repair and restore other work damaged.

D Measurement
The department will measure V-Loc Base as each individual V-Loc base, 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.0060.006	V-Loc Base	Each

Payment is full compensation for furnishing all materials; for hauling, handling and installing the sign post base, for excavating, removing surplus and debris, for backfilling and restoring the work site.

92. Asphaltic Median Sloped Nose, Item SPV.0060.007.

A Description
This special provision describes constructing an asphaltic median sloped nose in one course on a prepared foundation according to the applicable provisions of standard spec 465 and 620 and as detailed in the plans.

B Materials
Provide asphaltic median sloped nose materials according to the applicable sections of standard spec 465.

C Construction
Construct asphaltic median sloped nose according to the applicable sections of standard spec 620 and as detailed in the plans.

D Measurement
The department will measure Asphaltic Median Sloped Nose as each individual asphaltic median sloped nose, 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.0060.007	Asphaltic Median Sloped Nose	Each

Payment is full compensation for preparing the foundation; for providing all materials, including asphalt; for hauling, placing, consolidating, shaping, finishing, curing, and protecting the asphalt; and for disposing of surplus material and restoring the work site.

93. Covering Signs, Item SPV.0060.008.

A Description
This special provision describes covering traffic control signs at locations shown on the plans.

Perform the work according to the applicable provisions of standard spec 643.

B Materials
Furnish sheet aluminum sign covers and other materials according to standard spec. 643.2.9.5.

C Construction
Cover signs according to standard spec. 643.3.8.2. The sign cover will remain upon completion of the contract.

D Measurement
The department will measure Covering Signs as each individual covering signs, 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.0060.008	Covering Signs	Each

Payment is full compensation for providing full or partial sign covers, as specified in the plans or directed by the engineer; and for repairing and replacing damaged signs.

94. Department Owned Crash Cushion Temporary, Item SPV.0060.009.

A Description

This special provision describes loading, transporting, delivering, installing, and maintaining department owned crash cushion temporary according to standard spec 614 and as hereinafter provided.

Department owned crash cushion temporary will remain the property of the department upon completion of the contract.

B Materials

Furnish any installation or replacement materials for the department owned crash cushion temporary according to the crash cushion manufacturer's specifications and with the pertinent requirements of standard spec 614.2.

Department owned crash cushion temporary consist of the following:

1. One crash cushion with 6 bays (3 QuadGuard II cartridges, 3 QuadGuard I cartridges and a QuadGuard I nose cartridge)
2. Three crash cushions with 5 bays (3 QuadGuard II cartridges, 2 QuadGuard I cartridges and a QuadGuard I nose cartridge)
3. Three crash cushions with 2 bays (2 Hex-Foam II cartridges and a Hex-Foam II nose cartridge)

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C Construction

Load, transport, and deliver department owned crash cushion temporary to the project from a stored location within 5 miles of the project.

Install and maintain department owned crash cushion temporary according to the pertinent requirements of standard spec 614.3.4.

D Measurement

The department will measure Department Owned Crash Cushion Temporary as each individual department owned crash cushion temporary, 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.0060.009	Department Owned Crash Cushion Temporary	Each

Payment is full compensation for loading, transporting, delivering and installing; for providing foundation pads, transitions, and backup blocks; and for maintenance including furnishing and installation of any replacement parts and reassembly.

95. Concrete Bases Type 10 Special, Item SPV.0060.010.

A Description

Perform work according to the applicable provisions of standard spec 654, as detailed in the plans, and as hereinafter provided.

A.1 Qualifications of the Contractor

Assign a supervisor who has at least five years of drilled shaft experience including shafts drilled through rock. Consultants or manufacturer's representatives cannot be used to meet the experience requirement. Operators, and crew chiefs must have a minimum of three years of experience installing drilled shafts with the contractor's organization.

Upon request by the engineer, submit a list outlining experience on at least five projects with successfully completed drilled shaft construction, including one project completed within the last three years. The project experience documentation for each project must include a brief project description; the size of the drilled shafts, construction methods used during installation, soil conditions, actual construction time and contact information consisting of an individual's name and current phone number. Contacts must be capable of verifying the project information.

B Materials

Furnish materials according to standard spec 654.2, as detailed in the plans, and as hereinafter provided.

Provide equipment used for excavation, drilling, and cleaning operations having adequate capacity including power, torque, and down thrust to excavate a hole to a depth equal to the depth of the drilled shafts shown in the plans plus five feet. Anticipate and make available at the job site all equipment necessary and essential to penetrate a range of soft to consolidated type soils, as well as obstructions, during the construction of the drilled shafts.

When consolidated soils, or other material encountered, cannot be drilled using conventional earth augers with soil or rock teeth, drilling buckets, and/or over reaming tools, provide drilling equipment including, but not limited to, rock core barrels, rock tools, air tools, or any other equipment necessary to construct the drilled shaft excavation to the depth and size as shown on the plans and indicated herein.

Provide casing as necessary according to standard spec 636.3.3.

C Construction

Construct drilled shafts according to standard spec 654.3(1) and as detailed in the plans.

D Measurement
The department will measure Concrete Bases Type 10 Special by each individual concrete bases type 10 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.0060.010	Concrete Bases Type 10 Special	Each

Payment is full compensation for providing, placing and curing concrete; for embedded conduit, ground rod, and electrical components; for installing department furnished anchor rods, nuts, and washers; for bar steel reinforcement; for providing and removing casing if applicable; and for excavating and drilling through earth, including consolidated materials; backfilling and disposing of surplus materials.

96. Manholes 9-FT Diameter, Item SPV.0060.050.

A Description
Perform work according to the applicable provisions of standard spec 611 and as detailed in the plans.

B Materials
Furnish materials conforming to standard spec 611 and plan details.

C Construction
Provide shop drawings for the details of the reinforcing to the engineer.

Do not place reinforcing until engineer has reviewed the reinforcing shop drawing.

Construct according to standard spec 611 and plan details.

Maintain existing drainage patterns and provide necessary materials necessary for temporary connections to existing storm sewer.

All necessary temporary shoring needed for construction of this item will not be paid for separately but will be included in this item of work.

D Measurement
The department will measure Manholes 9-FT Diameter as each individual manhole, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.050	Manholes 9-FT Diameter	Each

Payment is full compensation for providing all materials, including all masonry, conduit and sewer connections, and other fittings; for performing the work; for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring to work site, and all incidentals necessary to complete the contract work except that the department will pay for covers, including frames, grates and lids separately.

97. Manhole EB607, Item SPV.0060.051; EB8001, Item SPV.0060.052; EB830, Item SPV.0060.053; F4400, Item SPV.0060.054; NR750, Item SPV.0060.055.

A Description

This special provision describes providing storm sewer manholes and junction chambers.

B Materials

Furnish materials conforming to standard spec 611 and plan details.

C Construction

Provide shop drawings for the details of the reinforcing steel to the engineer.

Do not place reinforcing until engineer has reviewed the reinforcing shop drawing.

Construct according to standard spec 611 and plan details.

Maintain existing drainage patterns, provide any dewatering and provide materials necessary for temporary connections to existing storm sewer.

Provide all temporary shoring needed for construction of this item. Temporary shoring will be paid for separately.

D Measurement

The department will measure Manhole (type) as each individual manhole, 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.0060.051	Manhole EB607	Each
SPV.0060.052	Manhole EB8001	Each
SPV.0060.053	Manhole EB830	Each
SPV.0060.054	Manhole F4400	Each
SPV.0060.055	Manhole NR750	Each

Payment is full compensation for providing all materials, including all concrete masonry, steel reinforcing, temporary sewer connections, and other fittings; for furnishing all excavating, dewatering, and maintaining drainage during the work; for backfilling, disposing of surplus material, and for cleaning out and restoring the work site, and all incidentals necessary to complete the contract work except that the department will pay for covers, including frames, grates and lids, and temporary shoring separately.

98. Inlet WW1478, Item SPV.0060.056.

A Description

This special provision describes providing a stormwater pond control structure.

B Materials

Furnish materials conforming to standard spec 611 and plan details.

C Construction

Provide shop drawings for the details of the reinforcing steel to the engineer.

Do not place reinforcing until engineer has reviewed the reinforcing shop drawing.
Construct according to standard spec 611 and plan details.

Maintain existing drainage patterns, provide any dewatering and provide materials necessary for temporary connections to existing storm sewer.

Provide all temporary shoring needed for construction of this item. Temporary shoring will be paid for separately.

D Measurement

The department will measure Inlet WW1478 as each individual Inlet WW1478, 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.0060.056	Inlet WW1478	Each

Payment is full compensation for providing all materials, including all concrete masonry, reinforcing steel, conduit and sewer connections, and other fittings; for furnishing all excavating, dewatering, and maintaining drainage during the work; for backfilling, disposing of surplus material, and for cleaning out and restoring the work site, and all incidentals necessary to complete the contract work except that the department will pay for the pyramidal inlet grate and temporary shoring separately.

99. Inlet Covers 2X3-FT, Item SPV.0060.057.

A Description

Perform work according to the applicable provisions of standard spec 611 and as detailed in the plans.

B Materials

Furnish inlet covers according to the pertinent requirements of standard spec 611. Provide open grates for drainage for a 2 foot by 3 foot opening in an inlet or manhole, traversable by vehicle and bicycle traffic, and rated for traffic loading.

C Construction

Install, adjust and secure inlet covers to the inlet or inlet frame.

Provide a detailed plan, stamped by a licensed professional engineer in the State of Wisconsin, indicating the methods and materials required to secure the inlet covers and grates to the inlet frames for traffic loading.

D Measurement

The department will measure Inlet Covers 2X3-FT as each individual inlet covers 2X3-FT, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.057	Inlet Covers 2X3-FT	Each

Payment is full compensation for furnishing inlet covers, including frames, grates or lids; for a detailed plan, stamped by a licensed professional engineer in the State of Wisconsin; and for providing all required materials and for installing, adjusting and securing each inlet cover.

100. Pyramidal Inlet Grate 6X6, Item SPV.0060.058; 6X12, Item SPV.0060.059.

A Description

This special provision describes furnishing and installing pyramidal inlet grates at locations as detailed in the plans and as hereinafter provided.

B Materials

Fabricate pyramidal inlet grates from schedule 40 steel pipe. Provide ASTM A36 steel clip angles as shown on plans.

Provide Type 304 stainless steel adhesive anchors according to standard spec 502.2.12.

Provide fully welded construction of pyramidal inlet grate assembly according to the American Welding Society Code for procedures, appearance, and quality of welds.

Hot dip galvanize pyramidal inlet grate assembly after fabrication according to ASTM Specification A123.

C Construction
Submit a manufacturer's certification of compliance to engineer, for all metal fabrications, and provide shop drawings for the pyramidal inlet grate assembly prior to fabrication.

Protect materials from damage to the galvanized coating during transportation, storage, and erection.

Repair pipes and angles on which the galvanized coating has been damaged according to standard spec 641.3.3 (7).

D Measurement
The department will measure Pyramidal Inlet Grate (size) as each individual pyramidal inlet grate, 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.0060.058	Pyramidal Inlet Grate 6X6	Each
SPV.0060.059	Pyramidal Inlet Grate 6X12	Each

Payment is full compensation for providing certification and shop drawings; for furnishing and fabricating; for furnishing adhesive anchors and installing; and for protection and repairs.

101. Infiltration Basin Spillway, Item SPV.0060.060.

A Description
Perform work according to the applicable provisions of standard spec 504 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Infiltration Basin Spillway as each individual infiltration basin spillway, 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.0060.060	Infiltration Basin Spillway	Each

Payment is full compensation for providing all materials, including all concrete and steel reinforcement; for furnishing all excavating and dewatering, for maintaining drainage during the work, for backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

102. Storm Sewer Check Valve 12-Inch, Item SPV.0060.061.

A Description
This special provision describes furnishing and installing 12-inch inline check valves as shown on the plans, according to standard spec 611, and as hereinafter provided.

B Materials
Furnish Tideflex Technologies CheckMate Inline Check Valve capable of connecting to Storm Sewer Pipe Reinforced Concrete Class IV, 12-Inch and all necessary hardware and materials to install the inline check valve.

C Construction
Furnish and install the check valve according to the manufacturer's recommendations at locations shown in the plans.

Install the check valve in the downstream end of the storm sewer pipe.

Maintain drainage and provide dewatering as necessary during the work.

D Manufacturer
The department will measure Storm Sewer Check Valve 12-Inch as each individual check valve, 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.0060.061	Storm Sewer Check Valve 12-Inch	Each

Payment is full compensation for furnishing and installing the check valve; for providing all necessary hardware, fittings, and connections; for furnishing all excavation, for dewatering, for maintaining drainage during the work, for backfilling, and disposing of surplus material.

103. Apron Endwalls for Culvert Pipe Reinforced Concrete 78-Inch, Item SPV.0060.062.

A Description
Perform work according to the applicable provisions of standard spec 522 and Standard Detail Drawing for Apron Endwalls for Culvert Pipe.

B Materials
Provide reinforced concrete apron endwalls compatible with a 78-inch reinforced concrete pipe.

C Construction
Maintain drainage and provide any dewatering necessary during the work.

D Measurement
The department will measure Apron Endwalls for Culvert Pipe Reinforced Concrete 78-Inch as each individual apron endwalls for culvert pipe reinforced concrete 78-inch, 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.0060.062	Apron Endwalls for Culvert Pipe Reinforced Concrete 78-Inch	Each

Payment is full compensation for providing, transporting, and installing the apron endwalls; for furnishing all excavating, including forming bed; for maintaining drainage and dewatering during the work; and for backfilling.

104. Concrete Cutoff Wall, Item SPV.0060.063.

A Description
Perform work according to the applicable provisions of standard spec 504 and as detailed in the plans.

B Materials
Provide concrete according to the applicable provisions of standard spec 504 and as detailed in the plans. Provide high strength galvanized steel adhesive anchors and washers according to the applicable provisions standard spec 502.2.12 and as detailed in the plans.

C Construction
Drill bolt holes in the locations shown on the plans after the concrete in the concrete cutoff wall is cured and use adhesive anchors to secure the endwall to the cutoff wall. Maintain existing drainage and provide any dewatering necessary for the work.

D Measurement
The department will measure Concrete Cutoff Wall as each individual concrete cutoff wall, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.063	Concrete Cutoff Wall	Each

Payment is full compensation for furnishing all excavation and preparation; for providing all equipment and materials, including concrete, reinforcing steel, and adhesive anchors; for placing, finishing, protecting, and curing; for maintaining drainage and dewatering; for disposing of surplus excavation material; and for restoring the work site.

105. Covering and Locating Storm Sewer, Item SPV.0060.064.

A Description
This special provision describes how various sized storm sewer pipe stubs and buried manhole castings will be covered to prevent sediment from infiltrating into the storm sewer system and then located. The locations of covering and locating storm sewer are shown on the plans. Perform locating work according to the applicable provisions of standard spec 650 of the standard spec.

B Materials
Furnish storm sewer stub covers made of a polyethylene film and plywood. Provide a polyethylene film meeting the following requirements:

Property Requirements	**Value**	**Test Method**
Tensile Strength, min.	40 lbf	ASTM D7003
Grab tensile strength, min.	50 lbf	ASTM D7004
Elongation at Breat, min.	400%	ASTM D7003
Hydrostatic Resistance	32 psi	ASTM D751
Permeability	0.058 g/100in ^{2}/day	ASTM E96 Pro. B

Provide plywood with a minimum thickness of 3/4-inch at storm sewer pipe stub locations.

C Construction
Completely cover the storm sewer openings with one continuous piece of polyethylene film. Cover a minimum of 1 foot of the stub length or 1 foot of the structure height with the polyethylene film and secure the polyethylene film to the storm sewer pipe stub or storm sewer structure.

Place a sheet of plywood to cover the opening of the storm sewer stub. Provide one continuous sheet and extend the plywood sheet a minimum of 2 inches beyond the outside diameter of the pipe on all sides. Place the plywood tight to the fabric or polyethylene and the storm sewer stub and secure the plywood as necessary to prevent movement or separation from the pipe while backfilling the trench.

Place the manhole casting to cover the opening of the storm sewer structure.

After construction of a storm sewer pipe stub or a storm sewer manhole, that is to be covered, is completed locate the stub or the manhole casting to within 0.02 feet horizontally (providing project utilized coordinates) and the top of the stub to within 0.02 feet vertically (utilizing the project vertical datum).

Provide a copy of the horizontal and vertical location of the top of storm sewer stub or storm sewer casting to the engineer that references the structure number the stub is connected to and the structure number of the structure the stub will be connected to in the future or the storm sewer structure itself. Provide a paper and electronic copy of the information in a table format acceptable to the engineer.

D Measurement

The department will measure Covering and Locating Storm Sewer as each individual covering and locating storm sewer, 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.0060.064	Covering and Locating Storm Sewer	Each

Payment is full compensation for furnishing all specified materials; for delivering, assembling; and for locating, preparing and delivering the horizontal and vertical locations of the top of the storm sewer.

106. Storm Sewer Tap, Item SPV.0060.065.

A Description

This special provision describes tapping various sized storm sewer pipes into existing structures, including manholes or inlets, or other pipes at locations shown on the plans.

Perform the work according to the applicable provisions of standard spec 607 and standard spec 611, and as hereinafter provided.

B (Vacant)

C Construction
Tap into the existing structure to allow the pipe to be flush with the interior wall of the existing pipe or structure.

All necessary temporary shoring needed for construction of this item will not be paid for separately but will be included in this item of work.

D Measurement
The department will measure Storm Sewer Tap as each individual storm sewer tap, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.065	Storm Sewer Tap	Each

Payment is full compensation for providing all materials, including saw cuts, for excavating; for removing concrete; for providing and removing sheeting and shoring, making connections to new or existing facilities, and for cleaning out.

107. Clay Anti-Seepage Collar, Item SPV.0060.066.

A Description
This special provision describes furnishing and installing low permeable clay around reinforced concrete storm sewer pipe at the locations shown on the plans.

B Material
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. Submit the test results to the engineer for review, two weeks prior to construction.

Table 1						
				Testing Frequency		
					QA/QC[3]	
Reference	Number	Test Title	Requirements	Screening	Top Cover	Sideslopes
ASTM[1]	D698	Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort	NA[2]	1/source	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[5]	1/3,330 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	1/3,330 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	1/3,330 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	1/3,330 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	240'x240' Grid/lift
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]	1/10,000 cy per lift[7]

Notes:
1. ASTM = American Society of Testing and Materials.
2. NA = Not applicable.
3. QA/QC = Quality Assurance / Quality Control. One QA/QC test for the project quantity required.
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.
7. An undisturbed sample from a thinned walled sampler (Shelby tube).

C Construction

C.1.1 Subgrade

Compact the collar to a minimum density as defined in standard spec 207.3.6.3 Standard Compaction or as otherwise specified in the contract requirements.

C.1.2 Placement
Place and compact low permeable clay in 6-inch lifts. Place each lift of low permeable clay in one continuous lift. The thickness of the low permeable clay shown on the plans should be measured perpendicular to the surface.

Extend the clay collar a minimum of four feet along the length of pipe, centered on the joint, and construct the clay collar according to the construction detail.

Compact the low permeable clay to a minimum of 95% Standard Proctor ASTM D698 Maximum Dry Density. Break up clods greater than 4-inches in diameter prior to compaction. Provide all equipment necessary to adjust low permeable clay to the proper moisture content for compaction. 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.

Low permeable clay not meeting the above requirements will be removed as directed by the engineer and removing, replacing, and/or reworking low permeable clay not meeting the above requirements will be completed at no cost to the department.

D Measurement
The department will measure Clay Anti-Seepage Collar as each individual clay anti-seepage collar, 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.0060.066	Clay Anti-Seepage Collar	Each

Payment is full compensation for testing/sampling furnishing, hauling and placing of all materials; and for excavation, backfilling and disposing of excess material.

108. Cover Plates, Item SPV.0060.067.

A Description
This special provision describes furnishing and installing cover plates at manholes, inlets and similar structures.

B Materials
Provide a 0.50-inch minimum thickness steel plate that extends, at a minimum, to the outside edge of the concrete structure.

C Construction
Install the cover plate to the structure securely using stainless steel anchors. Do not cover the plate until the engineer examines the installation.

D Measurement
The department will measure Cover Plates as each individual cover plates, 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.0060.067	Cover Plates	Each

Payment is full compensation for furnishing all materials; and for hauling, handling and installing the cover plate.

The steel plate becomes the property of the department upon completion of the contract work.

109. Restrictor Plate, Item SPV.0060.068.

A Description
This special provision describes furnishing and installing a flow restrictor plate at the headwall of box culvert C-13-115 as detailed in the plans and as hereinafter provided.

B Materials
Provide a galvanized steel plate according to ASTM A36.

Hot dip galvanize the steel plate after completing all cutting, drilling, and punching according to ASTM A123.

C Construction
Prior to fabrication, submit a manufacturer's certification of compliance to engineer for all metal fabrications.

Protect materials from damage to the galvanized coating during transportation, storage, and erection.

Repair metal plate on which the galvanized coating has been damaged according to standard spec 641.3.3 (7).

D Measurement
The department will measure Restrictor Plate as each individual restrictor plate, 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.0060.068	Restrictor Plate	Each

Payment is full compensation for furnishing, fabricating, and installing. Masonry anchors to attach the restrictor plate will be paid for separately.

110. Stop Gate, Item SPV.0060.069.

A Description
This special provision describes furnishing and installing a stop gate in the weir wall at box culvert C-13-115 as detailed in the plans and as hereinafter provided.

B Materials
Fabricate stop gate plate from type 304 stainless steel. Provide handle as shown on the plans.

Provide stiffeners as required to limit plate deflection to 1/360 of the plate span.

Fabricate stop gate guide frame from type 304 stainless steel. Provide ultra-high molecular weight seals/bearing bars incorporated into the guide frame on both sides of the stop plate. Provide dovetail slots to retain the bearing bars in the frame.

Provide type 304 stainless steel adhesive anchors according to standard spec 502.2.12.

Provide shop drawings to engineer for review prior to fabrication of stop gate. Include dimensions and configuration of all components including fasteners.

C Construction
Fasten stop gate frame to concrete as shown on the plans using adhesive anchors where specified by manufacturer.

Install stop gate vertically plumb and such that the top of the plate is at the same elevation as the top of the weir wall.

Provide 1/8-inch thick neoprene gasket between the stop gate frame and the concrete.

Maintain drainage and provide any dewatering necessary for the work.

D Measurement
The department will measure Stop Gate as each individual stop gate, 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.0060.069	Stop Gate	Each

Payment is full compensation for providing shop drawings; for furnishing and fabricating, including the adhesive anchors; for maintaining drainage and dewatering; and for installing.

111. Inlet Covers, Flat Temporary, Item SPV.0060.070.

A Description

Perform work according to the applicable provisions of standard spec 611 and as detailed in the plans.

B Materials

Furnish inlet covers according to the pertinent requirements of standard spec 611. Provide open grates for drainage, traversable by vehicle and bicycle traffic, and rated for traffic loading.

C Construction

Provide a detailed plan, stamped by a licensed professional engineer in the State of Wisconsin, indicating the methods and materials required to secure the inlet covers and grates to the inlet frames for traffic loading.

Adjust and set the grade of the inlet cover to meet the final surface of the temporary pavement for traffic lanes. Secure inlet covers to the inlet or inlet frame.

Remove the temporary inlet cover once no longer needed in the temporary traffic lanes.

D Measurement

The department will measure Inlet Covers, Flat Temporary as each individual inlet covers, flat temporary, 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.0060.070	Inlet Covers, Flat Temporary	Each

Payment is full compensation for furnishing inlet covers, including frames, grates or lids; for a detailed plan, stamped by a licensed professional engineer in the State of Wisconsin; for furnishing all necessary bolting; for providing all other required materials and for installing and adjusting each inlet cover; and for removing and disposing of inlet cover.

112. Drain Slotted Vane 6-FT, Item SPV.0060.071.

A Description

This special provision describes furnishing and installing drain slotted vanes according to standard spec. 415 and 611, as detailed in the plans, and as hereinafter provided.

B Materials
Provide a 15-inch diameter SDR-35 poly vinyl chloride (PVC) sanitary sewer pipe for the drain slotted vane casting to rest in.

Provide concrete according to standard spec 415 with a mix design and materials matching the adjacent concrete pavement.

C Construction
Prior to encasing the pipe in concrete, cover the upper end of the drain slotted vane with a cap as shown on the plans.

Prior to construction operations adjacent to the slotted area of the drain slotted vane pipe, cover the slots on the top of the drain. Remove any material entering the pipe.

Avoid damage to the drain slotted vane pipe. If any section of pipe is damaged or is unsatisfactory as determined by the engineer, replace the drain pipe at no cost to the department.

Place the drain at a 90 degree angle to the flow of water.

Finish the exposed concrete surface according to standard spec. 415.3.8.3.1. Cure the concrete according to standard spec 415.3.12 using a method matching the method used for the adjacent concrete pavement.

D Measurement
The department will measure Drain Slotted Vane 6-FT as each individual drain slotted vane 6-FT, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.071	Drain Slotted Vane 6-FT	Each

Payment is full compensation for furnishing all materials, including PVC pipe and end cap, drain slotted vane castings, concrete, reinforcement, bolts, fittings, connections, banding wire, and concrete adjusting bricks; for providing surface finish and curing; for making connections to inlets; and for cleaning out the drain upon completing the work.

113. Rock Excavation for Concrete Bases, Item SPV.0060.072.

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.0060.072	Rock Excavation for Concrete Bases	Each

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

114. Remove and Salvage Existing City-Owned Light Pole Assembly, Item SPV.0060.100.

A Description
This special provision describes removing and salvaging or disposing of existing city-owned light poles, pedestals, transformer bases, arms, luminaires, and wiring as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Contact the City of Fitchburg Department of Public Works, (608) 270-4260, at least seven days prior to removing any street lights on the City of Fitchburg lighting systems.

Remove existing light poles, pedestal/transformer bases, wiring within light poles and between light poles being removed, arms, and light fixtures according to standard spec 204 and as shown on the plans. Disconnect underground conduit system from light pole base and cap conduit, unless otherwise approved by the engineer or the city. Coordinate equipment to be salvaged with the city. Properly dispose of any equipment the city chooses not to salvage.

Place equipment on blocks between removal and delivery to the storage location, so as not to be in direct contact with the ground. Protect luminaires from moisture. Replace any equipment damaged in the removal process with equipment that is of greater or equal quality than the damaged piece.

Securely pack, transport, and deliver all salvaged lighting equipment to the City Maintenance Facility. Any equipment damaged during packing, transport, or delivery may be rejected by the city. Properly dispose of any rejected equipment.

Maintenance Facility
2373 S Fish Hatchery Road
Fitchburg, WI 53711
(608) 729-1720

D Measurement
The department will measure Remove and Salvage Existing City-Owned Light Pole Assembly as each individual remove and salvage existing city-owned light pole assembly, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.100	Remove and Salvage Existing City-Owned Light Pole Assembly	Each

Payment is full compensation for removing light poles, including fixtures, transformers, pedestal bases, wiring and conduit; for salvaging and disposing of surplus material; for stockpiling salvaged equipment and materials; for transporting, delivering and coordinating with the City of Fitchburg.

115. Relocate and Modify Existing Lighting Cabinet, Item SPV.0060.101.

A Description
This special provision describes removing, salvaging, storing, and protecting the existing lighting cabinet and associated equipment, and installing it on a new concrete base according to the plans and as hereinafter provided.

B Materials
Furnish all equipment necessary to relocate and modify the cabinet to power and control all lighting circuits, existing and proposed, associated with the cabinet. This includes, but is not limited to, the following: photocell, relays, terminal strips, wiring, and all miscellaneous electrical components.

C Construction
Notify the City of Fitchburg Department of Public Works, (608) 270-4260, at least 10 business days prior to removing the lighting cabinet. Coordinate acceptable dates and durations for all outages of the existing lighting on Fitchrona Road south of CTH PD (McKee Road) with the City of Fitchburg.

Perform a field review of existing lighting cabinet for condition of equipment prior to removal. Notify the City of Fitchburg, in writing, of any damaged or non-operating equipment. Any equipment damaged while the cabinet is being modified will be replaced in-kind by the contractor at no cost to the department.

Provide new circuit breakers in the existing lighting cabinet panelboard as shown on the plans. Provide photocell for central control of all lighting circuits. Modify the controls so the proposed additional lighting circuits are controlled in the same manner as the existing lighting circuits. Provide lighting contactors, number of poles as required, to accommodate additional lighting circuits.

Reinstall the lighting cabinet and electric service meter breaker pedestal on new concrete cabinet base at the location shown on the plans.

D Measurement
The department will measure Relocate and Modify Existing Lighting Cabinet as each relocate and modify existing lighting cabinet, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.101	Relocate and Modify Existing Lighting Cabinet	Each

Payment is full compensation for removing, salvaging, storing and protecting the cabinet and associated equipment; for cabinet modifications; for equipment and materials, including but not limited to new circuit breakers; for disposing of surplus material; and for coordinating with the City of Fitchburg.

116. Luminaires Utility LED-City of Fitchburg, Item SPV.0060.102.

A Description
This special provision describes furnishing and installing LED luminaires together with hardware and fittings as shown in the plans.

B Materials
Provide luminaires as manufactured by Cree, model number as listed in the department Electrical Qualified Products List for Luminaires Utility LED-A.

C Construction
Furnish and install Luminaires Utility LED-City of Fitchburg together with hardware and fittings according to standard spec 659.3 and as shown on the plans.

D Measurement
The department will measure Luminaires Utility LED-City of Fitchburg as each individual luminaires utility LED-City of Fitchburg, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.102	Luminaires Utility LED-City of Fitchburg	Each

Payment is full compensation for luminaires; for luminaire mounting boxes as required; junction box fusing; for furnishing all hardware and fittings; and for required coordination.

117. Luminaires Area LED, Item SPV.0060.103.

A Description
This special provision describes providing LED area luminaires together with hardware and fittings as shown on the plans.

B Materials
Provide luminaire constructed of cast aluminum with high performance aluminum heat sinks. Provide an LED driver with >90% power factor that is sealed in the luminaire for weather-tight operation. Provide luminaire with the following:

- 120-277V
- 50/60 Hz
- 350 mA drive current
- 4000K color temperature
- Type II Short optical distribution

Include luminaire with housing for mounting to round pole with 4 1/2" top diameter. Provide luminaire that is new, unused, and the latest model being produced. Provide luminaire with ten-year limited warranty. Provide luminaire as manufactured by Cree Lighting, Edge Series LED Area Luminaires (Order No. ARE-EDG-2M-DL-10-E-UL-BZ-350-40K).

C Construction
Provide Luminaires Area LED together with hardware and fittings according to applicable provisions of standard spec 659.3 and as shown on the plans.

D Measurement
The department will measure Luminaires Area LED as each individual luminaires area LED, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.103	Luminaires Area LED	Each

Payment is full compensation for luminaires; for luminaire mounting boxes as required; junction box fusing; for hardware and fittings; and for required coordination.

118. Luminaires Decorative LED, Item SPV.0060.104.

A Description
This special provision describes providing LED decorative luminaires and luminaire arms with hardware and fittings as shown on the plans.

B Materials
Provide luminaires manufactured by Sternberg Lighting, Glenview Series LED Luminaires Order No. 1940LEDSG/6ARC35T3/MDL/VG that are sealed in the luminaire for weather-tight operation.

Provide luminaire arms manufactured by Sternberg Lighting, Order No. AHS/FB6.

Provide single or double luminaire arms, as shown in the plans, that are pre-wired and have a Verde Green (VG) finish.

Bolt the luminaire arm to a post mount adapter that is welded to the Concrete Light Pole.

Provide all hardware, fittings, and wiring needed to attach luminaires to luminaire arms and luminaire arms to Concrete Light Pole.

C Construction
Install luminaires and luminaire arms according to the applicable provisions of standard spec 659.3.

D Measurement
The department will measure Luminaires Decorative LED as each individual luminaires decorative LED, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.104	Luminaires Decorative LED	Each

Payment is full compensation for luminaires and luminaire arms; for hardware, fittings, and wire; and for wiring and fusing if required.

119. Aluminum Light Pole, Item SPV.0060.105.

A Description

This special provision describes providing aluminum light poles according to standard spec 657, as shown on the plans, and as hereinafter provided.

B Materials

Furnish rounded top aluminum light pole manufactured by Hapco, model RTA30C8B4-BM capable of mounting to an Aluminum Transformer Base Breakaway included in these special provisions.

C Construction

Install aluminum light poles according to standard spec 657.3.

D Measurement

The department will measure Aluminum Light Pole as each individual aluminum light pole, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.105	Aluminum Light Pole	Each

Payment is full compensation for providing all materials including light pole, grounding lugs and related mounting hardware; for leveling shims; for installing identification plaques; for corrosion prevention; and for furnishing all hardware and fittings necessary for pole installation.

120. Lighting Control Cabinet–City of Fitchburg, Item SPV.0060.106.

A Description

This special provision describes furnishing, assembling, and installing lighting control cabinets and accessories, as specified in the standard spec 651, 652, 654, 655, and 656, as shown on the plans, and as provided hereinafter.

B Materials

Provide lighting control enclosure as manufactured by Milbank CP3B5111FB22DGWESP. Provide dark green powder-coated enclosure, NEMA 3R galvanized steel, and contain integral metering according to utility company requirements.

Mount lighting control devices on steel back panel within the enclosure. Provide control and switching devices that are NEMA rated when applicable. Provide devices as specified below and as shown on the plans:

1. Panelboard: provide 18-circuit, 120/240V, single-phase panelboard, with 100A, 2-pole, service entrance-rated main circuit breaker. Do not branch mount the main circuit breaker. Provide bolt-on type breakers, quantity as shown on the plans.
2. Provide 30A, electrically held lighting contactors, Square D, Class 8903, Allen Bradley 400-DP, ABB; provide quantity and number of poles as required to control the circuits as shown on the plans plus 25% spare circuit space.
3. Accessories:
   - 20A, GFI receptacle
   - Wiring troughs to route wire between devices
   - Three position selector switch control station (O-O-A)
   - Terminal Strips to land all wiring and branch circuits which exit the cabinet
   - TVSS unit (Square D SDSA1175, Intermatic AG24013, Citel M40-120T, or equal)
   - Photocell rated 1500 watts minimum
   - 2-channel programmable astronomical time clock with battery back-up memory

Provide grounding electrodes for each cabinet according to standard spec 656 and as shown on the plans.

C Construction

Install lighting control cabinet on Concrete Control Cabinet Base Special as specified in standard spec 654 and as shown on the plans.

Install electrical service to each cabinet as shown on the plans and according to standard spec 656. Before submittal to the electrical utility, send all applications for new electrical service installations to Graham Heitz, (608) 246-5362, for review and approval.

D Measurement

The department will measure Lighting Control Cabinet–City of Fitchburg as each individual lighting control cabinet-City of Fitchburg, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.106	Lighting Control Cabinet–City of Fitchburg	Each

Payment is full compensation for furnishing, assembling, and installing lighting control cabinet; assembly and installation of components.

121. Concrete Control Cabinet Bases Special, Item SPV.0060.107.

A Description
Perform work according to the applicable provisions of standard spec 654, and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Control Cabinet Bases Special by each individual concrete control cabinet bases special, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.107	Concrete Control Cabinet Bases Special	Each

Payment is full compensation for providing concrete bases; for embedded conduit and electrical components; for anchor rods, nuts, and washers; for bar steel reinforcement; and for excavating, backfilling and disposing of surplus materials.

122. Aluminum Transformer Base Breakaway, Item SPV.0060.108.

A Description
This special provision describes providing aluminum transformer bases according to standard spec 657, as shown in the plans, and as hereinafter provided.

B Materials
Provide Valmont TB2-17 transformer base with medium bronze powder coat finish to match finish of the Aluminum Light Pole bid item and capable of mounting on Concrete Bases Type 5 and according to standard spec 657.2.2.5.

C Construction
Install aluminum transformer bases according to standard spec 657.3.

D Measurement
The department will measure Aluminum Transformer Base Breakaway as each individual aluminum transformer base breakaway, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.108	Aluminum Transformer Base Breakaway	Each

Payment is full compensation for providing all materials including transformer base; and for furnishing all hardware and fittings necessary for installation, including but not limited to, connecting bolts, washers, hex nuts, grounding lugs and shims; and for corrosion prevention.

123. Concrete Light Pole, Item SPV.0060.109.

A Description

This special provision describes providing concrete light poles as shown on the plans and as hereinafter provided.

B Materials

Furnish concrete light poles manufactured by Traditional Concrete, Inc. Model D124-MG-EA-3x3T.

Provide a tenon meeting the manufacturer's dimension recommendations for the attachment of Luminaires Decorative LED to the concrete light pole.

C Construction

Install concrete light poles according to applicable provisions of standard spec 657.3 and the manufacturer's recommendations.

D Measurement

The department will measure Concrete Light Pole as each individual light pole, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.109	Concrete Light Pole	Each

Payment is full compensation for providing all materials including light pole and tenon; for excavation and backfilling; and for furnishing all hardware and fittings necessary for pole installation.

124. Pull Boxes, Polymer Concrete 12x12-Inch, Item SPV.0060.110; 17x30-Inch, Item SPV.0060.111.

A Description

This special provision describes furnishing and installing polymer concrete pull boxes. Perform work according to standard spec 653 and as specified herein.

B Materials
Provide gray colored polymer concrete pull boxes.

Provide Pull Boxes, Polymer Concrete 12x12-Inch as manufactured by New Basis, model number FCA121212T-00006.

Provide Pull Boxes, Polymer Concrete 17x30-Inch as manufactured by New Basis, model number FCA173024T-00006.

Provide each cover with the logo "STREET LIGHTING" imprinted on it from the manufacturer.

Provide coarse aggregate size no. 1 according to standard spec 501.2.5.4.4.

C Construction
Install pull boxes at the locations shown on the plans. Provide extensions by the pull box manufacturer as required for installation of lighting branch circuits. Construct the conduits entering the pull box to allow adequate drainage within the conduit.

D Measurement
The department will measure Pull Boxes, Polymer Concrete (size) as each pull boxes, polymer concrete (size), acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.110	Pull Boxes, Polymer Concrete 12x12-Inch	Each
SPV.0060.111	Pull Boxes, Polymer Concrete 17x30-Inch	Each

Payment is full compensation for providing and installing all materials including coarse aggregate; for excavating, backfilling, and disposing of surplus materials; for providing required pull box extensions, and conduit extensions less than 10 feet long including fittings.

125. Loop Detector Splice, Item SPV.0060.150.

A Description
This special provision describes furnishing and installing splice kits on new loop wire in pull boxes as shown on plans and as herein provided, for the purpose of sealing the loop wire for future connection.

B Materials
Furnish Loop Detector Splice that is according to the pertinent requirements of standard spec 655.

C Construction
Make splices as soon as possible after wires as specified in Loop Detector Wire are installed, but after all required testing of the Loop Detector Wire. Follow the manufacturer's recommended installation procedures.

D Measurement
The department will measure Loop Detector Splice as each individual loop detector splice, 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.0060.150	Loop Detector Splice	Each

Payment is full compensation for furnishing and installing loop detector splice, mechanical connection, and splice kit.

126. Pull Box Type I, Item SPV.0060.151; Type III, Item SPV.0060.152; Type V, Item SPV.0060.153.

A Description
Perform work according to the applicable provisions of standard spec 653 and as detailed in the plans.

B Materials
Provide pull boxes that are gray colored polymer concrete construction. Provide pull boxes having dimensions of 19 inches wide, 32 inches long, and 24 inches deep, and with a cover rated to withstand 15,000 pounds over a 10-inch square with a minimum test load of 20,000 pounds.

Provide Pull Box Type III that are high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Provide box dimensions for Type III of 12 inches wide, 12 inches long and 12 inches deep. The box and polymer cover must be rated to withstand 20,000 pounds.

Provide Pull Box Type V that are gray colored polymer concrete construction. Provide box dimensions of 24 inches wide, 36 inches long, and 24 inches deep. The box and cover must be rated at 15,000 pounds over a 10-inch square.

Provide each cover with the logo "TRAFFIC SIGNAL" imprinted on it from the manufacturer.

C Construction
Install pull boxes at the locations shown on the plans. Construct the conduits entering the pull box to allow adequate drainage within the conduit.

D Measurement
The department will measure Pull Box (type) as each individual pull box (type), 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.0060.151	Pull Box Type I	Each
SPV.0060.152	Pull Box Type III	Each
SPV.0060.153	Pull Box Type V	Each

Payment is full compensation for providing and installing all materials including coarse aggregate; for excavating, backfilling, and disposing of surplus materials.

127. Pull Box Non-Conductive 24x36-Inch, Item SPV.0060.154; Pull Box Non-Conductive 24x42-Inch, Item SPV.0060.155.

A Description
Perform work according to the applicable provisions of standard spec 653 and as detailed in the plans.

B Materials
Provide pull boxes, frames, and lids made of non-conductive material suitable for Tier 15 loading, as specified in ANSI/SCTE 77.

Provide pull boxes, frames, and lids made of non-conductive materials.

Provide each cover with the logo "WISDOT COMMUNICATIONS" for communications pull boxes and "ELECTRIC" for traffic signal and lighting pull boxes, imprinted on it from the manufacturer.

Provide one 24-inch length of #6 reinforcing steel.

C Construction
Install pull boxes at the locations shown on the plans. Extend pull boxes, as necessary, using the same material as the pull box and as shown in the construction details. Saw extensions parallel to the extension ring. Excavate, place coarse aggregate drain material, and backfill.

Drive reinforcing steel, vertically, on the north side of the pull box.

D Measurement
The department will measure Pull Box Non-Conductive (Size) as each individual pull box non-conductive, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.154	Pull Box Non-Conductive 24x36-Inch	Each
SPV.0060.155	Pull Box Non-Conductive 24x42-Inch	Each

Payment is full compensation for providing and installing all materials including coarse aggregate; for excavating, backfilling, and disposing of surplus materials; for extending the pull box; and for conduit extensions less than 10 feet long including fittings. The department will pay separately for engineer-directed pull box drain duct under the Conduit Rigid Nonmetallic bid items as specified in standard spec 652.5.

128. Concrete Base Type G, Item SPV.0060.156; Type LB-3, Item SPV.0060.157; Type LB-8, Item SPV.0060.158; Type P, Item SPV.0060.159.

A Description

Perform work according to the applicable provisions of standard spec 654, as specified herein and as detailed in the plans.

B Materials

Provide concrete masonry Grade A, A-WR, A-FA, or A-IP conforming to the requirements of standard spec 501.

Provide, conduit cast within the bases, Schedule 40 polyvinyl chloride (PVC) electrical conduit conforming to the requirements of standard spec 652.

Provide anchor bolts for Type G bases made from high-strength steel (50 KSI minimum yield strength), ASTM A36, and fitted with a hard washer and heavy hex nut. Provide a minimum of 3 inches of thread at the top end of each bolt. Provide galvanized bolts, washers, and nuts. Provide bolts that are 1.25 inch by 24 inch.

Provide anchor bolts for Type LB-3 and Type LB-8 bases made from high strength steel (50 KSI minimum yield strength), ASTM A36, and fitted with two hard washers and two heavy hex nuts. Provide a minimum of 6 inches of thread at the top end of each bolt. Provide galvanized bolts, washers, and nuts. Provide bolts for the LB-8 bases that are 1.25 inch by 48 inch, including a 4 inch L-bend at the bottom. Provide bolts for the LB-3 base that are 1 inch by 40 inch including a 4 inch L-bend at the bottom.

Include a concrete maintenance platform for the Type P bases. Construct the Type P bases according to the Concrete Control Cabinet Base detail in the plans. Confirm the location of the conduits in the base with the City of Madison prior to construction of the base. Anchor bolts, nuts, and washers for Concrete Controller Base Type P, will be provided and installed by the City of Madison when installing signal control cabinets. Provide bar steel reinforcement conforming to the requirements of standard spec 505.

C Construction

Place the bases with one side parallel to the centerline of the street.

Construct 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. Level the top surface of the base with a ¾ inch chamfer on the edges and provide a rubbed and broomed finish.

Cast anchor bolts into the base as shown on the plans. Verify bolt circle diameters before constructing the bases.

Furnish manufactured elbows and install in all bases, except as noted on the details. Install elbows to permit conduit to be installed in straight-line runs, without unnecessary bends. Bases not installed to this standard will not be accepted. Extend existing conduit into the bases.

Provide elbows conforming 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 a minimum of seven days.

Provide a rubbed and broomed finish on all concrete bases to 2 inches below finished grade**.**

D Measurement

The department will measure Concrete Base (Type) as each individual concrete base, 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.0060.156	Concrete Base Type G	Each
SPV.0060.157	Concrete Base Type LB-3	Each
SPV.0060.158	Concrete Base Type LB-8	Each
SPV.0060.159	Concrete Base 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, and corrugated steel pipe; bar steel reinforcement, nuts and washers, extra elbows, rubbed finish, and concrete masonry; for providing openings through existing pavement where required; and for excavation, including hand-digging as required, backfill, and proper disposal of surplus materials.

129. Transformer Base Steel, 16-Inch, Item SPV.0060.160; 20-Inch, Item SPV.0060.161.

A Description

This special provision describes furnishing and installing steel transformer bases as shown on the plans, according to standard spec 657 and as hereinafter provided.

B Materials

Provide hot-dipped galvanized steel transformer bases according to ASTM designation A123. Provide slotted bolt openings in the bases. Furnish steel connecting bolts, size 1.25 inches by 4 inches, hold down lugs for 1.25 inch bolts and nuts and washers, which are also hot-dipped galvanized and be of sufficient size and strength to exceed the capacity of the bases. Conform the 16-inch base to the detail in the plan. Provide a Valmont M201, Union Metal 14-B2640Y2, Millerbernd 390A105, Ameron TB1316, or approved equal for the 20-inch base.

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.

Provide shims made of an aluminum alloy.

C Construction

Install transformer bases according to the manufacturer's instructions, plans and specifications.

D Measurement

The department will measure Transformer Base Steel (Size) as each individual transformer base steel, 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.0060.160	Transformer Base Steel 16-Inch	Each
SPV.0060.161	Transformer Base Steel 20-Inch	Each

Payment is full compensation furnishing and installing transformer bases, mechanical grounding connector and related hardware; and for leveling shims when required.

130. Traffic Signal Trombone Arms, 15-FT, Item SPV.0060.162.

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, according to standard spec 657, and as hereinafter provided.

B Material

Provide traffic signal trombone arms designed to withstand loadings as specified in standard spec 657.2.2.2 and as shown on Standard Detail Drawing "Pole Mountings for Traffic Signals and Lighting Units, Type 3 (Heavy Duty)".

Furnish certification of compliance with these stated AASHTO performance requirements with submission of the material list to the engineer.

Submit shop drawings and include dimensions of width, depth, length and thickness of all members and ASTM designation and alloy designation of aluminum members.

Provide aluminum trombone arms consisting of round or oval upper and lower members joined by one or more tubular vertical struts welded to them. Provide a pole end of the mast arm having a mounting clamp welded to it which will permit the attachment of the mast arm to a round pole of varying diameter. Provide a lower clamp that has 5-7/8-inch I.D. and an upper clamp that has 5-l/2-inch I.D. Provide clamps able to accommodate some variation in pole diameter while still attaining full contact between the clamp and the pole. Provide a clamp with surface area contacting the pole that is sufficiently large and designed to prevent horizontal rotation in windy conditions.

Provide a vertical strut, which has provision for mounting the signal head, 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-inch heads, can be accommodated within the confines of the mast arm. The cross tees for signal heads will each have two slots on the threaded hubs that face each other.

Locate the wiring raceway entrance through the lower mounting bracket.

Provide a mast arm that has a uniform natural aluminum finish and is clean of dirt and debris. No painting or other corrosion preventive maintenance will be allowed.

The portion of the main members of the arm to which the arm attachment bands are welded will be one piece seamless tapered aluminum tubes.

Attach the main arm member to the pole using extruded aluminum clamps fastened with continuously threaded stainless steel or galvanized 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.

Permanently 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, 15-FT as each individual traffic signal trombone arm 15-FT, 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.0060.162	Traffic Signal Trombone Arms, 15-FT	Each

Payment is full compensation furnishing and installing all materials including all hardware, fittings, mounting clamps, shims, metal identification label, and attachments necessary to completely install the mast arm.

131. Pole 30-FT, 7 Gauge, Item SPV.0060.163; Pole 30-FT, 11 Gauge, Item SPV.0060.164.

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 poles that are round, with a base plate welded to the bottom end of the pole. All poles are to be a single section, with an eight-inch diameter shaft at the base and 0.14 inches per foot taper.

Provide base plates with slotted openings for anchor bolts.

Designate all 30-foot poles to withstand a 90 mile per hour sustained wind velocity and 117 mile per hour gust velocity with the bracket arm and luminaire in place. All 30-foot, 7 gauge poles will be used for supporting luminaires, signals heads, signs, and aluminum trombone arms holding signs and/or signal heads as shown in the drawings and on Standard Detail Drawings “Pole Mountings for Traffic Signals and Lighting Units, Type 3 (Heavy Duty)”. All 30-foot, 11 gauge poles will be used for supporting luminaires, signal heads, and signs as shown in the drawings and on Standard Detail Drawings “Pole Mountings for Traffic Signals and Lighting Units, Type 4.”

Provide a 4 x 6-1/2 inch galvanized handhole with contoured or flat cover plate joined to the reinforced handhole frame with two bolts. Locate the handhole 90 degrees clockwise from the bracket arm side of poles as viewed when looking down from the top of the pole. Locate the center of the handhole 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 is not acceptable. Furnish machine bolts that are a slotted hex-head style.

Fabricate the pole shaft from the herein specified manufacturer's best grade, hot rolled basic open hearth, or basic oxygen process steel. Provide a shaft having only one longitudinal, electrically welded joint, with the strength rated at not less than 100 percent of the yield strength of the steel and having no intermediate horizontal joints or welds. Use only one length of steel sheet formed into a continuously tapered shaft, having a taper of approximately 0.14 inchers per foot. Provide a smooth weld, allowing the specified taper to be constant. Provide a pole that is within 1/4 inch 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. Furnish a nut that is completely free of any metal residue that would prevent a bolt from easily screwing entirely into the nut.

All 30-foot poles with 10-foot arms will have a pole mounted simplex fitter welded to the pole, 6 inches from the top. The simplex fitter permits the positioning of the arm on the pole held only by gravity, while the arm is secured to the pole by two cap screws.

Provide arms with a single member, conforming to the drawing. Weld a steel fitting to the pole end of the arm, which will permit the positioning of the arm on the pole held only by gravity, while the arm is secured to the pole by two cap screws. Provide an arm having a weather-resistant connection and smooth wiring raceway. Provide arms able to accept a luminaire with a 2 inch slip fitter.

Place all mounting and wire raceway holes on all poles holding LED fixtures before being hot-dipped galvanized. Coordinate mounting needs with the LED luminaires selected for the project prior to ordering poles.

Furnish a pole-top cover and four nut covers and installed for each pole. Permanently imprint a metal label, attached with rivets midway between the base plate and the handhole, on each steel pole. Provide a label stating the overall pole height, shaft gauge, year of manufacture, and manufacturer's name. Conform the label to the curvature of the pole so that it does not have any sharp edges or corners. Smooth all rivets inside and outside of the pole.

After all welding has been completed, thoroughly clean the exterior surface of the pole, arm, and hardware making it free of all loose rust, mill scale, dirt, oil, grease, and other foreign substances. Provide poles and arms that are hot-dipped galvanized according to the requirements of ASTM Designation A123. Provide hardware that is hot dipped galvanized according to ASTM Designation A153. Provide a galvanized finish that is bright, shiny, and uniform. Matted or dull pole sections will not be accepted. Furnish non-shrink commercial grout from approved products list.

C Construction

Group lighting units to operate from branch circuits, which are energized by lighting contactors remotely controlled by photocell. Where a system is employed, no individual

lighting units are to be controlled by photocells or time switches. Time switches control only the removal from service of the midnight circuits.

Wire each system in a manner that presents as near as is possible a balanced load at the source of supply during midnight and all-night operation.

Provide conductors to the luminaire consisting of two No. 14 solid annealed copper, UF, 600 volt, as manufactured by General Cable, Anaconda, Rome, Kaiser, or approved equal. On all systems, provide phase wire at the pole handhole having a secondary in-line fuse assembly, Series 64, as manufactured by Elastic Stop Nut Corporation of America, Buss Tron HEB-AA fuseholder, or approved equal, with a Bussmantype FNM or FNQ fuse, 3.2 amp for 150 watt and 5.0 amp for 250 watt luminaires.

Do not splice the phase wire between the fuse assembly and luminaire. Provide for poles with two luminaires, two fuseholders and separate wire from each fuseholder to each luminaire. Install a sufficient length of No. 14 conductor in the pole to permit removal of this fuseholder through the handhole before disconnecting.

Install a 24 inch length of No. 12 THHN Stranded Conductor tail to supply wires permitting easy removal of fixture wires and fuse holder through the handhole.

Ground a tail of No. 4 wire from the neutral conductor splice to each ground rod and metal street light pole.

Use the following color coding at all street light bases:

- Midnight Circuit (red)
- All night circuit (black)
- Neutral (white)

Electrically secure electrical splices and connections and make with pressure or compression fittings as manufactured by Thomas & Betts, Burndy, 3-M (scotch lock brand) or approved equal. Protect taps and splices in the following manner: coat all wire connections with No-Lox Compound; build up taps and splices made with irregularly shaped connectors with insulating material, “Air Seal” #18415 manufactured by Kearney or approved equal, prior to coating; fill all sharp corners and voids; over this, install 3 half lapped layers of rubber electrical tape, dielectric strength, 300 volts per mil - self vulcanizing tape, installed as per manufacturer’s instructions; over this, apply 3 half lapped layers Scotch Brand 33 Plus or approved equal, vinyl plastic electrical tape; then dip the entire splice 1 inch beyond the insulating material in Scotch-Kote or approved equal. Allow the constructed splice to air dry completely before insertion into the street light pole. Orient all wires leaving the splice in one direction. Hammer and retighten three times all split bolts, when used, and provide a spacer between any copper and aluminum conductors.

Connect the fuse holder to the All-Night circuit or Midnight circuit as indicated on the plans with an approved wire nut (3M or Ideal). Dip the wire nut in Scotch-Kote or approved equal.

Connect the lighting units with the underground cable and provide a complete, operational system when finished.

Set and plumb all metal poles with the use of leveling nuts furnished with the anchor bolts. Level luminaries 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 anti-seize protection 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 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 finish 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.

Provide a permanent imprinted metal identification label to all poles attached with rivets midway between the base plate and the handhole. The label shall state the overall pole height, shaft gauge, and year of manufacturer. The label shall conform to the curvature of the pole and not have any sharp edges or corners. All rivets shall be smooth inside and outside of the pole.

D Measurement

The department will measure Pole 30-FT (gauge) as each individual pole 30-FT (gauge), 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.0060.163	Pole 30-FT, 7 Gauge	Each
SPV.0060.164	Pole 30-FT, 11 Gauge	Each

Payment is full compensation for furnishing and installing all materials, including poles, all hardware and fittings necessary to completely install the pole; for corrosion prevention; and for providing and installing metal identification labels.

132. Install Video Detection Camera, Item SPV.0060.165.

A Description

This special provision describes installing department furnished video detection cameras and mounting brackets as shown on the plans, according to standard spec 677, and as hereinafter provided.

B Materials
Provide communication and power cables and necessary connectors according to standard spec 677.2 and as required by the manufacturer (Autoscope video detector). Provide power cables with conductor sizes appropriate for the maximum current draw of the equipment and for the length of the cable runs.

C Construction
Contact Mike Christoph at the City of Madison Traffic Engineering Shop, (608) 266-9031, a minimum of seven working days in advance to coordinate installation of new video detection camera.

Mount the camera on an existing pole or proposed pole. Install the camera so that there are no obstructions in the view of the traffic detection zones as shown in the plans.

Install the camera cables in the pole, concrete base, conduits, and pull boxes or manholes as shown in the plans and as specified in standard spec 677.3.

Install all cables from the camera to the traffic signal cabinet, as shown on the plans or as directed by the engineer.

After installation, conduct a City of Madison approved operational test as specified in standard spec 677.3, which, at a minimum, verifies that all interconnecting cable installations are according to the specifications.

If any work proceeds at a location, without completion of testing procedures, correct the operation of the communication and power cable at no cost to the department.

D Measurement
The department will measure Install Video Detection Camera as each install video detection and camera, 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.0060.165	Install Video Detection Camera	Each

Payment is full compensation for installing the video detection camera on the pole; furnishing, installing, and testing the camera and communication and power cables, and mounting brackets; and for furnishing miscellaneous hardware needed to complete the installation.

133. 8-Count Fiber Optic Connector 1,400-FT, Item SPV.0060.166.

A Description

This special provision describes furnishing and installing 8-count factory terminated combination fiber optic patch panel and cable systems of the lengths described, according to standard spec 651, 655, 670, and 678, as shown on the plans, and as hereinafter provided.

B Materials

Furnish combination fiber optic termination patch panel and cable systems meeting the following requirements:

- 8 single mode fiber optic strands.
- Factory terminated LC connectors on panel end.
- Bare, unterminated fiber strands on non-panel end.
- Loose tube cable.
- Cable length as indicated by bid item.
- Patch panel must be designed and tested for 1,000 rematings with less than 0.2 dB change.
- Patch panel housing material must be ABS plastic.

C Construction

Follow all manufacturer's recommended installation procedures.

Install between the Metropolitan Unified Fiber Network (MUFN) vault (EXCV-1) and the traffic signal cabinet at Commerce Park Drive (EXCB-2) before the existing communication line is impacted by the proposed storm sewer installation.

Install cable from control cabinet end out to fiber optic splice location to prevent damage to the termination panel.

Mount the termination panel end in the control cabinet in a space available upon receiving approval by the engineer.

Provide same-day splice over between the existing fiber and new fiber, to minimize downtime for the adaptive system, as shown on the plans or as directed by the engineer. Splices are paid for separately.

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 and 14 working days in advance to coordinate installation of fiber splices into the MUFN.

D Measurement

The department will measure 8-Count Fiber Optic Connector 1,400-FT as each individual 8-Count Fiber Optic Connector 1,400-FT, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.166	8-Count Fiber Optic Connector 1,400-FT	Each

Payment is full compensation for furnishing and installing the fiber optic cable; for coordination with the City of Madison; and for termination panel assembly.

134. Remove Existing WisDOT-Owned Light Pole Assembly, Item SPV.0060.167.

A Description

This special provision describes removing and disposing of existing department-owned light poles, pedestal/transformer bases, arms, luminaires, and wiring as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction

Remove and dispose of existing light poles, pedestal/transformer bases, wiring in light poles and between light poles being removed, arms, and luminaires according to standard spec 204, and as shown on the plans.

D Measurement

The department will measure Remove Existing WisDOT-Owned Light Pole Assembly as each individual remove existing WisDOT-owned light pole assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.167	Remove Existing WisDOT-Owned Light Pole Assembly	Each

Payment is full compensation for removing light poles, pedestal/transformer bases, arms, luminaires, wiring and conduit; and for disposing of removed materials.

135. Remove Existing WisDOT-Owned Lighting Cabinet, Item SPV.0060.168.

A Description

This special provision describes removing and disposing of the existing department-owned lighting cabinet, appurtenances and the contents, as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Remove and dispose of existing lighting cabinet, appurtenances and the contents according to standard spec 204, and as shown on the plans.

D Measurement
The department will measure Remove Existing WisDOT-Owned Lighting Cabinet as each individual remove existing WisDOT-owned lighting cabinet, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.168	Remove Existing WisDOT-Owned Lighting Cabinet	Each

Payment is full compensation for removing lighting cabinet, appurtenances and the contents; and for disposing of removed materials.

136. Remove and Salvage Existing Blank Out Sign, Item SPV.0060.169.

A Description
This special provision describes removing and salvaging existing blank out signs and brackets as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Perform all work according to standard spec 204, 651 and 658.

Contact the department, Graham Heitz (Southwest Region Signal Operations) at (608) 246-5362, at least 10 business days prior to removal of the blank out signs that exist at the intersection of CTH PD and Verona Road at the former Military Ridge Path along the east side of Verona Road to provide a removal schedule and to coordinate pick up of salvaged items.

Disconnect any wiring splices in the transformer/pedestal bases, remove blank out signs, traffic signal cable, and all brackets and hardware according to standard spec 204. Seal and plug any remaining holes in the poles as required by the department and as approved by the engineer.

When removing existing blank out signs, carefully stockpile all equipment at an accessible location approved by the engineer. Place all equipment on blocks or pallets so not in direct contact with the ground. Make all materials available for the department to pick up and salvage. Properly dispose of any equipment that the department does not want salvaged.

Replace any equipment damaged during removal with equipment that is of equal or greater quality.

D Measurement
The department will measure Remove and Salvage Existing Blank Out Sign as each individual remove and salvage existing blank out sign, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.169	Remove and Salvage Existing Blank Out Sign	Each

Payment is full compensation for removing blank out sign, including brackets, traffic signal cable, wiring and hardware; for salvaging materials; for stockpiling salvaged materials; for coordinating with the department; and for disposing of surplus materials not salvaged by the department.

137. Perennials, Allium, 'Summer Beauty', CG, 1 Gal., Item SPV.0060.500; Feather Reed Grass, 'Overdam', CG, 1 Gal., Item SPV.0060.501; Gayfeather, Spiked 'Kobold', CG, 1 Gal., Item SPV.0060.502; Prairie Dropseed, 'Tara', CG, 1 Gal., Item SPV.0060.503.

A Description
This special provision describes furnishing and installing Perennials according to the applicable sections of standard spec 632, as shown on the plans, and as hereinafter provided.

B Materials
Provide Perennial (plant) complying with American Standard for Nursery Stock (ANSI Z60.1-2004) for type, shape, and height.

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

C Construction
Lay out location of plantings for approval by the engineer.

Place Planting Mixture according to the bid item Planting Mixture.

Compact the bottom of the hole to guard against settling. Tamp or water in as necessary to create a condition by which plants will not settle in the planting beds. Place the bottom of the root ball directly on the bottom of the hole.

D Measurement
The department will measure Perennials (plant) as each individual perennials (plant), acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.500	Perennials, Allium, 'Summer Beauty', CG, 1 Gal.	Each
SPV.0060.501	Perennials, Feather Reed Grass, 'Overdam', CG, 1 Gal.	Each
SPV.0060.502	Perennials, Gayfeather, Spiked 'Kobold', CG, 1 Gal.	Each
SPV.0060.503	Perennials, Prairie Dropseed, 'Tara', CG, 1 Gal.	Each

Payment is full compensation for providing, transporting, handling, storing, pruning, placing, and replacing plant materials; for laying out plantings and excavating all plant holes, salvaging topsoil, mixing, and backfilling; for providing and applying all required fertilizer, water, rodent protection, herbicides and anti-desiccant spray; and for disposing of all excess and waste materials except that the department will pay for Planting Mixture and Shredded Hardwood Bark Mulch separately.

138. Fire Hydrants, Item SPV.0060.600.

A Description
This work consists of furnishing and installing hydrants according to Section 7 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

B Materials
Furnish materials according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Field verify heights of proposed hydrants. Order hydrants accordingly so that the bury line, when hydrant is installed, will be within 0.2 feet of ground level.

C Construction
Install hydrants according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition, unless otherwise shown or specified.

Locations of fire hydrants may need to be field adjusted prior to installation to avoid conflicts. Field adjusting fire hydrants shall be incidental to the cost of the fire hydrant.

Hydrant leads with less than 6.5 feet of cover shall be insulated per specifications. Installing bends in hydrant lead in order to install hydrant at correct elevation is prohibited.

D Measurement
The department will measure Fire Hydrants as each individual fire hydrants, acceptably completed.

E Basis of Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.600	Fire Hydrants	Each

Payment is full compensation for providing and installing the fire hydrant, hydrant flag, hydrant extensions, thrust blocking, restraints, stainless steel bolts, support blocks, bedding, cover, clear stone, poly, continuity straps, and paint; for making connection; for excavation, dewatering, backfilling with granular backfill, compaction, bracing, shoring, disposal of surplus excavated material, protection and support of exiting utilities, field adjustments, chlorination, testing and cleanup.

139. Remove Existing Hydrant, Item SPV.0060.601.

A Description

Work under this item includes removing and salvaging or legal disposal of existing fire hydrant as identified in the plans or as directed by the City of Fitchburg.

B Materials

Provide all materials necessary to complete the work associated with this item according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

C Construction

Complete all work associated with this item according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

Remove hydrant only after the connected existing water main section has been abandoned or removed.

If the hydrant is a Waterous hydrant with a 250 psi rating, deliver it to the City of Fitchburg Utility at 2373 S. Fish Hatchery Road, Fitchburg. Legally dispose of all other hydrants.

D Measurement

The department will measure Remove Existing Hydrant as each individual remove existing 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.0060.601	Remove Existing Hydrant	Each

Payment is full compensation for disassembly, removal, storage, and delivery of the existing fire hydrant to the Fitchburg Utility or legal disposal of it; for excavating, dewatering, backfilling with granular backfill, compacting, bracing, shoring, and restoring the site; and for disposing of surplus materials.

140. Water Valve, 6-Inch, Item SPV.0060.602; 8-Inch, Item SPV.0060.603; 10-Inch, Item SPV.0060.604; 12-Inch, Item SPV.0060.605.

A Description

This work consists of furnishing and installing water valves according to Section 7 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition. Proposed valves associated with live taps, as indicated on the plans, are not included in this item.

B Materials

Furnish materials according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Provide granular backfill according to Granular Backfill for Water Main.

C Construction

Install water valves according to section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

D Measurement

The department will measure Water Valve, (size) as each water valve (size), 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.0060.602	Water Valve, 6-Inch	Each
SPV.0060.603	Water Valve, 8-Inch	Each
SPV.0060.604	Water Valve, 10-Inch	Each
SPV.0060.605	Water Valve, 12-Inch	Each

Payment is full compensation for providing and installing any water valve, stabilizer, valve box, bedding, cover, restraints, stainless steel bolts, support block, valve nut extension (if needed, extensions will be provided by the city), and continuity straps; for excavation, dewatering, backfilling, compaction, bracing and shoring; for furnishing all valve box adjustments; for disposal of surplus excavated material, protection and support of existing utilities and cleanup. Granular Backfill for Water Main will be paid separately.

141. Adjust Existing Valve Box, Item SPV.0060.606.

A Description
Adjust Existing Valve Box consists of adjusting and extending all existing water valve boxes within the project limits to a ¼ inch below finished grade.

B (Vacant)

C Construction
Adjust water valve box according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

Excavate and expose the existing water valve box to the depth needed to adjust the valve box to finished grade and depth necessary to replace all broken valve box sections. Extensions for additional depth and/or replacement may be required and are included in this item. Backfill and compact according to the City of Fitchburg 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 Existing Valve Box as each individual adjust existing 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.0060.606	Adjust Existing Valve Box	Each

Payment is full compensation for provision and installation of replacement valve box sections and covers; for excavating, backfilling with granular backfill, adjusting valve box to ¼ inch below finished grade, compacting and restoring disturbed areas.

142. Remove Existing Valve Box, Item SPV.0060.607.

A Description
Work under this item includes abandoning of water valve boxes no longer in service, as indicated in the plans or as directed by the City of Fitchburg.

B (Vacant)

C Construction
Complete all work associated with this item according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

After the existing water main has been abandoned, complete all work associated with this bid item.

Place the valve in the closed position prior to abandoning the box and completely remove the valve box. Where complete removal of the existing water valve box is not possible, remove the box to a point two (2) feet below the subgrade elevation.

D Measurement
The department will measure Remove Existing Valve Box as each individual remove existing valve box, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.607	Remove Existing Valve Box	Each

Payment is full compensation for backfilling with granular backfill; for closing valve and removing any valve box; and for disposing of surplus materials. Granular Backfill for Water Main will be paid separately.

143. Remove Existing Water Valve Manhole, Item SPV.0060.608.

A Description
Work under this item includes removing existing valve manholes no longer in service, as indicated in the plans or as directed by the City of Fitchburg.

B Materials
Provide all materials necessary for completion of this work according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

C Construction
Complete all work associated with this item according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

Remove Existing Water Valve Manhole on Abandon Water Main
Place the valve in the closed position prior to abandoning valve manhole, completely remove top section of the manhole at least 2 feet below the subgrade elevation and backfill with granular backfill.

Remove Existing Water Valve Manhole and replace with valve box
If the water main is to remain functioning. Completely remove top section of the valve manhole at least 2 feet below the subgrade elevation install a valve box and backfill with granular backfill according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

D Measurement
The department will measure Remove Existing Water Valve Manhole as each individual remove existing water valve manhole, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.608	Remove Existing Water Valve Manhole	Each

Payment is full compensation for backfilling with granular backfill; for closing valve and removing valve manhole; adding a valve box and stabilizer were required; and for disposing of surplus materials.

144. Connect to Existing Water Main, Item SPV.0060.609.

A Description
This special provision describes providing a cut-in connection to existing water main as indicated in the plans or as directed by the City of Fitchburg according to Section 7 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

B Materials
Provide all materials necessary for completion of this work according to Section 7.2 of the City of Fitchburg 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 Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

Provide water main flushing according to Section 7.4 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition

D Measurement
The department will measure Connect to Existing Water Main as each individual connect to existing water main, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.609	Connect to Existing Water Main	Each

Payment is full compensation for making all connections, disposing of surplus materials and for providing a water main flushing.

145. Abandon Existing Water Main, Item SPV.0060.610.

A Description
Work under this item includes abandonment of water main no longer in service, as indicated in the drawings or as directed by the City of Fitchburg according to Section 7 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

B Materials
Provide all materials necessary for completion of this work according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

C Construction
Complete all work associated with this item according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

D Measurement
The department will measure Abandon Existing Water Main as each individual abandon existing water main, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.610	Abandon Existing Water Main	Each

Payment is full compensation for abandonment of existing water main; for providing and installation of ductile iron plugs and caps, bedding, cover, restraints and blocking for water main to be abandoned; for excavation, dewatering, backfilling with granular backfill, compaction, bracing, shoring, disposal of surplus excavated material, protection and support of existing utilities and cleanup.

146. Live Tap, Item SPV.0060.611.

A Description
This special provision describes providing a live tap connection to existing water main as shown in the plans and hereinafter provided.

B Materials
Furnish materials according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Furnish tapping sleeve, valve, stabilizer, and valve box.

C Construction
Provide a live tap connection at the locations shown on the plans according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

D Measurement
The department will measure Live Tap as each individual 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.0060.611	Live Tap	Each

Payment is full compensation for providing and installing any live tap of any size, tapping sleeve of any size, valve of any size, valve box, stabilizer, bedding, cover, restraints, thrust blocking, stainless steel bolts, valve nut extension (if needed, extension will be provided by the City of Fitchburg), and polywrap; for excavation, dewatering, backfilling with granular backfill, compaction, bracing, shoring, connection to existing water mains, valve box adjustment to ¼ inch below final surface, disposal of surplus excavated material, protection and support of existing utilities, disinfection, testing and cleanup.

147. Adjust Water Curb Box, Item SPV.0060.612.

A Description
This special provision describes adjusting water curb boxes within the project limits to match finished grade as shown on the plans or directed by the City of Fitchburg according to Section 7 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

B (Vacant)

C Construction
Excavate and expose the existing water curb boxes to the depth needed to adjust the valve boxes to finished grade. Extensions may be required. Leave all curb boxes centered over the curb stop and free of dirt and debris.

D Measurement
The department will measure Adjust Water Curb Box as each individual adjust water curb 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.0060.612	Adjust Water Curb Box	Each

Payment is full compensation for excavating, exposing, backfilling with granular backfill, disposing of surplus material and restoring the site; and for necessary extensions.

148. Remove Existing Curb Box, Item SPV.0060.613.

A Description

This special provision describes abandoning water curb boxes within the project limits that serve copper water services no longer in service as shown on the drawings or directed by the City of Fitchburg according to Section 7 of the City of Fitchburg Standard Specifications - Latest Edition.

B (Vacant)

C Construction

Abandon existing copper water service at main and remove curb stop box. Backfill the openings with granular backfill, compact, and restore the disturbed areas.

D Measurement

The department will measure Remove Existing Curb Box as each individual remove existing curb 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.0060.613	Remove Existing Curb Box	Each

Payment is full compensation for excavation, removals, backfilling with granular backfill and restoring the site.

149. Temporary Water Main Connection, Item SPV.0060.614.

A Description

This special provision describes providing a temporary water connection to the existing water main. A temporary connection is needed to provide temporary water service due to the staging and phasing of the water main construction as part of the overall project. Proposed temporary water connections must be authorized by City of Fitchburg prior to installation in order to be considered for payment. Provide at least two working days notice to City of Fitchburg prior to performing any temporary connections.

B Materials

Furnish all materials needed for the temporary connection according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition. Materials may include but are not limited to; fittings, valves, pipe extensions and granular backfill. No previously used temporary water main connection materials may be permanently installed in the water system without written authorization from the City of Fitchburg.

Provide granular backfill according to Granular Backfill for Water Main.

C Construction
Provide a water-tight temporary connection at the locations to be determined and approved by the City of Fitchburg according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition. The temporary water connection work includes any, pipe abandonment, pipe removal, any cut-in connections and/or any cut-off and caps associated with the temporary connection.

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 City of Fitchburg.

D Measurement
The department will measure Temporary Water Main Connection as each individual temporary water main 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.0060.614	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. Permanent connection to an existing water main will be paid under bid item Connect to Existing Water Main. Granular Backfill for Water Main will be paid separately.

150. Reconstruct Existing Sanitary Sewer Structure, Item SPV.0060.615.

A Description
Work under this item includes the removal and/or replacement of the existing sewer access structure barrel sections and/or rotating cone sections, drilling new steps and removing existing steps to better align with improvements as indicated in the drawings or as required by the City of Fitchburg.

B Materials
Furnish all materials according to Section 8.2 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition

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 Fitchburg.

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 Reconstruct Existing Sanitary Sewer Structure as each individual reconstruct existing sanitary sewer structure, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.615	Reconstruct Existing Sanitary Sewer Structure	Each

Payment is full compensation removing and adding barrel sections to existing sanitary sewer structure; for rotating cone sections on existing sanitary sewer structure, drilling new steps to align with realigned cone section and removing existing steps that do not line up with realigned cone section; for excavation, dewatering, backfilling with granular backfill, compaction, bracing and shoring; for disposal of surplus excavated material, protection and support of existing utilities, and cleanup.

151. Sanitary Sewer Structure, 4-Foot Diameter, Item SPV.0060.616; 5-Foot Diameter, Item SPV.0060.617.

A Description
Work under this item includes installing Sanitary Sewer Structures at the depths and locations shown on the plan.

B Materials
Furnish materials according to Section 8.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

C Construction
Install sanitary sewer structures according to section 8.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Maintain the flow of wastewater at all times during installation of the new sanitary sewer structure and when connecting pipes to the new structure. All bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the flow of wastewater throughout construction, is incidental to this bid item.

Place concrete benches and flowlines as directed by the City of Fitchburg.

Complete testing of new sanitary sewer structure according to Section 8.4 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

D Measurement
The department will measure Sanitary Sewer Structure, (Size) as each individual sanitary sewer structure, (size), 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.0060.616	Sanitary Sewer Structure, 4-Foot Diameter	Each
SPV.0060.617	Sanitary Sewer Structure, 5-Foot Diameter	Each

Payment is full compensation for providing and installation of sanitary sewer structure, water tight sanitary sewer pipe connections, flowlines, concrete benches, castings, adjusting rings, chimney seal, bedding, and cover; for furnishing and installing all temporary bypass pumping and connections; for furnishing all connections to existing pipes; for excavation, dewatering, backfilling with granular backfill, compaction, bracing and shoring; for removal of all utilities to be abandoned within the location of the sanitary sewer structure; for disposal of surplus excavated material, protection and support of existing utilities, testing, televising and cleanup.

152. Remove Existing Sanitary Sewer Structure, Item SPV.0060.619.

A Description
This special provision describes removing sanitary sewer access structures as shown on the plans. The work includes salvaging and disposing of the resulting materials and backfilling the trenches with granular backfill.

B Materials
Provide granular backfill according to Granular Backfill for Sanitary Sewer. Furnishing and placing granular backfill in the void created by the structure removal is included with this bid item.

C Construction
Remove sanitary sewer access structures according to Section 8.3 the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

Plugging sewer mains and laterals that are connected to existing sanitary sewer structure to be removed is incidental to the removal of the structure. This is applicable to sewer plugs only. Concrete slurry of an entire sanitary sewer main or lateral under a proposed or existing roadway is paid for separately under Abandon Existing Sanitary Sewer - Slurry.

Deliver castings to the City of Fitchburg at 2373 S. Fish Hatchery Road, Fitchburg.

D Measurement
The department will measure Remove Existing Sanitary Sewer Structure as each individual remove existing sanitary sewer structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.619	Remove Existing Sanitary Sewer Structure	Each

Payment is full compensation for removing existing sanitary sewer structure; for excavation and plugging sewer mains and laterals, backfilling with granular backfill and compaction; for delivery of casting to City of Fitchburg; for disposal of surplus materials and for restoring the site.

153. Reconstruct Bench and Flowlines, Item SPV.0060.620.

A Description

Work under this item includes the removal and replacement of the existing sewer structure's bench and flowline(s) as indicated in the drawings, or as required by the City of Fitchburg, to restore the bench and flowline after completion of a connection as described under Connect to Existing Sanitary Sewer Structure.

B Materials

Furnish concrete materials according to Section 8.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition

C Construction

Notify the City of Fitchburg of any potential restoration work and provide a minimum of three working days for completion of a field assessment of the structure in question. Unless shown on the drawings, do not reconstruct bench and flowlines unless directed by the City of Fitchburg.

Complete all work associated with this item as directed by the City of Fitchburg. Provide a smooth trowel finish to all completed flowlines. Brushed flowlines will not be accepted.

D Measurement

The department will measure Reconstruct Bench and Flowlines as each individual reconstruct bench and flowlines, 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.0060.620	Reconstruct Bench and Flowlines	Each

Payment is full compensation for disposing of surplus materials; for removal of existing benches and flowlines; for providing concrete and for finishing the benches and flowlines.

154. Sanitary Sewer Lateral Electronic Marker, Item SPV.0060.621.

A Description
Work under this item includes installing sanitary sewer lateral electronic marker according to Section 8 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

B Materials
Furnish materials according to Section 8.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

C Construction
Install sanitary sewer lateral electronic marker according to Section 8.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

D Measurement
The department will measure Sanitary Sewer Lateral Electronic Marker as each individual sanitary sewer lateral electronic marker, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.621	Sanitary Sewer lateral Electronic Marker	Each

Payment is full compensation for installation of electronic markers and disposal of surplus material.

155. Fluorocarbon Gaskets, Item SPV.0060.622.

A Description
Work under this item includes furnishing and installing fluorocarbon gaskets as specified below or as directed by the City of Fitchburg.

B Materials
Furnish materials according to Section 8.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Furnish all required gasket diameters to complete the work within the contaminated soil or groundwater area.

C Construction
Install fluorocarbon gaskets at the joints and fittings for all ductile iron water main located in areas of contaminated soils or ground water encountered during excavation and 50 feet to either side of the contamination or as directed by the City of Fitchburg.

D Measurement
The department will measure Fluorocarbon Gaskets as each individual fluorocarbon gaskets installed, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.622	Fluorocarbon Gaskets	Each

Payment for Fluorocarbon Gaskets is full compensation for furnishing materials of any diameter required.

156. Fire Hydrant Weep Hole Plugs, Item SPV.0060.623.

A Description
Work under this item includes furnishing and installing fire hydrant weep hole plugs as specified below or as directed by the City of Fitchburg.

B Materials
Furnish materials according to Section 8.2 of the City of Fitchburg Standard Specification for Public Works Construction – Latest Edition.

Furnish all required fire hydrant weep hole plugs to completely plug each fire hydrant.

C Construction
Install fire hydrant weep hole plugs within contaminated soils or ground water areas encountered during excavation and 50 feet to either side of the contamination or as directed by the City of Fitchburg.

D Measurement
The department will measure Fire Hydrant Weep Hole Plugs as each individual fire hydrant weep hole plugs, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.623	Fire Hydrant Weep Hole Plugs	Each

Payment is full compensation for completely plugging a fire hydrant.

157. Clay Trench Dikes, Item SPV.0060.624.

A Description
This work consists of furnishing and installing clay trench dikes in areas of contaminated soil or groundwater as specified below or as directed by the City of Fitchburg.

B Materials
Use select clay fill classified as CL or CH according to the Unified Soil Classification System. Allow a maximum clump size of 6 inches capable of being broken down with normal construction equipment to a size of 2 to 3 inches prior to compaction. Fifty percent or more of the soil particles by weight must pass the Number 200 sieve. Remove rocks, stones, sticks and other foreign objects greater than 2 inches prior to placement.

C Construction
Maintain proper moisture content to achieve specified compaction. Make water available on site for clay conditioning.

Provide select clay fill in lift thicknesses as required to obtain the specified levels of compaction. Do not exceed maximum lift thickness of 4 to 6 inches after compaction. Compact select clay fill using penetrating foot-type compaction equipment having protrusions greater in length than the lift thickness of clay being compacted. Use compaction equipment of sufficient weight to compact clay with reasonable amount of effort in order to achieve the specified levels of compaction.

Place overburden material as soon as practical after completion of select clay fill placement to avoid drying of select clay fill.

Provide each layer of fill to the degree that no further appreciable consolidation is evidence under the action of the compaction equipment. The City of Fitchburg will observe compaction efforts, approve final products and may require that the compaction of the material be to a dry density of 90 percent of the maximum dry density determined by the Modified Proctor test, or 95 percent of the Standard Proctor maximum dry density.

Provide dikes approximately 50 feet from the limits of contaminated zones. Provide along the full trench width and extend a minimum 12 inches below the pipe to 24 inches above the pipe.

Required compaction will be attained for each layer before any material for the succeeding layer is placed.

D Measurement
The department will measure Clay Trench Dikes by each individual clay trench dikes, 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.0060.624	Clay Trench Dikes	Each

Payment is full compensation for furnishing all excavation; for providing all select clay fill; for maintaining the clay moisture; for compaction; and for disposing of excess material.

158. Sanitary Sewer Monitoring Manhole 6-Foot Diameter, Item SPV.0060.625.

A Description
Work under this item includes installing sanitary sewer monitoring manhole at the depths and locations shown on the plan.

B Materials
Furnish materials for the monitoring manhole as shown in the plans.

Provide a groove in the manhole flowline for a monitoring weir as shown in the plans details.

C Construction
Install sanitary sewer monitoring manhole according to section 8.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Maintain the flow of wastewater at all times during installation of the new sanitary sewer monitoring manhole and when connecting pipes to the new structure. All bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the flow of wastewater throughout construction, is incidental to this bid item.

Place concrete benches and flowlines as directed by the City of Fitchburg.

Complete testing of new sanitary sewer monitoring manhole according to Section 8.4 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

D Measurement
The department will measure Sanitary Sewer Monitoring Manhole 6-Foot Diameter as each individual sanitary sewer monitoring manhole 6-foot diameter, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.625	Sanitary Sewer Monitoring Manhole 6-Foot Diameter	Each

Payment is full compensation for provision and installation of sanitary sewer monitoring manhole, water tight sanitary sewer pipe connections, flowlines, concrete benches, castings, adjusting rings, chimney seal, bedding, and cover; for furnishing and installing all temporary bypass pumping and connections; for furnishing all connections to existing pipes; for excavation, dewatering, backfilling with granular backfill, compaction, bracing and shoring; for removal of all utilities to be abandoned and abandoned within the location of the sanitary

sewer structure; for disposal of surplus excavated material, protection and support of existing utilities, testing, televising and cleanup.

159. Sanitary Lateral Cleanout, Item SPV.0060.626.

A Description
This work consists of furnishing and installing sanitary lateral cleanouts as shown in the plans and per the requirements of Wisconsin Plumbing Code.

B Materials
Furnish all materials according to Section 7.2 and 8.2 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition

C Construction
Provide a sanitary lateral wye in the sanitary main at the cleanout location shown on the plans. Extend sanitary pipe, of the same material as the sanitary main, to the proposed finished surface grade. Connect pipe to a cast iron valve box at the surface. Provide a cast iron cleanout cap with the word "Sewer" across the top. Adjust the valve box to the finish surface grade.

D Measurement
The department will measure Sanitary Lateral Cleanout as each individual sanitary lateral cleanout, 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.0060.626	Sanitary Lateral Cleanout	Each

Payment is full compensation for providing and installing any sanitary lateral cleanout of any size, wye of any size, and valve box of any size; for excavation, dewatering, backfilling with granular backfill, compaction, bracing, shoring, connection to existing sanitary sewer mains, valve box adjustment to ¼ inch below final surface, disposal of surplus excavated material, protection and support of existing utilities, testing and cleanup.

160. Baseline CPM Progress Schedule, Item SPV.0060.700; CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.701.

Replace standard spec 108.4 with the following:

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

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

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

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

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

Critical Path Method (CPM)
A network based planning technique using activity durations and the relationships between activities to mathematically calculate a schedule for the entire project.

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

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

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

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

Float
Float, as used herein, is the total float of an activity; i.e., it is the amount of time between the date when an activity can start (the early start), and the date when an activity must start

(the late start). In cases where the total float of an activity has a different value when calculated based on the finish dates, the lower (more critical) value will govern.

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

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

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

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

Master Program Schedule
The department's schedule for the overall Verona Road (USH 18/151) Corridor Management Program, including intermediate milestone dates contract completion dates and codes.

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

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

108.4.5 Contractor's Scheduling Responsibilities

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

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

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

108.4.6 Submittals

108.4.6.1 Initial Work Plan Schedule

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

1. Provide a detailed plan of activities to be performed during the first 90 calendar days of the contract. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
2. Provide activities as necessary to depict administrative work, including submittals, reviews, procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days).
3. Provide activities as necessary to depict third-party work related to the contract.
4. Provide summary activities for the balance of the project beyond the first 90 calendar days of the project. Summary activities may have durations greater than 28 calendar days (20 business days).
5. Submit three copies of the IWP Schedule, including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's. Submit the P6 native data file (XER) and an electronic file (PDF) to the following DOT email boxes; DOTDTSDSWMEGASCHEDULERS@dot.wi.gov and veronaroadproject@dot.wi.gov.
6. Following department receipt of the IWP Schedule, allow ten business days for department review and return of comments. Within five business days of receiving the IWP Schedule, the department will schedule a workshop for the contractor to

present the IWP Schedule and to answer questions raised during the department's review. Provide formal responses to the comments and resubmit the IWP Schedule as necessary. A notice to proceed will not be issued until the engineer accepts the IWP Schedule. The department will use the IWP Schedule to monitor the progress of the work until the Baseline CPM Progress Schedule is accepted.

7. Submit an updated version of the IWP Schedule on a bi-monthly basis (every other week) until the engineer accepts the Baseline CPM Progress Schedule. With each update, include actual start dates, completion percentages, and remaining durations for activities started but not completed. Include actual finish dates for completed activities.

108.4.6.2 Baseline CPM Progress Schedule

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

1. Develop the Baseline CPM schedule. The Baseline CPM is the contractor's committed plan to complete the Work within the time frames required to achieve the contract completion date and intermediate milestone dates. The department will use the schedule to monitor the progress of the work. Include the following:

    1.1 Provide a detailed plan of activities to be performed during the entire contract duration, including all administrative and construction activities required to complete the work as described in the contract documents. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.

    1.2 Provide activities as necessary to depict administrative work, including submittals, reviews, procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days).

    1.3 Provide activities as necessary to depict third-party work related to the contract. Third-party work activities may include but is not limited to Railroads, Utilities, Real Estate and local government agencies.

    1.4 Make allowance for specified work restrictions, non-working days, time constraints, calendars, and potential or approved weather delays; reflect involvement and reviews by the department; and coordination efforts with adjacent contractors, utility owners, and other third parties.

    1.5 With the exception of the Project Start Milestone and Project Completion Milestone, all activities must have predecessors and successors. Predecessors and successors shall not be linked to the same activity with different relationship types.The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish- to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag or overlap unless the engineer accepts requested exceptions. Include and discuss request for exceptions in the schedule narrative provided with each schedule submittal.

1.6 Schedule activities shall include the following:

a. A clear and legible description. The use of abbreviations shall be limited. Descriptions shall include an action verb describing the work performed, a basic description of the materials used, and, where applicable, a general location of the work.

b. Codes for Contract ID / WisDOT Project ID, Responsibility, Stage, and Area. The department may provide additional codes for use within department reporting.

c. Activities shall carry a single Responsibility assignment.

1.7 Schedule all intermediate milestones in the proper sequence and input as either a "Start on or After" or "Finish on or Before" date. Do not use other constraint types, within the software, without prior approval by the engineer. Do not apply date constraints on any work tasks without prior approval by the engineer. Provide predecessors and successors for each intermediate milestone as necessary to model each Stage of the Work. Unless the engineer accepts a requested exception, the schedule shall encompass all the time in the contract period between the starting date and the specified completion date.

1.8 Develop an anticipated cash-flow curve for the project, based on the Baseline CPM schedule by assigning cost values to selective work tasks within the CPM schedule that total the value of the contract.

1.9 Provide budgeted quantities consistent with the bid quantities on selective construction tasks within the CPM schedule. The engineer will provide a summarized list of 30 generalized quantity items that will be identified and applied by the contractor using the P6 software application.

2. Provide three hard copies (11" x 17") of the CPM schedule depicting the CPM network. Organize the logic diagram by grouping related activities, based on the activity codes in the CPM.

3. Provide a written narrative with the Baseline CPM explaining the planned sequence of work, as-planned critical path, critical activities for achieving intermediate milestone dates, traffic phasing, and planned labor and equipment resources. Use the narrative to further explain:

3.1 The basis for activity durations in terms of production rates for each major type of work (number of shifts per day and number of hours per shift), and equipment usage and limitations.

3.2 Use of constraints.

3.3 Use of calendars.

3.4 Estimated number of adverse weather days on a monthly-basis.

3.5 Scheduling of permit and environmental constraints, and coordination of the schedule with other contractors, utilities, and public entities.

4. Submit three copies of the Baseline CPM schedule including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's. Submit the P6 native data file (XER) and an electronic file (PDF) to the following

DOT email boxes; DOTDTSDSWMEGASCHEDULERS@dot.wi.gov and veronaroadproject@dot.wi.gov.

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

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

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

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

108.4.6.3 Monthly CPM Schedule Updates

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

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

5. Within ten business days of receiving each CPM Schedule update, the engineer will provide formal review comments and schedule a meeting, if necessary, to address comments raised in the department's review. Address the department's comments and resubmit a revised CPM Schedule update within five business days after the department's request.

108.4.6.4 Three-Week Look-Ahead Schedules

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

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

108.4.6.5 Weekly Production Data

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

1. Provide data on the following items by the units specified:

1.1 Underground Facilities – LF per week

1.2 Retaining Walls – SF per week

- MSE Walls
- Other Wall Types

1.3 Bridge Construction

- Foundation Pile – EACH per week
- Foundation/Substructure Concrete – CY per week
- Structural Steel Girders – EACH per week
- Prestressed Concrete Girders – EACH per week
- Deck Formwork – SF per week

1.4 Roadway Excavation – CY per week

1.5 Roadway Embankment – CY per week

1.6 Roadway Structural Section

- Grading/Subgrade Preparation – SY per week
- Base Material Placement – TON per week
- Base Material Subgrade Preparation – SY per week
- Asphaltic Base – TON per week
- Asphaltic and HMA Pavements – TON per week
- Concrete Pavement – SY per week
- Concrete Pavement – CY per week

1.7 Finishing Items – SY per week

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

2. For each item, indicate the actual daily production for the past week and the anticipated weekly production for the next week. Also include cumulative production curves showing the production information for each item to date.

3. Submit the data in an electronic spreadsheet format at the same time the Three-Week Look-Ahead is submitted. On a weekly basis, the department and the contractor shall agree on the production data or document any disagreements.

108.4.7 Progress Review Meetings

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

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

108.4.8 CPM Progress Schedule Revisions

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

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

1. The forecast completion date is scheduled to occur more than 14 calendar days after the contract completion date.

2. An intermediate milestone is scheduled to occur more than 14 calendar days after the date required by the contract.

3. The engineer determines that the progress of the work differs significantly from the current schedule.

4. A contract change order requires the addition, deletion, or revision of activities that causes a change in the contractor's work sequence or the method and manner of performing the work.

108.4.9 Documentation Required for Time Extension Requests

To request a time extension to an intermediate milestone date or the contract completion date associated with changes to the work, provide a narrative detailing the work added or deleted and the other activities affected, based on the latest accepted CPM Monthly Update. For added work, submit a proposed fragnet of activities to be added or revised in the CPM schedule, indicating how the fragnet is to be tied to the CPM schedule.

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

1. For requests to extend the contract completion date, include a detailed description of how the delay, or additional work, affected the project's critical path, based on the latest accepted CPM Monthly Update.

2. For requests to extend an intermediate milestone date, include a description of how the delay, or additional work, affected the controlling (longest) path to the milestone, based on the latest accepted CPM Monthly Update.

3. The department and the contractor agree that the float is not for the exclusive use or financial benefit of either party. Either party has the full use of the float on a first come basis until it is depleted.

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

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

108.4.11 Payment for CPM Progress Schedule
The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.700	Baseline CPM Progress Schedule	Each
SPV.0060.701	CPM Progress Schedule Updates and Accepted Revisions	Each

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

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

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

If the Initial Work Plan Schedule, Baseline CPM Progress Schedule, Revised CPM Progress Schedule, and the Monthly Progress Schedule update submittals are not received by the department within 10 business days after the submittal time specified, the department will only make progress payments for the value of materials, as specified in standard spec 109.6.3.2.1, until the schedule is submitted.
(12/18/2014)

161. Street Sweeping, Item SPV.0075.001.

A Description

This special provision describes removing dirt and dust particles from the roadway using a street sweeper periodically during the project as directed by the engineer.

B Materials

Provide a mechanical, vacuum-assisted or regenerative street sweeper capable of collecting debris within an enclosed collection bin or hopper and disposing of the debris.

C Construction

Remove debris from the roadway using the street sweeper periodically during the project as directed by the engineer.

Provide logged hours of street sweeping to the engineer for approval on a weekly basis.

D Measurement

The department will measure Street Sweeping by the hour that the street sweeper is on the project picking up and removing debris from the roadway, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.001	Street Sweeping	HRS

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

162. Seeding Mixture Detention Pond, Wet Sedge Meadow, Item SPV.0085.001; Short Grass Prairie, Item SPV.0085.002.

A Description

This work consists of preparing seed beds, furnishing, and sowing detention pond 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 mixtures to the engineer a minimum of 30 calendar days prior to use.

B.2 Sedge Meadow

Provide a seed mixture at areas shown as Wet Sedge Meadow in the plans, conforming to the following species and mixture proportions:

Scientific Name	Common Name	% by weight	Total (oz)
Grasses			
Calamagrostis Canadensis	Blue Joint Grass	1.16	1.44
Elymus Riparius	River Bank Wild Rye	9.89	12.31
Glyceria Grandis	Reed Mana Grass	5.31	6.61
Spartina Pectinata	Prairie Cord Grass	5.40	6.72
Sedges			
Carex Comosa	Bristly Sedge	2.72	3.39
Carex Crinata	Fringed Sedge	1.10	1.37
Carex Stipata	Common Fox Sedge	2.67	3.32
Carex Vulpinoidea	Brown Fox Sedge	0.97	1.20
Scirpus Acutus	Hard-Stem Bulrush	1.60	2.00
Scirpus Atrovirens	Dark-Green Bulrush	1.20	1.49
Scirpus Cyperinus	Wool Grass	0.49	0.61
Scirpus Fluviatilis	River Bulrush	0.25	0.31
Scirpus Validus	Softstem Bulrush	1.72	2.15
Wildflowers			
Acorus Americanus	Sweet Flag	7.07	8.80
Alisma Subcordatum	Mud Plantain	1.36	1.69
Asclepias Incarnata	Marsh Milkweed	2.29	2.86
Aster Novae-Angliae	New England Aster	0.95	1.18
Eupatorium Maculatum	Spotted Joe Pye Weed	0.62	0.77
Helenium Autumnale	Sneezeweed	0.52	0.64
Iris Virginica Shrevei	Blue Flag Iris	4.67	5.81
Napea Dioica	Glade Mallow	10.81	13.46
Pontederia Cordata	Pickerel Weed	3.73	4.65
Sagittaria Latifolia	Common Arrowhead	0.76	0.95
Silphium Perfoliatum	Cupplant	11.66	14.52
Solidago Graminifolia	Grass-Leaved Goldenrod	0.08	0.10
Sparganium Eurycarpum	Great Bur Reed	18.66	23.23
Verbena Hastata	Blue Vervain	0.74	0.92
Vernonia Fasciculata	Ironweed	1.59	1.98

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	% by weight	Total (oz)
Grasses			
Andropogon Scoparius	Little Bluestem	18.86	88.79
Bouteloua Curtipendula	Side Oats Grama	43.06	202.73
Elymus Canadensis	Canada Wild Rye	11.93	56.14
Sporobolus Heterolepis	Prairie Dropseed	1.10	5.19
Wildflowers			
Agastache Foeniculum	Lavender Hyssop	0.85	3.98
Aster Azureus	Sky Blue Aster	0.97	4.54
Coreopsis Lanceolata	Sand Coreopsis	2.60	12.26
Echinacea Pallida	Pale Purple Coneflower	2.01	9.45
Monarda Fistulosa	Wild Bergamot	0.89	4.20
Penstemon Digitalis	Smooth Penstemon	0.52	2.43
Rudbeckia Hirta	Black-Eyed Susan	0.56	2.65
Solidago Rigida	Stiff Goldenrod	0.99	4.68
Tradescantia Ohiensis	Spiderwort	0.72	3.38
Verbena Stricta	Hoary Vervain	1.79	8.41
Legumes			
Cassia Fasciculata	Partridge Peas	5.14	24.20
Desmanthus Illinoensis	Illinois Bundle Flower	4.00	18.83
Petalostemum Candida	White Prairie Clover	1.88	8.85
Petalostemum Purpeum	Purple Prairie Clover	2.14	10.06

C Construction
Sow seeding mixtures according to standard spec 630.3.3.1.

Use a seeding rate for Wet Sedge Meadow of 0.21 pounds per 1,000 square feet and apply at a rate not less than 100 seeds per square foot.

Use a seeding rate for Short Grass Prairie of 0.67 pounds per 1,000 square feet and apply at a rate not less than 150 seeds per square foot.

Provide an establishment period for the Seeding Mixture Detention Pond (Type) according to standard spec 630.3.3.6. The establishment period maintenance shall apply to all growing seasons through October 15, 2019 for Seeding Mixture Detention Pond (Type).

D Measurement
The department will measure Seeding Mixture Detention Pond (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 Detention Pond, Wet Sedge Meadow	LB
SPV.0085.002	Seeding Mixture Detention Pond, Short Grass Prairie	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.

163. Construction Fence Temporary, Item SPV.0090.001.

A Description

This special provision describes furnishing, erecting, moving, maintaining and removing temporary construction fencing and gates according to standard spec 616 and as hereinafter provided.

B Materials

B.1

Provide a 6' high temporary chain link fence with materials conforming to standard spec 616.2.3 with the following exceptions:

1. Used/salvaged fencing materials are acceptable.
2. Determine post size, bracing, and hardware requirements with consideration for wind loading due to the privacy screening.
3. Portable free standing chain link fence panels may be used.

B.2

Provide privacy screening of either slats or fabric on the entire height and length of all construction fencing and gates that is green in color.

B.2.1

Provide bottom-locking PVC privacy fence slats.

B2.2

Provide HDPE or polypropylene commercial grade screening fabric with at least 88% blockage.

C Construction

Erect construction fence temporary at the locations shown on the plans or as directed by the engineer prior to beginning work operations. Provide gates and openings of size and location required by contractor's operations. Close and secure all gates and openings when not in use. Maintain the construction fence temporary including the privacy screening for the duration of the project and within four hours of any damage.

Install privacy screening according to manufacturer's recommendations.

D Measurement
The department will measure Construction Fence Temporary in length by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.001	Construction Fence Temporary	LF

Payment is full compensation for providing the chain link construction fencing, erecting the fencing, installing the privacy screening, maintaining and repairing the fence and privacy screening, for providing secure gates and openings, for moving and adjusting the fencing during construction, and for removing and disposing of the fence and privacy screening upon contract completion.

164. Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate, Item SPV.0090.002.

A Description
This special provision describes providing and placing pipe underdrain, geotextile fabric, and aggregate as shown on the plans and hereinafter provided.

B Materials
B.1 Pipe Underdrain
Provide Pipe Underdrain 6-Inch according to standard spec 612.2.

B.2 Geotextile Fabric
Provide Geotextile Fabric Type, DF Schedule B according to standard spec 645.2.1 and 645.2.4.

B.3 Aggregate
Provide coarse aggregate size No. 1 conforming to standard spec 501.2.5.4.

C Construction
Construct the Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate in locations shown on the plans and according to standard spec 612.3.1, 612.3.3, 612.3.5 and 645.3.4.

D Measurement
The department will measure Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate in length by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.002	Pipe Underdrain 6-Inch with Geotextile Fabric and Aggregate	LF

Payment is full compensation for providing and placing all materials, including pipe underdrain, geotextile fabric, aggregate, backfill, connections, fittings, and caps or plugs; for furnishing all excavating, recompacting, disposing of surplus material, and restoring the work site.

165. Salvage Timber Curb, Item SPV.0090.003.

A Description

This special provision describes removing and salvaging existing timber curb, including anchors, and reinstalling at the same location or as the engineer directs.

B Materials

Salvage and reuse the existing materials.

C Construction

Remove and salvage existing timber curb and anchors.

Stockpile and store timber curb and anchors until they are ready to be reinstalled.

Reinstall salvaged timber curb and anchors at the existing location without damage to the timber curb or anchors. Replace any timber curb or anchors that are damaged by the contractor at no expense to the department.

D Measurement

The department will measure Salvage Timber Curb 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.0090.003	Salvage Timber Curb	LF

Payment is full compensation for removing timber curb and anchors from existing location; for stockpiling and storage of salvaged timber curb and anchors; for placing timber curb and anchors; for replacement of any damaged installations and disposing of surplus materials; and for restoring the work site.

166. Salvage Boulder Wall, Item SPV.0090.004.

A Description
This special provision describes removing and salvaging existing boulder wall and reinstalling the boulder wall at the same location or as the engineer directs.

B Materials
Salvage and reuse the existing materials. Provide geotextile fabric type R according to the standard specifications standard spec 645.

C Construction
Remove and salvage existing boulder wall materials. Remove any existing geotextile fabric that may exist behind the boulder wall and dispose of it.

Stockpile and store boulders until they are ready to be reinstalled.

Replace any removed geotextile fabric that was removed according to the standard specifications standard spec 645.3.6. Reinstall boulder wall at the existing location without damage to the boulders. Replace any boulders damaged by the contractor at no expense to the department.

D Measurement
The department will measure Salvage Boulder Wall 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.0090.004	Salvage Boulder Wall	LF

Payment is full compensation for removing boulder wall from existing location; for stockpiling and storage of salvaged boulders; for furnishing and installing geotextile fabric; for reinstalling boulder wall; for replacing of damaged installations and disposing of surplus materials; and for restoring the work site.

167. Fence Wood Salvaged, Item SPV.0090.005.

A Description
This special provision describes salvaging and re-erecting wood fence according to the applicable sections of standard spec 204 and 616, at locations shown on the plans, and as hereinafter provided.

B (Vacant)

C Construction
Remove, handle, store, and re-erect the fence, fence posts, and appurtenant hardware without damaging the parts. Replace contractor-damaged parts and provide all other materials necessary to re-erect the fence. Dispose of all surplus materials.

D Measurement
The department will measure Fence Wood Salvaged 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.0090.005	Fence Wood Salvaged	LF

Payment is full compensation for removing, handling, and storing existing fence materials; for re-erecting the fence, fence posts, and appurtenant hardware; for replacing all contractor-damaged parts and materials; and for restoring the work site.

168. Concrete Barrier Precast 12.5-FT, Item SPV.0090.006.

A Description
This special provision describes furnishing, constructing and placing precast concrete barrier according to standard spec 603 and as hereinafter provided.

B Materials
An approved concrete barrier system listed in the department's Approved Product List may be furnished as an acceptable alternate to the concrete barrier temporary system shown in standard detail drawing Concrete Barrier Temporary Precast, 12'-6". Provide new concrete barrier. New concrete barrier that is delivered may be relocated within the job site. The concrete barrier will remain, upon completion of this contract, and will become the property of the department.

C Construction
Place the barrier according to the applicable sections of Standard Detail Drawing Concrete Barrier Temporary Precast, 12'-6".

Anchor Concrete Barrier Precast 12.5-FT if materials, equipment, or other items, that are a hazard, are within 4-feet of the construction zone side (deflection zone) of the barrier. Any drop off exceeding 2- feet or slope exceeding 3H:1V within the deflection zone will be considered a hazard.

D Measurement
The department will measure Concrete Barrier Precast 12.5-FT in length by the linear foot, acceptably completed. This measurement equals the length along the base of the barrier.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.006	Concrete Barrier Precast 12.5-FT	LF

Payment is full compensation for hauling, delivering, placing; for providing and installing all connecting pins and anchors; and for providing and installing necessary reflectors.

169. Surcharge Earth Embankment, Item SPV.0090.007.

A Description

This special provision describes constructing a surcharged earth embankment according to the dimensions, elevations and details as shown on the plans and as hereinafter provided.

B Materials

B.1 Drainage Blanket

B.1.1 Geotextile Fabric Type DF Schedule B

Provide schedule B geotextile fabric according to standard spec 645.2.4.

B.1.2 Select Crushed Material

Provide Select Crushed Material according to standard spec 312.

B.2 Backfill Material

Use of on-site material is acceptable as backfill material, provided the material is free of soft and organic soils, is granular in nature, and as visually approved by the engineer.

B.3 Settlement Gauges

Provide six 2-foot by 2-foot by 0.5-inch-thick heavy gauge steel plates with a ½-inch-diameter threaded socket welded to the middle of the plates. Provide threaded 4-foot long, ½-inch-diameter galvanized steel piping to use as uprights for the plates. Match the threading with the sockets provided above. Provide threaded PVC casing, 2-inch-diameter of sufficient length to isolate the galvanized steel uprights from the embankment fill. Provide a removable cap on the exposed end of the PVC casing.

C Construction

C.1 General

Schedule a meeting with the engineer and the department's geotechnical engineer 10 business days prior to beginning work under this bid item to discuss the excavation and embankment construction operations, locations of settlement gauges, types of settlement gauges being used and schedule for the work.

Construct the proposed surcharge earth embankment according to standard spec 205 and 207, or as directed by the engineer. Provide steps or benches where the surcharge earth embankment extends into the existing embankment.

Remove all loose material from the excavation surface. Use only small tracked dozers or small tracked loaders to travel on the excavation surface. Alternatively, a small dual smooth-drum compactor could be used to compact loose material present on the excavation surface. The intent of the compaction effort is to minimize the presence of loose material left from the excavation activities. The engineer will observe the loose material removal and/or surface compaction effort. If any yielding or pumping of the exposed material is observed, stop the compaction effort and/or equipment travel and remove any remaining loose material, as directed by the engineer, by other means.

C.2 Drainage Blanket

Place the geotextile on the prepared excavation surface according to standard spec 645.3.4. Notify the engineer of which method, overlapped or sewn, will be used. Uniformly place and level the select crushed material on top of the geotextile as shown on the plans to a depth of one foot within the proposed surcharge earth embankment limits. Compact the material according to standard spec 312. Wrap the select crushed material layer with the woven geotextile as shown on the plans.

Uniformly place and level the backfill material according to standard spec 207.3.6.2 except the maximum loose layer thickness is 8 inches. Use a vibratory-smooth drum roller to compact the backfill material. Only tracked vehicles or smooth-drum rollers are allowed to travel on the select crushed material.

Repair any rutting or deformations in the drainage blanket caused by construction operations to a level surface.

Replace damaged or defective drainage blanket at no cost to the department.

C.3 Settlement Gauges

Install the settlement gauges within 12 inches of the horizontal locations shown on the plan under the supervision of the engineer and/or the department's geotechnical engineer. If field conditions prohibit installation of the settlement gauges at the locations indicated on the plans, obtain approval from the engineer and department for new locations prior to installation.

Place the plates on top of the geotextile covering the drainage blanket backfill. Set the bottom of each plate level. Mortar may be used to level the 2-foot by 2-foot by 0.5-inch thick plate. Connect a section of galvanized steel upright to the plate. Place each upright vertical. Place a section of PVC casing over the upright. Install a removable PVC cap on the PVC casing to allow access to the galvanized steel upright and to prevent excess moisture and debris from entering the annulus between the galvanized steel upright and the PVC casing.

Determine the length of individual sections of the steel upright and PVC casing. Install additional lengths of galvanized steel uprights and PVC casing as the embankment fill progresses. Accurately measure and record the top elevation and coordinates of each added section of galvanized steel upright. Measure the vertical and lateral location of the top of the

galvanized steel upright for all settlement gauge readings. Record all surveying measurements to the nearest hundredth of a foot vertically and tenth of a foot horizontally. Conduct an as-built survey to determine the horizontal and vertical positions of the settlement gauges. Furnish the engineer with a copy of the results within 3 days of field survey data acquisition.

After Surcharge Earth Embankment construction has been completed, adjust the tops of the galvanized steel upright and the PVC casing so they terminate at the finished elevation of the embankment or as directed by the department.

Place and compact Surcharge Earth Embankment fill material within a minimum 3-foot radius of the riser pipe to specification requirements using hand equipment, taking precautions to keep alignment of the upright and the PVC pipes vertical at all times. Reduce the reinforced embankment material lift thickness within the minimum 3-foot radius as required to achieve the specified compaction.

Take all necessary precautions to ensure that the settlement gauges are not damaged, displaced, or misaligned. If a settlement gauge is damaged, immediately repair or replace the gauge at contractor's expense. The engineer will determine whether repair or replacement is required. Complete the repair or replacement as soon as practical after notification by the engineer as to whether a repair or replacement is required. Flag, protect, and maintain all settlement gauges installed as part of this contract.

C.4 Geotechnical Monitoring

Record initial readings of settlement gauges a minimum of 24 hours after completing the settlement marker installation. Obtain a minimum of two readings. The arithmetic average of the two initial recorded data readings will be recorded as the initial baseline reading.

After completion of the embankment construction record a minimum of one reading per instrument per week until completion of the project, or as directed by the engineer.

Cooperate with the department and its representatives in the monitoring and protection of the geotechnical instrumentation in the surcharge earth embankment. Conduct construction activities such that the department has reasonable access to the geotechnical instrumentation.

At the completion of the project, all settlement gauges will become the property of the department.

D Measurement

The department will measure Surcharge Earth Embankment in length by the linear foot, acceptably completed.

Measurement will occur along the VR roadway alignment.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.007	Surcharge Earth Embankment	LF

Payment is full compensation for furnishing all excavation; for furnishing and placing the geotextile fabric, Select Crushed Material, and backfill material; and for furnishing, placing, monitoring settlement gauge installation and coordinating with the department.

170. Sawing Curb Head, Item SPV.0090.008.

A Description
This special provision describes sawing curb heads according to the applicable provisions of standard spec 204 and as detailed in the plans.

B (Vacant)

C Construction
Sawcut and remove the curb head from existing asphaltic and concrete curb and gutter. Capture and dispose of the slurry residue created by the sawing.

D Measurement
The department will measure Sawing Curb Head 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.0090.008	Sawing Curb Head	LF

Payment is full compensation for sawing curb head; for hauling and disposing of surplus materials; for capturing and disposing of any saw slurry; and for restoring the work site.

171. Construction Staking Pedestrian Surface, Item SPV.0090.009.

A Description
Preform work according to the applicable provisions of standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction
Set construction stakes or marks at 50-foot intervals, maximum, and at additional locations as detailed in the plans. Set and maintain construction stakes or marks as necessary to achieve the required accuracy to support the method of operations. Set additional

construction stakes as necessary to establish location and grade of Concrete Sidewalk, Sidewalk Pavement, Temporary Pedestrian Surface Asphalt, and Temporary Pedestrian Surface Special including points of change in alignment and at driveway locations. Locate stakes to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

D Measurement
The department will measure Construction Staking Pedestrian Surface in length by the linear foot, acceptably completed.

Concrete Sidewalk, Sidewalk Pavement, Temporary Pedestrian Surface Asphalt, and Temporary Pedestrian Surface Special adjacent to concrete curb and gutter will not be measured as Construction Staking Pedestrian Surface.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.009	Construction Staking Pedestrian Surface	LF

Payment is full compensation for locating and setting all construction stakes and for relocating and resetting damaged or missing construction stakes.

172. Concrete Curb 4-Inch Sloped 12-Inch Type A, Item SPV.0090.010; Concrete Curb and Gutter 32-Inch Special, Item SPV.0090.011; Concrete Curb and Gutter 56-Inch Special; Item SPV.0090.012; Concrete Curb and Gutter 24-Inch Type D, Item SPV.0090.013.

A Description
Perform work according to the applicable provisions of standard spec 601, as detailed in the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Curb (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.0090.010	Concrete Curb 4-Inch Sloped 12-Inch Type A	LF
SPV.0090.011	Concrete Curb and Gutter 32-Inch Special	LF
SPV.0090.012	Concrete Curb and Gutter 56-Inch Special	LF
SPV.0090.013	Concrete Curb and Gutter 24-Inch Type D	LF

Payment is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway and alley entrances, or curb ramps; for providing all materials, including concrete, expansion joints, and reinforcement tie bars unless specified otherwise; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

173. Concrete Barrier Special, Item SPV.0090.014.

A Description
Perform work according to the applicable provisions of standard spec 603 and as detailed in the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Concrete Barrier Special in length by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.014	Concrete Barrier Special	LF

Payment is full compensation for furnishing all foundation excavation and preparation; for providing all materials, including concrete, expansion joints, and reinforcement tie bars unless specified otherwise; for placing, finishing, protecting, and curing; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for excavation required for this work as specified in the contract.

174. Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 38x60-Inch, Item SPV.0090.050; 43x68-Inch, Item SPV.0090.051.

A Description
Perform 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 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV (size) 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.0090.050	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 38x60-Inch	LF
SPV.0090.051	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 43x68-Inch	LF

Payment is full compensation for providing all materials; for furnishing all excavating except rock excavation; for forming the foundation; providing and removing sheeting and shoring; for laying pipe and sealing joints, and making connections to new or existing fixtures; for joint ties; for backfilling, for providing granular backfill material, including bedding material; for cleaning out; and absent the pertinent contract bid items, for restoring the work site.

175. Storm Sewer Pipe PVC 6-Inch, Item SPV.0090.052; 8-Inch, Item SPV.0090.053; 12-Inch, Item SPV.0090.054; 15-Inch, Item SPV.0090.055.

A Description
This special provision describes furnishing and installing Poly Vinyl Chloride (PVC) storm sewer pipe.

B Materials
Provide solid-wall PVC storm sewer pipe and fittings meeting the requirements of ASTM D 3034.

Provide pipe and fittings having a standard dimension ratio of 26 or 35.

Assemble solvent cement joints using solvent cement obtained from the pipe manufacturer, which conforms to the requirements of ASTM D2564.

The assembled joint must pass the performance tests as required in ASTM D3212.

Provide ASTM D3034 SDR-26 pipe for storm sewer mains deeper than 12 feet.

C Construction
Install PVC storm sewer pipe according to the applicable provisions of standard spec 520, at the alignment and grades shown on the plans.

Install pipe fittings according to the manufacturer's recommendation.

D Measurement
The department will measure Storm Sewer Pipe PVC (size) 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.0090.052	Storm Sewer Pipe PVC 6-Inch	LF
SPV.0090.053	Storm Sewer Pipe PVC 8-Inch	LF
SPV.0090.054	Storm Sewer Pipe PVC 12-Inch	LF
SPV.0090.055	Storm Sewer Pipe PVC 15-Inch	LF

Payment is full compensation for providing all materials, including fittings; for furnishing all excavating except rock excavation; for forming the foundation; providing and removing sheeting and shoring; for laying pipe and sealing joints, and making connections to new or existing fixtures; and for backfilling, for providing granular backfill material, including bedding material.

176. Galvanized Pipe Railing, Item SPV.0090.200.

A Description
This special provision describes fabricating, galvanizing, and installing railing according to standard spec 506 and 513 and the plan details, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Galvanized Pipe Railing in length by the linear foot along the top rail, 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.0090.200	Galvanized Pipe Railing	LF

Payment is full compensation for fabricating, galvanizing, transporting, and installing the railing, including any touch-up and repairs.

177. Water Main, 6-Inch, Item SPV.0090.600; 8-Inch, Item SPV.0090.601; 10-Inch, Item SPV.0090.602; 12-Inch, Item SPV.0090.603.

A Description

This special provision describes furnishing and installing water main (size) according to Section 7 of the City of Fitchburg Standard Specification for Public Works Construction – Latest Edition.

B Materials

Furnish materials according to Section 7.2 of the City of Fitchburg Standard Specification for Public Works Construction – Latest Edition.

Provide granular backfill according to Granular Backfill for Water Main.

C Construction

Install water main according to section 7.3 of the City of Fitchburg Standard Specification for Public Works Construction – Latest Edition.

Remove all abandoned or existing material located in the new water main alignment.

D Measurement

The department will measure Water Main (Size) in length as linear foot of water main (size), 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.0090.600	Water Main, 6-Inch	LF
SPV.0090.601	Water Main, 8-Inch	LF
SPV.0090.602	Water Main, 10-Inch	LF
SPV.0090.603	Water Main, 12-Inch	LF

Payment is full compensation for providing and installation of water main , fittings, bends, tees, appurtenances, bedding, cover restraints, thrust blocking, and polywrap; for furnishing all special connections to existing mains; for excavation; dewatering, backfilling, compaction, bracing and shoring; for removal of all utilities abandoned within the new water

main alignment; for disposal of surplus excavated material, protection and support of existing utilities, chlorination and testing and cleanup. Granular Backfill for Water Main will be paid separately.

178. Steel Casing Pipe, 24-Inch, Item SPV.0090.604.

A Description

This special provision describes installing water main with engineered spacers within steel casing pipe by open cutting.

B Materials

Provide granular backfill according to Granular Backfill for Water Main.

Provide all materials necessary to install water main within steel casing pipes via open cutting. Provide steel casing pipe, sized to provide a minimum of 24-inch diameter casing for a 12-inch water main. Provide steel casing pipe adequately sized to allow for complete installation of the carrier pipe to the elevations and slopes shown in the plans. Oversizing of the casing pipe to allow for installation is at the discretion of the contractor and is included in this item.

Provide steel casing pipes meeting the following standards:

- ASTM specification A139 Grade B or AWWA specification C200
- Outside diameter as specified by the contractor
- Not coated or cathodically protected, no hydrostatic testing required
- 0.3750" minimum thickness for 24-inch diameter casing
- Specified minimum yield strength, SMYS, of at least 35,000 psi
- New and unused pipe
- Straight and round pipe
- Beveled ends for butt welding

Provide two-piece stainless steel pipe spacers meeting the following requirements:

- Stainless Steel Band
  - 8-inches wide stainless steel with 2-inch wide glass reinforced polymer runners
  - 14 Gauge (0.074-inch) thickness
  - 100 percent 304 Stainless Steel
- Polyvinylchloride (PVC) liner
  - Thickness: 0.090-inches
  - Hardness: Durometer "A" 85-90
  - Dielectric Strength: 60,000 V min. (1/8" Surge Test), 58,000 V min. (Step-by-step test)
  - Water Absorption: 1 percent maximum
  - Functional Temperature Range: -40°F to 170°F
- Risers
  - 10 Gauge (0.135") thickness
  - 100% 304 Stainless Steel, MIG welded to the band

- Hardware
  - 8-inch stainless steel band with 6 studs, 12 nuts and washers
  - Threaded Studs: 5/16-inch - 18-inch x 2 1/2-inch 304 stainless steel or plated
  - Hex Nuts: 5/16-inch hex nuts
  - Washers: 5/16-inch SAE 2330

Provide water main carrier pipes meeting the requirements of Water Main, 12-Inch.

Provide pre-manufactured synthetic rubber casing/carrier end seals with stainless steel bands.

C Construction

Submit the following documents to the engineer and the City of Fitchburg for approval prior to ordering of materials and the start of construction:

- Certificate of compliance for the steel casing pipe.
- Pipe loading calculations for steel casing pipe.
- Sieve analysis and material specification for sand or limestone screenings for filling of annular space between carrier pipe and casing pipe.
- Material specification for casing spacers and end seals.
- Casing spacer design and layout plan.
- Boring and receiving pits excavation and soil retention design and plan.
- Site security plan.
- Design and mix for slurry and installation plan for filling voids between casing pipe and surrounding soil.

Fill any voids between casing pipe and surrounding soil with slurry conforming to Type B Slurry mix as specified in Article 301.9 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Connect adjacent lengths of steel casing pipe by continuous, circumferential, field butt welding according to AWWA C206. Provide connections that are straight and true, and watertight in the existing groundwater conditions.

Prior to installing the carrier pipe inside of the casing pipe, install spacers per manufacturer's recommendations at maximum eight foot spacing and within two feet of both ends of the casing pipe on all carrier pipe. Install sand or pea gravel into the annular space between the carrier pipe and casing pipe up to the spring line of the carrier pipe to provide bedding under the carrier pipe, as directed by the City of Fitchburg. Install end seals at each end of the casing pipe per manufactures instructions.

Contractor is solely responsible for any damage created by thrust and lateral earth pressures created by the installation process. Protect existing utilities in or around the boring and receiving pit areas.

D Measurement
The department will measure Steel Casing Pipe, 24-Inch, in length by the linear foot, acceptably completed.

Measurement will be made on a straight line from one end of the steel casing pipe to the other, measured at the invert.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.604	Steel Casing Pipe, 24-Inch	LF

Payment is full compensation for dewatering, excavation, shoring; for installation of the steel casing pipe, installation of the carrier pipe inside of the casing pipe with casing spacers as described, and filling of annular space between carrier pipe and casing pipe; for installing end seals on the finished installation; for excavations, for installing grout between casing pipe and surrounding soil, backfilling, compaction, disposal of excess materials, and restoration of the site; for protection or replacement of existing structures and utilities, and site security. Granular Backfill for Water Main will be paid separately.

179. Steel Casing Pipe, 36-Inch, Item SPV.0090.605.

A Description
This special provision describes installing sanitary sewer main with engineered spacers within steel casing pipe by trenchless bore and jack method.

B Materials
Provide granular backfill according to Granular Backfill for Sanitary Sewer.

Provide all materials necessary to install sanitary sewer within steel casing pipes via trenchless bore and jack method. Provide steel casing pipe, sized to provide a minimum of 36-inch diameter casing for a 15-inch sanitary sewer pipe. Provide steel casing pipe adequately sized to allow for complete installation of the carrier pipe to the elevations and slopes shown in the plans. Oversizing of the casing pipe to allow for installation is at the discretion of the contractor and is included in this item.

Provide steel casing pipes meeting the following standards:

- ASTM specification A139 Grade B or AWWA specification C200
- Outside diameter as specified by the contractor
- Not coated or cathodically protected, no hydrostatic testing required
- 0.5625” minimum thickness for 36-inch diameter casing
- Specified minimum yield strength, SMYS, of at least 35,000 psi
- New and unused pipe
- Straight and round pipe
- Beveled ends for butt welding

Provide two-piece stainless steel pipe spacers meeting the following requirements:

- Stainless Steel Band
  - 8-inches wide stainless steel with 2-inch wide glass reinforced polymer runners
  - 14 Gauge (0.074-inch) thickness
  - 100 percent 304 Stainless Steel
- Polyvinylchloride (PVC) liner
  - Thickness: 0.090-inches
  - Hardness: Durometer "A" 85-90
  - Dielectric Strength: 60,000 V min. (1/8" Surge Test), 58,000 V min. (Step-by-step test)
  - Water Absorption: 1 percent maximum
  - Functional Temperature Range: -40°F to 170°F
- Risers
  - 10 Gauge (0.135") thickness
  - 100% 304 Stainless Steel, MIG welded to the band
- Hardware
  - 8-inch stainless steel band with 6 studs, 12 nuts and washers
  - Threaded Studs: 5/16-inch - 18-inch x 2 1/2-inch 304 stainless steel or plated
  - Hex Nuts: 5/16-inch hex nuts
  - Washers: 5/16-inch SAE 2330

Provide sanitary sewer carrier pipes meeting the requirements of Sanitary Sewer Pipe, 15-Inch.

Provide pre-manufactured synthetic rubber casing/carrier end seals with stainless steel bands.

Provide sand or limestone screenings conforming to Article 502.1 (d) of the City of Madison Standard Specification for Public Works Construction - Latest Edition.

C Construction

Submit the following documents to the engineer and the City of Fitchburg for approval prior to ordering of materials and the start of construction:

- Certificate of compliance for the steel casing pipe.
- Pipe loading calculations for steel casing pipe.
- Sieve analysis and material specification for sand or limestone screenings for filling of annular space between carrier pipe and casing pipe.
- Material specification for casing spacers and end seals.
- Casing spacer design and layout plan.
- Boring and receiving pits excavation and soil retention design and plan.
- Site security plan.
- Design and mix for slurry and installation plan for filling voids between casing pipe and surrounding soil.

Excavate the boring and receiving pits according to Article 201.2 of the City of Madison Standard Specifications for Public Works Construction-Latest Edition.

Complete trenchless construction via dry auger boring and jacking. Water jacking for excavation of the soil is not allowed. The use of water to facilitate removal of spoil is permitted. At a minimum, extend trenchless construction to limits of the casing shown on the plans. Trenchless limits may be extended at the contractor's discretion, and as approved by the City of Fitchburg.

For casing pipe installation, excavate the bore hole to match the outside diameter of the casing pipe. In soft, unstable soil, maintain auger within the casing pipe and do not extend auger past the end of the casing to minimize creation of a void between the casing and surrounding soil. Fill any voids between casing pipe and surrounding soil with slurry conforming to Type B Slurry mix as specified in Article 301.9 of the City of Madison Standard Specifications for Public Works Construction - Latest Edition.

Connect adjacent lengths of steel casing pipe by continuous, circumferential, field butt welding according to AWWA C206. Provide connections that are straight and true, and watertight in the existing groundwater conditions.

Prior to installing the carrier pipe inside of the casing pipe, install spacers per manufacturer's recommendations at maximum eight foot spacing and within two feet of both ends of the casing pipe. Install carrier pipe inside of the casing pipe to line and grade shown in the drawings. Install sand or pea gravel into the annular space between the carrier pipe and casing pipe up to the spring line of the carrier pipe to provide bedding under the carrier pipe, as directed by City of Fitchburg. Install end seals at each end of the casing pipe per manufactures instructions.

Contractor is solely responsible for any damage created by thrust and lateral earth pressures created by the installation process. Protect existing utilities in or around the boring and receiving pit areas.

D Measurement

The department will measure Steel Casing Pipe, 36-Inch in length, by the linear foot, acceptably completed.

Measurement will be made on a straight line from one end of the steel casing pipe to the other, measured at the invert.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.605	Steel Casing Pipe, 36-Inch	LF

Payment is full compensation for dewatering and maintaining storm water ditching/piping, excavation, shoring of boring and receiving pits; for installation of the steel casing pipe via trenchless bore and jack method, installation of the carrier pipe inside of the casing pipe with casing spacers as described, and filling of annular space between carrier pipe and casing pipe; for installing end seals on the finished installation; for backfilling excavations, compaction, disposal of excess materials, and restoration of the site; for protection or replacement of existing structures and utilities, and site security. Granular Backfill for Sanitary Sewer will be paid separately.

180. Granular Backfill for Water Main, Item SPV.0090.606.

A Description

This special provision describes furnishing and placing granular backfill over the water main and copper water services along the entire length of the pipe.

B Materials

Provide granular backfill according to standard spec 209, grade 1, of the standard spec.

C Construction

Place granular backfill for water main and copper water services according to all applicable provisions of Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

D Measurement

The department will measure Granular Backfill for Water Main in length by the linear foot, acceptably completed. Measurement is along the centerline of the installed water main or copper water service and includes the length through bends, tees, valves, curb stops, and fire hydrants.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.606	Granular Backfill for Water Main	LF

Payment is full compensation for granular backfill material for open cut installations; for providing, placing, and compacting granular backfill; and for disposal of surplus excavated material in association with granular backfill material.

181. Copper Water Service, 1-Inch, Item SPV.0090.607; 1.5-Inch, Item SPV.0090.608; 2-Inch, Item SPV.0090.609.

A Description

This special provision describes furnishing and installing copper water service according to Section 7 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

B Materials
Furnish materials according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Provide granular backfill according to Granular Backfill for Water Main.

C Construction
Install copper water service according to section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Remove all abandoned or existing material located in the new copper water service alignment.

D Measurement
The department will measure Copper Water Service, (Size) 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 items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.607	Copper Water Service, 1-Inch	LF
SPV.0090.608	Copper Water Service, 1.5-Inch	LF
SPV.0090.609	Copper Water Service, 2-Inch	LF

Payment is full compensation for providing and installation of any copper water service, corporation, curb stop and box, bedding, cover, support blocks, and location marker; for furnishing all connections to existing services; for excavation, dewatering, backfilling, compaction, bracing and shoring; for removal of all utilities abandoned within the new copper water service alignment; for disposal of surplus excavated material, protection and support of existing utilities, chlorination and testing, curb box adjustments to finished grade, and cleanup. Granular Backfill for Water Main will be paid separately.

182. Water Main Insulation, Item SPV.0090.610.

A Description
This special provision describes furnishing and installing polystyrene insulation to insulate water mains and/or copper water service according to Section 7 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

B Materials
Provide materials according to Section 7.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

C Construction
Install water main insulation according to Section 7.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition

Provide water main insulation at locations where there is less than 6.5 feet of cover to finished grade and where water main crosses vertically within 3 feet of a proposed storm sewer or culvert pipe.

D Measurement
The department will measure Water Main Insulation in length by the linear foot, acceptably completed. Measurement is along the centerline of the installed water main or copper water service and includes the length through bends and tees.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.610	Water Main Insulation	LF

Payment is full compensation for providing and installation of 4-inch thick by 8 foot by 4 foot sheets of polystyrene at the locations shown on the plans and as directed by the engineer or the City of Fitchburg.

183. Sanitary Sewer Pipe, 8-Inch Item SPV.0090.611; 10-Inch, Item SPV.0090.612, 15-Inch, Item SPV.0090.613.

A Description
This special provision describes furnishing and installing sanitary sewer pipe at the alignment and grades shown on the plan according to Section 8 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

All sections of the sanitary sewer main are required to pass a low pressure air test, mandrel test, and a visual inspection via televising as specified in Section 8 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition. Costs associated with the testing and televising of the gravity sanitary sewer main are included in the contract unit price bid for this item.

B Materials
Furnish materials according to Section 8.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Provide granular backfill according to Granular Backfill for Sanitary Sewer.

C Construction
Install sanitary sewer pipe and fittings according to section 8.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Maintain the flow of wastewater at all times during installation of the new sanitary sewer pipe and when connecting pipes to the new structure. All bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the flow of wastewater throughout construction, is incidental to this bid item.

Remove all abandoned or existing material located in the new sanitary sewer alignment.

Complete testing and televising of new sewer pipes according to Section 8.4 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

D Measurement
The department will measure Sanitary Sewer Pipe, (Size) in length by the linear foot, acceptably completed.

Sanitary Sewer Pipe, (Size) will be measured through sanitary sewer structures, between the center of structures. Sanitary Sewer Pipe (Size) not terminating at a sanitary sewer structure will be measured to the end of pipe. Deductions from the measured length will not be made for wye installations.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.611	Sanitary Sewer Pipe, 8-Inch	LF
SPV.0090.612	Sanitary Sewer Pipe, 10-Inch	LF
SPV.0090.613	Sanitary Sewer Pipe, 15-Inch	LF

Payment is full compensation for providing and installation of sanitary sewer pipe, fittings, accessories, bedding, and cover; for furnishing and installing all temporary bypass pumping and connections; for furnishing all connections to existing pipes and structures; for excavation, dewatering, backfilling, compaction, bracing and shoring; for removal of all utilities abandoned within the sanitary sewer pipe alignment; for disposal of surplus excavated material, protection and support of existing utilities, jetting sanitary sewer pipe, testing, televising and cleanup. Granular Backfill for Sanitary Sewer will be paid separately.

184. Granular Backfill for Sanitary Sewer, Item SPV.0090.614.

A Description
This special provision describes furnishing and placing granular backfill over the sanitary sewer pipe and sanitary sewer laterals along the entire length of the pipe.

B Materials
Provide granular backfill according to standard spec 209, grade 1, of the standard spec.

C Construction
Place granular backfill for sanitary sewer pipe and sanitary sewer laterals according to Section 8.3 of the City of Fitchburg Standard Specifications for Public Works Construction - Latest Edition.

D Measurement
The department will measure Granular Backfill for Sanitary Sewer in length by the linear foot, acceptably completed. Measurement is along the centerline of the installed sanitary sewer pipe or sanitary sewer lateral and includes the length through wyes and couplings.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.614	Granular Backfill for Sanitary Sewer	LF

Payment is full compensation for granular backfill material for open cut installations; for providing, placing, and compacting granular backfill; and for disposal of surplus excavated material in association with granular backfill material.

185. Sanitary Sewer Lateral, 4-Inch, Item SPV.0090.615; 6-Inch, Item SPV.0090.616.

A Description
This work consists of excavating required trenches, connecting the lateral to the mainline pipe, placing bedding material, connecting the new lateral to the existing lateral, providing all required fittings, couplings, and bends, backfilling and compacting the trenches and restoring the work site as provided on the plans. This work also consists of locating, identifying, and abandoning "inactive" laterals.

B Materials
Furnish materials according to Section 8.2 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

Provide granular backfill according to Granular Backfill for Sanitary Sewer.

Compression coupling connections to the existing sewer laterals in conformance to Standard Detail Drawing 5.3.3, Coupling detail, from the City of Madison Standard Specifications for Public Works Construction- Latest Edition.

C Construction
Install sanitary sewer laterals and fittings according to section 8.3 of the City of Fitchburg Standard Specifications for Public Works Construction – Latest Edition.

The use of 45-degree bends is not permitted except with connecting to a wye at the sanitary sewer main. Bends of 22.5 degrees or less may be used, provided they are separated by at least 2 feet of straight pipe. Provide new lateral pipe having equal diameter to existing sanitary sewer lateral pipe.

If laterals indicate reinstatement on the plans, they are to be plugged under the direction of the City of Fitchburg. Use a sonde device to confirm the laterals that are indicated for abandonment are not active.

Couple the junction of a new lateral pipe to an existing lateral pipe as required in the field by the City of Fitchburg. Sawcut the existing main to accommodate a clean joint for the installation of the couplings. Place the coupling as directed by the City of Fitchburg.

Remove all abandoned or existing material located in the new sanitary sewer lateral alignment.

D Measurement

The department will measure Sanitary Sewer Lateral, (Size) in length by the linear foot, acceptably completed.

The quantity to be paid will be measured from the connection of the mainline sewer pipe to the connection of the existing sanitary lateral along the centerline of the pipe.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.615	Sanitary Sewer Lateral, 4-Inch	LF
SPV.0090.616	Sanitary Sewer Lateral, 6-Inch	LF

Payment is full compensation for providing and installation of any sanitary sewer lateral, fittings, accessories, bedding, and cover; for furnishing all connections to existing laterals, sanitary sewer pipes, and structures; for determining whether laterals are “active”, “inactive”, or abandoned, and the exact location and size of “active” lateral reconnections; for excavation, dewatering, backfilling, compaction, bracing and shoring; for removal of all utilities abandoned within the sanitary sewer lateral alignment; for disposal of surplus excavated material, protection and support of existing utilities, testing and cleanup. Granular Backfill for Sanitary Sewer will be paid separately.

186. Rock Excavation Water Main, Item SPV.0090.617.

A Description

This special provision describes providing rock excavation in accordance with standard spec 205 and as detailed herein.

B (Vacant)

C Construction
Classify rock excavation water main in accordance with 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 in accordance with 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.0090.617	Rock Excavation Water Main	LF

Payment is full compensation for all rock excavation, dewatering and disposal of surplus material. Backfill will be paid separately.

187. Research and Locate Existing Property Monuments, Item SPV.0105.001.

A Description
This special provision describes researching and locating existing property monuments located within permanent easement and temporary easement areas, within the construction limits that may be lost or disturbed by construction operations, as directed by the engineer, and as hereinafter provided.

This provision does not relinquish the contractor of his responsibility under standard spec 107.11.

B (Vacant)

C Construction
Prior to construction, research, locate and document the adjacent property monuments located within permanent easement and temporary easement areas. Tie the located property

monuments in with coordinates accurate to 1:3000 and tied to at least two adjacent witness markers that will not be disturbed by any project.

Prepare a property monument location map showing the type of monuments originally found with their coordinates. A legible tax map or right-of-way plat is acceptable as a base map for the property monument location map. Provide a copy of the property monument location map to the engineer.

All work under this item is to be performed by, or under the direction of, a land surveyor registered in the State of Wisconsin.

After construction is completed property monument locations will be verified and reset, if necessary, under the item titled "Verify and Replace Existing Property Monuments".

D Measurement
The department will measure Research and Locate Existing Property Monuments as a single lump sum unit of work, completed 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.0105.001	Research and Locate Existing Property Monuments	LS

Payment is full compensation for furnishing all research, field survey, locating, and recording of field data necessary to locate and determine coordinates for existing property monuments within the construction limits prior to construction; furnishing a registered land surveyor; and for preparing, annotating and delivering the property monument location map to the engineer.

188. Verify and Replace Existing Property Monuments, Item SPV.0105.002.

A Description
This special provision describes verifying the location of, and replacing existing property monuments, which were previously located under the item "Research and Locate Existing Property Monuments", that are determined to be lost or disturbed, as directed by the engineer, and as hereinafter provided.

This provision does not relinquish the contractor of his responsibility under standard spec 107.11.

B Materials
Provide replacement property monuments that are one-inch inside diameter by 24-inch long iron pipe or ¾-inch diameter iron rod or rebar that are 24 inches long in locations outside of pavement areas, a Berntsen Steel Nail Marker for placement in asphalt pavement, or a Berntsen BP1 Brass Marker with anchoring plug for placement in concrete pavement.

C Construction
After construction is completed, verify the location of all property monuments previously located under the item "Research and Locate Existing Property Monuments". Replace or reset as necessary, any property monuments that are lost or disturbed.

Prepare a property monument location map showing the type of monuments originally found, and the type of replacement monument used to replace or reset the lost or disturbed monuments, with their coordinates. A legible tax map or right-of-way plat is acceptable as a base map for the property monument location map. The property monument location map is to explicitly state that the replaced or reset monuments are not being certified as an actual property monument, only that evidence of a property monument was found and reset. Provide a copy of the property monument location map to the engineer and the county surveyor.

All work under this item is to be performed by, or under the direction of, a land surveyor registered in the State of Wisconsin.

D Measurement
The department will measure Verify and Replace Existing Property Monuments as a single lump sum unit of work, completed 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	Verify and Replace Existing Property Monuments	LS

Payment is full compensation for furnishing all survey work necessary to verify the location of all property monuments previously located under the item "Research and Locate Existing Property Monuments"; replacing or resetting, as necessary, property monuments that are lost or disturbed from their original location; furnishing property monuments; furnishing a registered land surveyor; and for preparing, annotating and delivering the property monument location map.

189. Construction Staking Supplemental Features, Item SPV.0105.003.

A Description
Preform work according to standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction
Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Set additional construction stakes as necessary to establish location and grade, including points of change in alignment and grade according to the plans, details, and for conformance with ADAAG. Staking includes, but is not limited to, curb ramps, driveway curb cuts, stormwater ponds, bioretention basins, stormwater outlet

control structures, traffic control paint lines, traffic control temporary concrete barrier, sawcuts, silt fence or other erosion control features, and rip rap limits. Locate stakes to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

D Measurement
The department will measure Construction Staking Supplemental Features as a single complete lump sum unit of work, completed according to the contract 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.0105.003	Construction Staking Supplemental Features	LS

Payment is full compensation for locating and setting all construction stakes and for relocating and resetting damaged or missing construction stakes.

190. Pond D Haul Road, Item SPV.0105.004.

A Description
Preform work according to the applicable provisions of standard spec 201, 205, 305, 465, 616, 624, 625, 628, 629, 630, 643, and 690 and the special provision for Roadway Embankment.

B Materials

B.1 Base Aggregate Dense
Provide Base Aggregate Dense 1 1/4-Inch within any portion of the Military Ridge Path that is crossed as part of the haul road operations.

B.2 Erosion Control
Provide Erosion Mat Urban Class I Type A, Silt Fence, and Tracking Pads according to the pertinent provisions of standard spec 628.

B.3 Fertilizer and Agricultural Limestone
Provide Fertilizer Type B according to the pertinent provisions of standard spec 629.

B.4 Seeding
Provide Seeding Temporary and Seeding Mixture No. 20 according to the pertinent provisions of standard spec 630.

B.5 Traffic Control
Provide Portable Changeable Message Signs, Hand Signaling Devices, and Signs according to the pertinent provisions of standard spec 643. Provide all flagging according to standard spec 104.6.1(4).

C Construction
Provide Portable Changeable Message Signs, Hand Signaling Devices, and Signs according to the pertinent provisions of standard spec 643 and as detailed in the Traffic Control plans.

Place and maintain silt fence and tracking pads at locations identified in the contractors ECIP and as directed by the engineer.

Provide water for dust control as directed by the engineer.

Remove and replace the section of the Military Ridge Path utilized for a haul route as directed by the engineer. Sawcut the limits of Military Ridge Path removal according to the pertinent provisions of standard spec 690.

Place Base Aggregate Dense 1 1/4-Inch at a depth of 8-Inches according to the pertinent provisions of standard spec 305 and Asphaltic Surface at a depth of 3-Inches along the entire width of the Military Ridge Path that is removed or damaged as a result of utilizing the haul route.

Restore the area used as a haul road according to the pertinent provisions of standard spec 624, 628, 629, and 630.

D Measurement
The department will measure Pond D Haul Road 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 items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.004	Pond D Haul Road	LS

Payment is full compensation for providing all materials, for clearing and grubbing, common excavation, roadway embankment, aggregates, asphaltic pavements, chain link fence, silt fence and silt fence maintenance, tracking pads, salvaged topsoil, seeding, fertilizers, erosion mats, traffic control devices, and sawcuts; for furnishing all excavating, backfilling, disposing of surplus material; and for restoring the work site.

191. Pond D Spillway, Item SPV.0105.050.

A Description
This special provision describes modifications to the existing Pond D concrete spillway. Perform work according to the applicable provisions of standard spec 502 and as detailed in the plans.

B (Vacant)

C Construction
Construct concrete features according to standard spec 502 and plan details.

Complete concrete surface repair on weir wall according to standard spec 509.3.7.

Maintain existing drainage patterns throughout construction and provide any dewatering necessary for the work.

D Measurement
The department will measure Pond D Spillway 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 items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.050	Pond D Spillway	LS

Payment is full compensation for providing all materials, including all concrete masonry, all surface repairs, steel reinforcing, adhesive anchors; for furnishing all excavating, backfilling, disposing of surplus material; for any dewatering; for maintaining existing drainage; and for cleaning out and restoring the work site.

192. Bioretention Basin B, Item SPV.0105.051; C, Item SPV.0105.052.

A Description
This special provision describes constructing bioretention basins as shown on the plans and as hereinafter provided.

B Materials
B.1 Engineered Soil
(1) Provide soil consisting of a mixture of sand and compost. Design the mix to approximate the following percentages, by volume.

Engineered Soil Component	Percentage Composition (By Volume)
Mineral ($Si0_2$) Sand	80%
Compost	20%

(2) Provide sand meeting the gradation requirements of standard spec 501.2.5.3.4. Provide sand consisting of mineral sand that is at least 97% $Si0_2$. Substitutions, such as calcium carbonated sand, dolomitic sand, manufactured sand or stone dust will not be allowed. Wash the sand to remove clay and silt particles and drain prior to mixing.

(3) Provide compost meeting the requirements of Wisconsin Department of Natural Resources Specification S100, Compost.

(4) Provide engineered soil mix free of rocks, stumps, roots, brush or other material over 1 inch in diameter. Do not mix materials with the engineered soil that may be harmful to plant growth or prove a hindrance to planting or maintenance.

(5) Provide engineered soil mix with a pH between 5.5 and 8.0 and with adequate nutrient content to meet plant growth requirements. Provide documentation of the pH level of the engineered soil to the engineer prior to use at the site.

B.2 Pea Gravel
Provide pea gravel meeting the specifications of ASTM standard C33 02a Size Number 8.

B.3 Geotextile Fabric, Type DF
Provide Geotextile Fabric, Type DF, schedule B according to standard spec 645.

B.4 Backfill Course Aggregate No. 1
Provide Backfill Course Aggregate No. 1 according to standard spec 501.2.5.4.4.

B.5 Pipe Underdrain 6-Inch
Provide Pipe Underdrain 6-Inch according to standard spec 612. Provide connections and fittings capable of attaching the Pipe Underdrain 6-Inch to the vertical clean-out.

B.6 Vertical Clean-Out and Pipe Cap
Provide 6-inch corrugated steel pipe culverts according to standard spec 521. Provide a fire resistant metal pipe cap capable of being mechanically attached to the 6-inch corrugated steel pipe and capable of opening, closing and being secured when closed. The use of adhesive or epoxy to attach the cap to the pipe is not allowed. Provide connections and fittings capable of attaching the vertical clean-out to the Pipe Underdain 6-Inch.

C Construction

C.1 Construction Site Stabilization
Prevent construction site runoff from disturbed areas from entering the bioretention basin. Divert runoff from pervious areas from the basin until the pervious areas have undergone final stabilization. Final stabilization is the condition achieved on pervious areas when uniform perennial vegetative cover has been established with a density of at least 70 percent.

C.2 Suitable Weather
Suspend basin construction during periods of rainfall or snowmelt. Maintain suspension of basin construction if ponded water is present or if residual soil moisture contributes significantly to the potential for soil smearing, clumping or other forms of compaction.

C.3 Geotextile Fabric, Type DF
Place Geotextile Fabric, Type DF according to standard spec 645.3.4.

C.4 Compaction Avoidance
Minimize compaction and smearing of the soils beneath the floor and side slopes of the bioretention area, and compaction of the soils used for backfill in the soil planting bed. During site development, cordon off the area dedicated to the bioretention basin to prevent access by equipment. Acceptable equipment for constructing the bioretention basin includes excavation hoes, light equipment with turf type tires, marsh equipment or wide-track loaders.

C.5 Compaction Remediation
If compaction occurs at the base of the bioretention basin refracture the soil to a depth of at least 12 inches. If smearing occurs, correct the smeared areas of the interface by roto-tilling.

C.6 Placement and Settling of Engineered Soil
(1) Prior to placement in the bioretention basin, premix the engineered soil and provide a moisture content low enough to prevent clumping and compaction during placement.

(2) Place the engineered soil in multiple lifts, each approximately 8 to 12 inches in depth.

(3) Methods to induce mild settling of the engineered soil bed, as needed to prepare a stable planting medium and to stabilize the ponding depth, may be utilized, such as overfilling engineered soil. Vibrating plate-style compactors may not be used to induce settling.

C.7 Pipe Underdrain 6-Inch
Install Pipe Underdrain 6-Inch according to standard spec 612.

C.8 Vertical Clean-Out and Pipe Cap
Install vertical clean-out and pipe cap according to standard spec 521 and as recommended by the manufacturer.

D Measurement
The department will measure Bioretention Basin (location) as a single complete lump sum unit of work, completed according to the contract 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.0105.051	Bioretention Basin B	LS
SPV.0105.052	Bioretention Basin C	LS

Payment is full compensation for providing all materials; including pea gravel, engineered soil, backfill course aggregate size no.1, geotextile fabric, pipe underdrain, vertical clean-out, pipe cap, connections, and fittings; and for furnishing all excavating, backfilling, stockpiling and disposing of surplus material.

193. Box Culvert Inlet Modifications, Item SPV.0105.053.

A Description
This special provision describes modifications to the existing median inlet on box culvert C-13-115. Perform work according to the applicable provisions of standard spec 504 and as detailed in the plans.

B (Vacant)

C Construction
Construct concrete features according to standard spec 504 and as shown in the plans.

Maintain drainage throughout construction and provide any dewatering necessary for the work.

D Measurement
The department will measure Box Culvert Inlet Modifications 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 items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.053	Box Culvert Inlet Modifications	LS

Payment is full compensation for providing all materials, including all concrete masonry, steel reinforcing, adhesive anchors; for furnishing all excavating, removing concrete, backfilling, disposing of surplus material; for any dewatering; for maintaining existing drainage; for cleaning out C-13-115 of debris caused by the work and restoring the work site.

194. Utility Support, Item SPV.0105.054.

A Description
This special provision describes providing supports for the existing sanitary sewer force main crossing beneath proposed storm sewer as shown on the plans and as hereinafter provided.

B Materials
B.1 Backfill Slurry
Provide backfill slurry according to Abandon Existing Sanitary Sewer - Slurry.

B.2 Concrete Beam
Furnish grade A or A-FA air-entrained concrete conforming to standard spec 501.

B.3 Insulation
Provide insulation according to Water Main Insulation at the thickness shown on the plans.

B.4 Geotextile Fabric, Type SR
Provide Geotextile Fabric, Type SR according to standard spec 645.2.5 and as follows:

Test	Method	Value[(1)]
Minimum Tensile Strength	ASTM D 4595	175 lb/in (30,600 N/m)
Maximum Elongation at Required Strength	ASTM D 4595	15 %
Minimum Puncture Strength	ASTM D 4833	145 lb (650 N)
Maximum Apparent Opening Size	ASTM D 4751	No. 40 (425 µm)
Minimum Permittivity	ASTM D 4491	0.05 s^{-1}

(1) All numerical values represent minimum/maximum average roll values. Average test results from all rolls in a lot must conform to the tabulated values.

C Construction
C.1 Backfill Slurry
Place all backfill slurry in a single operation. Provide a minimum of 12 hours of curing time before placement of concrete beams or as directed by the engineer.

C.2 Concrete Beam
Construct concrete beam as detailed in the plans.

C.3 Insulation
Provide insulation between the bottom of proposed storm sewer pipe and top of backfill slurry as detailed in the plans.

C.4 Geotextile Fabric, Type SR
Place Geotextile Fabric, Type SR according to standard spec 645.3.

D Measurement
The department will measure Utility Support 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 items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.054	Utility Support	LS

Payment is full compensation for providing all materials, including all concrete, backfill slurry, insulation, and Geotextile Fabric Type SR; for furnishing all excavating, backfilling, and disposing of surplus material and for dewatering and maintaining existing drainage.

195. Install Department Furnished Vehicle Detection, USH 18 and CTH PD, Item SPV.0105.150; USH 18 and Williamsburg Way, Item SPV.0105.151.

A Description

This special provision describes installing, integrating, and operating department furnished vehicle detection systems for use at existing signalized intersections throughout construction. Future removal of the installed items will be completed under a separate contract.

B Materials

The department will furnish all detectors including video detector(s), microwave sensor(s) and detector card(s). Department-furnished vehicle detection units include Wavetronix and Intersector microwave detectors and Grismart Video detectors, as shown on the drawings. Furnish cabling, all remaining hardware, fasteners and wiring connections necessary to install and integrate these detectors. Contractor furnished materials become the property of the department upon completion of this contract.

C Construction

C.1 General

Coordinate directly with the department's assigned project electrician for all activities associated with this bid item. The department will provide contact information for the designated project electrician at the preconstruction meeting. Contact the department at least five working days prior to the scheduled installation of the detection system and all subsequent changes in operation. Contact Graham Heitz (Southwest Region Signal Operations) at (608) 246-5362 in advance of the preconstruction meeting with any questions regarding this bid item.

The department's assigned project electrician will supply the contractor with the detection equipment on-site and oversee the installation, integration, and all subsequent changes in operation. All modifications to the existing traffic signal cabinet, wiring terminations, programming changes and testing procedures will be provided by the department.

Install the sensors and cabling to permanent and/or temporary signal supports to provide the needed detection as indicated on the plans and according to the on-site discretion of the department's electrician and equipment specifications. Re-aim sensors as needed for all changes in construction staging operations to maintain detection.

C.2 Operational Transfer

Contractor furnished materials become the property of the department upon completion of the contract. The department assumes maintenance and operational responsibilities of the microwave detection equipment upon completion and transfer.

D Measurement

The department will measure Install Department Furnished Vehicle Detection, (location) 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.0105.150	Install Department Furnished Vehicle Detection, USH 18 and CTH PD	LS
SPV.0105.151	Install Department Furnished Vehicle Detection, USH 18 and Williamsburg Way	LS

Payment is full compensation for furnishing and installing cabling, hardware, fasteners, and wiring connections; and installing, integrating, operating, and maintaining the complete detector installation through the completion of the contract including any temporary supports; and for re-aiming the sensors throughout the contract.

196. Remove and Transport Traffic Signals, Fitchrona Road, Item SPV.0105.152.

A Description

This special provision describes removing and transporting existing traffic signals at the intersection of CTH PD (Mckee Road) and Fitchrona Road as shown in the plans, according to standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction

Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

Notify Mike Christoph at (608) 266-9031 at least three working days prior to the removal of the traffic signals. Complete the removal work immediately following shut down of this equipment.

Perform a field review of existing equipment with Mike Christoph for condition of equipment prior to removal. The city will identify all items to be removed and salvaged or disposed.

Remove all standards and poles shown in the plans from their concrete footings and disassemble. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring/cabling and traffic signal mounting devices from each signal standard, arm or pole. Ensure that access handhole doors and hardware remain intact. Handle all materials designated for removal and salvage in a manner that will not cause damage to the materials. Any salvage materials damaged during removal shall be replaced with new materials at the contractor's expense. Store the materials off the ground, on pallets or other similar devices. Band or secure materials for hauling. Dispose of the underground signal cable, internal wires and street lighting cable.

After removal of signal equipment, coordinate delivery of all salvaged materials with Mike Christoph. Deliver materials to City of Madison, 1120 Sayle Street.

D Measurement
The department will measure Remove and Transport Traffic Signals, Fitchrona Road as a single 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.0105.152	Remove and Transport Traffic Signals, Fitchrona Road	LS

Payment is full compensation for coordinating with the City of Madison; removing and disassembling traffic signals; for any necessary interim stockpiling and storing; securing and delivering the requested materials to the City of Madison; for properly disposing of scrap material; and for replacement of any damaged materials.

197. Traffic Control Utility Crossings, Item SPV.0105.153.

A Description
This special provision describes coordinating and providing traffic control as shown in the plans for the CTH PD Utility Crossings - Stage 1 Phase 1 and Phase 2 and as hereinafter provided.

B Materials
B.1 Traffic Control
Provide temporary traffic signs, pavement markings, drums and barricades according to standard spec 643 and as shown in the plans.

B.2 Traffic Signal Flasher Assembly
Provide traffic signal cable necessary to complete the work according to standard spec 655. Provide traffic signal mounting hardware, traffic signal face 1-12 inch vertical, and LED module 12 inch red ball according to standard spec 658 and as shown in the plans. Erect, move, cover and uncover the signal faces as necessary to provide the traffic control as shown in the plans.

C Construction
Erect, maintain, move, cover, uncover and remove traffic signs, pavement markings, drums and barricades according to standard spec 643 and as shown in the plans. Cover and uncover existing traffic signals as shown in the plans.

Schedule a meeting with the engineer, the department, Dane County, City of Fitchburg, and City of Madison Traffic Operations at least 10 calendar days prior to beginning work under this bid item to discuss the traffic control, traffic signal flasher assembly power and mounting, light plant locations, portable changeable message sign locations, any necessary

coordination and the schedule for the CTH PD Utility Crossings, Stage 1 Phase 1 and Phase 2 work.

Install the temporary traffic signal assembly to existing traffic signal poles and wire to existing signals as shown in the plans. Do not drill into or damage existing poles while installing mounting hardware. Replace any damaged poles at no cost to the department. Install and maintain red LED modules conforming to the manufacturer's recommendations. Cover and uncover or power on and power off the temporary traffic signal assembly as necessary. Contact Mike Christoph, (608) 266-9031, City of Madison Traffic Operations, and Graham Heitz, (608) 246-5362, Wisconsin Department of Transportation Southwest Region Signal Operations, 14 calendar days prior to installing temporary traffic signal assembly to determine power source locations and installation options.

Provide temporary lights plants as shown in the plans and according to standard spec 107.7 to illuminate the CTH PD and USH 18/151 intersection.

Provide all necessary traffic control to accomplish the utility crossings for CTH PD Utility Crossings - Stage 1 Phase 1 and Phase 2, for a duration of 8 consecutive nights during the timeframes provided in the Traffic article of these special provisions.

Provide any additional individual traffic control devices and modify the traffic control shown in the plans as deemed necessary by the engineer. If additional nights are needed they shall be provided according to this special provision and the plans at no cost to the department.

Provide sufficient traffic control staff on site for the entire duration of the work to continually inspect and maintain the traffic control devices, including the temporary traffic signal assembly. Respond to any requests for revisions or maintenance of the traffic control within 15 minutes of being contacted by the engineer or the department.

D Measurement

The department will measure Traffic Control Utility Crossings as a single 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.0105.153	Traffic Control Utility Crossings	LS

Payment is full compensation for coordinating with the department, Dane County, City of Fitchburg, and City of Madison Traffic Operations; for providing, erecting, maintaining, moving, covering, uncovering and removing traffic signs, pavement markings, drums and barricades; for covering and uncovering existing traffic signals; for providing mounting hardware, traffic signal cable and wiring, traffic signal face 1-12 inch vertical, and LED module 12 inch red ball; for covering and uncovering or powering on and powering off the

temporary traffic signal assembly; for providing temporary light plants; for providing traffic control staff on site for continual inspection and maintenance for the entire duration of the work; and for replacement of any damaged or nonconforming materials.

For additional or modified individual traffic control devices that vary by more than 5 percent of the quantities shown in the plans for the CTH PD Utility Crossings, Stage 1 Phase 1 and Phase 2, payment will be made separately at contract unit prices for each individual traffic control device bid item included in the plans.

Portable changeable message signs, traffic control advanced warning signs and traffic control for establishing single lane closures in place for other work items along CTH PD or USH 18/151 will be paid separately.

198. EVP Detector, Item SPV.0105.154.

A Description

This special provision describes furnishing and installing an Optical Emergency Vehicle Preemption (EVP) System at the location shown on the plans and as hereinafter provided.

B Materials

Provide the following materials:

- Four channel discriminator
- Four optical detectors
- Card rack
- Detector cable as necessary
- Cables and auxiliary equipment as necessary for installation

Provide equipment from the same manufacturer and fully compatible. Provide a discriminator that can detect and prioritize Tomar and 3M brand emitters and that is capable of locking out non-coded emitters.

C Construction

Mount detectors on the top horizontal member of monotube arms, between the first and second traffic signal head, and as otherwise shown. Install per the manufacturer's instructions.

Aim detectors at approaching traffic. Install detector cable from the detector to the control cabinet, using the shortest path.

Contact Mike Christoph at the City of Madison Traffic Engineering shop at (608) 266-9031 to coordinate delivery of card rack and discriminators to the city. The card rack and discriminator installation, as well as cabinet connections, will be made by City of Madison Traffic Engineering staff.

Replace any materials deemed unacceptable or not in working order by the City of Madison at no cost to the department.

D Measurement
The department will measure EVP Detector as a single 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.0105.154	EVP Detector	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 of Madison Traffic Engineering, 1120 Sayle St; and for any replacement material.

199. Bioretention Maintenance, Item SPV.0105.500.

A Description
This special provision describes maintaining Native Vegetated Mat, plantings, rip-rap and landscape materials located at two bioretention basins.

B Materials
Provide any necessary replacement plantings or landscape materials in kind.

C Construction
Begin maintenance of the bioretention basins immediately upon the installation of plant material and maintain the bioretention basins through October 15, 2019.

Perform maintenance visits every two weeks during the growing seasons, between approximately April 15 and October 15.

Perform all maintenance visits 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 Native Vegetated Mat and bioretention basins in a healthy and flourishing condition including, but not limited to the following:

- Provide supplemental water if rainfall is less than 1-inch per week to maintain soil moisture content between 20-30 percent; water to a wet condition and then let the soil dry back to encourage deep root growth. Fertilizer is not recommended.
- Examine bioretention areas bi-weekly during the growing season. Remove all weeds, invasives or pioneer woody vegetation selectively by hand-pulling or by hand application by the gloved hand wiping method of post-emergence herbicide according to 632.2.12 to eradicate perennial weeds. Do not broadcast herbicide.

Controlled burning of areas is not permitted. If a large-scale inhabitation of weeds or invasives is documented, contact supplier immediately and set into action a course of correction to eliminate undesirable species before they can spread further. At a minimum eradicate the following common weed species by hand-pulling:

COMMON NAME	BOTANICAL NAME
Musk Thistle	Carduus nutans
Spotted Knapweed	Centaurea maculosa
Canada Thistle	Cirsium arvense
Bull Thistle	Cirsium vulgare
Field Bindweed	Convolvulus arvensis
Leafy Spurge	Euphorbia esula
Sweetclover	Melilotus species
Wild Parsnip	Pastinaca sativa
Alfalfa	Medicago sativa
Common Ragweed	Ambrosia artemisiifolia
Giant Ragweed	Ambrosia trifida
Lambsquarter	Chenopodium album
Curly Dock	Rumex crispus
Pinkweed	Polygonum pensylvanicum
Smartweed	Polygonum coccineum
Garlic Mustard	Alliaria petiolata

- Eradicate any additional weeds, invasives or pioneer woody vegetation as directed by the engineer.
- Remove all clippings and weed debris from the site.
- Remove trash, debris, slurry, sediment or other material deposited in the riprap areas, native vegetated mat areas, or other landscaped areas of the bioretention basins.
- Remove all dead plant material and replace with new.

Submit 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.

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 Bioretention 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.0105.500	Bioretention Maintenance	LS

Payment is full compensation for equipment, maintenance visits, written documentation of all visits, for providing and placing supplemental water; for herbicide; for removing depositions; and for maintaining and replacing plants and landscape materials.

200. Detention Pond Maintenance, Item SPV.0105.501.

A Description
This special provision describes maintaining Seeding Mixture Detention Pond Wet Sedge Meadow and Short Grass Prairie located at two 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 October 15, 2019.

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 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.

First Growing Season - 2017

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.

Second Growing Season - 2018

Mowing:
Mow all vegetation using a flail type mower to a height of 6 inches, rake up vegetation cuttings and remove from site. Spring clean-up mowing shall occur 1 time at each detention pond in mid-spring of the second growing season, approximately May 1 to May 30.

If biennial or annual weeds are observed mow using a flail type mower to a height of 12 inches when weeds are in full flower but prior to setting seeds. Mow all vegetation 3 times (1 time for spring clean-up and 2 times for weed control) at each detention pond in the second 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 maintenance activities at each detention pond every 4 to 6 weeks. A minimum of 5 visits are required at each pond during the second growing season.

Third Growing Season - 2019

Mowing:
Mow all vegetation using a flail type mower to a height of 6 inches, rake up vegetation cuttings and remove from site. Spring clean-up mowing shall occur 1 time at each detention pond in mid-spring of the third growing season, approximately May 1 to May 30.

If biennial or annual weeds are observed mow using a flail type mower to a height of 12 inches when weeds are in full flower but prior to setting seeds. Mow all vegetation 3 times (1 time for spring clean-up and 2 times for weed control) at each detention pond in the third 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 maintenance activities at each detention pond every 4 to 6 weeks. A minimum of 5 visits are required at each pond during the third 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.0105.501	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.

201. Construction Staking Water Main, Item SPV.0105.600.

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 at 50 intervals along the water main, 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 vertical and horizontal bends, tees, valves, hydrants, water services locations. Determine offsets in conjunction with contractor requirements.

Provide cut sheets to the City of Fitchburg and contractor for elevation reference.

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.0105.600	Construction Staking Water Main	LS

Payment is full compensation for locating and setting all construction stakes and providing cut sheet information; and for relocating and resetting damaged or missing construction stakes.

202. Construction Staking Sanitary Sewer, Item SPV.0105.601.

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. 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 along the sanitary sewer main and lateral locations.

Provide cut sheets to the City of Fitchburg and contractor for elevation reference.

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.0105.601	Construction Staking Sanitary Sewer	LS

Payment is full compensation for locating and setting all construction stakes and providing cut sheet information; and for relocating and resetting damaged or missing construction stakes.

203. Water for Seeded Areas, Item SPV.0120.001.

A Description
This special provision describes furnishing, hauling and applying water to seeded areas as directed by the engineer, and as hereinafter provided.

B Materials
When watering seeded areas, use clean water, free of impurities or substances that might injure the seed.

C Construction
If rainfall is not sufficient, keep all seeded areas thoroughly moist by watering or sprinkling. Water for 60 days after seed placement or as the engineer directs. Apply water in a manner to preclude washing or erosion. The topsoil shall not be left un-watered for more than 3 consecutive calendar days during this 60-day period unless the engineer determines that it is excessively wet and does not require watering. The equivalent of one inch of rainfall per week shall be considered the minimum.

D Measurement
The department will measure Water for Seeded Areas by volume by the thousand gallon units (MGAL), acceptably completed.

Provide volume by metering devices or from tanks of known capacity. Report volumes to the engineer daily. Unreported daily volumes may not be considered for payment.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0120.001	Water for Seeded Areas	MGAL

Payment is full compensation for furnishing, hauling, and applying the water.

204. Water for Detention Ponds, Item SPV.0120.002.

A Description
This special provision describes furnishing, hauling, and providing water to the normal water level of project detention ponds as directed by the engineer, and as hereinafter provided.

B Materials
When providing water for the detention ponds, use water from adjacent detention ponds and/or clean water that is free of impurities or substances that might injure the seeding.

C Construction
If rainfall is not sufficient to fill the detention ponds, fill detention ponds to the normal water level. Fill ponds at a controlled rate and in a manner to preclude damage to the pond clay liner and as directed by the engineer. Provide the engineer 14 calendar days advance notice of filling the ponds.

D Measurement
The department will measure Water for Detention Ponds by volume by the thousand gallon units (MGAL), acceptably completed.

Provide volume by metering devices or from tanks of known capacity. Report volumes to the engineer daily. Unreported daily volumes may not be considered for payment.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0120.002	Water for Detention Ponds	MGAL

Payment is full compensation for furnishing, hauling, providing and filling the ponds with water.

205. Sidewalk Pavement, Item SPV.0165.001.

A Description
This special provision describes constructing concrete or asphalt sidewalks.

B Materials
B.1 Concrete
Furnish concrete materials according to standard spec 602.

B.2 Asphalt
Furnish asphaltic materials according to standard spec 465.

B.3 Aggregates
Furnish aggregates according to standard spec 305.

C Construction
Construct Sidewalk Pavement according to the applicable provisions of standard spec 305, 465, and 602 and to the dimensions shown in the plans.

C.1 Concrete Sidewalks
Provide 4-inches of Base Aggregate Dense 1 1/4-Inch and Concrete Sidewalk 5-Inch.

C.2 Asphalt Sidewalks
Provide 6-inches of Base Aggregate Dense 1 1/4-Inch and 3-inches asphaltic surface.

D Measurement
The department will measure Sidewalk Pavement by the square foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.001	Sidewalk Pavement	SF

Payment is full compensation for providing all materials; for excavating and preparing the foundation; backfilling and disposing of surplus material; for placing, finishing, and curing (if applicable); and for restoring the work site.

206. Colored and Stamped Concrete 5-Inch, Item SPV.0165.002.

A Description

Construct colored concrete sidewalk according to standard spec 602, as shown in the plans, and as hereinafter provided.

B Materials

B.1 Concrete

Work under this item shall be according to standard spec 602 and as shown on the plans or as approved by the engineer.

Integrally color the concrete using non-fading synthetic iron oxides conforming to ASTM C979. Follow color pigment manufacturers recommendations for minimum and maximum percentage of loading by weight of the cementitious materials in the mix.

Provide color Dark Gold RC5010, trademarked RheoColor, by BASF.

Maintain mix characteristics for all colored concrete requiring a matching finish. Use the same source, brand, type, and color of portland cement, supplementary cementitious materials, aggregates and admixtures for colored concrete throughout the project. Use constant cement content, supplementary cementitious material content and water/cementitious materials ratio in the concrete mix to maintain consistent color.

B.2 Concrete Curing

Supply a clear, non-yellowing liquid membrane-forming clear curing compound conforming to ASTM C 1315, Type 1 A.

B.3 Admixtures

Furnish admixtures designed for use and compatible with colored concrete pigments. Do not use calcium chloride or admixtures containing chlorides.

B.4 Mix Approval

B.4.1 General

Perform preliminary laboratory and/or field trial batching to establish the mix proportions necessary to conform to the contract-required color.

Submit to the engineer the final mix design including specific sources and/or trade names as applicable for all materials. Include the slump, air, and water-cement ratio according to standard spec 602.

B.3.2 Test Panels

Provide the engineer 10 calendar day notice for production of a test panel. At an engineer-approved location on the project, place and finish an 8-foot by 8-foot by 5-inch colored concrete test panel using processes and techniques intended for use on permanent work, including curing procedures stamping, coloring, antiquing, joint tooling and sealing. Produce test panels using the same workers who will perform the contract work.

Retain samples of cements, sands, aggregates and color additives used in test panels for comparison with materials used in the contract work. For an accurate representation of the desired color or color intensity, produce the colored concrete for the test panel in a minimum batch size of 2 cubic yards or in full cubic yard increments for batch sizes greater than 2 cubic yards. Remove excess material from the project site.

The engineer will determine acceptance of the test panel color based on review and approval by engineer, the City of Fitchburg and department representatives. Test panel color will be evaluated for approval within five calendar days after the test panel is poured, cured and sealed according to all manufacturer's specifications (including all required cure time prior to sealing). Once approved, provide engineer with the documentation of all materials and material ratios within the approved test panel.

Store and protect the test panel on the project site for use during the entire project as a comparison of the completed work. Work that does not match the test panel, as determined by the engineer, may be ordered for removal and replacement by the engineer at no cost to the department.

Test panels that are damaged or removed from the project site shall be replaced at no cost to the department.

B.5. Stamp
Furnish 'Rustic River Rock Embossing Skin' pattern (No. 935M), trademarked Lithotex Pavecrafters, by Scofield, with a tool size of approximately 42 inches by 42 inches. Provide a sample stamp pattern to engineer for approval by the engineer, City of Fitchburg and department representatives a minimum of 10 calendar days prior to production of a test panel

B.6. Antiquing Release Agent
Use an antiquing release agent that is compatible with the stamp and coloring materials.

Use color Walnut 810 antique release, by Brickform.

Provide manufacturer's color chart and specifications for antiquing release agent to engineer 10 calendar days prior to production of a test panel.

B.7. Concrete Sealant
Use concrete sealant that is compatible with the stamp, release agent and manufacturer's recommended installation methods. Provide sealant specifications to the engineer 10 calendar days prior to production of a test panel.

Prime Sealant: Glossy.
Secondary Sealant: Matte.

C Construction
Construct Colored and Stamped Concrete 5-Inch according to standard spec 602.

Coordinate locations of permanent signage requiring PVC pipe box outs according to standard spec 634.3.2 and as approved by the engineer.

C.1 Placement
Produce consistent colored concrete mixes. Once colored concrete placement has started, variations in the amounts, types, or source of materials are not permitted, with the exception of minor adjustments of water and air-entraining agent as necessary according to the standard spec. Other changes require the contractor to repeat the mix approval process.

Schedule colored concrete placement to minimize exposure to rapid drying conditions, wind and full sun, before curing materials are applied. Do not place colored concrete if rain, snow, or freezing temperature is forecasted within 24-hours.

Cover and protect adjacent construction work from discoloration and spillage during placement and curing of colored concrete. Remove and replace discolored work as the engineer directs.

Perform finishing operations consistently to avoid color variation in the finished colored concrete. Do not begin finishing until bleed water has left the surface. If water is added to the surface of the colored concrete to aid in finishing, the engineer will order removal of the colored concrete. During final finishing and stamping apply all strokes in the same direction.

Cure colored concrete according to standard spec 415.3.12, using the impervious coating or impervious sheeting method. Protect colored concrete from premature drying and excessive cold or hot temperatures by prompt application of curing materials. Do not allow plastic sheeting to come in contact with colored concrete.

C.2 Stamp Preparation
Clean the stamp prior to each use and ensure that it is free of any build-up. Visually inspect each stamp for blemishes or tears, and repair if necessary according to the manufacturer's recommendations.

C.3 Stamp
Coordinate with the engineer to verify stamping pattern orientation prior to starting the stamping work.

Prepare stamp tools with a full, smooth coat of antiquing release agent according to the manufacturer’s recommendations.

While concrete is still in the plastic state, apply imprinting tools to the surface and press into the concrete to create the desired impression. Finish all surfaces uniformly. Ensure that the stamped surface is free of laitance; sandblasting is not permitted. Grind or fill any blemishes.

Hand apply antiquing release agent to each individual joint line by spraying or rolling according to the manufacturer’s recommendations.

Shake or spray antiquing release agent over concrete surface according to the manufacturer's recommendations to achieve desired look and to match approved test panel.

C.4 Finishing
Provide tooled joints in a 4-ft x 4-ft grid, perpendicular to the back of the primary curb, or as directed by the engineer.

Allow concrete to cure for 24 hours and according to the manufacturer's recommendations after application of the color hardeners, antiquing release agents and stamp pattern.

Pressure wash concrete surface to remove approximately 80% of the antiquing release agent.

Ensure that concrete is clean and dry according to the manufacturer's recommendations before proceeding with concrete sealant.

Apply sealant according to the manufacturer's recommendations. Spray or roll on a single layer of gloss sealant. Follow by spraying on a single coat of matte finish sealer. Do not roll matte finish sealer onto concrete surfaces.

Protect the colored concrete from damage. Do not permit construction traffic or material storage on colored concrete. Exclude other foot traffic from colored concrete for at least 24 hours after placement.

D Measurement
The department will measure Colored and Stamped Concrete 5-Inch by the square foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.002	Colored and Stamped Concrete 5-Inch	SF

Payment is full compensation for preparing the foundation; for developing mix designs and providing and storing test panels; for furnishing materials (including concrete masonry, colored pigments, sealers, joint and bond breakers, and retarders), hauling, preparing, placing, curing, and protecting the concrete; for stamping, for antiquing and finishing; for sawing required for construction of colored concrete; for jointing and joint materials; for measuring opening strength including fabricating and testing cylinders, and evaluating maturity; for furnishing all removal of test panels and surplus colored concrete; and for protecting adjacent work.

207. Temporary Pedestrian Surface Special, Item SPV.0165.003.

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

B Materials
Furnish Asphaltic Surface according to standard spec 465.2.

C Construction
Construct temporary pedestrian surface special according to Standard Detail Drawing 'Traffic Control, Pedestrian Accommodation', except 4-Inch Base Aggregate Dense 1 ¼-Inch is not required.

Construct temporary pedestrian surface special not exceeding a 5 percent longitudinal slope.

Maintain the surface with a 5-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 Special by the square foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.003	Temporary Pedestrian Surface Special	SF

Payment is full compensation for providing all materials; for excavating and preparing the foundation; backfilling and disposing of surplus material; and for maintaining and removing the temporary pedestrian surface when no longer required.

208. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, R-13-264, Item SPV.0165.004; R-13-265, Item SPV.0165.005; R-13-269, Item SPV.0165.006; R-13-271, Item SPV.0165.007.

A Description
This special provision describes designing, furnishing materials and erecting a permanent earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years minimum.

This special provision describes the quality management program (QMP) for Mechanically Stabilized Earth (MSE) walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

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

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

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

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Concrete Panel Mechanically Stabilized Earth Wall systems (Concrete Panel MSE Walls). Proprietary wall systems 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 concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

The department maintains a list of pre-approved Concrete Panel MSE 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 Concrete Panel MSE 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. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf according to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans. If the contractor utilizes an angle of internal friction greater than 30 degrees for the design, external stability checks at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks are required to be analyzed by the contractor.

The design of the Concrete Panel MSE Wall by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the

design life. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

Facing panels shall be designed according to AASHTO LRFD 11.10.2.3. The Facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height, or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. All soil reinforcement layers shall be connected to facings. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. The uppermost layer of the reinforcement shall be located between 6 inches and 18 inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads according to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Unless approved by the Bureau of Structures cutting or altering of the basic structural section of either the strip or grid at the site is prohibited, a minimum clearance of 3” shall be maintained between any obstruction and reinforcement, and splicing reinforcement is not allowed.

The minimum embedment of the MSE 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. The leveling pad’s steps shall keep the bottom of the wall within one half the panel heights of the minimum embedment i.e. the minimum embedment plus up to one half the height of one

panel. Additional embedment may be detailed by the contractor, but will not be measured for payment.

Wall facing panels shall be installed on concrete leveling pads. The minimum cross section of the leveling pad shall be 6-inches deep by 1-foot wide.

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 shall consist of modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The concrete for the panels shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of standard spec 501. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80, or high- density polyethylene pads with a minimum density of 0.034 lb/in^3 according to ASTM 1505.

An 18-inch wide geotextile shall be used on the back face of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

B.3.2 Sample Panel

Provide sample wall panels with the textures and relief features as provided on each structure plan.

Supply and deliver to the engineer a 5-foot x 5-foot minimum sample panel for each panel type, demonstrating all wall components, for each structure with the specified pattern and colors for each structure. Prepare concrete surfaces of the sample panels and apply the stain using the same materials and in the same manner as proposed for each structure. Obtain the engineer's acceptance of the panel's texture and pattern prior to production of the panels

required for the contract. The accepted pattern and color test panels shall remain on the project site in a readily accessible location for the duration of the project. The accepted pattern and color sample panels will be the standard for the wall panels for each structure. Continue to provide test panels until accepted by the engineer.

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

B.3.3 Backfill

Furnish and place backfill for Concrete Panel MSE Walls as shown on the plans and as hereinafter provided. Place backfill in a zone extending horizontally from the back face of the wall facing to 1 foot minimum beyond the end of the reinforcement and extending vertically from the top of the leveling pad to a minimum of 3 inches above the final reinforcement layer. The same backfill material must be used for the entire wall height, from the leveling pad to top of finished reinforced earth zone, for each stage of wall construction. For the purposes of this special provision, a stage is defined as constructing a full-height portion of wall along the wall alignment, not staging wall construction up the height of the wall. Horizontal changes in backfill strata up the height of the wall will not be allowed.

In addition to gradation requirements hereinafter provided, backfill material within the reinforced zone shall meet the following requirements.

Test	Method	Value (Galvanized)	Value (Aluminized Type 2)
pH	AASHTO T-289	5.0-10.0	5.0 – 9.0
Sulfate content	AASHTO T-290	200 ppm max.	
Chloride content	AASHTO T-291	100 ppm max.	
Electrical Resistivity	AASHTO T-288	3000 ohm-cm min.	1500 ohm-cm min.
Organic Content	AASHTO T-267	1.0% max.	
Angle of Internal Friction	AASHTO T-236*	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99, or as modified by C.2.)	

*If the amount of P-4 material is greater than 60%, use AASHTO 236 with a standard-size shear box. Test results of this method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM 5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1" material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified report of tests (except Angle of Internal Friction test), are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. All certified report of test results shall be less than 6 months old and performed by a certified independent laboratory.

B.3.2.1 Wall Backfill Type A

For typical wall backfill, provide and use natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. Do not use foundry sand, bottom ash, blast furnace slag, crushed/recycled concrete, crushed/milled asphaltic concrete or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	% by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. Provide the percent by weight, passing the #4 sieve.

B.3.2.2 Wall Backfill Type B

If the project schedule is such that the wall must be constructed during freezing weather, the engineer may allow use of alternate wall backfill materials. The alternate wall backfill materials will only be utilized when approved by the engineer. Alternate Wall Backfill, Type B shall comply with the requirements for Coarse Aggregate No.1 as given in standard spec 501.2.5.4.4. The alternate wall backfill must consist of crushed stone or crushed gravel.

For Alternate Wall Backfill, Type B, provide material conforming to the following gradation requirements as per WisDOT Standard Specifications for Highway and Structure Construction.

Sieve Size	Percentage by Weight Passing
	Size No. 1 Coarse Aggregate, Standard spec 501.2.5.4.4
1”	100
¾”	90-100
3/8”	20-55
#4	0-10
#8	0-5

When Alternate Wall Backfill Type B (Coarse Aggregate No.1) is used in the reinforced zone as backfill, as required for construction during freezing weather, a geotextile shall be placed to separate the Alternate Wall Backfill Type B from the retained soil. If the wall is constructed in stages where portions of wall backfill consist of Wall Backfill Type A and adjacent portions consist of Alternate Wall Backfill Type B (Coarse Aggregate No.1), a geotextile must also be placed at the interface of and between the two different backfill materials for the entire height of the backfill to prevent migration of finer soil. The geotextile shall also be placed on top of the Alternate Wall Backfill Type B to provide separation from the fill above the wall reinforced zone. Adjoining sections of geotextile should be overlapped by a minimum of 12 in. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B. Where geotextile is used it cannot be placed directly on top of wall reinforcement and it must be placed at one-half of the backfill lift thickness over the reinforcement.

Do not alternate wall backfill types along the height of the wall. Sloping of the Alternate Wall Backfill Type B from the top of the reinforced earth zone down to the leveling pad is acceptable as required for staging and as approved by the engineer. The section C.2 compaction requirements must be satisfied for this interim condition. Temporary shoring return walls, such as wire face MSE walls, are acceptable as approved by the engineer.

B.3.4 Soil Reinforcement

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability. Soil reinforcement shall be galvanized or aluminized Type 2. Galvanized soil reinforcement shall be according to AASHTO M 111 or ASTM A641. Aluminized soil reinforcement shall be according to ASTM A463 Aluminized Type 2-100, SS, Grade 50, Class 2. Design of galvanized soil reinforcement shall be according to Section 11.10.6.4.2 of the current AASHTO LRFD Specifications. The design life of steel soil reinforcements shall comply with AASHTO LRFD. Aluminized soil reinforcement shall be limited 16 years of steel protection. Aluminized steel shall only be used on soil reinforcement elements and shall not be used on facing connections or any other steel portion of the wall system. Steel soil reinforcement shall be prefabricated into single or multiple elements before galvanizing.

B.3.5 Miscellaneous

For cast in place concrete cap or coping, use poured concrete Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

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.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the MSE wall and the leveling pad shall be according to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall panels, soil reinforcement, or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back panels. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the panels.

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf), or as modified as follows. If the gradation of the granular backfill is such that the P-200 material is less than 7% and the P-40 is less than 30%, a one-point Proctor test can be conducted in place of the 5-point Proctor. To complete this one-point test, compact the sample at a moisture content of 6%, then compute the actual (as-tested) sample moisture after completion of the test. Use Method B or D, and perform this test without removing oversize particles and without correction for coarse particles, as

per AASHTO T224. The one-point as-tested moisture content represents the optimum moisture, and the measured one-point density represents the maximum wet density of the material. From these values, the maximum dry density can be computed.

If the engineer allows and approves use of alternate wall backfill material, the compaction of Alternate Wall Backfill Type B (Coarse Aggregate No.1) should be performed with at least three passes of a vibratory compactor in two mutually perpendicular directions (at least 6 passes total), such that with additional compactive effort, no further densification is obtained as visually determined by the engineer. If additional densification is observed after three passes in the two directions, then the material must be re-compacted until no further visual densification is observed. The initial three passes of the compactor must be in the direction parallel to the wall alignment followed by the three passes in the direction perpendicular to the wall alignment. Density testing is not required for Alternate Wall Backfill Type B.

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels.

A minimum of 3 inches of backfill shall be placed over the MSE reinforcement prior to working above the reinforcement.

C.3 Wall Components

C.3.1 General

Erect panel facing and other associated elements according to the wall manufacturer's construction guide. Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing.

The MSE reinforcement shall lay horizontally on the top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstructions in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.3.2 Steel Layers

Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C3.3 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed ½-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a ¾-inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance shall cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C.4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A proposed sequencing plan of wall construction operations and random test locations.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Grading Technician I

(GRADINGTEC-I); or Assistant Certified Technician, Grading (ACT-GRADING); or Aggregate Technician I (AGGTEC-I); or Assistant Certified Technician, Aggregate (ACT-AGG) present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Nuclear Density Technician I (NUCDENSITYTEC-I) or Assistant Certified Technician, Nuclear Density (ACT-NUC) perform field density and field moisture content testing. The HTCP Level I Grading Technician, Level I Aggregate Technician, or Assistant Certified Aggregate Technician (ACT) must also be present to document and confirm the required number of passes of the compaction equipment for the Alternate Wall Backfill Type B during wall backfill placement and compaction activities.

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

C.4.3 Equipment

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

Furnish nuclear gauges from the department's approved product list at http://www.atwoodsystems.com/materials. Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.

Conform to ASTM D 6938 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Perform each test for 4 minutes of nuclear gauge count time.

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department

C.4.4 Documentation

(1) Document all observations, inspection records, and process adjustments daily. Submit test results to the department's project materials coordinator on the same day they become available.

(2) Use forms provided in CMM chapter 8. Note other information in a permanent field record and as a part of process control documentation enumerated in the contractor's quality control plan. Enter data into the applicable materials reporting system (MRS) software within 5 business days after results are available.

(3) Submit final testing records and other documentation to the engineer electronically within 10 business days after all contract-required information becomes available. The engineer may allow submission of scanned copies of hand-written documentation.

C.4.5 Quality Control (QC) Testing

Perform compaction testing on the backfill. Conform to CMM 8.15 for testing and gauge monitoring methods. Conduct density testing at a minimum frequency of 1 test per 150 cubic yards of backfill, or major portion thereof. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing. Density testing is not required for Alternate Wall Backfill Type B.

Perform 1 gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.2) every 2000 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

Observe the compaction and densification process for the Alternate Wall Backfill Type B. The material must be compacted using the minimum number of passes of the compaction equipment until no further densification is obtained as visually determined. Provide documentation that the compaction met the required number of passes of the compaction equipment for the Alternate Wall Backfill Type B.

C.4.6 Department Testing

C.4.6.1 General

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

C.4.6.2 Quality Verification (QV) Testing

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.4.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.

(3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for 10 business days.

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

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

(6) The department will also provide personnel to be onsite and confirm the required number of passes of the compaction equipment for the Alternate Wall Backfill Type B during wall backfill placement and compaction activities on a random basis. This work does not relieve the contractor of the responsibility to observe and document fill placement and compaction as required in C.4.2 and C.4.4.

C.4.6.3 Independent Assurance (IA)

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

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

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.4.6.4.

C.4.6.4 Dispute Resolution

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

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

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

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP by the square foot, acceptably completed, measured as the vertical area within the pay limits the contract plans show. No other measurement of quantities shall be made in the field. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.004	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, R-13-264	SF
SPV.0165.005	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, R-13-265	SF
SPV.0165.006	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, R-13-269	SF
SPV.0165.007	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, R-13-271	SF

Payment is full compensation for supplying a design and shop drawings; supplying sample panels; 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 (Type A or Type B), backfilling, compacting,

developing/completing/documenting the quality management program, performing compaction testing; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the contract work. Any temporary return walls, such as a wire face MSE wall, required to facilitate construction of a portion of wall with Backfill Type B is incidental to this bid item.

Parapets, railings, abutment bodies and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.
(20150824)

209. Salvage and Replace Landscaping Stone, Item SPV.0165.008.

A Description
This special provision describes salvaging and replacing landscaping stone at locations shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Remove, handle, store and reinstall existing landscaping stone in a manner that prevents foreign material from being intermixed with the stone. If fabric or plastic sheeting underlies the existing landscaping stone, replace in a similar manner meeting the approval of the engineer.

D Measurement
The department will measure Salvage and Replace Landscaping Stone by the square foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.008	Salvage and Replace Landscaping Stone	SF

Payment is full compensation for removing, handling, and storing all materials, including all fabric or plastic sheeting; for furnishing all excavating, backfilling, disposing of surplus material; for reinstalling existing landscaping stone; and for restoring the work site.

210. 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 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.

Provide polymer consisting of polyester, polypropylene, polyamide, or polyetheylene.

Provide geogrid capable of maintaining dimensional stability during handling, placing, and installation and resistant to insects, rodents, mildew, and rot.

Provide geogrid with a minimum width of 6 feet.

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)] Determine values using Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches ±0.04 inch long. Use variable test specimen widths for differing geogrids that are equal to 1 element plus ½ the aperture width on both sides of that element. An element is defined

as the minimum number of parallel strands that form a distinguishable repeating pattern.

(4) Determine Aperture Area and Aperture Dimension for joined multi-layer geogrids 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. Clearly mark geogrid rolls 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 directed by the engineer. 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 6 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. No vehicles or construction equipment shall be permitted to operate 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 that 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. All costs to repair or replace damaged or defective geogrid shall be the responsibility of the contractor.

After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the special provisions. Place, spread, and compact the material to comply with the applicable sections of the standard specifications or as directed by the engineer, 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 that the geogrid is not displaced or damaged. The engineer may require changes in equipment and/or 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, storing, transporting, and installing the geogrid and furnishing and installing all devices and materials necessary to join or secure the geogrid in place.

211. Shredded Hardwood Bark Mulch, Item SPV.0180.500.

A Description
This special provision describes furnishing and installing Shredded Hardwood Bark Mulch according to the applicable sections of standard spec 627 and as hereinafter provided.

B Materials
Provide Shredded Hardwood Bark Mulch that is finely shredded hardwood bark mulch and the product of a mechanical chipper, hammermill, or tub grinder.

Provide fibrous wood mulch, uniformly dark brown in color, free of large wood chunks, and substantially free of mold, dirt, sawdust, and foreign material. Provide material that is not 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. Provide material that 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. Unattached bark or greenleaf composition, either singly or combined, shall 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.

Do not use any weed barrier fabric in mulch areas.

Do not damage plants, structures, and/or other materials already in place, when placing the mulch.

D Measurement
The department will measure Shredded Hardwood Bark Mulch by the square yard, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.500	Shredded Hardwood Bark Mulch	SY

Payment is full compensation for furnishing and installing all materials.

212. Native Vegetated Mat, Type A, Item SPV.0180.501; Type B, Item SPV.0180.502; Type C, Item SPV.0180.503.

A Description
This special provision describes furnishing and installing Native Vegetated Mat, (type) at the locations shown on the plans and as hereinafter provided.

Due to the nature of this product, Native Vegetated Mat, (type) will require custom growing by the nursery. Plan the coordination and ordering of the mat so the timing is such that the Native Vegetated Mat, (type) is fully rooted with vegetative coverage of no less than 75 percent by the time of installation. Contact the nursery as soon as possible after obtaining the contract and no less than six months in advance of the date of installation.

B Materials
Provide Native Vegetated Mat, (type) by a qualified nursery having a minimum of 3 years' experience in the growing and installation of vegetated sod or mats composed of native prairie species in the Upper Midwest, including:

- Agrecol, 10101 North Casey Road, Evansville, WI 53526, (608) 884-4640
- Prairie Restoration, Inc., 31616 128th Street, Princeton, MN 55371,
- (800) 837-5986
- Creative Edge Landscaping, 215 Burden Avenue, Twin Lakes, WI 53181,
- (262) 877-2805

Provide Native Vegetated Mat, (type) with the following qualities:

- Composed of solid seeded vegetated erosion control mat produced from a native seed matrix free from any noxious weeds or invasive species.
- Comprised of a soilless media with an integrated core material supporting a strong fibrous root system.
- Provide fully rooted Native Vegetated Mat with minimum vegetative coverage of 75% at time of installation. Nurse/cover crop cannot be counted towards the 75% minimum vegetative coverage.

- Provide a composite growing soilless media capable of sustaining vigorous root growth: free of any admixture of topsoil, subsoil, slag, clay, stones, sticks or other extraneous matter and having a pH value of a minimum of 5.4 and maximum of 7.0.
- Provide a growing media and root zone with a 1 inch depth, +/- .20 inches.
- 100% biodegradable coir mat of woven coir fibers evenly machine twisted and spun at 20.5 to 25.5 oz/cu.yd.
- Biodegradable with the longevity of the core being 3-6 years according to manufacturer's specifications.
- Provide a roll size of 40 inches wide.

Provide species composition for Native Vegetated Mat, Type A with 35% grasses, sedges and rushes (and a minimum of 15 out of 17 grass/sedge/rush species) and 65% wildflowers (and a minimum of 35 out of 40 wildflower species) as follows:

Native Vegetated Mat, Type A
Grasses, Sedges and Rushes

COMMON NAME	LATIN NAME
Side-Oats Grama	*Bouteloua curtipendula*
Fringed Brome	*Bromus ciliatus*
Bebb's Oval Sedge	*Carex bebbii*
Copper-Shouldered Oval Sedge	*Carex bicknellii*
Fringed Sedge	*Carex crinita*
Lance-Fruited Oval Sedge	*Carex scoparia*
Brown Fox Sedge	*Carex vulpinoidea*
Canada Wild Rye	*Elymus canadensis*
Virginia Wild Rye	*Elymus virginicus*
Rattlesnake Grass	*Glyceria canadensis*
Reed Manna Grass	*Glyceria grandis*
Squirrel-Tail Barley	*Hordeum jubatum*
June Grass	*Koeleria cristata (macrantha)*
Little Bluestem	*Schizachyrium scoparium*
Dark-Green Bulrush	*Scirpus atrovirens*
Red Bulrush	*Scirpus pendulus*
Three-Square Bulrush	*Scirpus pungens*

Native Vegetated Mat, Type A
Wildflowers

COMMON NAME	LATIN NAME
Nodding Onion	*Allium cernuum*
Leadplant	*Amorpha canescens*
Meadow Anemone	*Anemone canadensis*
Marsh Milkweed	*Aesclepias incarnata*
Butterfly Weed	*Aesclepias tuberosa*
Sky Blue Aster	*Aster azureus*
Smooth Blue Aster	*Aster laevis*
New England Aster	*Aster novae-angliae*

Swamp Aster	*Aster puniceus*
Cream Wild Indigo	*Baptisia leucophaea*
Partridge Pea	*Chamaecrista fasciculata*
Prairie Coreopsis	*Coreopsis palmata*
White Prairie Clover	*Dalea candida*
Purple Prairie Clover	*Dalea purpurea*
Pale Purple Coneflower	*Echinacea pallida*
Purple Coneflower	*Echinacea purpurea*
Rattlesnake Master	*Eryngium yuccifolium*
Spotted Joe Pye Weed	*Eupatorium maculatum*
Sneezeweed	*Helenium autumnale*
Early Sunflower	*Heliopsis helianthoides*
Prairie Blazing Star	*Liatris pycnostachya*
Marsh Blazing Star	*Liatris spicata*
Cardinal Flower	*Lobelia cardinalis*
Great Blue Lobelia	*Lobelia siphilitica*
Monkey Flower	*Mimulus ringens*
Wild Bergamot	*Monarda fistulosa*
Smooth Penstemon	*Penstemon digitalis*
Prairie Cinquefoil	*Potentilla arguta*
Mountain Mint	*Pycnantheum virginianum*
Yellow Coneflower	*Ratibida pinnata*
Black Eyed-Susan	*Rudbeckia hirta*
Sweet Black-Eyed Susan	*Rudbeckia subtomentosa*
Compass Plant	*Silphium laciniatum*
Prairie Dock	*Silphium terebinthiaceum*
Ohio Goldenrod	*Solidago ohioensis*
Riddell's Goldenrod	*Solidago riddellii*
Showy Goldenrod	*Solidago speciosa*
Spiderwort	*Tradescantia ohiensis*
Blue Vervain	*Verbena hastata*
Culver's Root	*Veronicastrum virginicum*

Provide species composition for Native Vegetated Mat, Type B with 35% grasses, sedges and rushes (and a minimum of 16 out of 20 grass/sedge/rush species) and 65% wildflowers (and a minimum of 40 out of 46 wildflower species) as follows:

Native Vegetated Mat, Type B
Grasses, Sedges and Rushes

COMMON NAME	**LATIN NAME**
Side-Oats Grama	*Bouteloua curtipendula*
Fringed Brome	*Bromus ciliatus*
Blue Joint Grass	*Calamagrostis canadensis*
Bebb's Oval Sedge	*Carex bebbii*
Copper-Shouldered Oval Sedge	*Carex bicknellii*
Crawford's Sedge	*Carex crawfordii*

Brown Fox Sedge	*Carex vulpinoidea*
Canada Wild Rye	*Elymus canadensis*
Virginia Wild Rye	*Elymus virginicus*
Squirrel-Tailed Barley	*Hordeum jubatum*
Common Rush	*Juncus effusus*
Path Rush	*Juncus tenuis*
Switch Grass	*Panicum virgatum*
Little Bluestem	*Schizachyrium scoparium*
Hard-Stem Bulrush	*Scirpus acutus*
Dark-Green Bulrush	*Scirpus atrovirens*
Red Bulrush	*Scirpus pendulus*
Three-Square Bulrush	*Scirpus pungens*
Indian Grass	*Sorghastrum nutans*
Prairie Cord Grass	*Spartina pectinata*

Native Vegetated Mat, Type B
Wildflowers

COMMON NAME	**LATIN NAME**
Mud Plantain	*Alisma subcordatum*
Nodding Onion	*Allium cernuum*
Leadplant	*Amorpha canescens*
Marsh Milkweed	*Aesclepias incarnata*
Sky Blue Aster	*Aster azureus*
New England Aster	*Aster novae-angliae*
Swamp Aster	*Aster puniceus*
Panicled Aster	*Aster simplex*
White Wild Indigo	*Baptisia leucantha*
Wild Senna	*Cassia hebecarpa*
Prairie Coreopsis	*Coreopsis palmata*
Tall Coreopsis	*Coreopsis tripteris*
White Prairie Clover	*Dalea candida*
Purple Prairie Clover	*Dalea purpurea*
Canada Tick Trefoil	*Desmodium canadense*
Pale Purple Coneflower	*Echinacea pallida*
Purple Coneflower	*Echinacea purpurea*
Rattlesnake Master	*Eryngium yuccifolium*
Spotted Joe Pye Weed	*Eupatorium maculatum*
Boneset	*Eupatorium perfoliatum*
Sneezeweed	*Helenium autumnale*
Sawtooth Sunflower	*Helianthus grosseserratus*
Early Sunflower	*Heliopsis helianthoides*
Great St. John's Wort	*Hypericum pyramidatum*
Prairie Blazing Star	*Liatris pycnostachya*
Marsh Blazing Star	*Liatris spicata*
Monkey Flower	*Mimulus ringens*
Wild Bergamot	*Monarda fistulosa*

Smooth Penstemon	*Penstemon digitalis*
Prairie Cinquefoil	*Potentilla arguta*
Mountain Mint	*Pycnantheum virginianum*
Yellow Coneflower	*Ratibida pinnata*
Black Eyed-Susan	*Rudbeckia hirta*
Sweet Black-Eyed Susan	*Rudbeckia subtomentosa*
Rosin Weed	*Silphium integrifolium*
Compass Plant	*Silphium laciniatum*
Cup Plant	*Silphium perfoliatum*
Prairie Dock	*Silphium terebinthiaceum*
Grass-Leaved Goldenrod	*Solidago graminifolia*
Ohio Goldenrod	*Solidago ohioensis*
Riddell's Goldenrod	*Solidago riddellii*
Stiff Goldenrod	*Solidago rigida*
Spiderwort	*Tradescantia ohiensis*
Ironweed	*Veronia fasciculata*
Blue Vervain	*Verbena hastata*
Culver's Root	*Veronicastrum virginicum*

Provide species composition for Native Vegetated Mat, Type C with 35% grasses, sedges and rushes (and a minimum of 6 out of 6 grass/sedge/rush species) and 65% wildflowers (and a minimum of 20 out of 26 wildflower species) as follows:

Native Vegetated Mat, Type C
Grasses, Sedges and Rushes

COMMON NAME	LATIN NAME
Side-Oats Grama	*Bouteloua curtipendula*
Copper-Shouldered Oval Sedge	*Carex bicknellii*
Canada Wild Rye	*Elymus canadensis*
Virginia Wild Rye	*Elymus virginicus*
June Grass	*Koeleria cristata (macrantha)*
Little Bluestem	*Schizachyrium scoparium*

Native Vegetated Mat, Type C
Wildflowers

COMMON NAME	LATIN NAME
Nodding Onion	*Allium cernuum*
Leadplant	*Amorpha canescens*
Butterfly Weed	*Aesclepias tuberosa*
Sky Blue Aster	*Aster azureus*
Smooth Blue Aster	*Aster laevis*
New England Aster	*Aster novae-angliae*
Partridge Pea	*Chamaecrista fasciculata*
Prairie Coreopsis	*Coreopsis palmata*
White Prairie Clover	*Dalea candida*
Purple Prairie Clover	*Dalea purpurea*

Pale Purple Coneflower	*Echinacea pallida*
Purple Coneflower	*Echinacea purpurea*
Rattlesnake Master	*Eryngium yuccifolium*
Early Sunflower	*Heliopsis helianthoides*
Prairie Blazing Star	*Liatris pycnostachya*
Wild Bergamot	*Monarda fistulosa*
Smooth Penstemon	*Penstemon digitalis*
Prairie Cinquefoil	*Potentilla arguta*
Mountain Mint	*Pycnantheum virginianum*
Yellow Coneflower	*Ratibida pinnata*
Black Eyed-Susan	*Rudbeckia hirta*
Sweet Black-Eyed Susan	*Rudbeckia subtomentosa*
Compass Plant	*Silphium laciniatum*
Showy Goldenrod	*Solidago speciosa*
Spiderwort	*Tradescantia ohiensis*
Culver's Root	*Veronicastrum virginicum*

Provide all Pure Live Seed (PLS) from Wisconsin or Minnesota nurseries specializing in growing native species from Upper Midwestern genotypes in Zone 5a or lower of the Plant Hardiness Zone Map, Miscellaneous Publication 1475, revised 1990. Ensure all seed used to produce the final vegetated mat product is cold, dry stratified.

Provide 6-inch long 100 percent biodegradable anchoring staples, defined as biodegradable from microbial activity according to ASTM D5338 and ASTM D5271, biodegradable in cold (43° F) and hot (180° F) soil conditions. Provide staples that are water resistant.

C Construction

Install native vegetated mats immediately following bioretention area construction. Do not disturb engineering soil profile or compact bioretention profile when placing the mat. If existing vegetation is present, eliminate all unwanted vegetation prior to installing Native Vegetated Mat, (type) by using a non-selective non-persisting herbicide like glyphosate or repeated mechanical weed control cultivations or smothering techniques. Eliminate all surface roughness to prevent mat root pruning from air gaps.

Keep Native Vegetated Mat, (type) cool and moist evenly through the roll during transportation to avoid root hair pruning (dry back). A refrigerated air ride truck may be necessary for long hauls but a tarped truck or trailer can be sufficient for short hauls, weather dependent. Consult with Native Vegetated Mat, (type) supplier regarding transportation based on timing, distance from nursery to project site and local forecasted conditions.

Handle native vegetated mats with care to minimize root and vegetative damage. Keep mat moist and cool at all times at the install site. Install mat within 48 hours of being initially loaded onto truck at supplier's location.

If soil is excessively dry, pre-water site before mat is laid or water as mat is laid. Wetting hot, exposed soil will also reduce heat injury to perishable prairie root hairs. Initially soak soil and mat to a wet, nearly saturated condition.

Install native vegetated mats in the locations shown on the plans and in a manner consistent with the supplier's recommendations. Lay mats 'edge to edge' with tight joints, but no overlap to prevent edge dry back. Lay native vegetated mat so that the ends of the pieces do not line up with the adjoining row, but create a staggered pattern. Lay mat parallel to slopes.

Install before June 30 or during the late summer/early fall per the supplier's recommendations.

Anchor the Native Vegetated Mat, (type) with biodegradable anchoring staples of the type and size specified. Secure the mat with biodegradable staples using one staple per square yard through the center and one staple every 2 feet along the edge of the native vegetated mats.

Water native vegetated mat as soon as possible after installation. Provide supplemental water for the Native Vegetated Mat, (type) according to supplier's recommendations for frequency, depth of water, and quality of water. Water every day for the first seven days after installation. Provide supplemental water if rainfall is less than 1-inch per week to maintain soil moisture content between 20-30 percent; watering to a wet condition and then letting the soil dry back to ensure roots grow deeper for moisture. Supplemental water is incidental to this item.

Examine Native Vegetated Mat, (type) that die or show evidence of dying during the remainder of the growing season. The nature of this material allows it to go dormant and the inherent seed bank from the initial growing may still remain. Do not immediately replace mats that show signs of browning or die-back; instead, consult with supplier to determine the cause and action plan based on the specific conditions of the site and the maintenance history.

Maintain Native Vegetated Mat, (type) for the duration of the contract. Maintenance activities include those necessary to keep the Native Vegetated Mat, (type) in healthy and flourishing condition and may include, but not be limited to:

- Providing supplemental water if rainfall is less than 1-inch per week to maintain soil moisture content between 20-30 percent; watering to a wet condition and then letting the soil dry back to ensure roots grow deeper for moisture.
- Examining areas planted with native vegetated mat bi-weekly for the establishment of wind or water-borne weeds, invasives or pioneer woody vegetation. Removing weeds/invasives/pioneer woody vegetation selectively by hand-pulling. Do not spray weeds as drift could eliminate other plants. If a large-scale inhabitation of weeds or invasives is documented, contact supplier immediately and set into action a course of correction to eliminate the invasives before they can spread further.

D Measurement
The department will measure Native Vegetated Mat, (type) 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.0180.501	Native Vegetated Mat, Type A	SY
SPV.0180.502	Native Vegetated Mat, Type B	SY
SPV.0180.503	Native Vegetated Mat, Type C	SY

Payment is full compensation for furnishing and installing all materials; providing and placing supplemental water; and for maintaining and replacing the vegetated mat.

213. Aggregate Fines, Item SPV.0195.001.

A Description
This special provision describes furnishing and installing Aggregate Fines at the locations shown on the plans and as hereinafter provided.

B Materials
Provide angular fines with the following characteristics:

- 3/16-inch size, with fines;
- Granite;
- Red granite in color, matching that of the existing aggregate in the area where Aggregate Fines are to be placed.

C Construction
Submit sample of material to engineer prior to use on the project for color verification. Select color from quarry or supplier's standard range of colors.

Compact subgrades under Aggregate Fines.

Install Aggregate Fines in locations indicated in the drawings at a final depth of 4 inches, taking into account settling and compacting.

Install Aggregate Fines by hand application, lightly wetting the top surface before compacting with a plate compactor or other light equipment. Apply additional material, wet the surface, and compact to achieve desired grades and to ensure that the finished surfaces of the Aggregate Fines are level with adjacent surfaces.

Correct any settling, subsidence or washout in the two-week period following installation by adding material, lightly wetting, and compacting.

D Measurement
The department will measure Aggregate Fines in tons of aggregate fines, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.001	Aggregate Fines	TON

Payment is full compensation for providing materials, transporting, handling, storing; for excavating, wetting, placing and compacting; for repairing areas of settlement, subsidence or washout; and for disposing of all excess and waste materials.

214. Cold Patch, Item SPV.0195.700.

A Description
This special provision describes furnishing, stockpiling, placing and maintaining cold patch material. The cold patch material shall be used for short term maintenance purposes to fill potholes/voids in the existing or temporary pavement surfaces as directed by the engineer.

B Materials
B.1 General
Furnish cold patch that is a combination of course aggregate, natural sand and bituminous material MC-250. Furnish a mixture designed to have a workability range of 15 degrees Fahrenheit to 100 degrees Fahrenheit without the addition of heat. Furnish a mixture having good adhesion to wet surfaces and resistant to damage by water, salt and deicing products. Provide a uniform mixture not requiring any mixing or special handling prior to use.

B.2 Gradation
Provide material conforming to the following gradation requirements:

SIEVE SIZE	PERCENT PASSING (by weight)
3/8 Inch (9.5mm)	96-100
No. 4 (4.75 mm)	76-82
No. 8 (2.38 mm)	50-60
No. 50 (.297 mm)	15-20
No. 200 (0.74 mm)	2-5
Bitumen	4.8-5.2

C Construction
Choose a smooth, firm, and well-drained area for an on-site stockpile that is cleared of vegetation and foreign material that may contaminate the cold patch. Locate the stockpile so it is easily accessible and able to be maintained and replenished at any time during the duration of the project. Maintain a minimum stockpile size of 3 to 5 tons or as directed by the engineer.

Application of cold patch must be able to be accomplished by hand labor as necessary. Prior to filling any potholes/voids remove all ponded water and loose debris with compressed air and dry the patch area thoroughly. Place material into the pothole/void and compact flush with a tamper, roller, or vehicle tire. Traffic must be able to travel over the patch immediately after compacting.

Maintain patched areas.

The intent of the majority of the repairs is to complete the work under a planned lane closure at night between the hours of 10:00 PM to 5:00 AM under the direction of the engineer. In addition, provide 12 hours-a-day availability (6:00 AM to 6:00 PM) of the equipment and forces to expeditiously repair areas within 2 hours of an emergency repair request by the engineer.

D Measurement

The department will measure Cold Patch in tons of cold patch, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.700	Cold Patch	TON

Payment is full compensation for removing ponded water and loose debris, thoroughly drying the area and preparing the area to be patched, performing the patch operations, furnishing and providing a stockpile of material, maintaining the patched area and for removing any unused stockpile at the completion of the project.

Final Payment is based on a 50% payment at the initial delivery of the stockpile to the project and final 50% of payment once material is acceptably utilized within the potholes. Payment includes any unused stockpile quantity remaining on the site at the completion of the project.

215. Excavation, Hauling, and Disposal of Contaminated Soil and Management of Contaminated Groundwater, Item SPV.0195.701.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of contaminated soil at a DNR approved landfill. The closest DNR landfill is:

Waste Management Madison Prairie Landfill
6002 Nelson Road
Sun Prairie, WI
(608) 837-9031

Perform this work according to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

This special provision also describes and includes pumping and disposing of contaminated groundwater (if dewatering is necessary).

Perform this work according to standard spec 205 and with pertinent parts of Chapters NR 100-299 of the Wisconsin Administrative Code, as supplemented herein. Perform all work necessary to control, handle, and dispose of groundwater and surface water, and all other water that may be encountered within contaminated areas, as required for performance of the work.

A.2 Notice to the Contractor – Contaminated Soil and Groundwater Locations

The department completed testing for soil and groundwater contamination for locations within this project where excavation is required.

1. (Site 8) Station 108+50 EB to 110+50 EB, from 25 right of the reference line to construction limits right near PDQ, from 3.5 feet to 5.5 feet below ground surface.
2. (Site 25) Station 111+50 EB to 114+25 EB from 25 feet right of the reference line to construction limits right, from 5 feet to 10 feet below ground surface.
3. (Site 96) Station 107+00 EB to 108+00 EB, from 50 feet left of the reference line to construction limits, from ground surface to 2 feet below ground surface. Station 106+50 EB to 107+25 EB, from 25 feet right of the reference line to construction limits right, from ground surface to 2 feet below ground surface. Construction activity where proposed storm sewer intersects the Cannonball Trail for the Detention Basin D inlet structure installations, from below paved path to 2 feet below ground surface.

Contaminated soils and/or groundwater and/or underground storage tanks (USTs) may be encountered at other locations within the construction limits. If contaminated soils and/or groundwater and/or USTs are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer and the environmental consultant. Contaminated soil and/or groundwater at other locations shall be managed by the contractor under this contract. USTs will be removed by others.

For further information regarding previous investigation and remediation activities at these sites contact:

Name:	Daniel Haak
Address:	TRC Environmental Corporation 708 Heartland Trail, Suite 3000, Madison, WI 53717
Phone:	(608) 826-3628
Fax:	(608) 826-3941
E-mail:	dhaak@trcsolutions.com

A.3 Coordination

Coordinate work under this Contract with the environmental consultant retained by the department:

Consultant:	TRC Environmental Corporation
Contact:	Mr. Dan Haak
Address:	708 Heartland Trail, Suite 3000, Madison, WI 53717
Phone:	(608) 826-3628
Fax:	(608) 826-3941
e-mail:	dhaak@trcsolutions.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;

2. Identifying contaminated soils to be hauled to the DNR approved landfill;

3. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and

4. Obtaining the necessary approvals for disposal of contaminated soil from the DNR approved landfill.

5. Coordinating abandonment of groundwater monitoring wells along the project corridor.

6. Identifying contaminated groundwater to be pumped for treatment and disposal (if dewatering is necessary). Coordinating groundwater characterization and approval for disposal of contaminated water.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in each of the contaminated areas.

Identify the DNR approved landfill that will be used for disposal of contaminated soils, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal of contaminated soils from the landfill.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated areas. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed. Do not transport contaminated soil or pump contaminated groundwater offsite without prior approval from the environmental consultant.

A.4 Protection of Groundwater Monitoring Wells

Groundwater monitoring wells, including lost or improperly abandoned wells, may be present within the construction limits. Notify the environmental consultant if groundwater monitoring wells are encountered. Protect all groundwater monitoring wells to maintain their integrity. If required by the environmental consultant, adjust wells that do not conflict with utilities, structures, curb and gutter, etc. to be flush with the final grade. For wells that conflict with the previously mentioned items, notify the environmental consultant, and coordinate with the environmental consultant, or for wells that required abandonment, the abandonment or adjust of the wells by others.

Coordinate with the environmental consultant to ensure that the environmental consultant is present to abandon and/or document the location of the groundwater monitoring well during excavation activities.

A.5 Excavation Management Plan Approval

The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR's concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding the investigations, including waste characterization within the project limits, contact Jennifer Grimes with the department, at (608) 844-1147.

A.6 Health and Safety Requirements

Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with gasoline, diesel fuel, fuel oil, or other petroleum related products. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

Disposal of petroleum-contaminated soil at the bioremediation facility is subject to the facility's safety policies, which include as a minimum:

1. No smoking is allowed on-site.
2. Maximum speed limit of 15 mph on access roads and 5 mph while in active area.
3. All persons entering the active area must wear the following personal protective equipment: hard hats, high visibility clothing, steel toed work boots, safety glasses, and seat belts.
4. Minimum requirement for spacing is as follows:
    a. A minimum 15 foot Safety Zone is required between landfill equipment and all personnel at all times.
    b. Do not back up directly behind the compactor or dozer.
    c. Trucks must yield the right-of-way to landfill equipment.
    d. 15 feet required between trucks.
5. Only the driver can exit the truck and must stay within 4 feet of the truck. Use of Spotter is prohibited. Helper (if any), must remain in vehicle while unloading.
6. Tailgates of all vehicles may only be opened while in the active area and must be closed prior to exiting the active area.
7. Cleaning out vehicles must be done in designated area, not in the active area. Vehicles must be properly locked out / tagged out according to OSHA during the clean out process.
8. No scavenging is allowed.
9. Horseplay is prohibited.

Violation of the landfill's safety policy will result a verbal or written warning explaining this policy and may result in the loss of dumping privileges.

Immediately report all accidents and injuries at the landfill to landfill management.

B (Vacant)

C Construction

Supplement standard spec 205.3 with the following:

The environmental consultant will periodically examine excavated soil during excavations in the areas of known petroleum or soil contamination within the construction limits.

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated and to ensure that excavations do not extend beyond the minimum required to construct utilities and highway improvements unless expressly directed to do so by the engineer.

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite disposal at a DNR approved landfill or can be beneficially re-used on-site. The environmental consultant will evaluate

excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

On the basis of the results of such field-screening, the material will be designated for disposal as follows:

- Excavation Common consisting of clean soil and/or clean construction and demolition fill (such as clean soil, boulders, concrete, reinforced concrete, bituminous pavement, bricks, building stone, and unpainted or untreated wood), which under NR 500.08 are exempt materials, or
- Low-level contaminated material for reuse as fill within the construction limits, or
- Contaminated soil for off-site treatment and disposal at the WDNR-licensed bioremediation facility, or
- Potentially contaminated for temporary stockpiling and additional characterization prior to disposal

Some material may require additional characterization prior to disposal. Provide for the temporary stockpiling of up to 200 cubic yards of contaminated soil on-site that require additional characterization. Construct and maintain a temporary stockpile of the material according to NR 718.05(3), including, but not limited to, placement of the contaminated soil/fill material on an impervious surface and covering the stockpile with impervious material to prevent infiltration of precipitation. The department's environmental consultant will collect representative samples of the stockpiled material, laboratory-analyze the samples, and advise the contractor, within 10 business days of the construction of the stockpile, of disposal requirements. The stockpiled material shall be disposed either at the WDNR-licensed disposal facility by the contractor or, if characterized as hazardous waste, by the department. As an alternative to temporarily stockpiling contaminated soil/fill material that requires additional characterization, the contractor has the option of suspending excavation in those areas where such soil is encountered until such time as characterization is completed.

Directly load and haul soils designated by the environmental consultant for off-site disposal to the DNR approved landfill. Use loading and hauling practices that are appropriate to prevent any spills or releases of petroleum-contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site disposal so as not to contain free liquids. Verify that the vehicles used to transport contaminated material are licensed for such activity according to applicable state and federal regulations.

When material is encountered outside the above-identified limits of known contamination that appears to have been impacted with petroleum or chemical products, or when other obvious potentially contaminated materials are encountered or material exhibits characteristics of industrial-type wastes, such as fly ash, foundry sand, and cinders, or when underground storage tanks are encountered, suspend excavation in that area and notify the engineer and the environmental consultant.

Groundwater may be present within the construction limits. Water generated during dewatering operations (if necessary) is expected to be permitted to discharge to the surface except in the contaminated areas. If dewatering of perched groundwater or stormwater is required, allow stormwater to settle for 24 hours after a rain event, after which the water shall be managed as uncontaminated dewatering, unless the environmental consultant has evidence that the water will require treatment and/or off-site disposal.

Contaminated groundwater generated from dewatering activities within the contaminated areas may exceed the surface water discharge limits for petroleum compounds specified in the DNR's "General Permit to Discharge under the Wisconsin Pollutant Discharge Elimination System" for "Contaminated Groundwater from Remedial Action Operations" (WPDES Permit No. WI-0046566-5), Table 3.1.

Pump contaminated water that exceeds surface water discharge limits, as determined by environmental consultant, into temporary holding tanks provided by others or an alternative discharge point as determined by the environmental consultant, as necessary to complete construction. Allow contaminated water encountered, but not requiring removal as a standard course of construction, to remain in-place and do not manage according to this special provision.

The environmental consultant will coordinate approval of contaminated water hauling and disposal. Only pump contaminated groundwater if the environmental consultant is on-site.

Discharging contaminated groundwater to any location other than that approved and provided by the environmental consultant, is at the contractor's cost. If the contractor chooses alternate discharge, at the contractor's cost, obtain DNR concurrence on any dewatering plans, and provide and operate any and all treatment and discharge equipment required.

Employ construction methods and techniques in a manner that will minimize the need for dewatering, and if dewatering is required, minimize the volume of water generated. Take measures to limit groundwater, surface water, and precipitation from entering and exiting excavations in the areas of contamination. Such measures, which may include berming, ditching, or other means, shall be maintained until construction of utilities in the areas of contamination are complete.

Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities. Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statues, judiciary decisions, and regulations of the State of Wisconsin.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Contaminated Soil and Management of Contaminated Groundwater in tons of contaminated soil accepted by the DNR approved disposal facility as documented by weight tickets generated by the disposal facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.701	Excavation, Hauling, and Disposal of Contaminated Soil and Management of Contaminated Groundwater	TON

Payment is full compensation for excavating, segregating, loading, hauling, and treatment via bioremediation of contaminated soil; tipping fees including applicable taxes and surcharges; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; and for dewatering of soils prior to transport, if necessary.

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 6 *(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 __3__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:

   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

   http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

2. Definitions

a. Interpret these terms, used throughout this additional special provision, as follows:

   i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
   ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
   iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
   iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as “Disc” on the cover of the Highway Work Proposal, which is enforced as committed.
   v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
   vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
   vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually

commits to DBE participation at or above the bid percentage, or certifies that they have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. Department's DBE Evaluation Process

a. Documentation Submittal

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

i. Bidder Meets DBE Goal

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

ii. Bidder Does Not Meet DBE Goal

(1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.

(2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:

a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.

b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define “good faith” but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they

have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

c. Prime Contractors should:

   i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

   ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, ***as required by federal rules***. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

      (1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.

      (2) SBN is the preferred outreach tool. https://www.bidx.com/wi/main Other acceptable means include postal mail, email, fax, phone call.

         a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

         b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.

      (3) Second solicitation should take place within 5 days
         a. An email solicitation is highly recommended for this second solicitation

      (4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

      (5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.

      (6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:
         a. Email to all prospective DBE firms in relevant work areas
         b. Phone call log to DBE firms who express interest via written response or call.
         c. Fax/letter confirmation
         d. Copy of the DBE quotes
         e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.

   i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.

   ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

   iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

      (1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.

      (2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

e. After notification of contract award, submit **'Commitment to Subcontract'** form within the time period specified in the contract.

   i. Provide the following information along with department form DT1202:

      (1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.

      (2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.

      (3) Photocopies or electronic copies of all written solicitations to DBE's.

      (4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.

      (5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office
6150 Fond du Lac Ave.
Milwaukee, WI 53218
Phone: 414-438-4583 / 608-266-6961
Fax: 414-438-5392
E-mail: DOTDBESupportServices@dot.wi.gov

6. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

7. Department's Criteria for DBE Participation

Department's DBE List

a. The department maintains a DBE list on the department's website

http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/ucp-directory.xlsx

b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor's responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.
b. A DBE is performing a commercially useful function if the following conditions are met:
c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website

http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

11. Manufacturers and Suppliers

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

12. DBE Prime

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

13. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

14. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm
b. On every other project that the mentor protégé team identifies itself on.
c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/policy-statement.pdf

16. Changes to the approved DBE Commitment Form DT1506

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

17. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors that were committed to equal work items, in the original contract.

18. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS

FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR

SUBJECT: **REQUEST FOR DBE QUOTES**

LET DATE & TIME

DATE: MONTH DAY YEAR

CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have some one contact me at this number

Prime Contractor 's Contact Person		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		Email	

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
    d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
    c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
    c. Add attachments to a sub-quote
    d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISIONS 5

Fuel Cost Adjustment

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $1.10 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:

450.3.2.1 General

Replace the entire text with the following effective with the June 2016 letting:

450.3.2.1.1 Preparation and Paving Operations

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 36 F for upper layers or 32 F for lower layers unless the engineer allows in writing. The contractor should place HMA pavement for projects in the northern asphalt zone between May 1 and October 15 inclusive and for projects in the southern asphalt zone between April 15 and November 1 inclusive. CMM 4-53 figure 2 defines asphalt zones. Notify the engineer at least one business day before paving.

(2) Unless the contract specifies otherwise, conform to the following:

- Keep the road open to all traffic during construction.
- Prepare the existing foundation for treatment as specified in 211.
- Incorporate loose roadbed aggregate as a part of preparing the foundation, in shoulder construction, or dispose of as the engineer approves.

(3) Place asphaltic mixture only on a prepared, firm, and compacted base, foundation layer, or existing pavement substantially surface-dry and free of loose and foreign material. Do not place over frozen subgrade or base, or where the roadbed is unstable.

450.3.2.1.2 Cold Weather Paving

450.3.2.1.2.1 General

(1) Conform to these cold weather paving provisions for work performed under the following:

- The 460 HMA Pavement bid items.
- The 465 Asphaltic Surface bid items.
- Special provisions that require placing mixture conforming to the contract requirements under 460 for HMA pavement or under 465 for asphaltic surface.

450.3.2.1.2.2 Cold Weather Paving Plan

(1) Submit a written cold weather paving plan to the engineer at the preconstruction meeting. In that plan outline material, operational, and equipment changes for paving when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F. Include the following:

- Use a department-accepted HMA mix design that incorporates a warm mix additive from the department's approved products list. Do not use a foaming process that introduces water into the mix.
- Identify the warm mix additive and dosage rate.
- Identify modifications to the compaction process and when to use them.

(2) Engineer written acceptance is required for the cold weather paving plan. Engineer acceptance of the plan does not relieve the contractor of responsibility for the quality of HMA pavement placed in cold weather except as specified in 450.5.2(3).

450.3.2.1.2.3 Cold Weather Paving Operations

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F unless a valid engineer-accepted cold weather paving plan is in effect.

(2) If the national weather service forecast for the construction area predicts ambient air temperature less than 40 F at the projected time of paving within the next 24 hours, confirm or submit revisions to the cold weather paving plan for engineer validation. Update the plan as required to accommodate the conditions anticipated for the next day's operations. Upon validation of the plan, the engineer will allow paving for the next day. Once in effect, pave conforming to the engineer-accepted cold weather paving plan for the balance of that work day or shift regardless of the temperature at the time of paving.

450.4 Measurement

Add the following as paragraph three effective with the June 2016 letting:

(3) The department will measure HMA Cold Weather Paving by the ton of HMA mixture placed conforming to an engineer-accepted cold weather paving plan.

450.5 Payment

Replace the entire text with the following effective with the June 2016 letting:

450.5.1 General

(1) All costs of furnishing, maintaining, and operating the truck scale or other weighing equipment and furnishing the weigh tickets are incidental to the contract.

(2) Nonconforming material allowed to remain in place is subject to price adjustment under 105.3.2.

(3) Full-depth sawing to remove integrally placed safety edge where not required is incidental to the contract.

(4) The contractor is responsible for the quality of HMA placed in cold weather.

450.5.2 Cold Weather Paving

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

ITEM NUMBER	DESCRIPTION	UNIT
450.4000	HMA Cold Weather Paving	TON

(2) Payment for HMA Cold Weather Paving is full compensation for additional materials and equipment specified for cold weather paving under 450.3.2.1.2 including costs for preparing, administering, and following the contractor's cold weather paving plan. The department will not pay for HMA Cold Weather Paving for HMA placed as follows:

- If the lot density is less than the minimum specified in table 460-3 for mixture placed under 460.
- On days when the department is assessing liquidated damages.

(3) If because of an excusable compensable delay under 108.10.3, the engineer directs the contractor to pave when the temperature is less than 36 F for the upper layer or less than 32 F for lower layers, the department:

- Will relieve the contractor of responsibility for damage and defects the engineer attributes to cold weather paving.
- Will not assess disincentives for density or ride.

(4) If HMA pavement is placed under 450.3.2.1.2 and the HMA Cold Weather Paving bid item is not in the contract, the department will pay for the additional costs specified in 450.5.2(2) as extra work. The department will pay separately for providing HMA pavement and HMA surface under 460.5, 465.5, and the contract special provisions.

460.3.4 Cold Weather Paving

Delete the entire subsection effective with the June 2016 letting:

460.5.1 General

Replace the entire text with the following effective with the June 2016 letting:

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

ITEM NUMBER	DESCRIPTION	UNIT
460.5000 - 5999	HMA Pavement (gradation) LT (binder)(designation)	TON
460.6000 - 6999	HMA Pavement (gradation) MT (binder)(designation)	TON
460.7000 - 7999	HMA Pavement (gradation) HT (binder)(designation)	TON
460.8000 - 8999	HMA Pavement (gradation) SMA (binder)(designation)	TON
460.2000	Incentive Density HMA Pavement	DOL

460.5.2.2 Disincentive for HMA Pavement Density

Replace paragraph two with the following effective with the June 2016 letting:

(2) The department will not assess density disincentives for pavement placed in cold weather because of a department-caused delay as specified in 450.5.2(3).

460.5.2.4 Cold Weather Paving

Delete the entire subsection effective with the June 2016 letting:

501.2.6 Fly Ash

Replace paragraph one with the following effective with the July 2016 letting:

(4) 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.

550.5.2 Piling

Add the following as paragraph three effective with the December 2015 letting:

(3) The department will not entertain a change order request for a differing site condition under 104.2.2.2 or for a quantity change under 104.2.2.4.3 for the Piling bid items. Instead the department will adjust pay under the Piling Quantity Variation administrative item if the total driven length of each size is less than 85 percent of, or more than 115 percent of the contract quantity as follows:

Percent of Contract Length Driven	Pay Adjustment
< 85	(85% contract length - driven length) x 20% unit price
> 115	(driven length - 115% contract length) x 5% unit price

643.2.1 General

Replace paragraph two with the following effective with the December 2015 letting:

(2) Use reflective sheeting from the department’s approved products list on barricades, drums, and flexible tubular marker posts.

715.3.1.2.1 General

Replace paragraph one with the following effective with the July 2016 letting:

(1) Designate the location and size of all lots before placing concrete. Ensure that no lot contains concrete of more than one mix design or placement method defined within 715.3.1.2 as follows:

Mix design change A modification to the mix requiring the engineer's approval under 710.4(5).

For paving mixes, a source change under item 1 of 710.4(5) for fly ash of the same class that does not require a modification under items 2 through 4 of 710.4(5) does not constitute a mix design change.

Placement method Either slip-formed, not slip-formed, or placed under water.

Errata

Make the following corrections to the standard specifications:

460.2.7 HMA Mixture Design - TABLE 460-2 MIXTURE REQUIREMENTS

Correct errata in the Fractured Faces row of table 460-2 to reference ASTM D5821.

Fractured Faces (ASTM D5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90

Correct errata in footnote two of table 460-2 to reference AASHTO M323.

[2] For a gradation that passes below the boundaries of the caution zone (ref. AASHTO M323), the dust to binder ratio limits are 0.6 - 1.6.

641.2.9 Overhead Sign Supports

Correct errata adding back accidentally deleted paragraphs one through three.

(1) Provide commercially fabricated overhead sign supports conforming to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years with a wind importance factor of 1.00. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the methods of appendix C of those AASHTO standards.

(2) Design structures, listed as applicable structure types in the AASHTO standards, to the fatigue category criteria as follows:

1. Structures carrying variable message signs:
   - Category I criteria for structures over all roadway types.
2. Structures carrying type II or III signs:
   - Category I criteria for structures used over highways and free flow ramps.
   - Category II criteria for structures with arms greater than 30 feet used over local roads and city streets.
   - Category III criteria for structures with arms 30 feet or less used over local roads and city streets.

(3) Use the posted speed limit of the roadway beneath the structure for truck-induced gusts.

(4) Submit shop drawings identified by structure number, design computations, and material specifications, to the engineer before erecting sign supports. Provide tightening procedures for mast arm or luminaire arm to pole shaft connections on the shop drawings. Have a professional engineer registered in the state of Wisconsin sign, seal, and date the shop drawings and certify that the design conforms to AASHTO standards and the contract.

(5) Provide steel pole shafts and mast arms zinc coated according to ASTM A123. Provide tapered pole and arm shafts with a minimum taper of 0.14 inch per foot for single-member vertical and single-member horizontal structure components. Provide bolts and other hardware conforming to 641.2.2.

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.

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 September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. Wage Rates, Hours of labor and payment of Wages
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Affidavits
V. Wage Rate Redistribution
VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
DANE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2016

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	31.55	18.52	50.07
Carpenter	33.02	17.12	50.14
Future Increase(s): Add $1.42/hr on 6/1/2016. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	35.97	17.85	53.82
Future Increase(s): Add $1.75 on 6/1/16. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	35.75	19.97	55.72
Future Increase(s): Add $1.25/hr on 6/1/16. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	35.62	0.00	35.62
Ironworker	32.50	20.58	53.08
Line Constructor (Electrical)	40.81	18.06	58.87
Painter	29.87	18.79	48.66
Pavement Marking Operator	31.24	17.30	48.54
Piledriver	30.11	21.09	51.20
Roofer or Waterproofer	30.40	2.23	32.63
Teledata Technician or Installer	22.50	12.74	35.24
Tuckpointer, Caulker or Cleaner	32.82	18.67	51.49
Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	17.37	50.02
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.09	39.62
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.97	34.72
TRUCK DRIVERS			
Single Axle or Two Axle	36.72	21.15	57.87
Three or More Axle	25.78	18.96	44.74
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	30.82	21.85	52.67
Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.			
Pavement Marking Vehicle	23.82	17.72	41.54
Shadow or Pilot Vehicle	25.28	18.31	43.59
Truck Mechanic	25.28	18.31	43.59
LABORERS			
General Laborer	30.95	15.65	46.60
Future Increase(s): Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017			
Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	17.00	4.22	21.22
Landscaper	30.95	15.65	46.60
Future Increase(s): Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	27.30	15.65	42.95
Future Increase(s): Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	19.35	0.00	19.35
Railroad Track Laborer	17.00	3.96	20.96
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.	38.27	21.85	60.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.	37.77	21.85	59.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type);	37.27	21.85	59.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx.	37.01	21.85	58.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- wage- compliance. aspx. .	36.72	21.85	58.57
Fiber Optic Cable Equipment.	29.50	0.68	30.18

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI160010
DATE: April 8, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$30.95	15.55
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	31.05	15.55
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	31.10	15.55
Group 4: Line and Grade Specialist	31.30	15.55
Group 5: Blaster and Powderman	31.15	15.55
Group 6: Flagperson and Traffic Control Person	27.30	15.55

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	25.63	18.96
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	25.63	18.96

CLASSES OF LABORER AND MECHANICS

Bricklayer	28.41	12.81
Carpenter	30.48	15.80
Millwright	32.11	15.80
Piledriverman	30.98	15.80
Ironworker	32.85	21.84
Cement Mason/Concrete Finisher	35.97	17.28
Electrician		See Page 3
Line Construction		
Lineman	42.14	32% + 5.00
Heavy Equipment Operator	40.03	32% + 5.00
Equipment Operator	33.71	32% + 5.00
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	23.18	32% + 5.00
Painter, Brush	26.70	17.65
Painter, Spray, Structural Steel,Bridges	27.70	17.65
Well Drilling:		
Well Driller	16.52	3.70

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0 dated January 8, 2016; Modification #1 dated January 29, 2016; Modification #2 dated February 26, 2016; Modification #3 dated March 11, 2016.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI160010
DATE: April 8, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$38.27	$21.55
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.	$37.77	$21.55
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$37.27	$21.55
Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	$37.01	$21.55
Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.	$36.72	$21.55
Group 6: Off – road material hauler with or without ejector	$30.82	$21.55

Premium Pay:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hours

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI160010
DATE: April 8, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$29.60	26.5%+ 9.15
Area 2:		
Electricians	31.21	18.92
Area 3:		
Electrical contracts under $130,000	28.96	18.26
Electrical contracts over $130,000	31.16	18.34
Area 4:	29.84	29.50% + 9.37
Area 5	28.96	24.85% + 9.70
Area 6	37.02	29%+9.77
Area 8		
Electricians	31.90	24.95% + 10.46
Area 9:		
Electricians	35.75	19.87
Area 10	29.64	20.54
Area 11	33.90	24.47
Area 12	34.98	19.89
Area 13	35.13	23.26
Teledata System Installer		
Area 14		
Installer/Technician	22.50	12.72
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	26.00	17.70

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

SCHEDULE OF ITEMS REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20160712004	1206-07-74	WISC 2016249
	1206-08-74	N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Contract Items					
0010	201.0105 Clearing	159.000 STA		.		.
0020	201.0115 Clearing	5.000 ACRE		.		.
0030	201.0120 Clearing	541.000 ID		.		.
0040	201.0205 Grubbing	154.000 STA		.		.
0050	201.0215 Grubbing	5.000 ACRE		.		.
0060	201.0220 Grubbing	536.000 ID		.		.
0070	203.0100 Removing Small Pipe Culverts	10.000 EACH		.		.
0080	203.0200 Removing Old Structure (station) 001.4X6 Box Culvert Sta. 65+43 EF	LUMP	LUMP			.
0090	204.0100 Removing Pavement	13,915.000 SY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	204.0115 Removing Asphaltic Surface Butt Joints	36.000 SY		.		.
0110	204.0120 Removing Asphaltic Surface Milling	8,590.000 SY		.		.
0120	204.0130 Removing Curb	245.000 LF		.		.
0130	204.0150 Removing Curb & Gutter	12,155.000 LF		.		.
0140	204.0155 Removing Concrete Sidewalk	3,540.000 SY		.		.
0150	204.0165 Removing Guardrail	1,765.000 LF		.		.
0160	204.0170 Removing Fence	156.000 LF		.		.
0170	204.0180 Removing Delineators and Markers	5.000 EACH		.		.
0180	204.0185 Removing Masonry	3.650 CY		.		.
0190	204.0195 Removing Concrete Bases	42.000 EACH		.		.
0200	204.0210 Removing Manholes	9.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0210	204.0220 Removing Inlets	42.000 EACH		.		.
0220	204.0245 Removing Storm Sewer (size) 001. 8-Inch	163.000 LF		.		.
0230	204.0245 Removing Storm Sewer (size) 002. 12-Inch	787.000 LF		.		.
0240	204.0245 Removing Storm Sewer (size) 003. 15-Inch	280.000 LF		.		.
0250	204.0245 Removing Storm Sewer (size) 004. 18-Inch	395.000 LF		.		.
0260	204.0245 Removing Storm Sewer (size) 005. 24-Inch	213.000 LF		.		.
0270	204.0245 Removing Storm Sewer (size) 006. 27-Inch	125.000 LF		.		.
0280	204.0245 Removing Storm Sewer (size) 007. 30-Inch	150.000 LF		.		.
0290	204.0245 Removing Storm Sewer (size) 008. 36-Inch	80.000 LF		.		.
0300	204.0245 Removing Storm Sewer (size) 009. 42-Inch	40.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0310	204.0245 Removing Storm Sewer (size) 010. 60-Inch	85.000 LF		.		.
0320	204.0245 Removing Storm Sewer (size) 011. 14x23-Inch HERCP	11.000 LF		.		.
0330	204.0245 Removing Storm Sewer (size) 012. 19x30-Inch HERCP	850.000 LF		.		.
0340	204.0245 Removing Storm Sewer (size) 013. 24x38-Inch HERCP	650.000 LF		.		.
0350	204.0245 Removing Storm Sewer (size) 014. 29x45-Inch HERCP	166.000 LF		.		.
0360	204.0280 Sealing Pipes	12.000 EACH		.		.
0370	204.0291.S Abandoning Sewer	8.000 CY		.		.
0380	204.9060.S Removing (item description) 001. Flag Pole	7.000 EACH		.		.
0390	204.9060.S Removing (item description) 002. Business Sign and Base	17.000 EACH		.		.
0400	204.9060.S Removing (item description) 003. Private Light	22.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0410	204.9060.S Removing (item description) 050. Inlet Covers	3.000 EACH		.		.
0420	204.9060.S Removing (item description) 051. Apron Endwalls	15.000 EACH		.		.
0430	204.9090.S Removing (item description) 001. Retaining Wall	80.000 LF		.		.
0440	204.9105.S Removing (item description) 001. Gate House	LUMP	LUMP			.
0450	204.9105.S Removing (item description) 002. Weigh Station Shed	LUMP	LUMP			.
0460	204.9105.S Removing (item description) 050. Storm Sewer Outlet Control Structure	LUMP	LUMP			.
0470	204.9105.S Removing (item description) 051. Gabion Structure	LUMP	LUMP			.
0480	205.0100 Excavation Common	357,147.000 CY		.		.
0490	205.0200 Excavation Rock	18,241.000 CY		.		.
0500	209.0100 Backfill Granular	1,145.000 CY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0510	209.0300.S Backfill Coarse Aggregate (size) 001. Size No 1	1,000.000 CY		.		.
0520	213.0100 Finishing Roadway (project) 001. 1206-07-74	1.000 EACH		.		.
0530	305.0110 Base Aggregate Dense 3/4-Inch	365.000 TON		.		.
0540	305.0120 Base Aggregate Dense 1 1/4-Inch	55,931.000 TON		.		.
0550	305.0130 Base Aggregate Dense 3-Inch	44,205.000 TON		.		.
0560	305.0500 Shaping Shoulders	19.000 STA		.		.
0570	312.0110 Select Crushed Material	42,283.000 TON		.		.
0580	405.0100 Coloring Concrete WisDOT Red	65.000 CY		.		.
0590	415.0100 Concrete Pavement 10-Inch	24,285.000 SY		.		.
0600	416.0170 Concrete Driveway 7-Inch	2,035.000 SY		.		.
0610	416.0190 Concrete Driveway 9-Inch	880.000 SY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0620	416.0270 Concrete Driveway HES 7-Inch	200.000 SY		.		.
0630	416.0290 Concrete Driveway HES 9-Inch	90.000 SY		.		.
0640	416.0508 Concrete Roundabout Truck Apron 8-Inch	300.000 SY		.		.
0650	416.0610 Drilled Tie Bars	41.000 EACH		.		.
0660	440.4410 Incentive IRI Ride	5,673.000 DOL	1.00000		5673.00	
0670	450.4000 HMA Cold Weather Paving	2,942.000 TON		.		.
0680	455.0605 Tack Coat	2,500.000 GAL		.		.
0690	460.2000 Incentive Density HMA Pavement	12,380.000 DOL	1.00000		12380.00	
0700	460.6223 HMA Pavement 3 MT 58-28 S	12,974.000 TON		.		.
0710	460.6424 HMA Pavement 4 MT 58-28 H	6,306.000 TON		.		.
0720	465.0105 Asphaltic Surface	703.000 TON		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0730	465.0120 Asphaltic Surface Driveways and Field Entrances	1,717.000 TON		.		.
0740	465.0125 Asphaltic Surface Temporary	565.000 TON		.		.
0750	465.0305 Asphaltic Surface Safety Islands	13.000 TON		.		.
0760	465.0310 Asphaltic Curb	1,222.000 LF		.		.
0770	502.3200 Protective Surface Treatment **P**	461.000 SY		.		.
0780	502.3210 Pigmented Surface Sealer	1,977.000 SY		.		.
0790	502.5005 Masonry Anchors Type L No. 5 Bars	43.000 EACH		.		.
0800	502.6102 Masonry Anchors Type S 1/2-Inch	4.000 EACH		.		.
0810	504.0100 Concrete Masonry Culverts **P**	6.000 CY		.		.
0820	504.0500 Concrete Masonry Retaining Walls **P**	1,968.000 CY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0830	505.0600 Bar Steel Reinforcement HS Coated Structures **P**	236,520.000 LB		.		.
0840	511.1100 Temporary Shoring	2,775.000 SF		.		.
0850	513.8016 Railing Steel Pedestrian Type C3 (structure) 001. R-13-264	140.000 LF		.		.
0860	516.0500 Rubberized Membrane Waterproofing	167.000 SY		.		.
0870	517.1010.S Concrete Staining (structure) 001. R-13-264 **P**	18,215.000 SF		.		.
0880	517.1010.S Concrete Staining (structure) 002. R-13-265 **P**	4,410.000 SF		.		.
0890	517.1010.S Concrete Staining (structure) 003. R-13-269 **P**	21,760.000 SF		.		.
0900	517.1010.S Concrete Staining (structure) 004. R-13-271 **P**	14,645.000 SF		.		.
0910	517.1010.S Concrete Staining (structure) 005. S-13-447 **P**	90.000 SF		.		.
0920	517.1010.S Concrete Staining (structure) 006. Concrete Barrier Wall **P**	725.000 SF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0930	517.1050.S Architectural Surface Treatment (structure) 001. R-13-264 **P**	9,475.000 SF		.		.
0940	517.1050.S Architectural Surface Treatment (structure) 002. R-13-265 **P**	2,250.000 SF		.		.
0950	517.1050.S Architectural Surface Treatment (structure) 003. R-13-269 **P**	13,900.000 SF		.		.
0960	517.1050.S Architectural Surface Treatment (structure) 004. R-13-271 **P**	8,910.000 SF		.		.
0970	517.1050.S Architectural Surface Treatment (structure) 005. S-13-447 **P**	70.000 SF		.		.
0980	520.1024 Apron Endwalls for Culvert Pipe 24-Inch	4.000 EACH		.		.
0990	520.2012 Culvert Pipe Temporary 12-Inch	96.000 LF		.		.
1000	520.2024 Culvert Pipe Temporary 24-Inch	72.000 LF		.		.
1010	520.4112 Culvert Pipe Class IV 12-Inch	1,041.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1020	520.4115 Culvert Pipe Class IV 15-Inch	366.000 LF		.		.
1030	520.4118 Culvert Pipe Class IV 18-Inch	684.000 LF		.		.
1040	520.4124 Culvert Pipe Class IV 24-Inch	695.000 LF		.		.
1050	520.4130 Culvert Pipe Class IV 30-Inch	9.000 LF		.		.
1060	520.8000 Concrete Collars for Pipe	41.000 EACH		.		.
1070	521.0112 Culvert Pipe Corrugated Steel 12-Inch	195.000 LF		.		.
1080	521.0728 Pipe Arch Corrugated Steel 28x20-Inch	68.000 LF		.		.
1090	521.1012 Apron Endwalls for Culvert Pipe Steel 12-Inch	3.000 EACH		.		.
1100	521.1228 Apron Endwalls for Pipe Arch Steel 28x20-Inch	1.000 EACH		.		.
1110	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	2.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1120	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	6.000 EACH		.		.
1130	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	2.000 EACH		.		.
1140	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	1.000 EACH		.		.
1150	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	1.000 EACH		.		.
1160	522.1054 Apron Endwalls for Culvert Pipe Reinforced Concrete 54-Inch	1.000 EACH		.		.
1170	523.0538 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 38x60-Inch	4.000 EACH		.		.
1180	524.0612 Apron Endwalls for Culvert Pipe Salvaged 12-Inch	1.000 EACH		.		.
1190	524.0618 Apron Endwalls for Culvert Pipe Salvaged 18-Inch	3.000 EACH		.		.
1200	524.0624 Apron Endwalls for Culvert Pipe Salvaged 24-Inch	5.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1210	601.0105 Concrete Curb Type A	45.000 LF		.		.
1220	601.0405 Concrete Curb & Gutter 18-Inch Type A	180.000 LF		.		.
1230	601.0407 Concrete Curb & Gutter 18-Inch Type D	2,059.000 LF		.		.
1240	601.0409 Concrete Curb & Gutter 30-Inch Type A	1,122.000 LF		.		.
1250	601.0411 Concrete Curb & Gutter 30-Inch Type D	20,694.000 LF		.		.
1260	601.0415 Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	130.000 LF		.		.
1270	601.0551 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	3,249.000 LF		.		.
1280	601.0580 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type R	265.000 LF		.		.
1290	601.0600 Concrete Curb Pedestrian	406.000 LF		.		.
1300	602.0410 Concrete Sidewalk 5-Inch	81,595.000 SF		.		.
1310	602.0415 Concrete Sidewalk 6-Inch	2,245.000 SF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1320	602.0515 Curb Ramp Detectable Warning Field Natural Patina	715.000 SF		.		.
1330	602.1500 Concrete Steps	80.000 SF		.		.
1340	603.1142 Concrete Barrier Type S42	1,807.000 LF		.		.
1350	603.1442 Concrete Barrier Type S42C	1,170.000 LF		.		.
1360	603.8000 Concrete Barrier Temporary Precast Delivered	12,040.000 LF		.		.
1370	603.8125 Concrete Barrier Temporary Precast Installed	12,295.000 LF		.		.
1380	606.0100 Riprap Light	82.000 CY		.		.
1390	606.0200 Riprap Medium	411.000 CY		.		.
1400	606.0300 Riprap Heavy	215.000 CY		.		.
1410	606.0400 Riprap Extra-Heavy	530.000 CY		.		.
1420	608.0005 Storm Sewer Rock Excavation	3,630.000 CY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1430	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	6,919.000 LF		.		.
1440	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	1,249.000 LF		.		.
1450	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	4,077.000 LF		.		.
1460	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	3,598.000 LF		.		.
1470	608.0430 Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	1,033.000 LF		.		.
1480	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	120.000 LF		.		.
1490	608.0442 Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	531.000 LF		.		.
1500	608.0448 Storm Sewer Pipe Reinforced Concrete Class IV 48-Inch	629.000 LF		.		.
1510	608.0454 Storm Sewer Pipe Reinforced Concrete Class IV 54-Inch	2,071.000 LF		.		.
1520	608.0460 Storm Sewer Pipe Reinforced Concrete Class IV 60-Inch	681.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1530	608.0478 Storm Sewer Pipe Reinforced Concrete Class IV 78-Inch	332.000 LF		.		.
1540	608.0548 Storm Sewer Pipe Reinforced Concrete Class V 48-Inch	549.000 LF		.		.
1550	608.0554 Storm Sewer Pipe Reinforced Concrete Class V 54-Inch	185.000 LF		.		.
1560	609.0112 Relaid Storm Sewer 12-Inch	35.000 LF		.		.
1570	609.0118 Relaid Storm Sewer 18-Inch	76.000 LF		.		.
1580	609.0124 Relaid Storm Sewer 24-Inch	24.000 LF		.		.
1590	610.0414 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 14x23-Inch	86.000 LF		.		.
1600	610.0419 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	262.000 LF		.		.
1610	610.0424 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	133.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1620	610.0429 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch	163.000 LF		.		.
1630	610.0434 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 34x53-Inch	1,551.000 LF		.		.
1640	611.0420 Reconstructing Manholes	1.000 EACH		.		.
1650	611.0530 Manhole Covers Type J	11.000 EACH		.		.
1660	611.0535 Manhole Covers Type J-Special	30.000 EACH		.		.
1670	611.0545 Manhole Covers Type L	4.000 EACH		.		.
1680	611.0606 Inlet Covers Type B	4.000 EACH		.		.
1690	611.0610 Inlet Covers Type BW	57.000 EACH		.		.
1700	611.0612 Inlet Covers Type C	1.000 EACH		.		.
1710	611.0624 Inlet Covers Type H	124.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1720	611.0627 Inlet Covers Type HM	21.000 EACH		.		.
1730	611.0636 Inlet Covers Type HM-S	4.000 EACH		.		.
1740	611.0639 Inlet Covers Type H-S	54.000 EACH		.		.
1750	611.0642 Inlet Covers Type MS	13.000 EACH		.		.
1760	611.0651 Inlet Covers Type S	3.000 EACH		.		.
1770	611.0652 Inlet Covers Type T	2.000 EACH		.		.
1780	611.0654 Inlet Covers Type V	28.000 EACH		.		.
1790	611.2003 Manholes 3-FT Diameter	3.000 EACH		.		.
1800	611.2004 Manholes 4-FT Diameter	104.000 EACH		.		.
1810	611.2005 Manholes 5-FT Diameter	28.000 EACH		.		.
1820	611.2006 Manholes 6-FT Diameter	12.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1830	611.2007 Manholes 7-FT Diameter	7.000 EACH		.		.
1840	611.2008 Manholes 8-FT Diameter	34.000 EACH		.		.
1850	611.3220 Inlets 2x2-FT	31.000 EACH		.		.
1860	611.3225 Inlets 2x2.5-FT	26.000 EACH		.		.
1870	611.3230 Inlets 2x3-FT	122.000 EACH		.		.
1880	611.3901 Inlets Median 1 Grate	9.000 EACH		.		.
1890	611.3902 Inlets Median 2 Grate	2.000 EACH		.		.
1900	611.8110 Adjusting Manhole Covers	14.000 EACH		.		.
1910	611.8115 Adjusting Inlet Covers	8.000 EACH		.		.
1920	611.8120.S Cover Plates Temporary	7.000 EACH		.		.
1930	611.9710 Salvaged Inlet Covers	3.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1940	611.9800.S Pipe Grates	18.000 EACH		.		.
1950	611.9900.S Drain Slotted Vane	20.000 EACH		.		.
1960	612.0206 Pipe Underdrain Unperforated 6-Inch	30.000 LF		.		.
1970	612.0406 Pipe Underdrain Wrapped 6-Inch	4,130.000 LF		.		.
1980	612.0806 Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	1.000 EACH		.		.
1990	614.0115 Anchorages for Steel Plate Beam Guard Type 2	1.000 EACH		.		.
2000	614.0150 Anchor Assemblies for Steel Plate Beam Guard	3.000 EACH		.		.
2010	614.0305 Steel Plate Beam Guard Class A	1,825.000 LF		.		.
2020	614.2300 MGS Guardrail 3	438.000 LF		.		.
2030	614.2500 MGS Thrie Beam Transition	148.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2040	614.2610 MGS Guardrail Terminal EAT	3.000 EACH		.		.
2050	616.0406 Fence Chain Link Salvaged 6-FT	32.000 LF		.		.
2060	616.0700.S Fence Safety	2,580.000 LF		.		.
2070	618.0100 Maintenance And Repair of Haul Roads (project) 001. 1206-07-74	1.000 EACH		.		.
2080	619.1000 Mobilization	1.000 EACH		.		.
2090	620.0100 Concrete Corrugated Median	163.000 SF		.		.
2100	620.0300 Concrete Median Sloped Nose	489.000 SF		.		.
2110	623.0200 Dust Control Surface Treatment	107,225.000 SY		.		.
2120	624.0100 Water	2,922.000 MGAL		.		.
2130	625.0100 Topsoil	2,000.000 SY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2140	625.0500 Salvaged Topsoil	222,440.000 SY		.		.
2150	627.0200 Mulching	64,830.000 SY		.		.
2160	628.1104 Erosion Bales	433.000 EACH		.		.
2170	628.1504 Silt Fence	17,015.000 LF		.		.
2180	628.1520 Silt Fence Maintenance	48,758.000 LF		.		.
2190	628.1905 Mobilizations Erosion Control	35.000 EACH		.		.
2200	628.1910 Mobilizations Emergency Erosion Control	14.000 EACH		.		.
2210	628.2004 Erosion Mat Class I Type B	149,810.000 SY		.		.
2220	628.2006 Erosion Mat Urban Class I Type A	19,570.000 SY		.		.
2230	628.2039 Erosion Mat Class III Type D	990.000 SY		.		.
2240	628.5505 Polyethylene Sheeting	1,110.000 SY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2250	628.6505 Soil Stabilizer Type A	5.000 ACRE		.		.
2260	628.6510 Soil Stabilizer Type B	5.000 ACRE		.		.
2270	628.7005 Inlet Protection Type A	417.000 EACH		.		.
2280	628.7010 Inlet Protection Type B	134.000 EACH		.		.
2290	628.7015 Inlet Protection Type C	240.000 EACH		.		.
2300	628.7020 Inlet Protection Type D	69.000 EACH		.		.
2310	628.7504 Temporary Ditch Checks	690.000 LF		.		.
2320	628.7515.S Stone or Rock Ditch Checks	130.000 CY		.		.
2330	628.7555 Culvert Pipe Checks	67.000 EACH		.		.
2340	628.7560 Tracking Pads	11.000 EACH		.		.
2350	628.7570 Rock Bags	244.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2360	629.0210 Fertilizer Type B	143.100 CWT		.		.
2370	630.0120 Seeding Mixture No. 20	3,941.000 LB		.		.
2380	630.0140 Seeding Mixture No. 40	1,027.000 LB		.		.
2390	630.0200 Seeding Temporary	5,687.000 LB		.		.
2400	630.0400 Seeding Nurse Crop	174.000 LB		.		.
2410	631.0300 Sod Water	346.200 MGAL		.		.
2420	631.1000 Sod Lawn	14,395.000 SY		.		.
2430	632.0101 Trees (species) (size) (root) 001. Coffeetree, 'Espresso', B&B, 2" Cal	4.000 EACH		.		.
2440	632.0101 Trees (species) (size) (root) 002. Elm, American 'Princeton', B&B, 2.5" Cal.	4.000 EACH		.		.
2450	632.0101 Trees (species) (size) (root) 003. Elm, 'Cathedral', B&B, 2.5" Cal.	6.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2460	632.0101 Trees (species) (size) (root) 004. Hackberry, 'Prairie Pride', B&B, 2.5" Cal.	6.000 EACH		.		.
2470	632.0101 Trees (species) (size) (root) 005. Maple, Freeman 'Celebration', B&B, 2.5" Cal.	4.000 EACH		.		.
2480	632.0101 Trees (species) (size) (root) 006. Oak, Bur, B&B, 2" Cal.	2.000 EACH		.		.
2490	632.0101 Trees (species) (size) (root) 007. Oak, Schuettes, B&B, 2" Cal.	7.000 EACH		.		.
2500	632.0101 Trees (species) (size) (root) 008. Crabapple, 'Sargent', B&B, 2" Cal.	11.000 EACH		.		.
2510	632.0101 Trees (species) (size) (root) 009. Hawthorn, Thornless Cockspur, B&B, 2" Cal.	10.000 EACH		.		.
2520	632.0101 Trees (species) (size) (root) 010. Lilac, 'Ivory Silk' (Shrub Form Tree), B&B, 6' Ht.	1.000 EACH		.		.
2530	632.0101 Trees (species) (size) (root) 011. Viburnum, Blackhaw (Shrub Form Tree), B&B, 6' Ht.	5.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2540	632.0201 Shrubs (species) (size) (root) 001. Juniper, Pfitzer 'Kallay's Compact', CG, 24" SP.	18.000 EACH		.		.
2550	632.9101 Landscape Planting Surveillance and Care Cycles	26.000 EACH		.		.
2560	633.5200 Markers Culvert End	36.000 EACH		.		.
2570	634.0410 Posts Wood 4x4-Inch X 10-FT	5.000 EACH		.		.
2580	634.0414 Posts Wood 4x4-Inch X 14-FT	60.000 EACH		.		.
2590	634.0416 Posts Wood 4x4-Inch X 16-FT	20.000 EACH		.		.
2600	634.0418 Posts Wood 4x4-Inch X 18-FT	3.000 EACH		.		.
2610	634.0612 Posts Wood 4x6-Inch X 12-FT	8.000 EACH		.		.
2620	634.0614 Posts Wood 4x6-Inch X 14-FT	12.000 EACH		.		.
2630	634.0616 Posts Wood 4x6-Inch X 16-FT	22.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2640	634.0618 Posts Wood 4x6-Inch X 18-FT	9.000 EACH		.		.
2650	634.0620 Posts Wood 4x6-Inch X 20-FT	1.000 EACH		.		.
2660	634.0624 Posts Wood 4x6-Inch X 24-FT	2.000 EACH		.		.
2670	636.0100 Sign Supports Concrete Masonry	10.000 CY		.		.
2680	636.1500 Sign Supports Steel Coated Reinforcement HS	2,210.000 LB		.		.
2690	637.1220 Signs Type I Reflective SH	179.500 SF		.		.
2700	637.2210 Signs Type II Reflective H	632.570 SF		.		.
2710	637.2215 Signs Type II Reflective H Folding	50.560 SF		.		.
2720	637.2230 Signs Type II Reflective F	197.500 SF		.		.
2730	638.2102 Moving Signs Type II	57.000 EACH		.		.
2740	638.2602 Removing Signs Type II	102.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2750	638.3000 Removing Small Sign Supports	134.000 EACH		.		.
2760	638.3100 Removing Structural Steel Sign Supports	1.000 EACH		.		.
2770	641.1200 Sign Bridge Cantilevered (structure) 001. S-13-447	LUMP	LUMP			.
2780	642.5401 Field Office Type D	1.000 EACH		.		.
2790	643.0200 Traffic Control Surveillance and Maintenance (project) 001. 1206-07-74	226.000 DAY		.		.
2800	643.0300 Traffic Control Drums	50,900.000 DAY		.		.
2810	643.0410 Traffic Control Barricades Type II	954.000 DAY		.		.
2820	643.0420 Traffic Control Barricades Type III	7,675.000 DAY		.		.
2830	643.0500 Traffic Control Flexible Tubular Marker Posts	54.000 EACH		.		.
2840	643.0600 Traffic Control Flexible Tubular Marker Bases	54.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2850	643.0705 Traffic Control Warning Lights Type A	12,195.000 DAY		.		.
2860	643.0715 Traffic Control Warning Lights Type C	3,416.000 DAY		.		.
2870	643.0800 Traffic Control Arrow Boards	570.000 DAY		.		.
2880	643.0900 Traffic Control Signs	28,513.000 DAY		.		.
2890	643.1000 Traffic Control Signs Fixed Message	472.410 SF		.		.
2900	643.1050 Traffic Control Signs PCMS	513.000 DAY		.		.
2910	644.1410.S Temporary Pedestrian Surface Asphalt	9,160.000 SF		.		.
2920	644.1601.S Temporary Curb Ramp	2.000 EACH		.		.
2930	644.1616.S Temporary Pedestrian Safety Fence	1,745.000 LF		.		.
2940	645.0120 Geotextile Type HR	2,126.000 SY		.		.
2950	645.0130 Geotextile Type R	249.000 SY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2960	645.0140 Geotextile Type SAS	538.000 SY		.		.
2970	646.0106 Pavement Marking Epoxy 4-Inch	53,475.000 LF		.		.
2980	646.0126 Pavement Marking Epoxy 8-Inch	4,065.000 LF		.		.
2990	646.0156 Pavement Marking Epoxy 18-Inch	49.000 LF		.		.
3000	646.0600 Removing Pavement Markings	19,193.000 LF		.		.
3010	646.0900.S Pavement Marking Late Season	8,289.000 LF		.		.
3020	647.0156 Pavement Marking Arrows Epoxy Type 1	1.000 EACH		.		.
3030	647.0166 Pavement Marking Arrows Epoxy Type 2	34.000 EACH		.		.
3040	647.0206 Pavement Marking Arrows Bike Lane Epoxy	36.000 EACH		.		.
3050	647.0306 Pavement Marking Symbols Bike Lane Epoxy	35.000 EACH		.		.
3060	647.0356 Pavement Marking Words Epoxy	19.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3070	647.0456 Pavement Marking Curb Epoxy	115.000 LF		.		.
3080	647.0553 Pavement Marking Stop Line Paint 12-Inch	41.000 LF		.		.
3090	647.0566 Pavement Marking Stop Line Epoxy 18-Inch	374.000 LF		.		.
3100	647.0606 Pavement Marking Island Nose Epoxy	8.000 EACH		.		.
3110	647.0653 Pavement Marking Parking Stall Paint	1,870.000 LF		.		.
3120	647.0726 Pavement Marking Diagonal Epoxy 12-Inch	412.000 LF		.		.
3130	647.0763 Pavement Marking Crosswalk Paint 6-Inch	65.000 LF		.		.
3140	647.0766 Pavement Marking Crosswalk Epoxy 6-Inch	135.000 LF		.		.
3150	647.0776 Pavement Marking Crosswalk Epoxy 12-Inch	1,759.000 LF		.		.
3160	647.0955 Removing Pavement Markings Arrows	15.000 EACH		.		.
3170	647.0965 Removing Pavement Markings Words	9.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3180	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	4,685.000 LF		.		.
3190	649.0402 Temporary Pavement Marking Paint 4-Inch	7,583.000 LF		.		.
3200	649.0600 Temporary Pavement Marking Removable Tape 6-Inch	412.000 LF		.		.
3210	649.0801 Temporary Pavement Marking Removable Tape 8-Inch	651.000 LF		.		.
3220	649.0802 Temporary Pavement Marking Paint 8-Inch	275.000 LF		.		.
3230	649.1100 Temporary Pavement Marking Stop Line 18-Inch	147.000 LF		.		.
3240	649.1600 Temporary Pavement Marking Diagonal Removable Tape 12-Inch	64.000 LF		.		.
3250	649.1802 Temporary Pavement Marking Arrows Paint	2.000 EACH		.		.
3260	650.4000 Construction Staking Storm Sewer	435.000 EACH		.		.
3270	650.4500 Construction Staking Subgrade	24,602.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3280	650.5000 Construction Staking Base	19,692.000 LF		.		.
3290	650.5500 Construction Staking Curb Gutter and Curb & Gutter	24,085.000 LF		.		.
3300	650.6500 Construction Staking Structure Layout (structure) 001. R-13-264	LUMP	LUMP			.
3310	650.6500 Construction Staking Structure Layout (structure) 002. R-13-265	LUMP	LUMP			.
3320	650.6500 Construction Staking Structure Layout (structure) 003. R-13-269	LUMP	LUMP			.
3330	650.6500 Construction Staking Structure Layout (structure) 004. R-13-271	LUMP	LUMP			.
3340	650.6500 Construction Staking Structure Layout (structure) 005. S-13-447	LUMP	LUMP			.
3350	650.7000 Construction Staking Concrete Pavement	6,696.000 LF		.		.
3360	650.7500 Construction Staking Concrete Barrier	57.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3370	650.8000 Construction Staking Resurfacing Reference	2,210.000 LF		.		.
3380	650.8500 Construction Staking Electrical Installations (project) 001. 1206-07-74	LUMP	LUMP			.
3390	650.9910 Construction Staking Supplemental Control (project) 001. 1206-07-74	LUMP	LUMP			.
3400	650.9920 Construction Staking Slope Stakes	26,027.000 LF		.		.
3410	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	17,857.000 LF		.		.
3420	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	4,542.000 LF		.		.
3430	652.0325 Conduit Rigid Nonmetallic Schedule 80 2-Inch	786.000 LF		.		.
3440	652.0335 Conduit Rigid Nonmetallic Schedule 80 3-Inch	3,075.000 LF		.		.
3450	652.0605 Conduit Special 2-Inch	354.000 LF		.		.
3460	652.0615 Conduit Special 3-Inch	1,880.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3470	652.0700.S Install Conduit into Existing Item	17.000 EACH		.		.
3480	652.0800 Conduit Loop Detector	2,911.000 LF		.		.
3490	652.0900 Loop Detector Slots	701.000 LF		.		.
3500	653.0222 Junction Boxes 18x12x6-Inch	6.000 EACH		.		.
3510	653.0905 Removing Pull Boxes	21.000 EACH		.		.
3520	654.0101 Concrete Bases Type 1	2.000 EACH		.		.
3530	654.0102 Concrete Bases Type 2	2.000 EACH		.		.
3540	654.0105 Concrete Bases Type 5	27.000 EACH		.		.
3550	654.0106 Concrete Bases Type 6	20.000 EACH		.		.
3560	654.0107 Concrete Bases Type 7	8.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3570	654.0230 Concrete Control Cabinet Bases Type L30	3.000 EACH		.		.
3580	655.0230 Cable Traffic Signal 5-14 AWG	2,396.000 LF		.		.
3590	655.0240 Cable Traffic Signal 7-14 AWG	715.000 LF		.		.
3600	655.0250 Cable Traffic Signal 9-14 AWG	1,395.000 LF		.		.
3610	655.0260 Cable Traffic Signal 12-14 AWG	666.000 LF		.		.
3620	655.0305 Cable Type UF 2-12 AWG Grounded	550.000 LF		.		.
3630	655.0515 Electrical Wire Traffic Signals 10 AWG	3,870.000 LF		.		.
3640	655.0610 Electrical Wire Lighting 12 AWG	12,940.000 LF		.		.
3650	655.0615 Electrical Wire Lighting 10 AWG	2,392.000 LF		.		.
3660	655.0620 Electrical Wire Lighting 8 AWG	21,583.000 LF		.		.
3670	655.0625 Electrical Wire Lighting 6 AWG	51,181.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3680	655.0635 Electrical Wire Lighting 2 AWG	3,114.000 LF		.		.
3690	655.0700 Loop Detector Lead In Cable	11,694.000 LF		.		.
3700	655.0800 Loop Detector Wire	5,395.000 LF		.		.
3710	656.0200 Electrical Service Meter Breaker Pedestal (location) 001. USH 18/151 & CTH PD	LUMP	LUMP			.
3720	656.0200 Electrical Service Meter Breaker Pedestal (location) 002. USH 18/151 & Williamsburg Way	LUMP	LUMP			.
3730	656.0200 Electrical Service Meter Breaker Pedestal (location) 003. Williamsburg Way	LUMP	LUMP			.
3740	656.0200 Electrical Service Meter Breaker Pedestal (location) 004. East Verona Road Frontage Road	LUMP	LUMP			.
3750	656.0200 Electrical Service Meter Breaker Pedestal (location) 005. CTH PD & Nesbitt Road	LUMP	LUMP			.
3760	657.0100 Pedestal Bases	8.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3770	657.0210 Transformer Bases Breakaway 15-17 Inch Bolt Circle	8.000 EACH		.		.
3780	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	32.000 EACH		.		.
3790	657.0305 Poles Type 2	1.000 EACH		.		.
3800	657.0321 Poles Type 5-Steel	7.000 EACH		.		.
3810	657.0322 Poles Type 5-Aluminum	6.000 EACH		.		.
3820	657.0327 Poles Type 6-Aluminum	20.000 EACH		.		.
3830	657.0337 Poles Type 17-Aluminum	8.000 EACH		.		.
3840	657.0410 Traffic Signal Standards Aluminum 9-FT	2.000 EACH		.		.
3850	657.0420 Traffic Signal Standards Aluminum 13-FT	2.000 EACH		.		.
3860	657.0425 Traffic Signal Standards Aluminum 15-FT	3.000 EACH		.		.
3870	657.0590 Trombone Arms 20-FT	1.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3880	657.0614 Luminaire Arms Single Member 4-Inch Clamp 8-FT	8.000 EACH		.		.
3890	657.0615 Luminaire Arms Single Member 4 1/2-Inch Clamp 8-FT	23.000 EACH		.		.
3900	657.0630 Luminaire Arms Single Member 6-Inch Clamp 8-FT	8.000 EACH		.		.
3910	657.0709 Luminaire Arms Truss Type 4-Inch Clamp 12-FT	4.000 EACH		.		.
3920	657.0710 Luminaire Arms Truss Type 4 1/2-Inch Clamp 12-FT	3.000 EACH		.		.
3930	657.1345 Install Poles Type 9	4.000 EACH		.		.
3940	657.1525 Install Monotube Arms 25-FT	1.000 EACH		.		.
3950	657.1530 Install Monotube Arms 30-FT	3.000 EACH		.		.
3960	657.6005.S Anchor Assemblies Light Poles on Structures	6.000 EACH		.		.
3970	658.0110 Traffic Signal Face 3-12 Inch Vertical	23.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3980	658.0120 Traffic Signal Face 5-12 Inch Vertical	4.000 EACH		.		.
3990	658.0215 Backplates Signal Face 3 Section 12-Inch	23.000 EACH		.		.
4000	658.0225 Backplates Signal Face 5 Section 12-Inch	4.000 EACH		.		.
4010	658.0416 Pedestrian Signal Face 16-Inch	8.000 EACH		.		.
4020	658.0500 Pedestrian Push Buttons	12.000 EACH		.		.
4030	658.0600 Led Modules 12-Inch Red Ball	15.000 EACH		.		.
4040	658.0605 Led Modules 12-Inch Yellow Ball	15.000 EACH		.		.
4050	658.0610 Led Modules 12-Inch Green Ball	15.000 EACH		.		.
4060	658.0615 Led Modules 12-Inch Red Arrow	12.000 EACH		.		.
4070	658.0620 Led Modules 12-Inch Yellow Arrow	16.000 EACH		.		.
4080	658.0625 Led Modules 12-Inch Green Arrow	16.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4090	658.0635 Led Modules Pedestrian Countdown Timer 16-Inch	8.000 EACH		.		.
4100	658.5069 Signal Mounting Hardware (location) 001. Fitchrona Road & CTH PD	LUMP	LUMP			.
4110	659.1125 Luminaires Utility LED C	38.000 EACH		.		.
4120	659.2130 Lighting Control Cabinets 120/240 30-Inch	2.000 EACH		.		.
4130	661.0200 Temporary Traffic Signals for Intersections (location) 001. CTH PD and Fitchrona Rd	LUMP	LUMP			.
4140	671.0132 Conduit HDPE 3-Duct 2-Inch	1,710.000 LF		.		.
4150	673.0105 Communication Vault Type 1	3.000 EACH		.		.
4160	674.0300 Remove Cable	2,941.000 LF		.		.
4170	674.0400 Reinstall Cable	755.000 LF		.		.
4180	678.0300 Fiber Optic Splice	8.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4190	690.0150 Sawing Asphalt	12,062.000 LF		.		.
4200	690.0250 Sawing Concrete	5,303.000 LF		.		.
4210	715.0415 Incentive Strength Concrete Pavement	7,286.000 DOL		1.00000		7286.00
4220	715.0502 Incentive Strength Concrete Structures	11,808.000 DOL		1.00000		11808.00
4230	999.1000.S Seismograph	LUMP	LUMP			.
4240	999.1500.S Crack and Damage Survey	LUMP	LUMP			.
4250	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	1,350.000 HRS		5.00000		6750.00
4260	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	2,400.000 HRS		5.00000		12000.00
4270	SPV.0035 Special 050. Pond Clay Liner	15,124.000 CY		.		.
4280	SPV.0035 Special 500. Planting Mixture	151.000 CY		.		.
4290	SPV.0035 Special 501. Topsoil Special	93.000 CY		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0035 Special 600.					
4300	Abandon Existing Sanitary Sewer - Slurry	43.000 CY		.		.
	SPV.0035 Special 700.					
4310	Roadway Embankment	145,649.000 CY		.		.
	SPV.0035 Special 701.					
4320	Excavation Special	1,325.000 CY		.		.
	SPV.0045 Special 700.					
4330	Portable Changeable Message Sign (PCMS) Cellular Communications	91.000 DAY		.		.
	SPV.0060 Special 001.					
4340	Utility Line Opening (ULO)	22.000 EACH		.		.
	SPV.0060 Special 002.					
4350	Concrete Flume	5.000 EACH		.		.
	SPV.0060 Special 003.					
4360	Posts Round Tubular Steel 2 3/8-Inch x 8-FT	9.000 EACH		.		.
	SPV.0060 Special 004.					
4370	Posts Round Tubular Steel 2 3/8-Inch x 10-FT	2.000 EACH		.		.
	SPV.0060 Special 005.					
4380	Posts Round Tubular Steel 2 3/8-Inch x 12-FT	10.000 EACH		.		.
	SPV.0060 Special 006.					
4390	V-Loc Base	21.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4400	SPV.0060 Special 007. Asphaltic Median Sloped Nose	1.000 EACH		.		.
4410	SPV.0060 Special 008. Covering Signs	1.000 EACH		.		.
4420	SPV.0060 Special 009. Department Owned Crash Cushion Temporary	3.000 EACH		.		.
4430	SPV.0060 Special 010. Concrete Bases Type 10 Special	4.000 EACH		.		.
4440	SPV.0060 Special 050. Manholes 9-FT Diameter	9.000 EACH		.		.
4450	SPV.0060 Special 051. Manhole EB607	1.000 EACH		.		.
4460	SPV.0060 Special 052. Manhole EB8001	1.000 EACH		.		.
4470	SPV.0060 Special 053. Manhole EB830	1.000 EACH		.		.
4480	SPV.0060 Special 054. Manhole F4400	1.000 EACH		.		.
4490	SPV.0060 Special 055. Manhole NR750	1.000 EACH		.		.
4500	SPV.0060 Special 056. Inlet WW1478	1.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4510	SPV.0060 Special 057. Inlet Covers 2X3-FT	20.000 EACH		.		.
4520	SPV.0060 Special 058. Pyramidal Inlet Grate 6X6	1.000 EACH		.		.
4530	SPV.0060 Special 059. Pyramidal Inlet Grate 6X12	1.000 EACH		.		.
4540	SPV.0060 Special 060. Infiltration Basin Spillway	2.000 EACH		.		.
4550	SPV.0060 Special 061. Storm Sewer Check Valve 12-Inch	1.000 EACH		.		.
4560	SPV.0060 Special 062. Apron Endwalls For Culvert Pipe Reinforced Concrete 78-Inch	1.000 EACH		.		.
4570	SPV.0060 Special 063. Concrete Cutoff Wall	18.000 EACH		.		.
4580	SPV.0060 Special 064. Covering and Locating Storm Sewer	42.000 EACH		.		.
4590	SPV.0060 Special 065. Storm Sewer Tap	12.000 EACH		.		.
4600	SPV.0060 Special 066. Clay Anti-Seepage Collar	2.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4610	SPV.0060 Special 067. Cover Plates	20.000 EACH		.		.
4620	SPV.0060 Special 068. Restrictor Plate	1.000 EACH		.		.
4630	SPV.0060 Special 069. Stop Gate	1.000 EACH		.		.
4640	SPV.0060 Special 070. Inlet Covers, Flat Temporary	2.000 EACH		.		.
4650	SPV.0060 Special 071. Drain Slotted Vane 6-FT	5.000 EACH		.		.
4660	SPV.0060 Special 072. Rock Excavation for Concrete Bases	13.000 EACH		.		.
4670	SPV.0060 Special 100. Remove and Salvage Existing City-Owned Light Pole Assembly	4.000 EACH		.		.
4680	SPV.0060 Special 101. Relocate and Modify Existing Lighting Cabinet	1.000 EACH		.		.
4690	SPV.0060 Special 102. Luminaires Utility LED - City Of Fitchburg	8.000 EACH		.		.
4700	SPV.0060 Special 103. Luminaires Area LED	17.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4710	SPV.0060 Special 104. Luminaires Decorative LED	11.000 EACH		.		.
4720	SPV.0060 Special 105. Aluminum Light Pole	17.000 EACH		.		.
4730	SPV.0060 Special 106. Lighting Control Cabinet-City Of Fitchburg	3.000 EACH		.		.
4740	SPV.0060 Special 107. Concrete Control Cabinet Bases Special	3.000 EACH		.		.
4750	SPV.0060 Special 108. Aluminum Transformer Base Breakaway	17.000 EACH		.		.
4760	SPV.0060 Special 109. Concrete Light Pole	10.000 EACH		.		.
4770	SPV.0060 Special 110. Pull Boxes, Polymer Concrete 12x12-Inch	10.000 EACH		.		.
4780	SPV.0060 Special 111. Pull Boxes, Polymer Concrete 17x30-Inch	44.000 EACH		.		.
4790	SPV.0060 Special 150. Loop Detector Splice	1.000 EACH		.		.
4800	SPV.0060 Special 151. Pull Box Type I	12.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4810	SPV.0060 Special 152. Pull Box Type III	8.000 EACH		.		.
4820	SPV.0060 Special 153. Pull Box Type V	4.000 EACH		.		.
4830	SPV.0060 Special 154. Pull Box Non-Conductive 24x36-Inch	11.000 EACH		.		.
4840	SPV.0060 Special 155. Pull Box Non-Conductive 24x42-Inch	37.000 EACH		.		.
4850	SPV.0060 Special 156. Concrete Base Type G	6.000 EACH		.		.
4860	SPV.0060 Special 157. Concrete Base Type LB-3	1.000 EACH		.		.
4870	SPV.0060 Special 158. Concrete Base Type LB-8	1.000 EACH		.		.
4880	SPV.0060 Special 159. Concrete Base Type P	1.000 EACH		.		.
4890	SPV.0060 Special 160. Transformer Base Steel 16-Inch	1.000 EACH		.		.
4900	SPV.0060 Special 161. Transformer Base Steel 20-Inch	1.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4910	SPV.0060 Special 162. Traffic Signal Trombone Arms, 15-FT	1.000 EACH		.		.
4920	SPV.0060 Special 163. Pole 30-FT, 7 Gauge	1.000 EACH		.		.
4930	SPV.0060 Special 164. Pole 30-FT, 11 Gauge	1.000 EACH		.		.
4940	SPV.0060 Special 165. Install Video Detection Camera	2.000 EACH		.		.
4950	SPV.0060 Special 166. 8-Count Fiber Optic Connecter 1,400-FT	1.000 EACH		.		.
4960	SPV.0060 Special 167. Remove Existing WisDOT-Owned Light Pole Assembly	8.000 EACH		.		.
4970	SPV.0060 Special 168. Remove Existing WisDOT-Owned Lighting Cabinet	1.000 EACH		.		.
4980	SPV.0060 Special 169. Remove and Salvage Existing Blank Out Sign	4.000 EACH		.		.
4990	SPV.0060 Special 500. Perennials, Allium, 'Summer Beauty', CG, 1 Gal.	40.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5000	SPV.0060 Special 501. Perennials, Feather Reed Grass, 'Overdam', CG, 1 Gal.	87.000 EACH		.		.
5010	SPV.0060 Special 502. Perennials, Gayfeather, Spiked 'Kobold', CG, 1 Gal.	16.000 EACH		.		.
5020	SPV.0060 Special 503. Perennials, Prairie Dropseed, 'Tara', CG, 1 Gal.	89.000 EACH		.		.
5030	SPV.0060 Special 600. Fire Hydrants	27.000 EACH		.		.
5040	SPV.0060 Special 601. Remove Existing Hydrant	16.000 EACH		.		.
5050	SPV.0060 Special 602. Water Valve, 6-Inch	23.000 EACH		.		.
5060	SPV.0060 Special 603. Water Valve, 8-Inch	17.000 EACH		.		.
5070	SPV.0060 Special 604. Water Valve, 10-Inch	10.000 EACH		.		.
5080	SPV.0060 Special 605. Water Valve, 12-Inch	14.000 EACH		.		.
5090	SPV.0060 Special 606. Adjust Existing Valve Box	25.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5100	SPV.0060 Special 607. Remove Existing Valve Box	41.000 EACH		.		.
5110	SPV.0060 Special 608. Remove Existing Water Valve Manhole	4.000 EACH		.		.
5120	SPV.0060 Special 609. Connect to Existing Water Main	29.000 EACH		.		.
5130	SPV.0060 Special 610. Abandon Existing Water Main	27.000 EACH		.		.
5140	SPV.0060 Special 611. Live Tap	6.000 EACH		.		.
5150	SPV.0060 Special 612. Adjust Water Curb Box	4.000 EACH		.		.
5160	SPV.0060 Special 613. Remove Existing Curb Box	5.000 EACH		.		.
5170	SPV.0060 Special 614. Temporary Water Main Connection	5.000 EACH		.		.
5180	SPV.0060 Special 615. Reconstruct Existing Sanitary Sewer Structure	2.000 EACH		.		.
5190	SPV.0060 Special 616. Sanitary Sewer Structure, 4-Foot Diameter	9.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5200	SPV.0060 Special 617. Sanitary Sewer Structure, 5-Foot Diameter	2.000 EACH		.		.
5210	SPV.0060 Special 619. Remove Existing Sanitary Sewer Structure	5.000 EACH		.		.
5220	SPV.0060 Special 620. Reconstruct Bench and Flowlines	3.000 EACH		.		.
5230	SPV.0060 Special 621. Sanitary Sewer Lateral Electronic Marker	12.000 EACH		.		.
5240	SPV.0060 Special 622. Fluorocarbon Gaskets	15.000 EACH		.		.
5250	SPV.0060 Special 623. Fire Hydrant Weep Hole Plugs	3.000 EACH		.		.
5260	SPV.0060 Special 624. Clay Trench Dikes	5.000 EACH		.		.
5270	SPV.0060 Special 625. Sanitary Sewer Monitoring Manhole 6-Foot Diameter	1.000 EACH		.		.
5280	SPV.0060 Special 626. Sanitary Lateral Cleanout	1.000 EACH		.		.
5290	SPV.0060 Special 700. Baseline CPM Progress Schedule	1.000 EACH		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5300	SPV.0060 Special 701. CPM Progress Schedule Updates and Accepted Revisions	9.000 EACH		.		.
5310	SPV.0075 Special 001. Street Sweeping	400.000 HRS		.		.
5320	SPV.0085 Special 001. Seeding Mixture Detention Pond, Wet Sedge Meadow	10.000 LB		.		.
5330	SPV.0085 Special 002. Seeding Mixture Detention Pond, Short Grass Prairie	116.000 LB		.		.
5340	SPV.0090 Special 001. Construction Fence Temporary	1,100.000 LF		.		.
5350	SPV.0090 Special 002. Pipe Underdrain 6-Inch With Geotextile Fabric and Aggregate	8,371.000 LF		.		.
5360	SPV.0090 Special 003. Salvage Timber Curb	67.000 LF		.		.
5370	SPV.0090 Special 004. Salvage Boulder Wall	43.000 LF		.		.
5380	SPV.0090 Special 005. Fence Wood Salvaged	25.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5390	SPV.0090 Special 006. Concrete Barrier Precast 12.5-FT	230.000 LF		.		.
5400	SPV.0090 Special 007. Surcharge Earth Embankment	315.000 LF		.		.
5410	SPV.0090 Special 008. Sawing Curb Head	78.000 LF		.		.
5420	SPV.0090 Special 009. Construction Staking Pedestrian Surface	3,336.000 LF		.		.
5430	SPV.0090 Special 010. Concrete Curb 4-Inch Sloped 12-Inch Type A	70.000 LF		.		.
5440	SPV.0090 Special 011. Concrete Curb & Gutter 32-Inch Special	120.000 LF		.		.
5450	SPV.0090 Special 012. Concrete Curb & Gutter 56-Inch Special	165.000 LF		.		.
5460	SPV.0090 Special 013. Concrete Curb & Gutter 24-Inch Type D	937.000 LF		.		.
5470	SPV.0090 Special 014. Concrete Barrier Special	65.000 LF		.		.
5480	SPV.0090 Special 050. Storm Sewer Pipe Reinforced Cncrt Hrzntl Elliptical Class HE-IV 38X60-Inch	406.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0090 Special 051.					
5490	Storm Sewer Pipe Reinforced Cncrt Hrzntl Elliptical Class HE-IV 43X68-Inch	232.000 LF		.		.
	SPV.0090 Special 052.					
5500	Storm Sewer Pipe PVC 6-Inch	35.000 LF		.		.
	SPV.0090 Special 053.					
5510	Storm Sewer Pipe PVC 8-Inch	89.000 LF		.		.
	SPV.0090 Special 054.					
5520	Storm Sewer Pipe PVC 12-Inch	7.000 LF		.		.
	SPV.0090 Special 055.					
5530	Storm Sewer Pipe PVC 15-Inch	40.000 LF		.		.
	SPV.0090 Special 200.					
5540	Galvanized Pipe Railing	7.000 LF		.		.
	SPV.0090 Special 600.					
5550	Water Main, 6-Inch	273.000 LF		.		.
	SPV.0090 Special 601.					
5560	Water Main, 8-Inch	696.000 LF		.		.
	SPV.0090 Special 602.					
5570	Water Main, 10-Inch	3,695.000 LF		.		.
	SPV.0090 Special 603.					
5580	Water Main, 12-Inch	3,587.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5590	SPV.0090 Special 604. Steel Casing Pipe, 24-Inch	240.000 LF		.		.
5600	SPV.0090 Special 605. Steel Casing Pipe, 36-Inch	230.000 LF		.		.
5610	SPV.0090 Special 606. Granular Backfill For Water Main	8,481.000 LF		.		.
5620	SPV.0090 Special 607. Copper Water Service, 1-Inch	50.000 LF		.		.
5630	SPV.0090 Special 608. Copper Water Service, 1.5-Inch	60.000 LF		.		.
5640	SPV.0090 Special 609. Copper Water Service, 2-Inch	50.000 LF		.		.
5650	SPV.0090 Special 610. Water Main Insulation	400.000 LF		.		.
5660	SPV.0090 Special 611. Sanitary Sewer Pipe, 8-Inch	504.000 LF		.		.
5670	SPV.0090 Special 612. Sanitary Sewer Pipe, 10-Inch	121.000 LF		.		.
5680	SPV.0090 Special 613. Sanitary Sewer Pipe, 15-Inch	1,010.000 LF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5690	SPV.0090 Special 614. Granular Backfill for Sanitary Sewer	1,635.000 LF		.		.
5700	SPV.0090 Special 615. Sanitary Sewer Lateral, 4-Inch	30.000 LF		.		.
5710	SPV.0090 Special 616. Sanitary Sewer Lateral, 6-Inch	222.000 LF		.		.
5720	SPV.0090 Special 617. Rock Excavation Water Main	402.000 LF		.		.
5730	SPV.0105 Special 001. Research and Locate Existing Property Monuments	LUMP	LUMP			.
5740	SPV.0105 Special 002. Verify And Replace Existing Property Monuments	LUMP	LUMP			.
5750	SPV.0105 Special 003. Construction Staking Supplemental Features	LUMP	LUMP			.
5760	SPV.0105 Special 004. Pond D Haul Road	LUMP	LUMP			.
5770	SPV.0105 Special 050. Pond D Spillway	LUMP	LUMP			.
5780	SPV.0105 Special 051. Bioretention Basin B	LUMP	LUMP			.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5790	SPV.0105 Special 052. Bioretention Basin C	LUMP	LUMP			.
5800	SPV.0105 Special 053. Box Culvert Inlet Modifications	LUMP	LUMP			.
5810	SPV.0105 Special 054. Utility Support	LUMP	LUMP			.
5820	SPV.0105 Special 150. Install Department Furnished Vehicle Detection, USH 18 & CTH PD	LUMP	LUMP			.
5830	SPV.0105 Special 151. Install Dept Furnished Vehicle Detection, USH 18 & Williamsburg Way	LUMP	LUMP			.
5840	SPV.0105 Special 152. Remove and Transport Traffic Signals, Fitchrona Road	LUMP	LUMP			.
5850	SPV.0105 Special 153. Traffic Control Utility Crossings	LUMP	LUMP			.
5860	SPV.0105 Special 154. EVP Detector	LUMP	LUMP			.
5870	SPV.0105 Special 500. Bioretention Area Maintenance	LUMP	LUMP			.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5880	SPV.0105 Special 501. Detention Pond Maintenance	LUMP	LUMP			.
5890	SPV.0105 Special 600. Construction Staking Water Main	LUMP	LUMP			.
5900	SPV.0105 Special 601. Construction Staking Sanitary Sewer	LUMP	LUMP			.
5910	SPV.0120 Special 001. Water for Seeded Areas	2,754.900 MGAL		.		.
5920	SPV.0120 Special 002. Water For Detention Ponds	4,074.000 MGAL		.		.
5930	SPV.0165 Special 001. Sidewalk Pavement	5,590.000 SF		.		.
5940	SPV.0165 Special 002. Colored and Stamped Concrete 5-Inch	3,530.000 SF		.		.
5950	SPV.0165 Special 003. Temporary Pedestrian Surface Special	1,535.000 SF		.		.
5960	SPV.0165 Special 004. Wall Concrete Panel Mechanically Stblzd Earth LRFD/QMP, R-13-264 **P**	13,875.000 SF		.		.
5970	SPV.0165 Special 005. Wall Concrete Panel Mechanically Stblzd Earth LRFD/QMP, R-13-265 **P**	3,150.000 SF		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
5980	SPV.0165 Special 006. Wall Concrete Panel Mechanically Stblzd Earth LRFD/QMP, R-13-269 **P**	17,170.000 SF		.		.
5990	SPV.0165 Special 007. Wall Concrete Panel Mechanically Stblzd Earth LRFD/QMP, R-13-271 **P**	11,285.000 SF		.		.
6000	SPV.0165 Special 008. Salvage and Replace Landscaping Stone	100.000 SF		.		.
6010	SPV.0180 Special 001. Geogrid Reinforcement	7,600.000 SY		.		.
6020	SPV.0180 Special 500. Shredded Hardwood Bark Mulch	211.000 SY		.		.
6030	SPV.0180 Special 501. Native Vegetated Mat, Type A	453.000 SY		.		.
6040	SPV.0180 Special 502. Native Vegetated Mat, Type B	340.000 SY		.		.
6050	SPV.0180 Special 503. Native Vegetated Mat, Type C	414.000 SY		.		.
6060	SPV.0195 Special 001. Aggregate Fines	8.000 TON		.		.
6070	SPV.0195 Special 700. Cold Patch	10.000 TON		.		.

CONTRACT: 20160712004
PROJECT(S): 1206-07-74, 1206-08-74
FEDERAL ID(S): WISC 2016249, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
6080	SPV.0195 Special 701. Excavation, Hauling, & Disposal Of Cntmntd Soil & Mngmnt Of Cntmntd Grndwt	500.000 TON		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE