HIGHWAY WORK PROPOSAL

Proposal Number: 2 2

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee/ Waukesha	1060-33-97		Zoo IC - Integrated Corridors 2 Various Intersections Milwaukee and Waukesha Counties	IH 94

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

Proposal Guaranty Required, $ 75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: May 13, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time August 28, 2015	
Assigned Disadvantaged Business Enterprise Goal 0 %	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Removals, upgrading signal systems, adding dynamic message signs (DMS), adding closed circuit televisions (CCTV), erosion control, traffic control.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2007 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

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

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

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

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

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

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

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

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

Table of Contents

Article	Description	Page #
1.	General.	5
2.	Scope of Work.	5
3.	Prosecution and Progress.	5
4.	Traffic.	9
5.	Holiday Work Restrictions.	9
6.	Utilities.	10
7.	Other Contracts.	16
8.	Erosion Control.	17
9.	Public Convenience and Safety.	18
10.	Public Information Meetings.	18
11.	Traffic Meetings and Traffic Control Scheduling.	18
12.	Material and Equipment Staging.	19
13.	Work Force Opportunities.	19
14.	Available Documents.	19
15.	Geotechnical Investigation Information.	20
16.	Contractor Notification.	20
17.	Contractor Document Submittals.	21
18.	Information to Bidders, Use of Recovered Material.	21
19.	Payment Tracking.	21
20.	Labor Compliance Reporting – Payroll Requirements.	22
21.	Dust Control Implementation Plan.	22
22.	Project Site Air Quality.	24
23.	OCIP Information.	25
24.	Owner Controlled Insurance Program.	26
25.	Subletting the Contract.	38
26.	CPM Progress Schedule.	38
27.	Force Account.	39
28.	QMP Base Aggregate.	39
29.	Sign Supports Concrete Masonry.	47
30.	Field Facilities.	48
31.	Signs Type I and II.	48
32.	Overhead Sign Support (Structure), Item 641.8100.	49
33.	Nighttime Work Lighting-Stationary.	49
34.	General Requirements for Electrical Work.	51
35.	Install Conduit Into Existing Item, Item 652.0700.S.	51
36.	Loop Detector Wire.	52
37.	Traffic Signals, General.	52
38.	Traffic Signal Faces.	56
39.	Intelligent Transportation Systems (ITS) – Control of Materials.	56
40.	Intelligent Transportation Systems – General Requirements.	57

41. Install Pole Mounted Cabinet, Item 673.0225.S. 62
42. Install Ethernet Switch, Item 675.0400.S. 63
43. Install Video Encoder, Item 677.0300.S. 64
44. Exposing Existing Utility Unpaved Area, Item SPV.0060.0001. 65
45. Exposing Existing Utility Paved Area, Item SPV.0060.0002. 67
46. Install Hybrid Dynamic Message Sign, Item SPV.0060.2001 69
47. Install Dynamic Message Sign, Item SPV.0060.2002. 70
48. Install 5.8 GHz Ethernet Bridge, Item SPV.0060.2003. 71
49. Install Wireless Modem, Item SPV.0060.2004. 72
50. Install Bluetooth Detector, Item SPV.0060.2005. 73
51. Ground Rod, Item SPV.0060.2006. 74
52. Salvage DMS, Item SPV.0060.2007 75
53. Remove, Salvage, and Install Traffic Signal Controller, Item SPV.0060.3001. 76
54. Supplementary Traffic Signal Cabinet Concrete Base, Item SPV.0060.3002. 78
55. Traffic Signal Cabinet and Controller Fully Actuated 4-Phase, Item SPV.0060.3003. 79
56. Install Camera Power Cable, Item SPV.0090.3001; Install Cat-5e Cable, Item SPV.0090.3002. 92
57. Pavement Cleanup, Item SPV.0105.0001. 94
58. Survey Project 1060-33-97, Item SPV.0105.0002 95
59. Removing Overhead Sign Support S-40-416, Item SPV.0105.0003. 97
60. Remove Video Detection Equipment STH 100 and W. Lapham Street, Item SPV.0105.3010; STH 100 and W. Theodore Trecker Way, Item SPV.0105.3011; IH 94 EB Off-Ramp and STH 100, Item SPV.0105.3012; IH 94 WB Ramps and STH 100, Item SPV.0105.3013; USH 18 and CTH JJ, Item SPV.0105.3014; USH 18 and CTH Y, Item SPV.0105.3015; USH 18 and Janacek Road, Item SPV.0105.3016; USH 18 and Brookfield Road, Item SPV.0105.3017; USH 18 and Woelfel Road, Item SPV.0105.3018; USH 18 and Calhoun Road, Item SPV.0105.3019; USH 18 and Thomas Lane, Item SPV.0105.3020; USH 18 and Executive Drive, Item SPV.0105.3021; USH 18 and Main Street, Item SPV.0105.3022; USH 18 and CTH O, Item SPV.0105.3023; STH 59 and S. 92nd Street, Item SPV.0105.3024; STH 59 and STH 181, Item SPV.0105.3025; IH 894/USH 45 EB Ramps and W. National Avenue, Item SPV.0105.3028; IH 894/USH 45 WB Ramps and W. National Avenue, Item SPV.0105.3029; STH 181 and State Fair Gate 4 Driveway, Item SPV.0105.3030; STH 181 and W. Schlinger Avenue / State Fair Gate 5 Driveway, Item SPV.0105.3031; IH 94 EB Ramps and STH 181, Item SPV.0105.3032; IH 94 WB Ramps and STH 181, Item SPV.0105.3033; STH 100 and Cleveland Avenue, Item SPV.0105.3040. 97
61. Remove Video Detection Equipment W. National Avenue and W. Cleveland Avenue, Item SPV.0105.3026; W. National Avenue and S. 102nd Street, Item SPV.0105.3027, W. National Avenue and W. Lincoln Avenue, Item SPV.0105.3038; W. National Avenue and S. 84th Street, Item SPV.0105.3039. 100
62. Remove Video Detection Equipment W. Watertown Plank Road and Swan Boulevard/Innovation Drive, Item SPV.0105.3034; W. Watertown Plank Road and Discovery Parkway, Item SPV.0105.3035; W. Watertown Plank Road and N.

92nd Street, Item SPV.0105.3036; W. Watertown Plank Road and N. 87th Street, Item SPV.0105.3037. 101
63. Remove Traffic Signals USH 18 and Jennifer Drive, Item SPV.0105.3045. 102
64. Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and CTH NN, Item SPV.0105.3075; STH 100 and W. Cleveland Avenue, Item SPV.0105.3076; STH 100 and W. National Avenue, Item SPV.0105.3077; STH 100 and W. Lincoln Avenue, Item SPV.0105.3078; STH 100 and W. Lapham Street, Item SPV.0105.3079; STH and W. Theodore Trecker Way, Item SPV.0105.3080; IH 94 EB Off-Ramp and STH 100, Item SPV.0105.3081; IH 94 WB Ramps and STH 100, Item SPV.0105.3082; USH 18 and CTH JJ, Item SPV.0105.3083; USH 18 and CTH Y, Item SPV.0105.3084; USH 18 and Jennifer Drive, Item SPV.0105.3085; USH 18 and Janacek Road, Item SPV.0105.3086; USH 18 and Brookfield Road, Item SPV.0105.3087; USH 18 and Woelfel Road, Item SPV.0105.3088; USH 18 and Calhoun Road, Item SPV.0105.3089; USH 18 and Thomas Lane, Item SPV.0105.3090; USH 18 and Executive Drive, Item SPV.0105.3091; USH 18 and Main Street, Item SPV.0105.3092; USH 18 and CTH O, Item SPV.0105.3093; Pilgrim Parkway and Watertown Plank Road, Item SPV.0105.3094; CTH Y and Davidson Road, Item SPV.0105.3095; CTH Y and Water Tower Boulevard, Item SPV.0105.3096; CTH Y and Swenson Drive, Item SPV.0105.3097; IH 94 WB Off-Ramp and CTH Y, Item SPV.0105.3098; STH 59 and CTH Y, Item SPV.0105.3099; STH 59 and Brookfield Road, Item SPV.0105.3100; STH 59 and Calhoun Road, Item SPV.0105.3101; STH 59 and S. 92nd Street, Item SPV.0105.3102; STH 59 and STH 181, Item SPV.0105.3103; W. National Avenue and W. Cleveland Avenue, Item SPV.0105.3104; W. National Avenue and S. 102nd Street, Item SPV.0105.3105; IH 894/USH 45 EB Ramps and W. National Avenue, Item SPV.0105.3106; IH 894/USH 45 WB Ramps and W. National Avenue, Item SPV.0105.3107; W. National Avenue and W. Lincoln Avenue, Item SPV.0105.3108; W. National Avenue and S. 92nd Street, Item SPV.0105.3109; W. National Avenue and W. Becher Street and S. 90th Street, Item SPV.0105.3110; W. National Avenue and S. 84th Street, Item SPV.0105.3111; W. Becher Street and S. 92nd Street, Item SPV.0105.3112; W. Lincoln Avenue and S. 92nd Street, Item SPV.0105.3113; W. Lincoln Avenue and S. 90th Street, Item SPV.0105.3114; S. 84th Street and W. Lapham Street, Item SPV.0105.3115; STH 181 and State Fair Gate 4 Driveway, SPV.0105.3116; STH 181 and W. Schlinger Avenue / State Fair Gate 5 Driveway, Item SPV.0105.3117; IH 94 EB Ramps and STH 181, Item SPV.0105.3118; IH 94 WB Ramps and STH 181, Item SPV.0105.3119; W. Watertown Plank Road and Swan Boulevard / Innovation Drive, Item SPV.0105.3120; W. Watertown Plank Road and Discovery Parkway, Item SPV.0105.3121; W. Watertown Plank Road and N. 92nd Street, Item SPV.0105.3122; W. Watertown Plank Road and N. 87th Street, Item SPV.0105.3123. 103
65. Install Fiber Optic Communications in Cabinet STH 100 and CTH NN, Item SPV.0105.3130; STH 100 and W. National Avenue, Item SPV.0105.3131; STH 100 and W. Cleveland Avenue, Item SPV.0105.3132; STH 100 and W. Lincoln Avenue, Item SPV.0105.3133; Pilgrim Parkway and Watertown Plank Road, Item

SPV.0105.3134; IH 94 WB Off-Ramp and CTH Y, Item SPV.0105.3135; STH 59 and CTH Y, Item SPV.0105.3136; STH 59 and Brookfield Road, Item SPV.0105.3137; STH 59 and Calhoun Road, Item SPV.0105.3138. 108

66. Install State Furnished Traffic Signal Cabinet USH 18 and Jennifer Drive, Item SPV.0105.3145; IH 94 WB Off-Ramp and CTH Y, Item SPV.0105.3146..... 110

67. Remove Loop Detector Wire STH 100 and CTH NN, Item SPV.0105.3160, STH 100 and W. National Avenue, Item SPV.0105.3161; STH 100 and Cleveland Avenue, Item SPV.0105.3162; STH 100 and W. Lincoln Avenue, Item SPV.0105.3163..... 111

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1060-33-97 Zoo IC – Integrated Corridors 2, Various Intersections, IH 94, located in Milwaukee and Waukesha Counties Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2014 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.
100-005 (20130615)

2. Scope of Work.

The work under this contract shall consist of updating and integrating traffic signals, ITS, erosion control and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

All equipment completion dates include system integration with the Statewide Traffic Operations Center.

Schedule of Operations
Traffic shifts shown in a given stage may occur at different times during that stage depending on the controlling elements for a given traffic movement. The department anticipates that the schedule for each stage shall be as follows:

Anticipated Traffic Signal and Traffic Signal Interconnect Schedule:

Watertown Plank Road Corridor:

After completion of Project 1060-33-72: November 30, 2014

STH 100/IH 94 Signals:

After completion of Project 1060-33-75: December 6, 2014

STH 100 and W. Theodore Trecker Way
W. National Avenue and S. 84th Street
W. National Avenue and W. Lincoln Avenue:
After interim completion of Project 1060-35-91: December 30, 2014

STH 59 and STH 181
STH 59 and S. 92nd Street
STH 100 and W. Lapham Street
STH 181 and State Fair Gate 4 Driveway
STH 181 and W. Schlinger Avenue/State Fair Gate 5 Driveway
W. National Avenue and S. 102nd Street:
After completion of Project 1060-35-91: May 30, 2015

Interim Completion of Work October 1, 2014
Supplement standard spec 108.11 as follows.

If the contractor fails to complete all of the work necessary to complete Fiber optic cable installation on National Avenue and portions of USH 18 Corridor including: Moorland Road and Bluemound Road, Watertown Plank Road and Pilgrim Parkway and prior to 12:01 AM on October 2, 2014, the contractor shall be liable to the department for a pay reduction in the amount of $1,235 per day, or portion thereof, for each calendar day after 12:01 AM on October 2, 2014.

Interim Completion of Work December 1, 2014
Supplement standard spec 108.11 as follows.

If the contractor fails to complete all of the work necessary to complete DMS-67-417, Bluetooth detection on Bluemound Road east of USH 45, and portions of USH 181 Corridor including: IH 94 EB Ramps and STH 181 (84th Street), IH 94 WB Ramps and STH 181 (84th Street) prior to 12:01 AM on December 2, 2014, the contractor shall be liable to the department for a pay reduction in the amount of $1,235 per day, or portion thereof, for each calendar day after 12:01 AM on December 2, 2014.

Interim Completion of Work March 1, 2015
Supplement standard spec 108.11 as follows.

If the contractor fails to complete all of the work necessary to complete DMS-67-449, CCTV along STH 100 Corridor, portions of USH 181 Corridor including: S. 84th Street and W. Lapham Street; portions of STH 100 Corridor including: IH 94 EB Exit Ramp and STH 100, IH 94 WB Ramps and STH 100, STH 100 and CTH NN, STH 100 and W. National Avenue, STH 100 and W. Cleveland Avenue, STH 100 and W. Lincoln Avenue, STH 100 and W. Theodore Trecker Way; portions of W. Watertown Plank Road Corridor including: W. Watertown Plank Road and Swan Boulevard Avenue/Innovation Drive, W. Watertown Plank Road and Discovery Parkway, W. Watertown Plank Road and N. 92nd Street, W. Watertown Plank Road and N. 87th Street; portions of W. National Avenue Corridor including: W. National Avenue and W. Lincoln Avenue, W. National

Avenue and S. 92nd Street, W. National Avenue and W. Becher Street and S. 90th Street, W. National Avenue and S. 84th Street, W. Becher Street and S. 92nd Street, W. Lincoln Avenue and S. 92nd Street, W. Lincoln Avenue and S. 90th Street, prior to 12:01 AM on March 2, 2015, the contractor shall be liable to the department for a pay reduction in the amount of $1,235 per day, or portion thereof, for each calendar day after 12:01 AM on March 2, 2015.

All equipment completion dates include system integration with the Statewide Traffic Operations Center.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed according to standard spec 108.11.

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

Advance Notification
Notify the engineer and WisDOT Region Work Zone Engineer , (262) 548-6730, if there are any changes in the schedule, early completions, or cancellations of scheduled work. Coordinate the locations of messages of portable changeable message sign with the engineer and WisDOT STOC. Notify WisDOT Signal Operations, (414) 750-2605, and WisDOT Electrical Field Unit, (414) 266-1170, regarding changes for alternate routes and detours.

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

Ramp Closures	3 business days
System Ramp Closures	7 calendar days
Lane Closures	3 business days
Full Freeway Closures	14 calendar days
Construction Stage Changes	14 calendar days
Detours	14 calendar days

Definitions
The following definitions apply to this contract:

Peak Hours

6:00 AM – 9:00 PM	Monday, Tuesday, Wednesday, Thursday
6:00 AM – 9:00 PM	Friday
11:00 AM – 8:00 PM	Saturday
1:00 PM – 5:00 PM	Sunday

Off-Peak Hours

9:00 PM – 6:00 AM	Monday, Tuesday, Wednesday, Thursday PM to the following AM
9:00 PM – 11:00 AM	Friday PM to Saturday AM
8:00 PM – 1:00 PM	Saturday PM to Sunday PM
5:00 PM – 6:00 AM	Sunday PM to Monday AM

Local Street Work Restrictions
At least two lanes available to traffic during the Peak Hours unless approved by the engineer. One lane may be available to traffic during Off-Peak Hours only.

Comply with all local ordinances that apply to local street work operations, including those pertaining to working during night time hours. Furnish any ordinance variance issued by the municipality or required permits to the engineer in writing 3 days prior to performing such work.

Apply for and acquire all construction permits necessary to complete the work, including permits from local municipalities.

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

All Work Restrictions
Comply with the noise level restrictions as defined in the article Public Convenience and Safety.

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

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

Provide Wisconsin State Patrol, Milwaukee County Highway Maintenance, Milwaukee County Sheriff's Department, Waukesha County Sherriff's Department, and the police departments for the following municipalities: City of Brookfield, City of Milwaukee, City of New Berlin, City of Wauwatosa, City of West Allis, City of Greenfield, with a 24-hour emergency contact number for when maintenance is required.

4. Traffic.

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

At all times maintain access to businesses and residents on the existing local streets within the project work area. Do not close or remove driveway approaches or parking stalls from service without a five business day notice given to the occupants of the premises to remove their vehicles prior to driveway removal or closing of the driveway approach access.

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

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 94, USH 18 (W. Bluemound Road/E. Moreland Boulevard), STH 59 (W. Greenfield Avenue), STH 100 (S. 108th Street/N. Mayfair Road), STH 181 (S. 84th Street), STH 190 (Capitol Drive), CTH O (Moorland Road), CTH Y (Barker Road), W. Watertown Plank Road, and National Avenue corridors traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Thursday, July 3, 2014 to 6:00 AM Monday, July 7, 2014 for Independence Day;
- From noon Friday, August 29, 2014 to 6:00 AM Tuesday, September 2, 2014 for Labor Day;
- From noon Wednesday, November 26, 2014 to 6:00 AM Monday, December 1, 2014 for Thanksgiving;
- From noon Monday, December 22, 2014 to 6:00 AM Monday, January 5, 2015 for Christmas and New Year's;

- From noon Friday, May 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day;
- From noon Thursday, July 2, 2015 to 6:00 AM Monday, July 6, 2015 for Independence Day.

107-005 (20050502)

6. Utilities.

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

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

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

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

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

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

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

Known utilities in the projects are as follows:

ATC has overhead electric transmission lines within the project limits. These overhead facilities will remain in place without adjustment. Due to outage constraints for the multi-state electric grid, these transmission lines cannot be de-energized during construction. Use caution when operating overhead equipment in this area and maintain OSHA safe working clearance to the overhead conductors at all times.

Contact Jim Briggs, (414) 651-1830, of American Transmission Company 7 days in advance to coordinate locations and any excavation near their facilities.

AT&T Corporation has underground facilities within the project limits. These facilities will remain in place without adjustment.

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

AT&T Wisconsin has underground and overhead communication facilities within the project limits. AT&T Wisconsin existing facilities will remain in place without adjustment.

Contact Jay Bulanek, (414) 535-7407 office, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of – Sewer, Water and Lighting has underground and overhead facilities within the project limits. These facilities will remain in place without adjustment.

Contact John Carlson, (262) 787-3539 office / (262) 424-2899 cell, of the City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, City of – Signals has existing signal facilities within the project area. New City of Brookfield - Signals equipment will be constructed as part of this project. Abandon, remove, leave in place, and reconstruct the signal equipment as shown in the plans.

Contact John Carlson, (262) 787-3539 office / (262) 424-2899 cell, of the City of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Brookfield, Town of – Sewer, Water and Lighting has underground and overhead facilities within the project limits. These facilities will remain in place without adjustment.

Contact Jeff Golner, (262) 796-3795 office, of the Town of Brookfield 7 days in advance to coordinate locations and any excavation near their facilities.

Elm Grove, Village of – Sewer, Water and Lighting has underground and overhead facilities within the project limits. These facilities will remain in place without adjustment.

Contact Richard Paul, Jr., (262) 782-6700 office, of the Village of Elm Grove 7 days in advance to coordinate locations and any excavation near their facilities.

Elm Grove, Village of – Signals has existing signal facilities within the project area. New Village of Elm Grove - Signals equipment will be constructed as part of this project. Abandon, remove, leave in place, and reconstruct the signal equipment as shown in the plans.

Contact Richard Paul, Jr., (262) 782-6700 office, of the Village of Elm Grove 7 days in advance to coordinate locations and any excavation near their facilities.

Level 3 Communications LLC has underground facilities within the project limits. These facilities will remain in place without adjustment.

Contact Mark Dechant, (414) 426-1857 cell, of Level 3 Communications LLC 7 days in advance to coordinate locations and any excavation near their facilities.

Midwest Fiber Network has underground facilities within the project limits. These facilities will remain in place without adjustment.

Contact Richard Trgovec, (414) 459-3554 office, of Midwest Fiber Network 7 days in advance to coordinate locations and any excavation near their facilities.

Milwaukee, City of - Cable has underground communications cable facilities within the project limits. These facilities will remain in place without adjustment.

Contact Brian Pawlak, (414) 286-5970 office, of the City of Milwaukee - Cable 7 days in advance to coordinate locations and any excavation near their facilities.

Milwaukee, City of - Conduit has underground communication conduit facilities within the project limits. These facilities will remain in place without adjustment.

Contact Karen Rogney, (414) 286-3243, of the City of Milwaukee – Conduit 7 days in advance to coordinate locations and any excavation near their facilities.

Milwaukee, City of - Lighting has underground and overhead lighting facilities within the project limits. These facilities will remain in place without adjustment.

Contact Dennis Miller, (414) 286-5942 office / (414) 708-4251 cell, or George Berdine, (414) 708-4245, of the City of Milwaukee - Lighting 7 days in advance to coordinate locations and any excavation near their facilities.

Milwaukee, City of - Sewers has sanitary sewer facilities within the project limits. These facilities will remain in place without adjustment.

Contact Jason Barman, (414) 286-3267 office, of the City of Milwaukee - Sewers 7 days in advance to coordinate locations and any excavation near their facilities.

Milwaukee, City of - Signals has underground and overhead signal facilities within the project limits. These facilities will remain in place without adjustment.

Contact Dennis Miller, (414) 286-5942 office / (414) 708-4251 cell, of the City of Milwaukee - Signals 7 days in advance to coordinate abandonment and removal of the existing signal facilities.

Milwaukee, City of - Water has underground water facilities in the project limits. These facilities will remain in place without adjustment.

Contact Josh Iwen, (414) 286-3640, of City of Milwaukee - Water 7 days in advance to coordinate locations and any excavation near their facilities.

MMSD has underground sanitary sewer facilities within the project limits. These facilities will remain in place without adjustment.

Contact Debra Jensen, (414) 225-2143, of MMSD 7 days in advance to coordinate locations and any excavation near their facilities.

New Berlin, City of – Sewer, Water and Lighting has underground and overhead facilities within the project limits. These facilities will remain in place without adjustment.

Contact J.P. Walker, (262) 797-2445 office / (262) 613-2025 cell, of the City of New Berlin 7 days in advance to coordinate locations and any excavation near their facilities.

Sprint has underground facilities within the project limits. These facilities will remain in place without adjustment.

Contact Gerry Crain, (630) 660-9626, of Sprint 7 days in advance to coordinate locations and any excavation near their facilities.

TCA has underground and overhead facilities in project limits. These facilities will remain in place without adjustment.

Contact Don Dietsch, (262) 646-5602 office / (414) 651-2862 cell, of Northwind Technical Services 7 days in advance to coordinate locations and any excavation near their facilities.

TDS Metrocom has underground communication facilities within the project limits. These facilities will remain in place without adjustment.

Contact Michael Johnson, (262) 754-3052 office /(262) 939-6355 cell, of TDS MetroCom 7 days in advance to coordinate locations and any excavation near their facilities.

Time Warner Cable has overhead and underground communication facilities within the project limits. These facilities will remain in place without adjustment.

Contact Lukas LaCrosse, (414) 908-4766 office / (414) 430-9321 cell, of Time Warner Cable 7 days in advance to coordinate locations and any excavation near their facilities.

TW Telecom has underground communication facilities within the project limits. These facilities will remain in place without adjustment.

Contact Brahim Gaddour, (414) 908-1024 office / (414) 704-1026 cell, of TW Telecom 7 days in advance to coordinate locations and any excavation near their facilities.

Waukesha, County – Signals has existing signal facilities within the project area. New Waukesha County - Signals equipment will be constructed as part of this project. Abandon, remove, leave in place, and reconstruct the signal equipment as shown in the plans.

Contact Gary Evans, (262) 548-7740 office / (262) 424-3415 cell, of Waukesha County - Signals 7 days in advance to coordinate locations and any excavation near their facilities.

Wauwatosa, City of – Lighting has existing lighting facilities within the project limits. These facilities will remain in place without adjustment.

Contact Bill Wehrley, (414) 479-8929, of City of Wauwatosa - Lighting 7 days in advance to coordinate locations and any excavation near their facilities.

Wauwatosa, City of – Sewer has underground sanitary sewer facilities within the project limits. These facilities will remain in place without adjustment.

Contact Mike Maki, (414) 479-8991, of City of Wauwatosa - Sewer 7 days in advance to coordinate locations and any excavation near their facilities.

Wauwatosa, City of – Signals has existing signal facilities within the project area. New City of Wauwatosa - Signals equipment will be constructed as part of this project. Abandon, remove, leave in place, and reconstruct the signal equipment as shown in the plans.

Contact Bill Wehrley, (414) 479-8929, of City of Wauwatosa - Signals 7 days in advance to coordinate locations and any excavation near their facilities.

Wauwatosa, City of - Water has underground water facilities within the project limits. These facilities will remain in place without adjustment.

Contact Jim Wojcehowicz, (414) 479-8965, of the Wauwatosa Water Utility 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies – Electric has overhead and underground electric facilities within the project limits. These facilities will remain in place without adjustment.

Contact Jason Chapin, (414) 944-5575 office / (414) 587-0655 cell, of We Energies 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies – Gas has underground gas facilities within the project limits. These facilities will remain in place without adjustment.

Contact Amy Plato, (414) 385-6149 office / (414) 335-7543 cell, of We Energies - Gas 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of – Lighting has existing lighting facilities within the project limits. These facilities will remain in place without adjustment.

Contact Peter Daniels, (414) 302-8374 office, of City of West Allis - Lighting 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of – Signals has existing signal facilities within the project area. New City of West Allis - Signals equipment will be constructed as part of this project. Abandon, remove, leave in place, and reconstruct the signal equipment as shown in the plans.

Contact Peter Daniels, (414) 302-8374 office, of City of West Allis - Signals 7 days in advance to coordinate locations and any excavation near their facilities.

West Allis, City of – Sewer and Water has sewer and water facilities within the project limits. These facilities will remain in place without adjustment.

Contact Joe Burtch, (414) 302-8379 office, of City of West Allis – Sewer and Water 7 days in advance to coordinate locations and any excavation near their facilities.

West Shore Pipeline has underground facilities within the project limits. These facilities will remain in place without adjustment.

Contact Aric Aufdermauer, (414) 391-8102 cell, of West Shore Pipeline 7 days in advance to coordinate locations and any excavation near their facilities.

Windstream has existing underground fiber optic facilities within the project limits. These facilities will remain in place without adjustment.

Contact Jim Kostuch, (262) 792-7938 office, of Windstream 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT – Lighting has existing lighting facilities within the project area. These facilities will remain in place without adjustment.

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

WisDOT – Signals has existing signal facilities within the project area. New WisDOT - Signals equipment will be constructed as part of this project. Abandon, remove, leave in place, and reconstruct the signal equipment as shown in the plans.

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

WisDOT - STOC has existing communication facilities in the project area. Existing WisDOT - STOC facilities will remain in place with some new construction as part of this project. Construct the WisDOT - STOC facilities as shown in the plans.

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

7. Other Contracts.

Coordinate your work in accordance to standard spec 105.5.

Modifications to the traffic control plan may be required by the engineer to be safe and consistent with adjacent work by others.

It is expected that routine maintenance by the city and county personnel may be required at certain times concurrently with the work being done under this contract.

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

Contract ID 1060-33-75, UPRR and STH 100 Bridges over IH 94 from the Hank Aaron State Trail to IH 94 westbound Ramp Terminal. The WisDOT contact is Joshua LeVeque at (262) 548-8797; joshua.leveque@dot.wi.gov.

Contract ID 1060-33-78, S. 76th St Bridge over IH 94 from Kearney St to O'Connor St. The WisDOT contact is Jeff Bohen at (262) 750-2928; jeffery.bohen@dot.wi.gov

Contract ID 1060-33-72, Zoo IC Watertown Plank Road Interchange, from Wisconsin Avenue to Underwood Parkway. The WisDOT contact is Jeff Bohen at (414) 750-2928; jeff.bohen@dot.wi.gov.

Contract ID 1060-35-91, Zoo IC – 2014 TMP Projects; various locations in Milwaukee County. The WisDOT contact is Christopher Hager at (414) 750-1487; christopher.hager@dot.wi.gov

Project 1120-11-86, IH 41 Conversion, Russell Road - SCL Dodge County Signing, USH 41, SE Region Wide, Wisconsin under a department contract. Work under this contract is anticipated to be LET in March 2014 with an anticipated completion date of November 14, 2014. Work areas under contract 1120-11-86 fall within the physical limits of work under this contract. Coordinate activities in these areas with the 1120-11-86 contractor.

8. Erosion Control.

Supplement standard spec 107.20 with the following:

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

Topsoil graded areas, as designated by the engineer, immediately after grading has been completed within those areas. Seed and mulch, or sod, and fertilize all topsoiled areas within 5 days after placement of topsoil.

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

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

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

Replace standard spec 107.20(3) with the following:

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

9. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

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

107-001 (20060512)

10. Public Information Meetings.

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

SEF Rev. 12_0330

11. Traffic Meetings and Traffic Control Scheduling.

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

Meet with the engineer between 11:00 - 11:30 AM on Wednesdays at the Zoo Interchange project office on 2424 S. 102nd Street; West Allis to discuss and answer questions on the proposed schedule. Edit, delete and add closures to the detailed proposed 2-week look-ahead schedule, as directed by the engineer, so that proposed closures meet specification requirements. Other edits, deletions or additions unrelated to meeting specification requirements may also be agreed upon with the engineer during the 11:00 AM meeting.

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

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

SEF Rev. 12_0810

12. Material and Equipment Staging.

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

SEF Rev. 13_0204

13. Work Force Opportunities.

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

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

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

SEF Rev. 12_0510

14. Available Documents.

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

- Design Study Report
- Environmental Impact Statement
- As-Built Drawings

These documents are available from Chris Hager at 141 NW Barstow Street, Waukesha, WI 53187. He may be reached at (262) 521-4433

Reproduction costs will be applied to any copies requested.
SEF Rev. 13_1218

15. Geotechnical Investigation Information.

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

Available information relative to subsurface exploration, borings, soundings, water levels, elevations or profiles are available for review at the department's Regions office. Contact Chris Hager, 141 NW Barstow Street, Waukesha, WI 53187, (262) 521-4433.

Remote Traffic Sign Foundation Geotechnical Memorandum
Zoo Interchange, January 8, 2014, Project: 1060-33-97

Additional geotechnical information is available from studies and analyses that have been performed by Forward 45 for the Wisconsin Department of Transportation (WisDOT) for other aspects of this project. Review the available information to determine if it is of use. The use or not of the geotechnical information does not relieve performing the work in accordance to the plans and specifications.

SEF Rev. 12_0813

16. Contractor Notification.

Replace standard spec 104.2.2.2(2) with the following:

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

104.3.2 (Vacant)

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

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

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

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

SEF Rev. 12_0823

17. Contractor Document Submittals.

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

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

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

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

All costs for contractor document submittals are incidental to the contract.

SEF Rev. 12_ 0920

18. Information to Bidders, Use of Recovered Material.

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

SEF Rev. 12_1212

19. Payment Tracking.

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

Report payments to all first tier relationships including subcontractors, suppliers, and trucking firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by subcontractors, suppliers, and trucking firms. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.

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

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

B (Vacant)

C (Vacant)

D (Vacant)

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

SEF Rev. 12_1108

20. Labor Compliance Reporting – Payroll Requirements.

Submit weekly certified payrolls verifying prevailing wage rates for all work performed under the contract as directed in the civil rights and labor compliance management system manual. Submit weekly certified payrolls within seven calendar days of the week covered by the weekly certified payroll.

SEF Rev. 12_1008

21. Dust Control Implementation Plan.

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

B (Vacant)

C Construction
C.1 General
Take responsibility for dust control on the project as specified in standard spec 107.18. Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter (PM) or nuisance dust conditions. Take direct responsibility for controlling dust at all times throughout the duration of the contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays.

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

C.2 Dust Control Implementation Plan Contents

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

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

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

C.3 Updating the Dust Control Implementation Plan

Update the DCIP throughout the term of the contract as the engineer directs. Obtain the engineer's approval for all DCIP alterations. Also obtain the engineer's approval for DCIP

routine adjustments for weather, job conditions, or emergencies that will have an impact on payment under the bid items listed in the approved DCIP.

C.4 Dust Control Deficiencies

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

D Measurement

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

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

623.0200	Dust Control Surface Treatment
624.0100	Water
628.7560	Tracking Pads
SPV.0105.0001	Pavement Cleanup

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

E Payment

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

SEF Rev. 12_1004

22. Project Site Air Quality.

Because fine particulate matter levels for Milwaukee, Racine and Kenosha Counties are typically close to $PM_{2.5}$ limits and the project is in a non-attainment area for the federal 8-hour ozone standard, contributions from construction activities can have a major impact well beyond the project limits. Take practical measures to mitigate the impact of operating construction equipment on the air quality in and around the project site.

Voluntarily establishing the staging zones for trucks waiting to load and unload is encouraged by the department. Locate staging zones where idling of diesel powered equipment will have minimal impact on abutting properties and the general public. The department will make signs available to help identify these zones. Have truckers queue up in these zones whenever it is practical. The department further encourages drivers to shut down diesel trucks as soon as it appears likely that they will be queued up for more than ten minutes. Notify employees and sub-contractors about fueling and engine idling.

Portable Concrete Crusher Plants
Portable concrete crusher plants may need a NR 440 Concrete Crusher Plant Air Permit for air emissions. Please contact Mike Griffin, Wisconsin Department of Natural Resources, Air Compliance Engineer (414) 263-8554 to request additional information and permit application materials. Complete permit applications may take three months to process.

SEF Rev. 12_1008

23. OCIP Information.

The Owner Controlled Insurance Program (OCIP)

The Zoo Interchange project will be constructed under the umbrella of an Owner Controlled Insurance Program (OCIP). Contractor/Consultant participation in this Corridor Project is mandatory and requires enrollment into the OCIP. Additional information regarding OCIP can be found at http://roadwaystandards.dot.wi.gov/hcci/index.shtm.

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

SEF Rev. 13_0722

24. Owner Controlled Insurance Program.

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

107.26 Standard Insurance Requirements

107.26(1)(a) Owner Controlled Insurance Program

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

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

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

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

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

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

* WisDOT is requiring all vendors who perform maintenance on an enrolled

contractor's equipment to be enrolled in the OCIP. Please see "WisDOT OCIP Enrollment Guidance Relating to Service Vendors" to determine whether they will be enrolled per project id number or on a Miscellaneous blanket basis.

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

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

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

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

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

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

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

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

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

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

Summary of OCIP Coverages

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

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

b. Employer's Liability Insurance $1,000,000 Bodily Injury by Accident, each accident $1,000,000 Bodily Injury by Disease, each employee $1,000,000 Bodily Injury by Disease, policy limits

c. Commercial General Liability (ISO Occurrence Form – Limits Shared By All Insureds) $2,000,000 Each Occurrence Limit (Annual Limit) $2,000,000 Personal/Advertising Injury Aggregate $4,000,000 General Aggregate Limit for all Enrolled Parties (Annual Limit)

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

10 yr. Products & Completed Operations Extension

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

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

$100,000,000 Each Occurrence Limit

$100,000,000 Aggregate (Annual Limit)

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

f. Builder's Risk Insurance Coverage:

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

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

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

Builders Risk:

Limit

Each Occurrence Limit
$100,000,000

*Builder's Risk Obligation**:***

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

6. The WisDOT's Insurance Obligations.

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

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

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

7. Contractor's OCIP Obligations. Contractor shall:

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

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

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

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

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

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

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

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

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

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

TYPE OF INSURANCE MINIMUM LIMITS REQUIRED

1. Commercial General Liability insurance shall be endorsed to include Blanket Contractual Liability coverage.

   a. $2,000,000 Combined Single Limits per occurrence with an annual aggregate limit of not less than $4,000,000.

   b. The OCIP Coverage's shall exclude blasting or explosion operations. If blasting or explosion operations are used in connection with the Work, Commercial General Liability insurance shall not contain an exclusion for blasting or explosion and shall be provided in limits established by the WisDOT at the time such blasting or explosion methods are elected. Such coverage shall apply to operations whether the operations occur on the Project site or away from the Project site.

   c. Wisconsin Department of Transportation, their respective officers, agents and employees, and any additional entities as the WisDOT may request as additional insureds must be named as an Additional Insured which shall include: i) liability arising out of the Work performed by the named insured; ii) liability arising out of the supervision of the Work performed by or operations of the named insured; and iii) liability of the acts or omissions of the Additional Insureds relating to Work performed by the named insured for the Project, except for sole negligence of the Additional Insureds iv) will state that coverage is afforded on a primary and non-contributory basis.

   d. Ongoing Construction Operation(s) in effect at all times while work is being performed by Contractor;

   e. Subcontractors and Independent Contractors (if any);

   f. Products and Completed Operations, including coverage applicable to additional insureds (as required by this agreement) with Completed Operations coverage to remain in force, whether by endorsement or renewal of coverage, including the

Contractor, any party required to be indemnified by this Contract and any other party required by this Contract to be named as an additional insured, for at least two (2) years from the date of final completion of the Project and WisDOT's acceptance of the work; and

g. Explosion, collapse, and underground hazards.

h. Contractual Liability (insured contract) coverage sufficient to meet the requirements of this Contract (including defense costs and attorney's fees assumed under contract);

i. Personal and Advertising Injury Liability coverage (with the standard contractual and employee exclusions deleted);

j. Notice and Knowledge of Occurrence conditions limited to the knowledge of relevant corporate officers or risk managers with an Unintentional Errors and Omissions provision (providing that the insurer may not deny coverage unless it can show that it has been prejudiced by a failure of the insured to comply with a condition of the policy); and

k. CG 22 79 07 98 (or equivalent) is the only acceptable Professional Liability Exclusion.

l. Operations performed within 50' of railroad

m. Contractors must provide their own insurance for owned, leased, rented and borrowed equipment, whether such equipment is located at a Project Site or "in transit". Contractors are solely responsible for any loss or damage to their personal property including, without limitation, property or materials created or provided under the Contract until installed at the Project Site, Contractor tools and equipment, scaffolding and temporary structures.

2. Workers' Compensation and Employer's Liability insurance.

a. Workers' Compensation Limits: Statutory Limits

b. Employer's Liability limits:

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

Terms and conditions shall include:

- USL&H – where applicable.
- Jones Act – where applicable.
- All states endorsement -where applicable.

3. Commercial Automobile Liability insurance as specified by Insurance Services Office (ISO), form CA 00 01, symbol 1 (any auto) with the following limits and endorsements:

a. No Trucking or Hauling: $1,000,000 Each Accident

b. Trucking or Hauling (Non Hazardous Materials): $2,000,000 Each Accident

c. Trucking or Hauling Hazardous Materials: $5,000,000 Each Accident with an MCS 90 Endorsement and ISO Endorsement CA 99 48.

4. For any work over water, whether deemed navigable or otherwise, Contractors Pollution Liability insurance with $2,000,000 per occurrence and $2,000,000 aggregate policy limits.
5. Aviation and/or Watercraft Liability insurance, as appropriate, including hull and protection and indemnity for watercraft, or other insurance, in form and with limits of liability and from an insuring entity reasonably satisfactory to the WisDOT.

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

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

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

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

9. Additional Insureds:

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

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

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

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

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

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

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

11. Severability of Interests (Cross Liability):

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

any provision in any insurance policy which excludes or conditions coverage on the existence of a contract or other agreement requiring insurance.

12. Breach of Insurance Requirements:

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

13. **Subcontractor**:

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

14. Notice of Cancellation:

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

15. Limits of Insurance:

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

16. Deductibles/Denial of Claims:

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

17. No Waiver of Insurance Requirements:

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

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

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

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

21. Waiver of Claim and Waiver of Subrogation:

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

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

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

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

SEF-ZOO IC 13_0114

25. Subletting the Contract.

Replace standard spec 108.1.1 (3) with the following:

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

SEF Rev. 13_0225

26. CPM Progress Schedule.

Submit a CPM Progress Schedule and updates in accordance to standard spec 108.4.4, and as hereinafter provided.

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

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

Designate a Project Scheduler who will be responsible for scheduling the Work and submit a professional resume describing a minimum of three years of scheduling experience on interstate-highway reconstruction work of similar size and complexity, including recent experience with P6. Obtain approval of the submitted resume prior to scheduling the work.

With each Monthly CPM Progress Schedule Update also include:

1. Activities underway and as-built dates for the past month.
2. On a monthly basis, agree on the as-built dates with the department depicted in the Monthly CPM Progress Schedule Update or document any disagreements. Use the as-built dates from the Monthly CPM Progress Schedule Update for the month when updating the CPM schedule.

3. Provide actual as-built dates for completed activities through final acceptance of the project.

SEF Rev. 13_0812

27. Force Account.

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

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

SEF Rev. 13_0228

28. QMP Base Aggregate.

A Description

A.1 General

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

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

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

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

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

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

A.2 Contractor Testing for Small Quantities

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

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

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

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

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

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

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

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

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

B Materials

B.1 Quality Control Plan

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

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

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

B.2 Personnel

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

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

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

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

B.3 Laboratory

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

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

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

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

B.4.3 Control Charts

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

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

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

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

B.5 Contractor Testing

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

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

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

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

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

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

B.6 Test Methods

B.6.1 Gradation

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

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

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

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

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

B.6.2 Fracture

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

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

B.6.3 Liquid Limit and Plasticity

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

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

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

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

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

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

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

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

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

contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:

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

B.8 Department Testing

B.8.1 General

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

B.8.2 Verification Testing

B.8.2.1 General

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

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

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

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

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

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

B.8.3 Independent Assurance

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

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

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

B.9 Dispute Resolution

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

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

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

C (Vacant)

D (Vacant)

E Payment

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

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

301-010 (20100709)

29. Sign Supports Concrete Masonry.

Add the following to standard spec 636.3.2:

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

It is strongly advised to obtain and review the Geotechnical Exploration and Foundation Evaluation Reports for the sign structures and as well as nearby structures to the sign structure foundation being constructed. See article "Geotechnical Investigation Information" in these special provisions for information on obtaining geotechnical reports.

Add the following paragraph to standard spec 636.3.3:

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

Replace standard spec 636.5.2(1) with the following:

Payment for Sign Supports Concrete Masonry is full compensation for providing, transporting, placing and curing the concrete; for providing and removing casing if applicable; for providing required ground rods; for all required excavating; for placing post stubs or anchor bolts, and for providing and placing electrical conduit if required;

for pumping of ground water seepage if applicable; for cleaning-up, repairing damage, and for disposing of excavation and surplus materials.

SEF Rev. 12_0810

30. Field Facilities.

Replace standard spec 642 with the following:

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

SEF-ZOO IC 12_0723

31. Signs Type I and II.

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

Modify standard spec 637.2.4 with the following:

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

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

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

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

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

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

Append standard spec 637.3.2.1(3) with the following:

Provide the engineer with 3 copies of drawings of the signs proposed to be furnished under this contract for approval.

Append standard spec 637.3.3.2(2) with the following:

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

Append standard spec 637.3.3.3(3) with the following:

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

637-SER1 (20120401)

32. Overhead Sign Support (Structure), Item 641.8100.

Modify standard spec 641.5 Payment with the following:

(3) after "for excavating," add "backfilling, and disposing of surplus materials."

33. 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)

34. General Requirements for Electrical Work.

Replace standard spec 651.3.2 (1) with the following:

Perform all electrical work using a journey worker electrician. Before performing electrical work, provide the documentation specified in standard spec 651.3.2(3) to the engineer proving that the electrician's performing the work have attained status as journey worker.

Append standard spec 651.3.3 (3) with the following:

Notify the department's Electrical Field Unit at (414) 266-1170 and each municipality to coordinate the inspection. The department's Region Electrical personnel will perform the inspection for the state owned and maintained traffic signals and the municipalities will perform the inspection for the municipal owned traffic signals.

35. Install Conduit Into Existing Item, Item 652.0700.S.

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

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

C Construction

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

D Measurement

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

E Payment

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

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

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

36. Loop Detector Wire.

Append standard spec 655.3.9 with the following:

Splice loop detector wire to existing loop detector lead-in cables using cast in place splice kits from an approved manufacturer. Make splices as soon as possible after installing loop detector wire.

Append standard spec 655.5 with the following:

Payment for Loop Detector Wire is full compensation for furnishing and installing loop detector wire, for furnishing and installing splice kits, and for splicing to the existing loop detector lead-in cable.

37. Traffic Signals, General.

All work shall be in accordance to the plans and the State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, 2014 Edition, and these special provisions.

Contact the WisDOT electrical field unit (414) 266-1170 five business days prior to performing work on in-service WisDOT traffic signals.

Any work that requires a traffic signal to go into a flashing red state shall not be performed during weekday morning or weekday afternoon peak hours. Contact the engineer for approval five business days prior to performing any work requiring the traffic signal to go into a flashing red state.

All traffic signal cabinet switches for WisDOT and municipal operated traffic signals shall be performed during weekend nighttime hours (10:00 PM – 6:00 AM). Coordinate all traffic signal cabinet switches for WisDOT operated traffic signals with the WisDOT electrical field unit at (414) 266-1170 a minimum of five business days prior to construction for approval.

Adaptive Traffic Signal Turn-on
The WisDOT signal operations unit (414) 750-2605 and the WisDOT electrical field unit (414) 266-1170 shall determine and coordinate the adaptive traffic signal turn on day and time.

State Owned Traffic Signals
Work under this item shall consist of furnishing and/or installing all materials indicated in the plans for the department owned traffic signals at the following intersections:

STH 100 (S. 108th Street) Corridor
- STH 100 and CTH NN (W. Oklahoma Avenue)
- STH 100 and W. National Avenue
- STH 100 and W. Cleveland Avenue
- STH 100 and W. Lincoln Avenue
- STH 100 and W. Lapham Street
- STH 100 and Theo Trecker Way
- IH 94 Eastbound Off-Ramp and STH 100
- IH 94 Westbound Ramps and STH 100

USH 18 (W. Bluemound Road) Corridor
- USH 18 and CTH JJ (W. Bluemound Road)
- USH 18 and CTH Y (N. Barker Road)
- USH 18 and Jennifer Drive
- USH 18 and Janacek Road
- USH 18 and Brookfield Road
- USH 18 and Woelffel Road/Corporate Drive
- USH 18 and Calhoun Road
- USH 18 and Thomas Lane
- USH 18 and Executive Drive
- USH 18 and Main Street
- USH 18 and CTH O (S. Moorland Road)/Pilgrim Parkway

CTH Y (N. Barker Road) Corridor
· IH 94 Westbound Off Ramp and CTH Y

STH 59-1 (W. Greenfield Avenue) Corridor
· STH 59 and CTH Y (N. Barker Road)
· STH 59 and Brookfield Road

STH 59-2 (W. Greenfield Avenue) Corridor
· STH 59 and S. 92nd Street
· STH 59 and STH 181 (S. 84th Street)

W. National Avenue Corridor
· IH 894/USH 45 Eastbound Ramps and W. National Avenue
· IH 894/USH 45 Westbound Ramps and W. National Avenue

STH 181 (S. 84th Street) Corridor
· STH 181 and State Fair Gate 4
· STH 181 and W. Schlinger Avenue/State Fair Gate 5
· IH 94 Eastbound Ramps and STH 181
· IH 94 Westbound Ramps and STH 181

Village of Elm Grove Owned Traffic Signals
Work under this item shall consist of furnishing and/or installing all materials indicated in the plans for the Village of Elm Grove owned traffic signals at the following intersections:

USH 18 (W. Bluemound Road) Corridor
· W. Watertown Plank Road and N. Pilgrim Parkway

Obtain the necessary electrical permits from the Village of Elm Grove prior to beginning the work. Pay any fines, penalties, damage done to property, etc., billed by the Village of Elm Grove. Maintain operation of the traffic signals until the work at the intersections is complete.

Waukesha County Owned Traffic Signals
Work under this item shall consist of furnishing and installing all materials indicated in the plans for the Waukesha County owned traffic signals at the following intersections:

CTH Y (N. Barker Road) Corridor
· CTH Y and Davidson Road
· CTH Y and Tower Boulevard
· CTH Y and Swenson Drive

Obtain any necessary electrical permits from the applicable municipality prior to beginning the work. Pay any fines, penalties, damage done to property, etc. billed by the municipality or Waukesha County. Maintain the existing traffic signals until the work at the intersections is complete.

City of Brookfield Owned Traffic Signals
Work under this item shall consist of furnishing and/or installing all materials indicated in the plans for the City of Brookfield owned traffic signals at the following intersections:

STH 59 (W. Greenfield Avenue) Corridor
- STH 59 and N. Calhoun Road

Obtain the necessary electrical permits from the City of Brookfield prior to beginning the work. Pay any fines, penalties, damage done to property, etc., billed by the City of Brookfield. Maintain operation of the traffic signals until the work at the intersections is complete.

City of West Allis Owned Traffic Signals
Work under this item shall consist of furnishing and/or installing all materials indicated in the plans for the City of West Allis owned traffic signals at the following intersections:

W. National Avenue Corridor
- W. National Avenue and W. Cleveland Avenue
- W. National Avenue and S. 102nd Street
- W. National Avenue and W. Lincoln Avenue
- W. National Avenue and S. 92nd Street
- W. National Avenue and W. Becher Street and S. 90th Street
- W. National Avenue and S. 84th Street
- W. Becher Street and S. 92nd Street
- W. Lincoln Avenue and S. 92nd Street
- W. Lincoln Avenue and S. 90th Street

STH 181 (S. 84th Street) Corridor
- S. 84th Street and W. Lapham Street

Obtain the necessary electrical permits from the City of West Allis prior to beginning the work. Pay any fines, penalties, damage done to property, etc., billed by the City of West Allis. Maintain operation of the traffic signals until the work at the intersections is complete.

City of Wauwatosa Owned Traffic Signals
Work under this item shall consist of furnishing and/or installing all materials indicated in the plans for the City of Wauwatosa owned traffic signals at the following intersections:

W. Watertown Plank Road Corridor

- W. Watertown Plank Road and Swan Boulevard/Innovation Drive
- W. Watertown Plank Road and Discovery Parkway
- W. Watertown Plank Road and N. 92nd Street
- W. Watertown Plank Road and N. 87th Street

Obtain the necessary electrical permits from the City of Wauwatosa Building Department prior to beginning the work. Pay any fines, penalties, damage done to property, etc., billed by the City of Wauwatosa. Maintain operation of the traffic signals until the work at the intersections is complete.

38. Traffic Signal Faces.

Append 658.3.2 with the following:

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

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

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

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

Department-furnished Items
Bluetooth Detector
Camera
30-Foot Camera Pole
Arterial DMS
Hybrid DMS
Freeway DMS
Ethernet Video Encoder
Ethernet Switch
Pole Mounted Cabinet

Pick-up small department-furnished equipment, such as communications devices, cameras, and controllers, from the department's Statewide Traffic Operations Center (STOC), 433 W. St. Paul Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal state office hours. Contact the department's STOC at (414) 227-2166 to coordinate pick-up of equipment.

Large department-furnished equipment, such as camera poles will be delivered by the supplier to a contractor-controlled site within Waukesha or Milwaukee County. Delivery will not necessarily be in a "just in time" manner. Store the equipment until field installation. Provide location details and a contact for delivery coordination upon receiving the contract's Notice to Proceed.

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

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

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

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

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

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

The department will complete its review of the material within 30 days from the date of receipt of the submission, unless otherwise specified. The department will advise the contractor, in writing, as to the acceptability of the material submitted. The department may determine that if no exceptions were taken for the item, it is approved, and no further action is required by the contractor; or the item may be partially or totally rejected, in which case modify and/or amend the submittal as required by the department and resubmit the item within 14 days. At this time, the review and approval cycle described above will begin again.
670-005 (20100709)

40. Intelligent Transportation Systems – General Requirements.

A Description
A.1 General
This contract includes furnishing and installing elements for an Intelligent Transportation System (ITS) in or along the existing roadway as shown on the plans.

Unusual aspects of this project include:

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

2. The department will furnish some of the equipment to be installed. Make a reasonable effort to discover defects in that equipment prior to installing it.

A.2 Surge Protection

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

B Materials

B.1 General

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

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

B.2 Outdoor Equipment

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

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

B.3 Custom Equipment

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

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

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

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

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

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

B.3 Environmental Conditions

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

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

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

B.4 Patch Cables and Wiring

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

B.5 Surge Protection

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

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

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

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

C Construction

C.1 Thread Protection

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

C.2 Cable Installation

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

C.3 Wiring

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

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

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

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

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

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

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

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

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

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

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

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

41. Install Pole Mounted Cabinet, Item 673.0225.S.

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

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

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

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

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

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

C Construction

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

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

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

D Measurement

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

E Payment

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

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

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

673-010 (20100630)

42. Install Ethernet Switch, Item 675.0400.S.

A Description

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

B Materials

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
675.0400.S	Install Ethernet Switch	Each

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

43. Install Video Encoder, Item 677.0300.S.

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

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

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

D Measurement
The department will measure Install Video Encoder by each individual assembly, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
677.0300.S	Install Video Encoder	Each

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

44. Exposing Existing Utility Unpaved Area, Item SPV.0060.0001.

A Description

This work includes exposing existing utilities which are in direct conflict with proposed facilities. The location of existing utilities not in direct conflict with proposed construction is not included and shall be addressed using standard utility location procedures. The work includes exposing existing utilities under unpaved surfaces more than 6 feet outside a paved surface, and providing both lateral and depth measurements for use in determining potential utility conflict solutions.

B Materials

B.1 Granular Backfill

Furnish granular backfill that conforms to standard spec 209.

C Construction

C.1 General

Obtain engineer approval prior to performing the work, submitting all requests for exposing existing utilities in writing. Coordinate utility exposures with the engineer and notify the utility owner or their agents of this work 2 working days in advance so that they may be present when the work commences.

C.2 Excavation

Remove all unpaved surfaces at locations where the existing utility is being exposed. Maintain drainage at all times in accordance to standard spec 205.3.3. Take precautions, including temporary shoring, in order to prevent any undermining of the existing roadway. Perform work in accordance to all applicable laws, ordinances, rules, regulations, and OSHA standards.

Expose all utility locations within a given location to a minimum depth of 18-inches below the bottom of each utility. Excavate in a manner that protects the integrity of the utilities and prevents any damage to wrappings or protective coatings such as by any mechanical method or hand digging. Notify the utility owner promptly if damage or interruption of service occurs. Repair all damage caused to such utilities resulting from negligence or carelessness at own expense.

Take all lateral and depth measurements in US feet and tenths thereof. Identify horizontal locations of each exposed utility with a coordinate northing and easting referenced to the Wisconsin County Coordinate System (WCCS), Milwaukee and Waukesha Counties, NAD 83 (2007). Provide vertical elevations for each exposed utility and reference to NAVD 88 (2007).

The utility location shall remain exposed and available for visual inspection until the completion of all work in a given location. If the utility shall remain exposed overnight or for prolonged periods of time, protect the location with traffic-rated steel plating, safety barriers, and all necessary traffic control devices that may be required under applicable standards or as directed by the engineer.

C.3 Backfilling

Upon completion of the utility exposure, restore the location in kind to its original condition. Use granular backfill, conforming to standard spec 209, to backfill the exposed utility locations to the subgrade elevation except for areas located within local streets. All granular material placed to an elevation of 18-inches above each exposed utility shall consist substantially of sand with all particles retained on a one-inch (25.0 mm) sieve removed. The remaining granular material shall conform to the specifications for backfill for trench excavation. In grassy areas, place 6-inches of topsoil, sod or seed and mulch, and fertilizer. Alternate restoration methods may be used upon written approval from the engineer.

C.4 Documentation

Pro vide documentation to the engineer and include the coordinates, elevations, and sketches of the utility locations tied to known features in the plans. Reference each utility to a proposed alignment with a station and offset. Where near a ramp, reference the ramp alignment. Document the size and/or diameter, composition, and a description of each utility and the location of the elevation with respect to each utility noted. Supply digital photographs of the uncovered utility to the engineer in .jpeg format for future reference.

D Measurement

The department will measure Exposing Existing Utility, Unpaved Area as a unit for each location, acceptably completed. A location may have multiple utilities located within the same exposure area. An exposure area will include all utilities within 6 lateral feet of each other, and payment will only be made for one unit regardless of the number of utilities exposed. If the distance from the existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is between 0 and 6 feet, the department will measure each location as a single unit of work. If the distance from the existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is greater than 6 feet and less than 12 feet, the department will pay for the item as two units of work. Exposures in depth greater than 12 feet are not covered under this item.

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.0060.0001	Exposing Existing Utility Unpaved Area	Each

Payment is full compensation for all excavation; for disposing of all materials; for locating all utilities within each respective location; for providing documentation and photographs of utility locations to the engineer; for all surveying associated with exposing existing utilities; for all maintenance of the location during construction; for all traffic control, safety barriers, and steel plating required; for temporary shoring.

SEF Rev. 13_0926

45. Exposing Existing Utility Paved Area, Item SPV.0060.0002.

A Description

This work includes exposing existing utilities which are in direct conflict with proposed facilities. The location of existing utilities not in direct conflict with proposed construction is not included and shall be addressed using standard utility location procedures. The work includes exposing existing utilities under paved surfaces or within 6 feet of a paved surface, and providing both lateral and depth measurements for use in determining potential utility conflict solutions.

B Materials

B.1 Backfill Slurry

Use aggregates that conform to standard spec 501 for grade A concrete. Weigh aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver to the project site using a truck mixer. Add enough water to enable the mixture to flow readily.

C Construction

C.1 General

Obtain engineer approval prior to performing the work, submitting all requests for exposing existing utilities in writing. Coordinate utility exposures with the engineer and notify the utility owner or their agents of this work 2 working days in advance so that they may be present when the work commences.

C.2 Excavation

Remove all paved surfaces at locations where the existing utility is being exposed. Saw or remove concrete and asphaltic pavements to the nearest joint. Remove all pavement surfaces in such a way that all existing edges consist of a true line having a perpendicular edge with no unraveling. Maintain drainage at all times in accordance to standard spec 205.3.3. Take precautions, including temporary shoring, in order to prevent any undermining of the existing roadway. Perform work in accordance to all applicable laws, ordinances, rules, regulations, and OSHA standards.

Expose all utility locations within a given location to a minimum depth of 18-inches below the bottom of each utility. Excavate in a manner that protects the integrity of the utilities and prevents any damage to wrappings or protective coatings such as by any mechanical method or hand digging. Notify the utility owner promptly if damage or interruption of service occurs. Repair all damage caused to such utilities resulting from negligence or carelessness at own expense.

Take all lateral and depth measurements in US feet and tenths thereof. Identify horizontal locations of each exposed utility with a coordinate northing and easting referenced to the Wisconsin County Coordinate System (WCCS), Milwaukee and Waukesha Counties, NAD 83 (2007). Provide vertical elevations for each exposed utility and reference to NAVD 88 (2007).

The utility location shall remain exposed and available for visual inspection until the completion of all work in a given location. If the utility shall remain exposed overnight or for prolonged periods of time, protect the location with traffic-rated steel plating, safety barriers, and all necessary traffic control devices that may be required under applicable standards or as directed by the engineer.

C.3 Backfilling

Upon completion of the utility exposure, restore the location in kind to its original condition. When exposed utility locations fall within local streets or city right-of-way, use slurry backfill to fill the entire location to the subgrade elevation.

Restore concrete pavement and concrete base course to the depth found in the existing roadway. Replace all locations that fall within live lanes of any roadway or pedestrian traffic with a high early-strength concrete pavement mix design having a depth equivalent to the existing pavement structure unless directed otherwise by the engineer. Locations that are closed to through traffic may use an approved concrete pavement mix conforming to standard spec 501. If directed by the engineer, tie concrete pavement and/or dowel it to the existing pavement according to the standard detail drawing for concrete pavement. All locations requiring asphaltic pavement shall consist of HMA Pavement Type E-3 unless otherwise directed by the engineer. Place the HMA pavement in lifts to a depth as directed by the engineer. Apply tack coat to composite pavement structures and between lifts.

Place base aggregate dense between the subgrade surface and the bottom of the pavement.

C.4 Documentation

Provide documentation to the engineer and include the coordinates, elevations, and sketches of the utility locations tied to known features in the plans. Reference each utility to a proposed alignment with a station and offset. Where near a ramp, reference the ramp alignment. Document the size and/or diameter, composition, and a description of each utility and the location of the elevation with respect to each utility noted. Supply digital photographs of the uncovered utility to the engineer in .jpeg format for future reference.

D Measurement

The department will measure Exposing Existing Utility, Paved Area as a unit for each location, acceptably completed. A location may have multiple utilities located within the same exposure area. An exposure area will include all utilities within 6 lateral feet of each other and payment will only be made for one unit regardless of the number of utilities exposed. If the distance from the existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is between 0 and 6 feet, the department will measure each location as a single unit of work. If the distance from the

existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is greater than 6 feet and less than 12 feet, the department will pay for the item as two units of work. Exposures in depth greater than 12 feet are not covered under this item.

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.0060.0002	Exposing Existing Utility Paved Area	Each

Payment is full compensation for all excavation; for disposing of all materials; for locating all utilities within each respective location; for providing documentation and photographs of utility locations to the engineer; for all surveying associated with exposing existing utilities; for all maintenance of the location during construction; for all traffic control, safety barriers, and steel plating required; for temporary shoring, and all finishing items including, but not limited to, base aggregate dense, concrete pavement, HMA pavement, curb and gutter, and sidewalk located above the subgrade elevation.

SEF Rev. 13_0926

46. Install Hybrid Dynamic Message Sign, Item SPV.0060.2001.

A Description

This special provision describes installing two department-furnished hybrid dynamic message signs as part of a larger static sign on a butterfly sign structure (static sign and sign structure paid for separately), integrating the sign and making it functional in the existing system.

B Materials

Materials will include department-furnished materials and contractor furnished materials.

Department-furnished materials include the following:

- Two (2) Hybrid Dynamic Message Sign (HDMS). Each HDMS is approximately 2-feet by 3-feet in size and weigh approximately 90 pounds.
- Control cable from DMS Cabinet to DMS.

Contractor furnished materials include the following:

- AWG #6 copper wire or equivalent bonding straps to bond the sign to the structural steel.
- Power cable from power source to DMS.

C Construction

Install the department-furnished control cable from the HDMS to the pole mounted cabinet. Coil 10 feet of cable in the cabinet.

Connect the power and control cables in accordance to the manufacturer's recommendations.

Bond the bottom of the sign structure to one or more ground rods. Use exothermic welding at each end of the ground wire (unless the steel structure has a suitable grounding lug). Use an AWG # 6 solid, bare copper wire to bond the sign structure to the ground rod(s). Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement
The department will measure Install Hybrid Dynamic Message Sign as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2001	Install Hybrid Dynamic Message Sign	Each

Payment is full compensation for installation of the sign; fabrication and installation of all mounting hardware; furnishing and installation of control and power cables; testing the sign and controller.

47. Install Dynamic Message Sign, Item SPV.0060.2002.

A Description
This special provision describes installing a department-furnished arterial dynamic message sign on a sign structure (paid for separately), integrating the sign and making it functional in the existing system.

B Materials
Materials will include department-furnished materials and contractor furnished materials.

Department-furnished materials include the following:

- One (1) Arterial Dynamic Message Sign (DMS). The DMS will have dimensions and weight consistent with the maximum requirements of the Overhead Sign Supports (paid for separately) the DMS are being mounted on.
- One DMS Controller.
- Control cable from DMS Controller to DMS.

Contractor furnished materials include the following:

- AWG #6 copper wire or equivalent bonding straps to bond the sign to the structural steel.
- Power cable from power source to DMS.

C Construction
Install the department-furnished sign controller in the cabinet as shown on the plans using one of the power outlets included in the cabinet.

Connect the power and control cables in accordance to the manufacturer's recommendations.

Bond the bottom of the sign structure to one or more ground rods. Use exothermic welding at each end of the ground wire (unless the steel structure has a suitable grounding lug). Use an AWG # 6 solid, bare copper wire to bond the sign structure to the ground rod(s). Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement
The department will measure Install Dynamic Message Sign as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2002	Install Dynamic Message Sign	Each

Payment is full compensation for installation of the sign and controller; fabrication and installation of all mounting hardware; furnishing and installation of control and power cables; testing the sign and controller.

48. Install 5.8 GHz Ethernet Bridge, Item SPV.0060.2003.

A Description
This special provision describes installing a department-furnished, or salvaged, 5.8 GHz Ethernet radio and associated external antenna at a new or existing cabinet or new or existing pole.

B Materials
Materials will include department-furnished materials and contractor furnished materials.

Department-furnished or salvaged, materials include the following:

- One 5.8 GHz Ethernet bridge with integral antenna.
- One 5.8 GHz Ethernet bridge power converter.
- One 5.8 GHz Ethernet bridge mounting bracket.
- One 5.8 GHz Ethernet bridge external antenna where directed by the plans or by the engineer

Contractor-furnished materials include the following:

- Mounting hardware.
- Outdoor rated Category 6 communications cable.
- Inline network cable surge suppressor.
- Coax cable from 5.8 GHz Ethernet bridge to external antenna

C Construction

Bond the surge suppressor to the cabinet grounding system.

Install the 5.8 GHz Ethernet Bridge in a point-to-point or point-to-multipoint configuration as shown on the plans and as directed by the engineer.

Use the manufacturer's set-up software to configure the Ethernet bridge radio for its intended use. Use the signal strength indicator on the radio to find the optimum position. Also perform a frequency analysis to determine the optimal hop pattern of the radios and test the continuity of the link by polling the radios using the software provided. The position of the radio and the hop pattern shall be adjusted until the polls show at least 200 consecutive polling intervals have been successfully transmitted and received. Demonstrate to the engineer that the hop pattern selected corresponds to the optimal noise free frequencies identified in the frequency analysis. Deliver 3 copies of the final test results for signal strength, frequency analysis, and test polling.

D Measurement

The department will measure Install 5.8 GHz Ethernet Bridge as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2003	Install 5.8 GHz Ethernet Bridge	Each

Payment is full compensation for installing, setting up, configuring, and testing the 5.8 GHz Ethernet bridge radio, surge suppressor, cables, and connections; and transportation.

49. Install Wireless Modem, Item SPV.0060.2004.

A Description

This special provision describes installing a wireless cellular modem and antenna and providing all necessary associated wiring.

B Materials

The department will furnish the wireless cellular modem and antenna. Provide all necessary cables between the wireless modem and device to be connected to it.

C Construction
Drill a hole in the new or existing cabinet to install the wireless modem antenna cable through. Mount the antenna on top of the cabinet and seal the hole with purpose-made waterproof sealing device such as a grommet or gasket.

Install the wireless modem in a new or existing field cabinet. Connect it to the antenna and to devices as shown on the plans, or as directed by the engineer.

D Measurement
The department will measure Install Wireless Modem by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2004	Install Wireless Modem	Each

Payment is full compensation for installing a wireless modem; furnishing all necessary incidental hardware; and making all necessary connections.

50. Install Bluetooth Detector, Item SPV.0060.2005.

A Description
This special provision describes installing a department-furnished Bluetooth chip detector to track the chips to generate traffic data. Provide mounting hardware, stainless steel bands, a Category 5 or better network cable between the reader and the associated Ethernet switch, and other incidentals necessary to complete the work.

B Materials
Bluetooth chip detector, range extension antenna, and mounting bracket as provided by the state.

Stainless steel bands to attach mounting bracket to pole.

Furnish Category 5 or better network cable, with RJ-45 connectors, of sufficient length to reach from the reader to the associated Ethernet switch as shown on the plans.

C Construction
Prior to beginning any work related to installing the Bluetooth chip detector, coordinate IP addresses and other network integration efforts with department staff at the Statewide Traffic Operations Center.

Install the Bluetooth chip reader per the manufacturer's recommendations for mounting heights to maximize effective range of the reader, and for all other mounting considerations.

Use existing or shared access holes in poles or sign structures to install the associate network cable in the pole or sign structure. Where necessary, drill a new hole for the cable and seal the hole using an appropriately sized grommet.

Install the network cable between the reader and the Ethernet switch and following the manufacturer's set-up instructions and the network settings information from the department to integrate the readers into the network and to make them functional.

D Measurement
The department will measure Install Bluetooth Detector as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2005	Install Bluetooth Detector	Each

Payment is full compensation for testing and installing the Bluetooth chip detector, cable and connections; for network and integration setup and coordination; mounting hardware; and transportation.

51. Ground Rod, Item SPV.0060.2006.

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

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2006	Ground Rod	Each

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

52. Salvage DMS, Item SPV.0060.2007.

A Description

This special provision describes removing an existing arterial dynamic message sign, controller, pole-mounted cabinet and cables; delivering the sign to the ITS maintenance contractor; storing the remaining pieces for removal of desired parts by the department, and disposing of remaining undesired parts.

B Materials

Existing sign, cabinet, controller, control cables, and power wires.

Existing sign assembly consists of dynamic message sign, hardware for mounting sign on sign structure, and sign cabinet and controller. Cabling for the dynamic message sign and controller is contained in rigid conduit. The above components are mounted to an overhead sign support structure (removed under a separate pay item).

Removed dynamic message sign is approximately 10’ 3” long by 4’ 3” tall by 1’ 3/8” deep and weighs approximately 700 pounds.

C Construction

Carefully remove the dynamic message sign and deliver to the ITS maintenance contractor. Coordinate delivery with Brian Scharles, (262) 814-7306, ten business days in advance of removal. The ITS maintenance contractor will paint the sign enclosure within two weeks. The ITS maintenance contractor will deliver the same sign for re-installation under a separate pay item.

Prior to removing the sign and controller, the contractor may request that it be inspected to determine condition. Once removal has started, the contractor shall be responsible for any damage to the sign until it is delivered to the ITS maintenance contractor. It will be the choice of the contractor on how best to remove the sign from the overhead structure. Replace or repair any damaged components at no additional expense to the department.

Carefully remove the cabinet and controller for storage, parts removal, and later disposal. Store the cabinet and controller in a secure and safe location until such time as the department can have a representative remove desired parts. The department will complete the parts removal process within 10 non-holiday business days of the sign being removed from the overhead structure and access being granted to the department representative. Contact Dean Beekman at (414) 227-2154 for coordination of parts removal by the department 30 calendar days prior to the sign being made available for parts removal. After the department has obtained all desired parts, the contractor shall properly dispose of all remaining undesired parts off the project area.

D Measurement
The department will measure Salvage DMS by each individual unit, acceptably removed and stored for parts removal.

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

Item Number	Description	Unit
SPV.0060.2007	Salvage DMS	Each

Payment is full compensation for removing and delivering the DMS, removing the cabinet and sign controller and cables, including any necessary wiring disconnections; for storing spare parts; any necessary restoration; for disposing of the remaining components after spare parts removal.

53. Remove, Salvage, and Install Traffic Signal Controller, Item SPV.0060.3001.

A Description
This special provision describes removing the existing municipal traffic signal controller from the traffic signal cabinet, delivering the existing controller to the municipality, and installing a department furnished traffic signal controller in the existing traffic signal cabinet.

B Materials
Use the department furnished traffic signal controller.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the state furnished materials five working days prior to picking up the materials.

Provide all other needed materials in conformance with standard specs 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction
Perform work in accordance to standard specs 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

The appropriate municipality assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Replace any equipment not identified as damaged or not working, prior to removal at no cost to the appropriate municipality.

The traffic signal is to remain operational throughout the duration of the work except for the time required for the controller replacement.

City of Brookfield Traffic Signals
Notify the City of Brookfield Public Works Department (262) 787-3919 at least five working days prior to the removal of the traffic signal controller. Complete the removal work as soon as possible following shut down of the equipment.

Remove the traffic signal controller from the cabinet. Deliver the controller to the City of Brookfield. Contact the City of Brookfield Public Works Department (262) 787-3919 at least five working days prior to delivery to make arrangements.

Program the department furnished traffic signal controller with the existing traffic signal controller parameters. Install the department furnished traffic signal controller in the traffic signal cabinet per manufacturer's specifications.

Request a signal inspection of the signal installation to the engineer at least five working days prior to the time of the requested inspection. City of Brookfield personnel will perform the inspection.

Village of Elm Grove Traffic Signals
Notify the Village of Elm Grove Public Works Department (262) 782-6700 at least five working days prior to the removal of the traffic signal controller. Complete the removal work as soon as possible following shut down of the equipment.

Remove the traffic signal controller from the cabinet. Deliver the controller to the Village of Elm Grove. Contact the Village of Elm Grove Public Works Department (262) 782-6700 at least five working days prior to delivery to make arrangements.

Program the department furnished traffic signal controller with the existing traffic signal controller parameters. Install the department furnished traffic signal controller in the traffic signal cabinet per manufacturer's specifications.

Request a signal inspection of the signal installation to the engineer at least five working days prior to the time of the requested inspection. Village of Elm Grove personnel will perform the inspection.

Waukesha County Traffic Signals
Notify Fred Patzer at (262) 424-9129 from Waukesha County at least five working days prior to the removal of the traffic signal controller. Complete the removal work as soon as possible following shut down of the equipment.

Remove the traffic signal controller from the cabinet. Deliver the controller to the Waukesha County Highway Operations shop at 1641 Woodburn Road, Waukesha WI. Contact Fred Patzer at (262) 424-9129 at least five working days prior to delivery to make arrangements.

Program the department furnished traffic signal controller with the existing traffic signal controller parameters. Install the department furnished traffic signal controller in the traffic signal cabinet per manufacturer's specifications.

Request a signal inspection of the signal installation to the engineer at least five working days prior to the time of the requested inspection. Waukesha County personnel will perform the inspection.

D Measurement
The department will measure Remove, Salvage, and Install Traffic Signal Controller as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3001	Remove, Salvage, and Install Traffic Signal Controller	Each

Payment is full compensation for removing the existing municipal traffic signal controller from the traffic signal cabinet and delivering the existing controller to the municipality; for picking up and installing the department furnished traffic signal controller; for programming the department furnished traffic signal controller with the existing traffic signal controller settings; for furnishing alland installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit; for clean-up and waste disposal.

54. Supplementary Traffic Signal Cabinet Concrete Base, Item SPV.0060.3002.

A Description
Work under this specification shall be done in accordance to standard spec 654, contract plan detail, and these special provisions.

B Materials
Materials shall be in accordance to standard spec 654.

C Construction
Construction shall be in accordance to standard spec 654.

D Measurement
The department will measure Supplementary Traffic Signal Cabinet Concrete Base as each individual base, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3002	Supplementary Traffic Signal Cabinet Concrete Base	Each

Payment is full compensation for providing concrete bases; for embedded conduit and electrical components; for anchor rods, nuts, and washers; for bar steel reinforcement, if required; for excavating, backfilling, and disposing of surplus materials.

55. Traffic Signal Cabinet and Controller Fully Actuated 4-Phase, Item SPV.0060.3003.

A Description

This work shall consist of furnishing and installing traffic signal cabinets and installing traffic signal controllers as shown on the plans and as hereinafter provided.

Equipment shall be examined and tests will be performed to insure that proper and sufficient equipment is furnished as is required to complete the signal plan operation and sequence in compliance with the intent of the contract specifications.

All testing and equipment examination will be in the presence of the contractor's representative furnishing the equipment. The contractor's representative will be notified of any needed modifications or corrections to be accomplished by the contractor.

The department will furnish the traffic signal controller to install in the cabinet. The controller will be a fully traffic actuated, solid state, digital microprocessor based controller, capable of providing the number and sequence of phases, overlaps and any special logic as described herein and shown on the accompanying plan.

Program the department furnished controller and mount in a control cabinet to operate as a complete and functioning intersection traffic signal control system. The equipment items included shall be, but not necessarily limited to, cabinet, microprocessor based controller, conflict monitor, power distribution panel, interior cabinet wiring and other associated electrical and electronic equipment interior to the control cabinet that is necessary to provide the type of operation described in these specifications.

A four ring, programmable for both single and dual entry concurrent timing, nine phase frame or equivalent shall be provided. Volume density timing shall be provided for eight phases and pedestrian timing shall be provided for all phases. MUTCD flashing capability shall be provided. All controls shall be in accordance with the accompanying plans and with NEMA standards Publication No. TS1-1976 including Revisions No. 1 and No. 2.

The department furnished intersection controller unit will be capable of up to 16 phase operation plus 16 programmable overlaps regardless of whether preemption, coordination or special programming is used. The intersection cabinet shall be wired for a minimum of twelve and include twelve 3 circuit load switches

B. Materials

B.1 Electrical and Operational Aspects.

Buffering. All logic circuit inputs will be internally buffered to withstand transient and noise, such as might result from normal usage, without damage to any mechanism components.

Timing Features. All controller timing parameters will be fully programmable from the front panel using keyboard inputs. Memory storage features will be nonvolatile under power off conditions for at least 30 days. The locking, non locking detection mode and per phase recall will also be accessible on the front panel.

Minimum Green Timing. The passage timer will time concurrently with the minimum green timer, so that the duration of the minimum green time is directly adjustable and is independent of the passage time setting.

Dual Ring Timing. In the dual ring application, no more than two phases will be permitted to time concurrently and no more than one phase per ring. The controller will provide barrier protection against concurrent timing of two conflicting phases; no phases assigned to one side of the barrier shall be permitted to time concurrently, if a conflict will occur. The controller willl service calls on a single entry basis, and both rings will cross the barrier simultaneously in accordance with the following logic:

- Phases timing concurrently shall terminate simultaneously if both have a gap out due to excessive time between actuations.
- Phases timing concurrently shall terminate simultaneously if both have a maximum time out.
- In the event that one phase has not achieved a gap out or maximum time out, the other gapped out phase shall be permitted to leave the gapped out condition and retime an extension when an actuation is received.

Manual (Police) Control. If manual control is used, actuation of the manual control will permit manual advance of the Walk, Pedestrian Clearance and Green interval terminations only. Manual termination of Yellow or All Red clearance intervals will not be permitted.

Red Revert. An adjustable red revert control will be provided to assure adequate red display when recycling a phase during call-away or red operation. A call for service to different phase will be preceded by an all-red clearance interval, as programmed.

Coordination. The controller will be capable of operation progressive coordination systems and mutual coordination and will contain, but not be limited to, the following external inputs, with all functions brought out:

Vehicle/Pedestrian Detectors per phase
Phase Omit per phase
Omit Red Clearance per ring
Maximum II per ring
Stop Timing per ring
Select Minimum Recall per controller
Semi-Mode per controller
Pedestrian Omit per phase
Hold per phase
Internal Max Inhibit per ring
Red Rest per ring
Force-Off per ring
Manual Control per controller
External Start per controller
Conflict Monitor Status

Minimum Safe Timing Control. Controllers will not accept any operator input or stored timing parameters that would result in intervals shorter than the following: yellow clearance - 3.0 seconds, minimum walk - 4.0 seconds, minimum pedestrian clearance - 6.0 seconds. At the beginning of each of the above intervals, the controller will check the previously stored data against these minimums. If an operator attempts to load an incorrect timing parameter, the controller unit will output a unique error code on the front panel display. As an alternative to minimum timing control, a coded keyboard entry security feature may be provided.

Indicator Lights and Switches. A backlit alphanumeric LCD display will be provided to show the status of each signal phase on. The LCD display will also be used to show the interval status, phase termination information and the presence of vehicular and pedestrian calls for each phase. The controller will have fuses for AC power and +24 power.

Data Display. The front panel will contain a display panel consisting of a backlit alphanumeric LCD display. The face of the display will be scratch, chemical and solvent resistant. The operator will access the controller through a menu system. By selecting various menu options, real time operational status or stored parameter tables will be presented to the operator.

Diagnostic Program. A diagnostic program will be prepared by the manufacturer of the controller unit which will demonstrate the proper operation of all inputs, outputs, controls and indicators in the controller, and shall have visual confirmation on the front panel. The diagnostic program will be resident in the controller. The controller will continuously run a diagnostic routine in the background to assure unit integrity.

Maintenance of Controller. For ease of service, the controller will be divided into a minimum of the following separate circuit boards:

CPU/Memory/Internal 1/0
External Input/Output
Display Subsystem
Power Supply

Each board must be easily removable without requirements for special tools.

The controller will provide user programmable, data logging of local events or alarm events including, but not limited to: Conflict Flash, Remote Flash, Local Flash, Controller Voltage Monitor, Detector Failure, On Line and Data Change. The time and date will be recorded as a part of the message logged. The logging function will be resident in the controller unit. The logging function will be viewed from the front panel LCD display. If the logging function cannot be viewed from the front panel LCD display and it has to be performed by supplemental auxiliary equipment, the auxiliary equipment will be supplied.

RS-232 Interface. An RS-232C interface and connector will be provided for interconnecting to a conflict monitor, printer, another like controller unit, a local personal computer or a remote personal computer through an external modem.

Controller Functions:
Remote Flash. Controller will have a user front panel programmable "Automatic Night Flash." The flash will allow the user to program entry and exit phase(s) plus program the output of each load switch for off, flash, or alternate flash. This programming will be independent of start-up flash and or initial phase programming. This allows the operator complete programmability for automatic flash to be different from emergency flash.

Dynamic Maximum. This allows the user to program values which the controller programmed time of day for automatic maximum time adjustments. This automatic controller adjustment will be based on concurrent “Max-Out" or “Gap-Out” terminations of phase green.

Detector Inputs and Logging. The controller will have the capability to process 80 separate detector inputs. Each of the 80 inputs can be capable of being user programmable for phase detector inputs, system detector inputs, and/or Queue detector inputs. The controller will have capability to count in a report defined by the user up to 24 separate detector inputs. The report will log/record these 24 detector inputs for 72 events. Events start/stop and duration are all individually user programmable. This will allow the user total intersection counting capability without changing any field or cabinet wiring.

Queue Selection. The controller will have 2 separate Queue selection routines capable of selecting any/all or partial timing plan operation over riding any existing operation. The queue selection will be based on computed volume and/or user selected occupancy routine

with processing up to 8 detectors in each selection. The user programs thresholds settings to enable/disable queue override.

B.2 Monitoring.
A NEMA + monitor with all components and circuitry, independent from the controller and having the capacity to handle 6 channels shall be provided. The monitor shall detect conflicting indications, switch failure, controller voltage drops and the absence of reds as follows:

Conflicting indications shall cause the monitor to place the intersection in a flashing mode of operation. The monitor shall maintain the flashing mode until manually reset, regardless of 110 VAC power to the conflict monitor.

The +24 VDC cabinet power source shall be monitored by the conflict monitor. If that voltage drops to an unsatisfactory level, the monitor shall place the intersection in a flashing mode of operation. Upon resumption of normal voltages, the controller shall resume normal stop and go operation without the necessity of manual resetting.

The absence of any required red signal voltage at the field connection terminals in the controller assembly shall cause the monitor to place the intersection in a flashing mode of operation. The monitor shall maintain the flashing mode until manually reset.

A load switch that turns on any two indications for the same approach (such as green and yellow, yellow and red or red and green), shall place the intersection in the flashing mode of operation. The monitor shall maintain the flashing mode until manually reset, regardless of 110 VAC power to the controller.

After a power interruption (exceeding 457+25 milliseconds) to the controller assembly, a flashing period (4 to 10 seconds adjustable) shall precede the start up (initialization) sequence. This feature can be resident in either the monitor or the controller.

The flash circuit shall be wired in a failsafe manner so that the intersection will revert to and remain in a flashing mode of operation, whenever and for as long as, either the controller unit or monitor unit is disconnected.

Indicator lights shall be provided for:

- an indicator for each channel which will latch status of failure
- +24 VDC inputs
- conflict
- power (conflict monitor unit)
- power interrupt after failure
- red failure
- switch

It will not be acceptable to disable any of the conflict monitor features because of signal sequences containing left or right turns with no red indication. Such sequences will require a loading resistor(s) to be mounted and wired to the unused triac output to simulate field load. The loading resistor shall meet MIL-R-370 or equal.

B.3 Terminal Facilities.
Terminal facilities shall consist of all devices external to the controller unit which are necessary to complete the intersection. Terminal facilities supplied shall be protected by a 30 amp circuit breaker. The 30 amp circuit breaker shall feed a signal bus through radio interference line filters and bus relays. Bus relays, in all cases, shall be a solid state type contactor and shall not be jack mounted. Terminal facilities shall also include applicable load switch panels of sufficient capacity to accommodate 4 vehicle phases and 4 pedestrian phases or 4 overlap phases and shall include 8 solid state 3 circuit load switches with visual indicators. Flash transfer relays as required and one double circuit NEMA flasher shall also be provided. The internal wiring of the load switch panels shall be insulated wiring of sufficient size or the individual outputs fused so that the wiring will not be damaged by shorted output light circuits. Printed circuits in the load switch panels will not be acceptable.

Terminal strips shall be used to terminate controller cables, signal head cables and vehicle and/or pedestrian detector cables. All controller inputs and outputs shall be terminated on an interface panel. All interface and output terminal connections shall be the screw down type.

AC interconnect terminal facilities shall be fused to incoming lines.

A "D" connector harness and panel compatible with the WisDOT furnished traffic signal controller shall be provided. The wiring for all alarm log inputs shall be terminated on this panel.

B.4 Cabinet Switches.
The following switches shall be located inside the cabinet on the maintenance panel:

Controller Power On/Off
Cabinet Light On/Off
Stop time (3 position)

POSITION	LABEL	FUNCTION
Upper	Stop Time	Place stop time on the controller
Center	Run	Remove stop time input to the controller
Lower	Normal	Connects the monitor to the controller stop time input

Switches shall be provided for all vehicle phases and all even pedestrian phases.

The following switches shall be located behind the police door:

Signal/Off
Flash/Normal

The above switches (Signal/Off and Flash/Normal) shall function as follows:

	SIGNAL	OFF
FLASH	Signals Flash	Signals Dark
NORMAL	Signals Normal	Signals Dark

Manual Detector Operation. Three position switches shall be provided external to the controller which will permit manual detector calls and manual detector disconnect for each phase independently. The switches shall be spring loaded and shall rest in the center (non-operative) position. The switches shall be appropriately labeled and shall operate as follows:

Upper Position:	Spring loaded, disconnect detector
Center Position:	Normal detector operation
Lower Position:	Spring loaded, test call is placed to the controller

B.5 Cabinet and Cabinet Equipment.
The department furnished controller shall be completely housed in a door-in-door ground mounted (without anchor bolts) metal cabinet size 44-inches wide, 27-inches deep and 51 inches high.

The cabinet shall be of clean cut design and appearance. The size of the cabinet shall be such as to provide ample space for housing the controller and all of the associated electrical devices which are to be furnished with the controller, together with any other auxiliary devices herein specified.

All cabinets shall have the following:

- A 15 amp circuit breaker for auxiliary equipment.

- A pedestrian push button optoisolator assembly providing four channels of isolation. Relays shall not be acceptable.

- A valve type surge protectorshall be mounted internally within the traffic signal cabinet and shall be connected across the line terminals of the circuit breakers. An arrestor, shall be installed at the load terminals of each circuit breaker from the hot line to the ground conductor.

- Incandescent lamp socket with 100 watt lamp.

- Solid state NEMA flasher(s) with visual indicators and completely wired and base rated for at least 10 amps per circuit at 165-degrees.

- Control switches, including controller power switch, stop time switch and cabinet light switch.

- All switches specified in Cabinet Switches and Cabinet and Cabinet Equipment sections.

- All necessary fuses and circuit breakers.

- All wiring harnesses including detector harnesses. Loop detector harness connector shall be MS3106B018-1S, fully wired, terminals I and J shall go to separate isolated terminals. A loop harness shall be provided for each loop as shown on the plans.

- Duplex power receptacle. A 120 VAC 20 amp, NEMA 5-20R GFI convenience outlet shall be mounted in each cabinet for energizing equipment or tools. The outlet shall be fuse protected.

- Radio interference filter. Each control cabinet shall be equipped with a single radio interference suppressor of sufficient ampere rating to handle the load requirements. The RIS shall be installed at the input power point. It shall minimize interference in both the broadcast the aircraft frequencies, and shall provide a maximum attenuation of 50DB over a frequency range of from 200KHz to 75MHz, when used in connection with normal installations. The RIS shall be hermetically sealed in a substantial metal case which shall be filled with a suitable insulating compound. The terminals shall be nickel plated brass studs of sufficient external length to provide space to connect two no. 8 AWG wires and shall be so mounted that they cannot be turned in the case. Ungrounded terminals shall be properly insulated from each other, and shall maintain a surface leakage distance of not less than 1/4 inch between any exposed current conductor and any other metallic parts. The terminals shall have an insulation factor of 100-200 megohms dependent upon external conditions. The RIS shall not be rated less than 35 amperes. The RIS shall be designed for operation on 115 VAC±10%, 60Hz, single phase circuits, and shall meet the standards of UL and Radio Manufacturer's Association.

- Cabinet grounding. In all controller cabinets and auxiliary cabinets, the AC common, the logic ground and the chassis ground shall be isolated from each other the same as detailed by NEMA Standard.

- Suppressors. Each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, shall have a suppressor to protect the controller's internal solid state devices from excessive voltage surges. Such suppressors shall be in addition to the surge protector at the input power point.

- Provide all necessary hardware to accommodate fiber optic interconnect, radio interconnect, and/or Ethernet communications.

All conductors in the cabinet shall be number 22 AWG or larger, with a minimum of 19 strands and conforming to military specifications, Mil-W-16878D, type B or D vinyl nylon jacket, 600 volt, 105 degree C. All cabinets shall be factory wired.

The cabinet shall provide weather protection and forced ventilation, air filters and heaters with adjustable thermostat switches to comply with the environmental and operating standards outlined in NEMA Specification TSI-1-1976. The heater supplied shall have an adjustable thermostat setting which varies from 0 degree to 40 degree. The cabinet shall provide reasonable vandalism protection. Access doors shall be provided with latches and a corbin lock, dust cap and key change LR6380. The small door shall be provided with standard police locks.

Forced Ventilation. Controller cabinet containing solid state equipment shall be ventilated by means of a 120 VAC, 60 Hz, tube axial compact type fan. The fan's free air delivery flow shall be greater than 100 CFM. The magnetic field of the fan motor shall not affect the performance of the. control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp or have bearing failure within a 7 year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The thermostat's turn on setting shall be adjustable from 90 to 120 degrees Fahrenheit. The fan shall run until the cabinet's temperature decreases to approximately 30 degrees below the turn on temperature setting. The fan shall be fused.

Metal shelves shall be provided to support the controller and external equipment. The controller shall on the top shelf and not less than 38-inches above the bottom of the cabinet. There shall be a minimum of 10-inch vertical height for detector units.

Bus and flash transfer relays, flashers, load switches, circuit breakers and interference filters shall be located on a standard panel consistent with the intersection plan. Design shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools.

All cabinet inside and outside surfaces shall be primed with phosphate treatment and primer. All exterior surfaces and interior surfaces shall be natural aluminum.

Any cables, wires or circuits which are not being used shall be neatly folded and shall be capped. These wires shall be neatly tied and stowed away in or on the terminal facilities.

Terminal facilities arrangement shall be in a fashion so that trouble shooting of load bay or behind the load bay can be accomplished with simple tools. This means that the load bay will be hinged so that it can be dropped down for ease of maintenance. There will be sufficient slack in the load bay wiring to allow for dropping the load bay.

B.6 Solid State Load Switches.
Load switches shall meet the requirements of NEMA-TS1 Part 5 for three circuit load switches.

Each load switch shall contain three individually replaceable, molded case, solid state relay modules. Each relay module shall utilize optical isolation between the control and the load circuits. The module shall have the functions and terminal assignments a specified in NEMA TS1-Part 5

Each panel of load switches shall be either rack mounted or shall have a switch support bracket extending across the entire length of the switch panel.

The load bay arrangement from left to right shall be as described below:

Vehicular shall be grouped first - phase 1 through phase 8, inclusive.

Pedestrian phasing and any other special phasing shall follow.

B.7 Equipment List and Drawings.
Detailed shop drawings of the control cabinet, equipment layout drawings and wiring diagrams of all equipment installed in the cabinet shall be submitted to the project engineer for approval. Two sets of cabinet wiring diagrams shall be contained in a heavy duty clear plastic envelope mounted on the inside of the front door.

B.8 Preemption.
General. These specifications detail a preemptor program for use with 2 through phase actuated controller.

The preemptor shall be capable of being adaptable to meet the various types of applications such as railroad, fire station, emergency vehicle and bridge preempts, simultaneously.

The preemptor shall be internal to the controller and shall not alter the controller capability or interchangeability under normal operation. The preemptor shall be completely programmable by the user in the field and have (6) six separate sequences with each having high and low priority inputs capable of the following:

Preempt Program.
Preempt Registration. The preempt call input shall initialize preempt registration and start preempt sequence unless a priority call input is activated which would treat the current controller preemptions as normal operation and reinitiate call registration.

Preempt Delay. As soon as the preempt call is registered the preempt delay will begin timing unless preempt delay is set to zero or preempt delay omit was active during preempt call registration. Delay shall be programmable from 0 to 255 seconds minimum.

As soon as preempt delay is timed out, current running phases not next to be common in the preempt sequence are cleared. If the running phases are green and must be cleared, special programmable values of minimum green, walk and pedestrian clearance intervals will time normal times. Concurrently a special preempt clearance is generated. This clearance is designed for advance track signals and any overlaps that make be green and require yellow clearance.

Entry Clearance Phase(s) Select. Two sequential phases or phase pairs shall be available to be run as programmable fixed time intervals as an entry sequence. Two entry options shall be available, each programmable. The entry sequence shall be capable of being omitted entirely.

Dwell Sequence. After the entry sequence, the preemptor shall enter the dwell sequence. During the dwell sequence the controller shall cycle between selected phases on a pre-timed or actuated basis. Pedestrian phasing may be normal or omitted entirely. When the dwell sequence is entered, a preempt dwell output shall be generated. The preemptor shall remain in dwell for the length of the dwell extension timer which shall be capable of being held in reset by the preempt call input. Dwell extension shall be omitable by setting the timer to zero.

Exit Sequence. After leaving dwell, the controller shall enter one or two programmed exit phase(s) or phase pairs sequences. The sequence will time programmed minimum green and place a vehicle call on all phases not omitted. After timing exit phase minimum green the controller shall time and sequence normally.

Preempt Sequences. The preemptor shall provide a minimum of six different programmable preemption sequences. These preemption sequences shall be associated with separate preempt call inputs or the sequences may be linked to each other to create more sophisticated sequences.

B.9 Time Based Coordination.
These specifications detail a time base coordinator program for use with 2 through 16 phase actuated controller.

The units shall allow traffic control equipment to be coordinated without requiring the use of interconnection cables. The units shall coordinate traffic control equipment based on signals from a precise time base which will allow output control signals to be changed at the proper preprogrammed time to achieve the coordinated operation of an intersection with other intersections or the desired operation of an isolated intersection. The time base coordinator may also be used as a programmer for a master intersection controller which in turn is interconnected with secondary intersection controllers. The units shall also be capable of providing a command for MUTCD flash, and shall allow a full year program to be initiated and carried out without the necessity of field adjustment for anticipated special events, etc.

B.10 Loop Detector Amplifiers.
The contractor shall provide the necessary Loop Detector Amplifiers as required on the plans.

All loop detector amplifies supplied shall be two- channel, shelf mounted units with digital output timing and sequential scanning. The amplifier shall operate in compliance with all the requirements specified herein when connected to an inductance loop plus lead-in of from 0 to 1000 micro-henries with a loop parameter as low as 5.0 at the amplifiers operating frequency.

Each channel shall be self-tuning and shall be fully operational within one minute after power up. After a power interruption, the channel shall automatically return to normal operation. Two conventional single channel front panel mounted MS3102A 18-1P connectors for each amplifier shall be provided.

Each channel shall have a fail-safe design such that if the loop sensor circuit is broken, the channel shall output a continuous vehicle call.

The loop sensor shall be coupled to the channel input circuitry through isolation transformers. This arrangement shall provide continued operation of the channel even if the loop sensor in the street develops resistive leakage or becomes grounded.

Each amplifier shall have lightning protection as an integral part of its own circuitry. The protection shall enable the detector to withstand the discharge of a 10 microfarad capacitor, charged to $\pm$ 1000 volts. The discharge shall be applied directly across the detector loop input pins with no loop load present. The protection shall also enable the detector to withstand the discharge from a 10 microfarad capacitor, charged to 1 to 2000 volts. The discharge shall be applied directly across either the detector loop input pins or across either side of the loop input pins to each ground. For this test, the detector chassis shall be grounded and the detector loop input pins shall have a 5.0 ohm dummy resistive load connected across them.

The detector circuits shall be so designed that changes due to environmental drift and applied power shall not cause an actuation. The detectors shall be capable of compensating or tracking for an environmental change of up to, but not exceeding, 1 x 10 minus 3% charge in inductance per second. This requirement must be met within two hours after initial application of operation power.

Each detector channel shall have a minimum of three sensitivity settings and these shall be front panel selectable. The most sensitive setting shall respond to an inductance change of 0.02%. The least sensitive setting may be chosen by the manufacturer such that accurate and repeatable occupancy measurements may be obtained. This setting must cause the detector channel to respond to a 0.14-0.4% charge in inductance.

Each detector channel shall have a front panel mounted indicator to provide a visual indication of each vehicle detection. A detector channel shall not cross talk with any other channel within the same module.

The unit shall operate over input voltage from 95VAC TO 135VAC and shall neither originate nor be sensitive to electrical transients in excess of proposed NEMA standards. Varistors shall be provided between power lines to limit transient voltages. Extension and delay timing shall be provided for each channel independently as described below.

Delay Timing. Delay detector output for selected interval of 1 to 30 seconds in 1 second increments. Each new detection restarts the delay timer. All channels to be provided.

Extension Timing. Extends vehicle calls up to 7.75 seconds in .050 second increments. All channels to be provided.

Green Gating. Green signals from the controller shall be wired to the detector to modify timing functions. When green is true, delay timing is disabled. When green is false, extension timing is disabled. The green input signals may be DC or direct line voltage AC.

Smart Indicators. Normal indicator operation is provided when neither timer is active. Delay and extensions are distinguished by 4 hertz and 16 hertz flashing, respectively.

B.11 Controller Operation.
During the installation and testing of the controller, the contractor shall provide, at his own expense, a competent representative to oversee, direct and manage the installation and testing of the controller. In the final stages of installation and testing, the manufacturer's representative shall be available at the job site for consultation until such time as the controller operation is tested and accepted.

C Construction
Pick up the departrment furnished traffic signal controller at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking up the materials.

Program the department furnished traffic signal controller with the existing municipal traffic signal controller parameters. Install the department furnished traffic signal controller in the traffic signal cabinet per manufacturer's specifications.

Notify City of West Allis Public Works Department at (414) 302-8808 at least five working days prior to the removal of the traffic signal cabinet. The removal and installation of the cabinet shall be performed during weekend nighttime hours (10:00 PM – 6:00 AM).

Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signal cabinet can be removed.

The existing City of West Allis electrical service shall be used to power the cabinet. Make all arrangements for disconnecting the existing electrical service from the existing cabinet and re-connecting the existing electrical service to the new traffic signal cabinet.

Remove the existing cabinet from the concrete base. Deliver the cabinet to the City of West Allis Department of Public Works at 6300 W. McGeoch Avenue, West Allis, WI. Contact City of West Allis Public Works Department at (414) 302-8808 at least five working days prior to delivery to make arrangements.

Install the traffic signal cabinet on the existing concrete base. Connect all the field wiring inside the cabinet and test the signal circuits for correct operation after mounting the cabinet on the cabinet foundation. Connect and test the signal circuits outside the controller cabinet as directed by the engineer. Connecting and testing signal circuits shall be considered part of this item of work.

D Measurement

The department will measure Traffic Signal Controller Fully Actuated 4-Phase bid item as each individual traffic signal controller, 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.0060.3003	Traffic Signal Cabinet and Controller Fully Actuated 4-Phase	Each

Payment is full compensation for picking up, installing, and programming the WisDOT furnished signal controller; removing the existing cabinet from the concrete base and delivering it to the City of West Allis; installing the cabinet on the existing concrete base; connecting the existing electrical service; furnishing and installing the conflict monitor together with cabinet; furnishing and installing switches for flashing operation; furnishing and installing fittings as are necessary to assure that the controller will perform said functions.

56. Install Camera Power Cable, Item SPV.0090.3001; Install Cat-5e Cable, Item SPV.0090.3002.

A Description

This special provision describes the transporting and installing of department furnished Camera Power Cable, Cat-5e Cable, and Ethernet repeaters.

B Materials

Pick up the department furnished Camera Power Cable, Cat-5e cable, and Ethernet repeaters at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical field unit at (414) 266-1170 to make arrangements for

picking up the department furnished materials at least five working days prior to material pick-up.

Furnish all other necessary materials (connectors including wire nuts, splice kits, tape, insulating varnish or sealant and ground lug fasteners) ensuring all materials are in compliance with the WisDOT Qualified Electrical Products List."

C Construction

Install the Camera Power Cable (without splices) from the video detection cameras to the cabinet. Provide an extra 6-foot loop of cable in each pull box. Terminate the ends of the cable and connect the cable to the video detection cameras per the adaptable traffic signal video detection camera manufacturer's specifications.

Install the Cat-5e Cable from the video detection cameras to the cabinet. Provide an extra 6-foot loop of cable in each pull box. Terminate the ends of the cable and connect the cable to the video detection cameras per the adaptable traffic signal video detection camera manufacturer's specifications. Cat-5e Cable runs longer than 300-feet require an Ethernet repeater. Provide an extra 12-foot loop of cable at locations provided by the engineer and install the department furnished Ethernet repeaters per the manufacturer's specifications. All open field ends shall be taped and covered with a sealant in accordance to standard spec 655.3.1.

Mark the cabinet end of the Camera Power Cable and Cat-5e Cable appropriately to indicate the equipment label (i.e. VID1, VID2, etc.) in the traffic signal control cabinet. Neatly coil a minimum of 15-feet of extra cable in the traffic signal cabinet for connection to the traffic signal cabinet equipment by others.

Do not install Camera Power Cable or Cat-5e Cable at intersections where a supplementary cabinet concrete base is being constructed until the supplementary cabinet is installed on the concrete base by others.

Notify department's Electrical Field Unit at (414) 266-1170 upon installation completion at each intersection.

D Measurement

Camera Power Cable and Cat-5e cable will be measured by the linear foot of cable, complete in place.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.3001	Install Camera Power Cable	LF
SPV.0090.3002	Install Cat-5e Cable	LF

Payment is full compensation for transporting and installing the Video Camera Power Cable, Cat-5e Cable, and Ethernet Repeaters; for making all connections; for furnishing and installing all connectors, including wire nuts, splice kits, tape, insulating varnish or sealant and ground lug fasteners; and for testing.

57. Pavement Cleanup, Item SPV.0105.0001.

A Description

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site.

B Materials

B.1 Pavement Cleanup

Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Vacuum equipment shall have a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified herein or approved by the engineer.

C Construction

C.1 Pavement Cleanup

Keep all pavements, curb lanes and gutters both closed and open to public traffic within the job-site boundaries free of dust and debris generated from any activity under the contract. Keep all pavements, curb lanes and gutters adjacent to the project free of dust and debris that are affected by land disturbing, dust generating activities, as defined in the contractor's dust control implementation plan.

Provide surveillance to identify if material is being tracked from the jobsite. Clean up spillage and material tracked from the project within an hour of occurrence or as directed by the engineer. Perform cleanup operations in a safe manner.

Provide routine sweeping of all pavements, curb lanes and gutters on local street active haul routes a minimum of once a day as defined in the Dust Control Implementation Plan (DCIP) or as directed by the engineer. Streets to be included in routine sweeping are: USH 18 (W. Bluemound Road/E. Moreland Boulevard), STH 59 (W. Greenfield Avenue), STH 100 (S. 108th Street/N. Mayfair Road), STH 181 (S. 84th Street), STH 190 (Capitol Drive), CTH O (Moorland Road), CTH Y (Barker Road), W. Watertown Plank Road, and National Avenue corridors.

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to deal with dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Respond to emergency sweeping requests within four hours.

If the vacuum-type sweeper breaks down, a mechanical broom sweeper may be substituted for no more than 24 hours total elapsed time. Repair the vacuum-type sweeper within that 24 hours or substitute a vacuum-type sweeper.

Skid steers with mechanical power brooms may only be utilized on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer.

D Measurement
The department will measure Pavement Cleanup as a single lump sum for work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0001	Pavement Cleanup	LS

Payment schedule for this item will be in accordance to the percentage of contract value earned.

Payment is full compensation for surveillance, mobilization, sweeping and disposing of materials.

SEF Rev. 12_1008

58. Survey Project 1060-33-97, Item SPV.0105.0002.

A Description
Perform work according to standard spec 650.

This special provision describes modifying standard specs 105.6 and 650 to define the requirements for construction staking for this contract.

Replace standard spec 105.6.2 with the following:

The department will not perform any construction staking for this contract. Obtain engineer's approval prior to performing all survey required to lay out and construct the work under this contract.

The survey includes establishing horizontal and vertical position for all aspects of construction including but not limited to base, sign structures, curb and gutter, electrical installations, ITS, traffic control items, etc.

The department may choose to perform quality assurance surveys during the project. These quality assurance surveys do not relieve the responsibility for performing all survey work required to lay out and construct the work under this contract.

Delete standard spec 650.1.

B (Vacant)

C Construction
Conform to standard spec 650.3 and as modified in this special provision.

Replace standard spec 650.3.3.1 with the following:

Under the Survey Project bid item, global positioning system (GPS) machine guidance for conventional subgrade staking on all or part of the work may be substituted. The engineer may require reverting to conventional subgrade staking methods for all or part of the work at any point during construction if, in the engineer's opinion, the GPS machine guidance is producing unacceptable results.

Replace standard spec 650.3.3.3.4.1 with the following:

The department will provide the contractor staking packet as described in the Construction and Materials Manual (CMM) 7.10. At any time after the contract is awarded, the available survey and design information may be requested. The department will provide that information within 5 business days of receiving the contractor's request. The department incurs no additional liability beyond that specified in standard spec 105.6 or standard spec 650 by having provided this additional information.

Add the following to standard spec 650.3.3.3.6.2:

Record all subgrade elevation checks and submit a hard copy to the engineer at the completion of the project.

D Measurement
Replace standard spec 650.4 with the following:

The department will measure Survey Project 1060-33-97 as a separate single lump sum unit of work, acceptably completed.

E Payment
Replace standard spec 650.5 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0002	Survey Project 1060-33-97	LS

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract. No additional payments will be made for restaking due to construction disturbance and knock-outs.

SEF Rev. 13_0925

59. Removing Overhead Sign Support S-40-416, Item SPV.0105.0003.

A Description
Work under this item shall consist of removing the overhead sign structure and footing. The sign on the structure is paid for under a separate pay item. See ITS plans for location.

B (Vacant)

C Construction
Remove overhead sign supports and concrete footings, backfill the resulting holes, and dispose of all materials outside of the right-of-way in accordance to standard spec 204.3 and standard spec 638.3. Concrete footing shall be removed to 2' below the existing ground. The reinforcement shall be cut off flush with the top of the concrete. The footing shall be then covered with topsoil and seeded.

D Measurement
The department will measure Removing Overhead Sign Support, as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0003	Removing Overhead Sign Support S-40-416	LS

Payment in full compensation for disassembling, removing, including concrete footings, backfilling, and disposal of all materials.

638-SER1 (20040405)

60. Remove Video Detection Equipment STH 100 and W. Lapham Street, Item SPV.0105.3010; STH 100 and W. Theodore Trecker Way, Item SPV.0105.3011; IH 94 EB Off-Ramp and STH 100, Item SPV.0105.3012; IH 94 WB Ramps and STH 100, Item SPV.0105.3013; USH 18 and CTH JJ, Item SPV.0105.3014; USH 18 and CTH Y, Item SPV.0105.3015; USH 18 and Janacek Road, Item SPV.0105.3016; USH 18 and Brookfield Road, Item SPV.0105.3017; USH 18 and Woelfel Road, Item SPV.0105.3018; USH 18 and Calhoun Road, Item SPV.0105.3019; USH 18 and Thomas Lane, Item SPV.0105.3020; USH 18 and Executive

Drive, Item SPV.0105.3021; USH 18 and Main Street, Item SPV.0105.3022; USH 18 and CTH O, Item SPV.0105.3023; STH 59 and S. 92nd Street, Item SPV.0105.3024; STH 59 and STH 181, Item SPV.0105.3025; IH 894/USH 45 EB Ramps and W. National Avenue, Item SPV.0105.3028; IH 894/USH 45 WB Ramps and W. National Avenue, Item SPV.0105.3029; STH 181 and State Fair Gate 4 Driveway, Item SPV.0105.3030; STH 181 and W. Schlinger Avenue / State Fair Gate 5 Driveway, Item SPV.0105.3031; IH 94 EB Ramps and STH 181, Item SPV.0105.3032; IH 94 WB Ramps and STH 181, Item SPV.0105.3033; STH 100 and Cleveland Avenue, Item SPV.0105.3040.

A Description

This special provision describes removing existing traffic signal video detection equipment at the department owned intersections in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

The department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Department Owned Traffic Signals

The department will provide at least a five working day notification when the adaptable traffic signal equipment is ready for activation and the video detection equipment can be removed. Arrange for removing the video detection equipment with the department the same day as the adaptable traffic signal turn-on.

The traffic signal is to remain operational throughout the duration of the work.

Remove all video detection cameras per plan from their poles. Remove the video detection camera wiring/cabling from each signal standard, arm or pole. Remove the video detection processor and other video detection equipment from the traffic signal cabinet. Dispose of the video detection camera wiring/cabling off the state right-of-way. Deliver the materials to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, WI. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

D Measurement

The department will measure Remove Video Detection Equipment [Location] as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3010	Remove Video Detection Equipment STH 100 and W. Lapham Street	LS
SPV.0105.3011	Remove Video Detection Equipment STH 100 and W. Theodore Trecker Way	LS
SPV.0105.3012	Remove Video Detection Equipment IH 94 EB Off-Ramp and STH 100	LS
SPV.0105.3013	Video Detection Equipment IH 94 WB Ramps and STH 100	LS
SPV.0105.3014	Remove Video Detection Equipment USH 18 and CTH JJ	LS
SPV.0105.3015	Remove Video Detection Equipment USH 18 and CTH Y	LS
SPV.0105.3016	Remove Video Detection Equipment USH 18 and Janacek Road	LS
SPV.0105.3017	Remove Video Detection Equipment USH 18 and Brookfield Road	LS
SPV.0105.3018	Remove Video Detection Equipment USH 18 and Woelfel Road	LS
SPV.0105.3019	Remove Video Detection Equipment USH 18 and Calhoun Road	LS
SPV.0105.3020	Remove Video Detection Equipment USH 18 and Thomas Lane	LS
SPV.0105.3021	Remove Video Detection Equipment USH 18 and Executive Drive	LS
SPV.0105.3022	Remove Video Detection Equipment USH 18 and Main Street	LS
SPV.0105.3023	Remove Video Detection Equipment USH 18 and CTH O	LS
SPV.0105.3024	Remove Video Detection Equipment STH 59 and S. 92nd Street	LS
SPV.0105.3025	Remove Video Detection Equipment STH 59 and STH 181	LS
SPV.0105.3028	Remove Video Detection Equipment IH 894/USH45 EB Ramps and W. National Avenue	LS
SPV.0105.3029	Remove Video Detection Equipment IH 894/USH 45 WB Ramps and W. National Avenue	LS
SPV.0105.3030	Remove Video Detection Equipment STH 181 and State Fair Gate 4 Driveway	LS
SPV.0105.3031	Remove Video Detection Equipment STH 181 and W. Schlinger Avenue/State Fair Gate 5 Driveway	LS
SPV.0105.3032	Remove Video Detection Equipment IH 94 EB Ramps and STH 181	LS
SPV.0105.3033	Remove Video Detection Equipment IH 94 WB Ramps and STH 181	LS
SPV.0105.3040	Remove Video Detection Equipment STH 100 and Cleveland Avenue	LS

Payment is full compensation for removing video detection equipment; for scrapping of some materials; for disposing of scrap material; and for delivering the requested materials to the West Allis Electrical Service Facility.

61. Remove Video Detection Equipment W. National Avenue and W. Cleveland Avenue, Item SPV.0105.3026; W. National Avenue and S. 102nd Street, Item SPV.0105.3027, W. National Avenue and W. Lincoln Avenue, Item SPV.0105.3038; W. National Avenue and S. 84th Street, Item SPV.0105.3039.

A Description

This special provision describes removing existing traffic signal video detection equipment in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

The City of West Allis assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Replace any equipment not identified as damaged or not working, prior to removal at no cost to the department or City of West Allis.

City of West Allis Owned Traffic Signals

The department will provide at least a five working day notification when the adaptable traffic signal equipment is ready for activation and the video detection equipment can be removed. Arrange for removing the video detection equipment with the department and appropriate municipality the same day as the adaptable traffic signal turn-on.

Notify City of West Allis Public Works Department at (414) 302-8808 at least five working days prior to the removal of the video detection equipment. Complete the removal work as soon as possible.

The traffic signal is to remain operational throughout the duration of the work.

Remove all video detection cameras per plan from their poles. Remove the video detection camera wiring/cabling from each signal standard, arm or pole. Remove the video detection processor and other video detection equipment from the traffic signal cabinet. Dispose of the video detection camera wiring/cabling off the right-of-way. Deliver the materials to the City of West Allis Department of Public Works at 6300 W. McGeoch Avenue, West Allis, WI. Contact City of West Allis Public Works Department at (414) 302-8808 at least five working days prior to delivery to make arrangements.

D Measurement
The department will measure Remove Video Detection Equipment [Location] as a single lump sum unit of work for each intersection, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3026	Remove Video Detection Equipment W. National Avenue and W. Cleveland Avenue	LS
SPV.0105.3027	Remove Video Detection Equipment W. National Avenue and S. 102nd Street	LS
SPV.0105.3038	Remove Video Detection Equipment W. National Avenue and W. Lincoln Avenue	LS
SPV.0105.3039	Remove Video Detection Equipment W. National Avenue and S. 84th Street	LS

Payment is full compensation for removing video detection equipment; for scrapping of some materials; for disposing of scrap material; and for delivering the requested materials to the City of West Allis Department of Public Works.

62. Remove Video Detection Equipment W. Watertown Plank Road and Swan Boulevard/Innovation Drive, Item SPV.0105.3034; W. Watertown Plank Road and Discovery Parkway, Item SPV.0105.3035; W. Watertown Plank Road and N. 92nd Street, Item SPV.0105.3036; W. Watertown Plank Road and N. 87th Street, Item SPV.0105.3037.

A Description
This special provision describes removing existing traffic signal video detection equipment in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction
The City of Wauwatosa assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Replace any equipment not identified as damaged or not working, prior to removal at no cost to the department or the City of Wauwatosa.

City of Wauwatosa Owned Traffic Signals
The department will provide at least a five working day notification when the adaptable traffic signal equipment is ready for activation and the video detection equipment can be removed. Arrange for removing the video detection equipment with the department and appropriate municipality the same day as the adaptable traffic signal turn-on.

The traffic signal is to remain operational throughout the duration of the work.

Remove all video detection cameras per plan from their poles. Remove the video detection camera wiring/cabling from each signal standard, arm or pole. Remove the video detection processor and other video detection equipment from the traffic signal cabinet. Dispose of the video detection camera wiring/cabling off the right-of-way. Deliver the materials to the City of Wauwatosa Electrical Yard at 11100 W. Walnut Road, Wauwatosa, WI. Contact the City of Wauwatosa Public Works Department at (414) 471-8422 at least five working days prior to delivery to make arrangements.

D Measurement

The department will measure Remove Video Detection Equipment [Location] as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3034	Remove Video Detection Equipment W. Watertown Plank Road and Swan Boulevard/Innovation Drive	LS
SPV.0105.3035	Remove Video Detection Equipment W. Watertown Plank Road and Discovery Parkway	LS
SPV.0105.3036	Remove Video Detection Equipment W. Watertown Plank Road and N. 92nd Street	LS
SPV.0105.3037	Remove Video Detection Equipment W. Watertown Plank Road and N. 87th Street	LS

Payment is full compensation for removing video detection equipment; for scrapping of some materials; for disposing of scrap material; and for delivering the requested materials to the City of Wauwatosa Electrical Yard.

63. Remove Traffic Signals USH 18 and Jennifer Drive, Item SPV.0105.3045.

A Description

This special provision describes removing existing traffic signals at the department owned intersections of USH 18 and Jennifer Drive in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

The department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Department Owned Traffic Signals
Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable off the state right-of-way. Deliver the remaining materials to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, WI. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

Department forces will remove the signal cabinet from the footing. The signal cabinet and associated signal cabinet equipment will be removed from the site by department forces and will remain the property of the department.

D Measurement
The department will measure Remove Traffic Signals (Location) as a single lump sum unit of work for each intersection, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3045	Remove Traffic Signals USH 18 and Jennifer Drive	LS

Payment is full compensation for removing and disassembling traffic signals; for scrapping of some materials; for disposing of scrap material; and for delivering the requested materials to the West Allis Electrical Service Facility.

64. Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and CTH NN, Item SPV.0105.3075; STH 100 and W. Cleveland Avenue, Item SPV.0105.3076; STH 100 and W. National Avenue, Item SPV.0105.3077; STH 100 and W. Lincoln Avenue, Item SPV.0105.3078; STH 100 and W. Lapham Street, Item SPV.0105.3079; STH and W. Theodore Trecker Way, Item SPV.0105.3080; IH 94 EB

Off-Ramp and STH 100, Item SPV.0105.3081; IH 94 WB Ramps and STH 100, Item SPV.0105.3082; USH 18 and CTH JJ, Item SPV.0105.3083; USH 18 and CTH Y, Item SPV.0105.3084; USH 18 and Jennifer Drive, Item SPV.0105.3085; USH 18 and Janacek Road, Item SPV.0105.3086; USH 18 and Brookfield Road, Item SPV.0105.3087; USH 18 and Woelfel Road, Item SPV.0105.3088; USH 18 and Calhoun Road, Item SPV.0105.3089; USH 18 and Thomas Lane, Item SPV.0105.3090; USH 18 and Executive Drive, Item SPV.0105.3091; USH 18 and Main Street, Item SPV.0105.3092; USH 18 and CTH O, Item SPV.0105.3093; Pilgrim Parkway and Watertown Plank Road, Item SPV.0105.3094; CTH Y and Davidson Road, Item SPV.0105.3095; CTH Y and Water Tower Boulevard, Item SPV.0105.3096; CTH Y and Swenson Drive, Item SPV.0105.3097; IH 94 WB Off-Ramp and CTH Y, Item SPV.0105.3098; STH 59 and CTH Y, Item SPV.0105.3099; STH 59 and Brookfield Road, Item SPV.0105.3100; STH 59 and Calhoun Road, Item SPV.0105.3101; STH 59 and S. 92nd Street, Item SPV.0105.3102; STH 59 and STH 181, Item SPV.0105.3103; W. National Avenue and W. Cleveland Avenue, Item SPV.0105.3104; W. National Avenue and S. 102nd Street, Item SPV.0105.3105; IH 894/USH 45 EB Ramps and W. National Avenue, Item SPV.0105.3106; IH 894/USH 45 WB Ramps and W. National Avenue, Item SPV.0105.3107; W. National Avenue and W. Lincoln Avenue, Item SPV.0105.3108; W. National Avenue and S. 92nd Street, Item SPV.0105.3109; W. National Avenue and W. Becher Street and S. 90th Street, Item SPV.0105.3110; W. National Avenue and S. 84th Street, Item SPV.0105.3111; W. Becher Street and S. 92nd Street, Item SPV.0105.3112; W. Lincoln Avenue and S. 92nd Street, Item SPV.0105.3113; W. Lincoln Avenue and S. 90th Street, Item SPV.0105.3114; S. 84th Street and W. Lapham Street, Item SPV.0105.3115; STH 181 and State Fair Gate 4 Driveway, SPV.0105.3116; STH 181 and W. Schlinger Avenue / State Fair Gate 5 Driveway, Item SPV.0105.3117; IH 94 EB Ramps and STH 181, Item SPV.0105.3118; IH 94 WB Ramps and STH 181, Item SPV.0105.3119; W. Watertown Plank Road and Swan Boulevard / Innovation Drive, Item SPV.0105.3120; W. Watertown Plank Road and Discovery Parkway, Item SPV.0105.3121; W. Watertown Plank Road and N. 92nd Street, Item SPV.0105.3122; W. Watertown Plank Road and N. 87th Street, Item SPV.0105.3123.

A Description
This special provision describes the transporting and installing of department furnished Adaptable Traffic Signal Cameras and mounting hardware.

B Materials
Pick up the department furnished Adaptable Traffic Signal Cameras and mounting hardware at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical field unit at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

C Construction
Notify the department's Electrical field unit at (414) 266-1170 and traffic signal owner if different from the department at least five working days prior to the installation of the cameras.

Install the pole/arm mounting bracket, extension arm (if required) and cameras as shown on the plans (the final determination of location will be made by the department's electrical personnel to ensure best line of sight) per manufacturer recommendations.

Assist the department and Vendor with aiming and programming the cameras during the adaptable traffic signal turn-on. The department will schedule the adaptable traffic signal turn-on and provide notification a minimum of five working days prior to turn-on.

D Measurement
The department will measure Transporting and Installing State Furnished Adaptable Traffic Signal Cameras [Location] as a single lump sum unit of work for each intersection, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3075	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and CTH NN	LS
SPV.0105.3076	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and W. Cleveland Avenue	LS
SPV.0105.3077	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and W. National Avenue	LS
SPV.0105.3078	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and W. Lincoln Avenue	LS
SPV.0105.3079	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and W. Lapham Street	LS
SPV.0105.3080	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 100 and W. Theodore Trecker Way	LS

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3081	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras IH 94 EB Off-Ramp and STH 100	LS
SPV.0105.3082	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras IH 94 WB Ramps and STH 100	LS
SPV.0105.3083	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and CTH JJ	LS
SPV.0105.3084	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and CTH Y	LS
SPV.0105.3085	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Jennifer Drive	LS
SPV.0105.3086	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Janacek Road	LS
SPV.0105.3087	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Brookfield Road	LS
SPV.0105.3088	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Woelfel Road	LS
SPV.0105.3089	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Calhoun Road	LS
SPV.0105.3090	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Thomas Lane	LS
SPV.0105.3091	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Executive Drive	LS
SPV.0105.3092	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and Main Street	LS
SPV.0105.3093	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras USH 18 and CTH O	LS
SPV.0105.3094	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras Pilgrim Parkway and Watertown Plank Road	LS
SPV.0105.3095	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras CTH Y and Davidson Road	LS
SPV.0105.3096	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras CTH Y and Water Tower Boulevard	LS
SPV.0105.3097	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras CTH Y and Swenson Drive	LS
SPV.0105.3098	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras IH 94 WB Off-Ramp and CTH Y	LS
SPV.0105.3099	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and CTH Y	LS
SPV.0105.3100	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and Brookfield Road	LS
SPV.0105.3101	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and Calhoun Road	LS

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3102	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and S. 92nd Street	LS
SPV.0105.3103	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 59 and STH 181	LS
SPV.0105.3104	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. National Avenue and W. Cleveland Avenue	LS
SPV.0105.3105	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. National Avenue and S. 102nd Street	LS
SPV.0105.3106	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras IH 894/USH 45 EB Ramps and W. National Avenue	LS
SPV.0105.3107	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras IH 894/USH 45 WB Ramps and W. National Avenue	LS
SPV.0105.3108	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. National Avenue and W. Lincoln Avenue	LS
SPV.0105.3109	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. National Avenue and S. 92nd Street	LS
SPV.0105.3110	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. National Avenue and W. Becher Street and S. 90th Street	LS
SPV.0105.3111	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. National Avenue and S. 84th Street	LS
SPV.0105.3112	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. Becher Avenue and S. 92nd Street	LS
SPV.0105.3113	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. Lincoln Avenue and S. 92nd Street	LS
SPV.0105.3114	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. Lincoln Avenue and S. 90th Street	LS
SPV.0105.3115	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras S. 84th Street and W. Lapham Street	LS
SPV.0105.3116	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 181 and State Fair Gate 4 Driveway	LS

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3117	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras STH 181 and W. Schlinger Avenue / State Fair Gate 5 Driveway	LS
SPV.0105.3118	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras IH 94 EB Ramps and STH 181	LS
SPV.0105.3119	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras IH 94 WB Ramps and STH 181	LS
SPV.0105.3120	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. Watertown Plank Road and Swan Boulevard / Innovation Drive	LS
SPV.0105.3121	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. Watertown Plank Road and Discovery Parkway	LS
SPV.0105.3122	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. Watertown Plank Road and N. 92nd Street	LS
SPV.0105.3123	Transporting and Installing State Furnished Adaptable Traffic Signal Cameras W. Watertown Plank Road and N. 87th Street	LS

Payment is full compensation for transporting and installing the State Furnished Adaptable Traffic Signal System cameras and mounting hardware; for assisting the vendor and department with aiming and programming the cameras.

65. Install Fiber Optic Communications in Cabinet STH 100 and CTH NN, Item SPV.0105.3130; STH 100 and W. National Avenue, Item SPV.0105.3131; STH 100 and W. Cleveland Avenue, Item SPV.0105.3132; STH 100 and W. Lincoln Avenue, Item SPV.0105.3133; Pilgrim Parkway and Watertown Plank Road, Item SPV.0105.3134; IH 94 WB Off-Ramp and CTH Y, Item SPV.0105.3135; STH 59 and CTH Y, Item SPV.0105.3136; STH 59 and Brookfield Road, Item SPV.0105.3137; STH 59 and Calhoun Road, Item SPV.0105.3138.

A Description

This special provision describes installing fiber optic communications equipment in traffic signal cabinets.

B Materials

The department will furnish pre-terminated fiber optic patch panels and Ethernet switches. The patch panels will have pre-terminated fiber optic cable pigtails. Provide two each 1-meter lengths of ST-ST single mode fiber jumper (2 fibers per jumper) from the patch panel to the Ethernet switch. Provide a 1-meter length of Cat-5e cable from the Ethernet switch to the controller. Provide a 1-meter length of Cat-5e cable from the Ethernet switch to the Interface Panel. Cat-5e patch cords shall have factory pre-terminated RJ45 / 8P8C

connectors on both ends per TIA/EIA T568B. Provide all patch panel, Ethernet switch, and Interface Panel attachment hardware.

Provide a 14 AWG XLP insulated, stranded, copper, 600 volt AC locate wire through the conduit run from the communication vault to the traffic signal cabinet. Connect the locate wire by using a silicone filled wire nut at each pull box, vault or other access point. Alternatively, use a single wire through the access points, leaving a six (6) foot coil in each pull box, vault or other access point for splicing. All material under this item shall meet the requirements of standard spec 655 of the Standard Specifications.

C Construction

Pick up all the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical field unit at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

Install the patch panel and Ethernet switch on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. With approval by the engineer, the Ethernet switch may be placed on a shelf near the patch panel. Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in standard spec 678.3.1. Fiber optic cable ends shall be covered securely to protect open ends during installation in raceways. Leave the remainder of the fiber optic cable coiled in the communication vault.

Install the fiber jumpers and Cat-5e cable and provide a communications link from the communication vault to the controller for WisDOT owned traffic signals. Do not connect the Ethernet switch to the municipal owned traffic signal controllers, but provide the cables for a possible future connection. Install the Cat5-e cable from the Interface Panel to the Ethernet switch.

Connect the locate wire by using a wire nut at each access point. Alternatively, use a single wire through the access points.

D Measurement

The department will measure Install Fiber Optic Communications in Cabinet (Location) as a single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3130	Install Fiber Optic Communications in Cabinet STH 100 and CTH NN	LS
SPV.0105.3131	Install Fiber Optic Communications in Cabinet STH 100 and W. National Avenue	LS

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3132	Install Fiber Optic Communications in Cabinet STH 100 and W. Cleveland Avenue	LS
SPV.0105.3133	Install Fiber Optic Communications in Cabinet STH 100 and W. Lincoln Avenue	LS
SPV.0105.3134	Install Fiber Optic Communications in Cabinet Pilgrim Parkway and Watertown Plank Road	LS
SPV.0105.3135	Install Fiber Optic Communications in Cabinet ; IH 94 WB Off-Ramp and CTH Y	LS
SPV.0105.3136	Install Fiber Optic Communications in Cabinet STH 59 and CTH Y	LS
SPV.0105.3137	Install Fiber Optic Communications in Cabinet STH 59 and Brookfield Road	LS
SPV.0105.3138	Install Fiber Optic Communications in Cabinet STH 59 and Calhoun Road	LS

Payment is full compensation for transporting and installing pre-terminated patch panels, Ethernet switches, and fiber optic cable in conduit; furnishing and installing attachment hardware, fiber jumpers, Cat-5e cable, and locate wire.

66. Install State Furnished Traffic Signal Cabinet USH 18 and Jennifer Drive, Item SPV.0105.3145; IH 94 WB Off-Ramp and CTH Y, Item SPV.0105.3146.

A Description

This special provision describes the installing of the department furnished traffic signal cabinet for traffic signals.

B Materials

Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet. The department will provide notification at the preconstruction meeting of the Traffic Signal Cabinet vendor and provide the vendor's contact information.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking up the materials.

Provide all other needed materials in conformance with standard specs 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

Append standard spec 651.3.3 (6) with the following:

Operate the completed traffic signal installation for 30 days consecutively, using the specified signal sequence(s) and all special functions, such as preemption as the plans show or as specified by the engineer.

C Construction
Perform work in accordance to standard specs 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. The departments' Region Electrical personnel will perform the inspection.

Coordinate directly with the department's Traffic Signal Cabinet vendor to schedule the cabinet acceptance testing. Notify the department's Electrical Field Unit at (414) 266-1170 and participate in the acceptance testing. The department has the final determination of the cabinet acceptance testing date and time. The acceptance testing procedures will be provided by the department. The department shall not be responsible for project delays and costs due to the delays of delivery by the vendor or by the failure of the Traffic Signal Cabinet to pass acceptance testing.

D Measurement
The department will measure Install State Furnished Traffic Signal Cabinet [Location] as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3145	Install State Furnished Traffic Signal Cabinet USH 18 and Jennifer Drive	LS
SPV.0105.3146	Install State Furnished Traffic Signal Cabinet IH 94 WB Off-Ramp and CTH Y	LS

Payment is full compensation for installing and testing the Traffic Signal Cabinet; for furnishing and installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit; and for clean-up and waste disposal.

67. Remove Loop Detector Wire STH 100 and CTH NN, Item SPV.0105.3160, STH 100 and W. National Avenue, Item SPV.0105.3161; STH 100 and Cleveland Avenue, Item SPV.0105.3162; STH 100 and W. Lincoln Avenue, Item SPV.0105.3163.

A Description
This special provision describes removing loop detector wire at the state owned intersections of STH 100 and CTH NN, STH 100 & W. National Avenue, STH 100 and Cleveland Avenue, and STH 100 and W. Lincoln Avenue. Removal shall be in accordance to standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C Construction

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the loop detector wire. WisDOT forces shall disconnect the lead-in cable from the cabinet equipment, if required.

Remove and dispose of loop wire for loops that are to remain in place. Loop wire shall become property of the contractor and shall be disposed off of the right-of-way.

D Measurement

The department will measure Remove Loop Detector Wire as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.3160	Remove Loop Detector Wire STH 100 and CTH NN	LS
SPV.0105.3161	Remove Loop Detector Wire STH 100 and W. National Avenue	LS
SPV.0105.3162	Remove Loop Detector Wire STH 100 and Cleveland Avenue	LS
SPV.0105.3163	Remove Loop Detector Wire STH 100 and W. Lincoln Avenue	LS

Payment is full compensation for removing loop detector wire; for scrapping of some materials; for disposing of scrap material.

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 PROVISION 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2014 edition of the standard specifications:

101.3 Definitions

Replace the definition of semi-final estimate with the following effective with the December 2013 letting:

Semi-final estimate An estimate indicating the engineer has measured and reported all contract quantities and materials requirements.

105.11.1 Partial Acceptance

Replace paragraph two with the following effective with the December 2013 letting:

(2) Partial acceptance will relieve the contractor of maintenance responsibility for the designated portion of the work. By relieving the contractor of maintenance, the department does not relieve the contractor of responsibility for defective work or damages caused by the contractor's operations. Do not construe partial acceptance to be conditional final acceptance or final acceptance of any part of the project, or a waiver of any legal rights specified under 107.16.

105.11.2 Final Acceptance

Retitle and replace the entire text with the following effective with the December 2013 letting:

105.11.2 Project Acceptance

105.11.2.1 Inspection

105.11.2.1.1 General

(1) Notify the engineer when the project is substantially complete as defined in 105.11.2.1.3. As soon as it is practical, the engineer will inspect the work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete.
3. Complete.

105.11.2.1.2 Unacceptable or Not Complete

(1) The engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The engineer will assess contract time until the work is corrected or completed.

(2) Proceed as specified in 105.11.2.1.1 until the engineer determines that the work is complete.

105.11.2.1.3 Substantially Complete

(1) The project is substantially complete and the engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch-list. As applicable, the following must have occurred:

1. All lanes of traffic are open on a finished surface.
2. All signage and traffic control devices are in place and operating.
3. All drainage, erosion control, excavation, and embankments are completed.
4. All safety appurtenances are completed.

(2) The engineer will provide a written punch-list enumerating work the contractor must perform and documents the contractor must submit before the the engineer will categorize the work as complete.

1. Punch-list work includes uncompleted cleanup work required under 104.9 and minor corrective work. Immediately correct or complete the punch-list work. The engineer may restart contract time if the contractor does not complete the punch-list work within 5 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 5-day requirement.
2. Punch-list documents include whatever contract required documentation is missing. The engineer may restart contract time if the contractor does not submit the punch-list documents within 15 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 15-day requirement.

(3) Proceed as specified in 105.11.2.1.1 until the work is complete.

105.11.2.1.4 Complete

(1) The project is complete when the contractor has completed all contract bid items, change order work, and punch-list work including the submission of all missing documentation.

105.11.2.2 Conditional Final Acceptance

(1) When the engineer determines that the project is complete, the engineer will give the contractor written notice of conditional final acceptance relieving the contractor of maintenance responsibility for the completed work.

105.11.2.3 Final Acceptance

(1) The engineer will grant final acceptance of the project after determining that all contract is work complete; all contract, materials, and payroll records are reviewed and approved; and the semi-final estimate quantities are final under 109.7.

(2) Failure to discover defective work or materials before final acceptance does not prevent the department from rejecting that work or those materials later. The department may revoke final acceptance if the department discovers defective work or materials after it has accepted the work.

105.13.3 Submission of Claim

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than final acceptance of the project as specified in 105.11.2.3. If the contractor does not submit the claim before final acceptance of the project, the department will deny the claim.

107.17.3 Railroad Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the engineer determines that the work is complete as specified in 105.11.2.1.4.

107.26 Standard Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) Maintain the following types and limits of commercial insurance in force until the engineer determines that the work is complete as specified in 105.11.2.1.4.

TABLE 107-1 REQUIRED INSURANCE AND MINIMUM COVERAGES

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements with primary insurance coverage or with excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees shall be named as an additional insured under the general liability and automobile liability insurance.

108.14 Terminating the Contractor's Responsibility

Replace paragraph one with the following effective with the December 2013 letting:

(1) The contractor's responsibilities are terminated, except as set forth in the contract bond and specified in 107.16, when the department grants final acceptance as specified in 105.11.2.3.

109.2 Scope of Payment

Replace paragraph two with the following effective with the December 2013 letting:

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the applicable bid items including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
    - The nature of the work.
    - The action of the elements.
    - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.6.1 General

Replace paragraphs three and four with the following effective with the December 2013 letting:

(3) The department's payment of an estimate before conditional final acceptance of the work does not constitute the department's acceptance of the work, and does not relieve the contractor of responsibility for:

1. Protecting, repairing, correcting, or renewing the work.
2. Replacing all defects in the construction or in the materials used in the construction of the work under the contract, or responsibility for damage attributable to these defects.

(4) The contractor is responsible for all defects or damage that the engineer may discover on or before the engineer's conditional final acceptance of the work. The engineer is the sole judge of these defects or damage, and the contractor is liable to the department for not correcting all defects or damage.

109.7 Acceptance and Final Payment

Replace paragraphs one and two with the following effective with the December 2013 letting:

(1) After the engineer grants conditional final acceptance of the work as specified in 105.11.2.2 and reviews required document submittals and materials test reports, the engineer will issue the semi-final estimate.

(2) Within 30 calendar days after receiving the semi-final estimate, submit to the engineer a written statement of agreement or disagreement with the semi-final estimate. For an acceptable statement of disagreement, submit an item-by-item list with reasons for each disagreement. If the contractor does not submit this written statement within those 30 days, the engineer will process the final estimate for payment. The engineer and the contractor can mutually agree to extend this 30-day submission requirement.

450.3.3 Maintaining the Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the prepared foundation, tack coat, base, paved traffic lanes, shoulders, and seal coat. Correct all rich or bleeding areas, breaks, raveled spots, or other nonconforming areas in the paved surface.

455.3.2.5 Maintaining Tack Coat

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the existing surface and the tack coat. Correct areas with excess or deficient tack material and any breaks, raveled spots, or other areas where bond might be affected.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the January 2014 letting:

(1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for E-3 mixes.

[2] 15.5 for E-3 mixes.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the January 2014 letting:

(1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to the department's test method number 1559 as described in CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to the department's test method number 1559.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	___
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	50	50	45	45	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	___
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 - 78[4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)							
no antistripping additive	0.70	0.70	0.70	0.70	0.70	0.70	0.70
with antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Draindown at Production Temperature (%)	___	___	___	___	___	___	0.30

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

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

[3] For 9.5mm and 12.5 mm nominal maximum size mixtures, the specified VFB range is 70 - 76%.

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

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

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the January 2014 letting:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+/- 1.3	+/- 1.0
VMA in percent[1]	- 0.5	- 0.2

[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in Table 460-1.

(2) Warning bands are defined as the area between the JMF limits and the warning limits.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace the entire text with the following effective with the January 2014 letting:

(1) The contractor may request adjustment of the JMF according to the department's test method number 1559. Have an HTCP HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have an HMA technician certified at level III review the proposed adjustment and, if acceptable, issue a revised JMF.

(2) The department will not allow adjustments that do the following:

- Exceed specified JMF tolerance limits.
- Reduce the JMF asphalt content unless the production VMA running average meets or exceeds the minimum VMA design requirement defined in table 460-1for the mixture produced.

(3) Have an HMA technician certified at level II make related process adjustments. If mixture redesign is necessary, submit a new JMF, subject to the same specification requirements as the original JMF.

520.3.8 Protection After Laying

Delete the entire subsection.

614.2.1 General

Replace paragraphs five and six with the following effective with the December 2013 letting:

(5) Furnish zinc coated wire rope and fitting conforming to the plans and galvanized according to ASTM A741.

(6) Before installation store galvanized components above ground level and away from surface run off. The department may reject material if the zinc coating is physically damaged or oxidized.

(7) Provide manufacturer's drawings, and installation and maintenance instructions when providing proprietary systems.

614.2.3 Steel Rail and Fittings

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish galvanized steel rail conforming to AASHTO M180 class A, type II beam using the single-spot test coating requirements. Furnish plates, anchor plates, post mounting brackets, and other structural steel components conforming to 506.2.2.1 and hot-dip galvanized according to ASTM A123.

614.2.7 Crash Cushions

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish permanent and temporary crash cushions from the department's approved products list. Use cushions as wide or wider than the plan back-width. Furnish transitions conforming to the crash cushion manufacturer's design and specifications. Submit manufacturer crash cushion and transition design details to engineer before installing.

616.3.1 General

Replace paragraph six with the following effective with the December 2013 letting:

(6) Remove and dispose of all excess excavation and surplus materials from the fence site.

618.3.3 Restoration

Replace paragraph one with the following effective with the December 2013 letting:

(1) Upon termination of hauling operations and before conditional final acceptance, restore all haul roads, including drainage facilities and other components, to the equivalent of pre-hauling conditions.

627.3.1 General

Replace paragraph four with the following effective with the December 2013 letting:

(4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes.

637.3.2.1 General

Delete paragraph three effective with the December 2013 letting.

670.3.4.2 Post-Construction Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit 5 copies of ITS documentation including but not limited to the following:

- Operator's manual: for contractor furnished equipment, submit a manual containing detailed operating instructions for each different type or model of equipment and or operation performed.
- Maintenance procedures manuals: for contractor furnished equipment, submit a manual containing detailed preventive and corrective maintenance procedures for each type or model of equipment furnished.
- Cabinet fiber optic wiring diagram: submit a cabinet wiring diagram, identified by location for each cabinet. Include both electrical wiring and fiber optic conductor and cable connections. Place one copy of the fiber optic wiring diagram in a weatherproof holder in the cabinet. Deliver the other copies to the engineer.
- As-built drawings: submit final as-built drawings that detail the final placement of all conduit, cabling, equipment, and geometric modifications within the contract. Provide all documentation in an electronic format adhering to the region’s ITS computer aided drafting standards and according to the department’s as-built requirements. The department will review the as-built drawings for content and electronic format. Modify both the content and format of as-built drawings until meeting all requirements.
- Equipment inventory list: submit an inventory list including serial number, make, model, date installed, and location installed of all equipment installed under the contract.

Errata

Make the following corrections to the 2014 edition of the standard specifications:

415.3.14 Protecting Concrete

Correct errata by referencing the opening to service specification.

(1) Erect and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until it is opened for service as specified in 415.3.15. Conform to 104.6 for methods of handling and facilitating traffic.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(2) Furnish sheeting conforming to ASTM C171 for white opaque polyethylene film, except that the contractor may use clear or black polyethylene for cold weather protection.

607.2 Materials

Correct errata by changing AASHTO M198 to ASTM C990.

(1) Use materials conforming to the requirements for the class of material named and specified below.

Composite pipe, couplings, fittings and joint materials	ASTM D2680
Annular rubber and plastic gaskets for flexible, watertight joints	ASTM C990
External rubber gaskets, mastic, and protective film	ASTM C877
Mortar	519.2.3

637.2.1.3 Sheet Aluminum

Correct errata by changing ASTM B449 to B921 and eliminating the specification for coating thickness.

(4) Degrease, etch, and coat the sign blank on both sides with a chromate treatment conforming to ASTM B921, class 2.

637.3.3.4 Performance

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(1) Under 105.11.2.3 the department may revoke acceptance and direct the contractor to repair or replace previously accepted sign installations if the department subsequently discovers evidence of defective materials or improper installation. Deficiencies that warrant department action include but are not limited to the following:

- Sign posts more than five degrees out of plumb.
- Signs twisted by more than 5 degrees from plan orientation.
- Signs with delaminated or warped plywood.
- Signs with bubbling, fading, delaminating, or buckling sheeting.

646.3.3.4 Proving Period

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(4) Replace all marking within sections with a percent failing more than 10% and repair or replace all markings that, in the engineer's assessment, show evidence of improper construction. If post-acceptance inspections uncover evidence of defective materials or improper construction, the department may revoke acceptance under 105.11.2.3.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

DECEMBER 2013

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. Wage Rates, Hours of labor and payment of Wages
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Affidavits
V. Wage Rate Redistribution
VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
MILWAUKEE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on January 1, 2014

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	35.80	16.87	52.67
Carpenter	33.68	19.81	53.49
Future Increase(s): Add $1.25/hr on 6/2/2014.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	31.56	18.53	50.09
Future Increase(s): Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	32.82	22.61	55.43
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	16.00	3.33	19.33
Ironworker	30.51	23.23	53.74
Line Constructor (Electrical)	38.25	17.63	55.88
Painter	21.87	11.37	33.24
Pavement Marking Operator	30.00	0.00	30.00
Piledriver	27.67	25.64	53.31
Roofer or Waterproofer	29.40	15.55	44.95
Teledata Technician or Installer	24.75	16.08	40.83
Tuckpointer, Caulker or Cleaner	34.57	16.42	50.99
Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	15.07	45.67
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.58	40.36
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.04	11.74	32.78
TRUCK DRIVERS			
Single Axle or Two Axle	34.22	19.90	54.12
Three or More Axle	25.24	15.20	40.44
Articulated, Euclid, Dumptor, Off Road Material Hauler	29.27	20.40	49.67
Future Increase(s): Add $1.75/hr on 6/1/14); Add $1.25/hr on 6/1/15); Add $1.30/hr on 6/1/16); Add $1.25/hr on 6/ 1/ 17. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Pavement Marking Vehicle	25.24	15.20	40.44
Shadow or Pilot Vehicle	34.22	19.90	54.12
Truck Mechanic	25.24	15.20	40.44
LABORERS			
General Laborer	26.06	19.43	45.49
Future Increase(s): Add $1.60/hr on 6/1/2014. Premium Pay: Add $.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.50/hr for line and grade specialist; Add $.65/hr for blaster and powderman; Add $2.01/hr for topman; Add $2.46/hr for bottomman; Add $3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	19.00	0.00	19.00
Landscaper	26.06	19.43	45.49
Future Increase(s): Add $1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	22.55	19.43	41.98
Future Increase(s): Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.69	15.50	33.19
Railroad Track Laborer	13.50	4.06	17.56

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.72	20.40	57.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.22	20.40	56.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches	35.72	20.40	56.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
& A- Frames. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.46	20.40	55.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.17	20.40	55.57
Fiber Optic Cable Equipment.	26.69	16.65	43.34
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	38.80	20.17	58.97
Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	38.80	20.17	58.97
Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	34.50	20.04	54.54
Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks-Great Lakes ONLY.	34.50	20.04	54.54

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 ROADWAY ITEMS					
0010	108.4400 CPM PROGRESS SCHEDULE	1.000 EACH		.		.
0020	204.0150 REMOVING CURB & GUTTER	170.000 LF		.		.
0030	204.0155 REMOVING CONCRETE SIDEWALK	5,227.000 SY		.		.
0040	213.0100 FINISHING ROADWAY (PROJECT) 0001. 1060-33-97	1.000 EACH		.		.
0050	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	138.000 TON		.		.
0060	601.0551 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A	148.000 LF		.		.
0070	601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	22.000 LF		.		.
0080	602.0410 CONCRETE SIDEWALK 5-INCH	5,303.000 SF		.		.
0090	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	88.000 SF		.		.
0100	614.0395 GUARDRAIL MOW STRIP CONCRETE	153.000 SY		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	614.2300 MGS GUARDRAIL 3	287.500 LF		.		.
0120	614.2610 MGS GUARDRAIL TERMINAL EAT	2.000 EACH		.		.
0130	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	2.000 EACH		.		.
0140	619.1000 MOBILIZATION	1.000 EACH		.		.
0150	625.0500 SALVAGED TOPSOIL	845.000 SY		.		.
0160	627.0200 MULCHING	100.000 SY		.		.
0170	628.1504 SILT FENCE	1,065.000 LF		.		.
0180	628.1520 SILT FENCE MAINTENANCE	1,065.000 LF		.		.
0190	628.1905 MOBILIZATIONS EROSION CONTROL	4.000 EACH		.		.
0200	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	4.000 EACH		.		.
0210	628.7005 INLET PROTECTION TYPE A	10.000 EACH		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	628.7015 INLET PROTECTION TYPE C	15.000 EACH		.		.
0230	629.0210 FERTILIZER TYPE B	2.000 CWT		.		.
0240	630.0120 SEEDING MIXTURE NO. 20	25.000 LB		.		.
0250	631.0300 SOD WATER	19.000 MGAL		.		.
0260	631.1000 SOD LAWN	845.000 SY		.		.
0270	634.0618 POSTS WOOD 4X6-INCH X 18-FT	19.000 EACH		.		.
0280	636.0100 SIGN SUPPORTS CONCRETE MASONRY	28.000 CY		.		.
0290	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS	4,880.000 LB		.		.
0300	637.1220 SIGNS TYPE I REFLECTIVE SH	616.000 SF		.		.
0310	637.2210 SIGNS TYPE II REFLECTIVE H	348.125 SF		.		.
0320	638.2102 MOVING SIGNS TYPE II	1.000 EACH		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0330	638.2602 REMOVING SIGNS TYPE II	5.000 EACH		.		.
0340	638.3000 REMOVING SMALL SIGN SUPPORTS	4.000 EACH		.		.
0350	641.0100 SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN (STRUCTURE) 0001. S-40-447	LUMP	LUMP			.
0360	641.0100 SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN (STRUCTURE) 0002. S-40-449	LUMP	LUMP			.
0370	641.0100 SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN (STRUCTURE) 0003. S-67-413	LUMP	LUMP			.
0380	641.0100 SIGN BRIDGE SINGLE POLE SIGN SUPPORT ONE SIGN (STRUCTURE) 0004. S-67-417	LUMP	LUMP			.
0390	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 0015. S-40-416	LUMP	LUMP			.
0400	643.0100 TRAFFIC CONTROL (PROJECT) 0001. 1060-33-97	1.000 EACH		.		.
0410	643.0300 TRAFFIC CONTROL DRUMS	213.000 DAY		.		.
0420	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	761.000 DAY		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	1,521.000 DAY		.		.
0440	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	57.000 DAY		.		.
0450	643.0800 TRAFFIC CONTROL ARROW BOARDS	9.000 DAY		.		.
0460	643.0900 TRAFFIC CONTROL SIGNS	811.000 DAY		.		.
0470	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	15.000 EACH		.		.
0480	652.0125 CONDUIT RIGID METALLIC 2-INCH	60.000 LF		.		.
0490	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	1,099.000 LF		.		.
0500	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	1,755.000 LF		.		.
0510	652.0605 CONDUIT SPECIAL 2-INCH	80.000 LF		.		.
0520	652.0615 CONDUIT SPECIAL 3-INCH	1,931.000 LF		.		.
0530	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM	54.000 EACH		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	653.0135 PULL BOXES STEEL 24X36-INCH	4.000 EACH		.		.
0550	653.0140 PULL BOXES STEEL 24X42-INCH	33.000 EACH		.		.
0560	654.0101 CONCRETE BASES TYPE 1	6.000 EACH		.		.
0570	654.0102 CONCRETE BASES TYPE 2	43.000 EACH		.		.
0580	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	104.000 LF		.		.
0590	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	3,633.000 LF		.		.
0600	655.0505 ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	2,350.000 LF		.		.
0610	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	11,963.000 LF		.		.
0620	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	870.000 LF		.		.
0630	655.0800 LOOP DETECTOR WIRE	6,936.000 LF		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0640	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0001. HDMS-67-0120	LUMP	LUMP			.
0650	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0002. HDMS-67-0118	LUMP	LUMP			.
0660	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0020. HDMS-40-0128	LUMP	LUMP			.
0670	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0021. HDMS-40-0127	LUMP	LUMP			.
0680	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0001. CB-HDMS-67-0120	LUMP	LUMP			.
0690	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0002. CB-HDMS-67-0118	LUMP	LUMP			.
0700	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0020. HDMS-40-0128	LUMP	LUMP			.
0710	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0021. HDMS-40-0127	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0720	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0024. DMS-40-0111	LUMP	LUMP			.
0730	657.0100 PEDESTAL BASES	6.000 EACH	.			.
0740	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	45.000 EACH	.			.
0750	657.0310 POLES TYPE 3	45.000 EACH	.			.
0760	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3. 5-FT	6.000 EACH	.			.
0770	657.0714 LUMINAIRE ARMS TRUSS TYPE 4-INCH CLAMP 15-FT	45.000 EACH	.			.
0780	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	4.000 EACH	.			.
0790	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	4.000 EACH	.			.
0800	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	2.000 EACH	.			.
0810	658.0500 PEDESTRIAN PUSH BUTTONS	33.000 EACH	.			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0820	658.0600 LED MODULES 12-INCH RED BALL	2.000 EACH		.		.
0830	658.0605 LED MODULES 12-INCH YELLOW BALL	2.000 EACH		.		.
0840	658.0610 LED MODULES 12-INCH GREEN BALL	2.000 EACH		.		.
0850	658.0615 LED MODULES 12-INCH RED ARROW	2.000 EACH		.		.
0860	658.0620 LED MODULES 12-INCH YELLOW ARROW	2.000 EACH		.		.
0870	658.0625 LED MODULES 12-INCH GREEN ARROW	2.000 EACH		.		.
0880	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	2.000 EACH		.		.
0890	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 3001. USH 18 & JENNIFER DR	LUMP	LUMP			.
0900	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 3002. CTH Y & USH 18 & CTH O	LUMP	LUMP			.
0910	659.0802 PLAQUES SEQUENCE IDENTIFICATION	11.000 EACH		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0920	670.0100 FIELD SYSTEM INTEGRATOR 0001. ITS	LUMP	LUMP			.
0930	670.0100 FIELD SYSTEM INTEGRATOR 3001. STH 100	LUMP	LUMP			.
0940	670.0100 FIELD SYSTEM INTEGRATOR 3002. USH 18	LUMP	LUMP			.
0950	670.0100 FIELD SYSTEM INTEGRATOR 3003. CTH Y	LUMP	LUMP			.
0960	670.0100 FIELD SYSTEM INTEGRATOR 3004. STH 59 - 1	LUMP	LUMP			.
0970	670.0100 FIELD SYSTEM INTEGRATOR 3005. STH 59 - 2	LUMP	LUMP			.
0980	670.0100 FIELD SYSTEM INTEGRATOR 3006. W. NATIONAL AVE	LUMP	LUMP			.
0990	670.0100 FIELD SYSTEM INTEGRATOR 3007. STH 181	LUMP	LUMP			.
1000	670.0100 FIELD SYSTEM INTEGRATOR 3008. W. WATERTOWN PLANK RD	LUMP	LUMP			.
1010	670.0200 ITS DOCUMENTATION 0001. ITS	LUMP	LUMP			.
1020	670.0200 ITS DOCUMENTATION 3001. STH 100	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1030	670.0200 ITS DOCUMENTATION 3002. USH 18	LUMP	LUMP			.
1040	670.0200 ITS DOCUMENTATION 3003. CTH Y	LUMP	LUMP			.
1050	670.0200 ITS DOCUMENTATION 3004. STH 59 - 1	LUMP	LUMP			.
1060	670.0200 ITS DOCUMENTATION 3005. STH 59 - 2	LUMP	LUMP			.
1070	670.0200 ITS DOCUMENTATION 3006. W. NATIONAL AVE	LUMP	LUMP			.
1080	670.0200 ITS DOCUMENTATION 3007. STH 181	LUMP	LUMP			.
1090	670.0200 ITS DOCUMENTATION 3008. W. WATERTOWN PLANK RD	LUMP	LUMP			.
1100	671.0232 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-IN	2,025.000 LF		.		.
1110	672.0230 BASE CAMERA POLE 30-FT	1.000 EACH		.		.
1120	673.0105 COMMUNICATION VAULT TYPE 1	3.000 EACH		.		.
1130	673.0225.S INSTALL POLE MOUNTED CABINET	5.000 EACH		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1140	674.0300 REMOVE CABLE	255.000 LF		.		.
1150	675.0400.S INSTALL ETHERNET SWITCH	18.000 EACH		.		.
1160	677.0100 INSTALL CAMERA POLE	1.000 EACH		.		.
1170	677.0200 INSTALL CAMERA ASSEMBLY	9.000 EACH		.		.
1180	677.0300.S INSTALL VIDEO ENCODER	10.000 EACH		.		.
1190	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	205.000 LF		.		.
1200	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT	2,480.000 LF		.		.
1210	678.0300 FIBER OPTIC SPLICE	117.000 EACH		.		.
1220	678.0400 FIBER OPTIC TERMINATION	6.000 EACH		.		.
1230	678.0500 COMMUNICATION SYSTEM TESTING 0001. ITS	LUMP	LUMP			.
1240	678.0500 COMMUNICATION SYSTEM TESTING 3001. STH 100	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1250	678.0500 COMMUNICATION SYSTEM TESTING 3002. USH 18	LUMP	LUMP			.
1260	678.0500 COMMUNICATION SYSTEM TESTING 3003. CTH Y	LUMP	LUMP			.
1270	678.0500 COMMUNICATION SYSTEM TESTING 3004. STH 59 - 1	LUMP	LUMP			.
1280	678.0500 COMMUNICATION SYSTEM TESTING 3005. STH 59 - 2	LUMP	LUMP			.
1290	678.0500 COMMUNICATION SYSTEM TESTING 3006. W. NATIONAL AVE	LUMP	LUMP			.
1300	678.0500 COMMUNICATION SYSTEM TESTING 3007. STH 181	LUMP	LUMP			.
1310	678.0500 COMMUNICATION SYSTEM TESTING 3008. W. WATERTOWN PLANK RD	LUMP	LUMP			.
1320	690.0250 SAWING CONCRETE	525.000 LF		.		.
1330	SPV.0060 SPECIAL 0001. EXPOSING EXISTING UTILITY UNPAVED AREA	15.000 EACH		.		.
1340	SPV.0060 SPECIAL 0002. EXPOSING EXISTING UTILITY PAVED AREA	15.000 EACH		.		.
1350	SPV.0060 SPECIAL 2001. INSTALL HYBRID DYNAMIC MESSAGE SIGN	4.000 EACH		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1360	SPV.0060 SPECIAL 2002. INSTALL DYNAMIC MESSAGE SIGN	1.000 EACH		.		.
1370	SPV.0060 SPECIAL 2003. INSTALL 5.8 GHZ ETHERNET BRIDGE	30.000 EACH		.		.
1380	SPV.0060 SPECIAL 2004. INSTALL WIRELESS MODEM	1.000 EACH		.		.
1390	SPV.0060 SPECIAL 2005. INSTALL BLUETOOTH DETECTOR	16.000 EACH		.		.
1400	SPV.0060 SPECIAL 2006. GROUND ROD	6.000 EACH		.		.
1410	SPV.0060 SPECIAL 2007. SALVAGE DMS	1.000 EACH		.		.
1420	SPV.0060 SPECIAL 3001. REMOVE, SALVAGE, AND INSTALL TRAFFIC SIGNAL CONTROLLER	7.000 EACH		.		.
1430	SPV.0060 SPECIAL 3002. SUPPLEMENTARY TRAFFIC SIGNAL CABINET CONCRETE BASE	4.000 EACH		.		.
1440	SPV.0060 SPECIAL 3003. TRAFFIC SIG CABINET & CONTROLLER FULLY ACTUATED 4 PHASE	4.000 EACH		.		.
1450	SPV.0090 SPECIAL 3001. INSTALL CAMERA POWER CABLE	53,854.000 LF		.		.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1460	SPV.0090 SPECIAL 3002. INSTALL CAT- 5E CABLE	55,145.000 LF		.		.
1470	SPV.0105 SPECIAL 0001. PAVEMENT CLEANUP	LUMP	LUMP			.
1480	SPV.0105 SPECIAL 0002. SURVEY PROJECT 1060-33-97	LUMP	LUMP			.
1490	SPV.0105 SPECIAL 0003. REMOVING OVERHEAD SIGN SUPPORT S-40-416	LUMP	LUMP			.
1500	SPV.0105 SPECIAL 3010. REMOVE VIDEO DETECTION EQUIPMENT STH 100 & W. LAPHAM ST	LUMP	LUMP			.
1510	SPV.0105 SPECIAL 3011. REMOVE VIDEO DETECTION EQUIPMENT STH 100 & W. THEODORE TRECKER WAY	LUMP	LUMP			.
1520	SPV.0105 SPECIAL 3012. REMOVE VIDEO DETECTION EQUIPMENT IH 94 EB-OFF RAMP & STH 100	LUMP	LUMP			.
1530	SPV.0105 SPECIAL 3013. REMOVE VIDEO DETECTION EQUIPMENT IH 94 WB RAMPS & STH 100	LUMP	LUMP			.
1540	SPV.0105 SPECIAL 3014. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH JJ	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1550	SPV.0105 SPECIAL 3015. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH Y	LUMP	LUMP			.
1560	SPV.0105 SPECIAL 3016. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & JANACEK RD	LUMP	LUMP			.
1570	SPV.0105 SPECIAL 3017. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & BROOKFIELD RD	LUMP	LUMP			.
1580	SPV.0105 SPECIAL 3018. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & WOELFEL RD	LUMP	LUMP			.
1590	SPV.0105 SPECIAL 3019. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CALHOUN RD	LUMP	LUMP			.
1600	SPV.0105 SPECIAL 3020. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & THOMAS LANE	LUMP	LUMP			.
1610	SPV.0105 SPECIAL 3021. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & EXECUTIVE DR	LUMP	LUMP			.
1620	SPV.0105 SPECIAL 3022. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & MAIN ST	LUMP	LUMP			.
1630	SPV.0105 SPECIAL 3023. REMOVE VIDEO DETECTION EQUIPMENT USH 18 & CTH O	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1640	SPV.0105 SPECIAL 3024. REMOVE VIDEO DETECTION EQUIPMENT STH 59 & S. 92ND ST	LUMP	LUMP			.
1650	SPV.0105 SPECIAL 3025. REMOVE VIDEO DETECTION EQUIPMENT STH 59 & STH 181	LUMP	LUMP			.
1660	SPV.0105 SPECIAL 3026. REMOVE VIDEO DETECTION EQUIPMENT W NATIONAL AVE & W. CLEVELAND AVE	LUMP	LUMP			.
1670	SPV.0105 SPECIAL 3027. REMOVE VIDEO DETECTION EQUIPMENT W. NATIONAL AVE & S. 102ND ST	LUMP	LUMP			.
1680	SPV.0105 SPECIAL 3028. REMOVE VIDEO DETECTION EQUIPMENT IH 894/USH 45 EB RAMPS & W. NATIONAL AVE	LUMP	LUMP			.
1690	SPV.0105 SPECIAL 3029. REMOVE VIDEO DETECTION EQUIPMENT IH 894/USH 45 WB RAMPS & W. NATIONAL AVE	LUMP	LUMP			.
1700	SPV.0105 SPECIAL 3030. REMOVE VIDEO DETECTION EQUIPMENT STH 181 & STATE FAIR GATE 4 DRIVEWAY	LUMP	LUMP			.
1710	SPV.0105 SPECIAL 3031. REMOVE VIDEO DETECTION EQUIPMENT STH 181 & W. SCHLINGER AVE	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1720	SPV.0105 SPECIAL 3032. REMOVE VIDEO DETECTION EQUIPMENT IH 94 EB RAMPS & STH 181	LUMP	LUMP			.
1730	SPV.0105 SPECIAL 3033. REMOVE VIDEO DETECTION EQUIPMENT IH 94 WB RAMPS & STH 181	LUMP	LUMP			.
1740	SPV.0105 SPECIAL 3034. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLK RD & SWAN BLVD/INNOVA DR	LUMP	LUMP			.
1750	SPV.0105 SPECIAL 3035. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLANK ROAD & DISCOVERY PKY	LUMP	LUMP			.
1760	SPV.0105 SPECIAL 3036. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLANK RD & N. 92ND ST	LUMP	LUMP			.
1770	SPV.0105 SPECIAL 3037. REMOVE VIDEO DETECTION EQUIPMENT W WATERTOWN PLANK RD & N. 87TH ST	LUMP	LUMP			.
1780	SPV.0105 SPECIAL 3038. REMOVE VIDEO DETECTION EQUIPMENT W. NATIONAL AVE & W. LINCOLN AVE	LUMP	LUMP			.
1790	SPV.0105 SPECIAL 3039. REMOVE VIDEO DETECTION EQUIPMENT W. NATIONAL AVE & S. 84TH ST	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1800	SPV.0105 SPECIAL 3040. REMOVE VIDEO DETECTION EQUIPMENT STH 100 & CLEVELAND AVE	LUMP	LUMP			.
1810	SPV.0105 SPECIAL 3045. REMOVE TRAFFIC SIGNALS USH 18 & JENNIFER DR	LUMP	LUMP			.
1820	SPV.0105 SPECIAL 3075. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & CTH NN	LUMP	LUMP			.
1830	SPV.0105 SPECIAL 3076. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W CLEVELAND AVE	LUMP	LUMP			.
1840	SPV.0105 SPECIAL 3077. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W. NATIONAL AVE	LUMP	LUMP			.
1850	SPV.0105 SPECIAL 3078. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W. LINCOLN AVE	LUMP	LUMP			.
1860	SPV.0105 SPECIAL 3079. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W. LAPHAM ST	LUMP	LUMP			.
1870	SPV.0105 SPECIAL 3080. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 100 & W. THEO TRECKER	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1880	SPV.0105 SPECIAL 3081. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH94 EB OFFRAMP & STH 100	LUMP	LUMP			.
1890	SPV.0105 SPECIAL 3082. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 WB RAMPS & STH 100	LUMP	LUMP			.
1900	SPV.0105 SPECIAL 3083. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CTH JJ	LUMP	LUMP			.
1910	SPV.0105 SPECIAL 3084. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CTH Y	LUMP	LUMP			.
1920	SPV.0105 SPECIAL 3085. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & JENNIFER DR	LUMP	LUMP			.
1930	SPV.0105 SPECIAL 3086. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & JANACEK RD	LUMP	LUMP			.
1940	SPV.0105 SPECIAL 3087. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & BROOKFIELD RD	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1950	SPV.0105 SPECIAL 3088. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & WOELFEL RD	LUMP	LUMP			.
1960	SPV.0105 SPECIAL 3089. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CALHOUN RD	LUMP	LUMP			.
1970	SPV.0105 SPECIAL 3090. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & THOMAS LANE	LUMP	LUMP			.
1980	SPV.0105 SPECIAL 3091. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & EXECUTIVE DR	LUMP	LUMP			.
1990	SPV.0105 SPECIAL 3092. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & MAIN ST	LUMP	LUMP			.
2000	SPV.0105 SPECIAL 3093. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS USH 18 & CTH O	LUMP	LUMP			.
2010	SPV.0105 SPECIAL 3094. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS PILGRIM PKWY & WTP RD	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2020	SPV.0105 SPECIAL 3095. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS CTH Y & DAVIDSON RD	LUMP	LUMP			.
2030	SPV.0105 SPECIAL 3096. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS CTH Y & WATER TOWER BLVD	LUMP	LUMP			.
2040	SPV.0105 SPECIAL 3097. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS CTH Y & SWENSON DR	LUMP	LUMP			.
2050	SPV.0105 SPECIAL 3098. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 WB OFF-RAMP & CTH Y	LUMP	LUMP			.
2060	SPV.0105 SPECIAL 3099. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & CTH Y	LUMP	LUMP			.
2070	SPV.0105 SPECIAL 3100. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & BROOKFIELD RD	LUMP	LUMP			.
2080	SPV.0105 SPECIAL 3101. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & CALHOUN RD	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2090	SPV.0105 SPECIAL 3102. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & S. 92ND ST	LUMP	LUMP			.
2100	SPV.0105 SPECIAL 3103. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 59 & STH 181	LUMP	LUMP			.
2110	SPV.0105 SPECIAL 3104. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS NATIONAL AVE & CLEVE AVE	LUMP	LUMP			.
2120	SPV.0105 SPECIAL 3105. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS NATIONAL AVE & 102ND ST	LUMP	LUMP			.
2130	SPV.0105 SPECIAL 3106. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM IH894 EB RAMPS & NATIONAL AVE	LUMP	LUMP			.
2140	SPV.0105 SPECIAL 3107. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM IH894 WB RAMPS & NATIONAL AVE	LUMP	LUMP			.
2150	SPV.0105 SPECIAL 3108. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM NATIONAL AVE & LINCOLN AVE	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2160	SPV.0105 SPECIAL 3109. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM W. NATIONAL AVE & S. 92ND ST	LUMP	LUMP			.
2170	SPV.0105 SPECIAL 3110. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM NATIONAL AV/BECHER ST/90TH ST	LUMP	LUMP			.
2180	SPV.0105 SPECIAL 3111. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS NATIONAL AVE & 84TH ST	LUMP	LUMP			.
2190	SPV.0105 SPECIAL 3112. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS BECHER ST & 92ND ST	LUMP	LUMP			.
2200	SPV.0105 SPECIAL 3113. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS LINCOLN AVE & 92ND ST	LUMP	LUMP			.
2210	SPV.0105 SPECIAL 3114. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS LINCOLN AVE & 90TH ST	LUMP	LUMP			.
2220	SPV.0105 SPECIAL 3115. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS S. 84TH ST & W. LAPHAM ST	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2230	SPV.0105 SPECIAL 3116. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM STH 181 & STATE FAIR GATE 4	LUMP	LUMP			.
2240	SPV.0105 SPECIAL 3117. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS STH 181 & SCHLINGER AVE	LUMP	LUMP			.
2250	SPV.0105 SPECIAL 3118. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 EB RAMPS & STH 181	LUMP	LUMP			.
2260	SPV.0105 SPECIAL 3119. TRNSP & INST S-F ADAPTABLE TRAF SIG CAMERAS IH 94 WB RAMPS & STH 181	LUMP	LUMP			.
2270	SPV.0105 SPECIAL 3120. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WTP RD/SWAN BLVD/INNOVATION DR	LUMP	LUMP			.
2280	SPV.0105 SPECIAL 3121. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WATERTOWN PLK RD & DISC PKWY	LUMP	LUMP			.
2290	SPV.0105 SPECIAL 3122. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WATERTOWN PLANK RD & 92ND ST	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2300	SPV.0105 SPECIAL 3123. TRNSP & INST S-F ADAPTABLE TRAF SIG CAM WATERTOWN PLANK RD & 87TH ST	LUMP	LUMP			.
2310	SPV.0105 SPECIAL 3130. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & CTH NN	LUMP	LUMP			.
2320	SPV.0105 SPECIAL 3131. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. NATIONAL AVE	LUMP	LUMP			.
2330	SPV.0105 SPECIAL 3132. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. CLEVELAND AVE	LUMP	LUMP			.
2340	SPV.0105 SPECIAL 3133. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET STH 100 & W. LINCOLN AVE	LUMP	LUMP			.
2350	SPV.0105 SPECIAL 3134. INST FIBER OPTIC COMM. IN CABINET PILGRIM PKWY & WATERTOWN PLANK RD	LUMP	LUMP			.
2360	SPV.0105 SPECIAL 3135. INST FIBER OPTIC COMM. IN CABINET IH 94 WB OFF RAMP & CTH Y	LUMP	LUMP			.
2370	SPV.0105 SPECIAL 3136. INST FIBER OPTIC COMM. IN CABINET STH 59 & CTH Y	LUMP	LUMP			.

CONTRACT: 20140513022 PROJECT(S): 1060-33-97 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SPV.0105 SPECIAL 3137.					
2380	INST FIBER OPTIC COMM. IN CABINET STH 59 & S. BROOKFIELD RD	LUMP	LUMP			.
	SPV.0105 SPECIAL 3138.					
2390	INST FIBER OPTIC COMM. IN CABINET STH 59 & S. CALHOUN RD	LUMP	LUMP			.
	SPV.0105 SPECIAL 3145.					
2400	INSTALL STATE FURNISHED TRAFFIC SIG CABINET USH 18 & JENNIFER DR	LUMP	LUMP			.
	SPV.0105 SPECIAL 3146.					
2410	INSTALL STATE FURNISHED TRAFFIC SIG CABINET IH 94 WB OFF-RAMP & CTH Y	LUMP	LUMP			.
	SPV.0105 SPECIAL 3160.					
2420	REMOVE LOOP DETECTOR WIRE STH 100 & CTH NN	LUMP	LUMP			.
	SPV.0105 SPECIAL 3161.					
2430	REMOVE LOOP DETECTOR WIRE STH 100 & W NATIONAL AVE	LUMP	LUMP			.
	SPV.0105 SPECIAL 3162.					
2440	REMOVE LOOP DETECTOR WIRE STH 100 & CLEVELAND AVE	LUMP	LUMP			.
	SPV.0105 SPECIAL 3163.					
2450	REMOVE LOOP DETECTOR WIRE STH 100 & W LINCLON AVE	LUMP	LUMP			.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE