HIGHWAY WORK PROPOSAL

Proposal Number: 1 Ø

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	2160-10-70	WISC 2014 022	South 76th Street 600' N of High Street to Carter Boulevard	CTH U

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, $ 100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: February 11, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time July 1, 2015	
Assigned Disadvantaged Business Enterprise Goal 15 %	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 Grading, aggregate base, concrete pavement, hot mix apshalt pavement, concrete curb and gutter, storm sewer, retaining walls, box culvert extension, sidewalk, traffic signals, signing and pavement marking and landscaping.	
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.

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 2160-10-70, S. 76th St. (CTH U) 600 feet north of W. High Street to W. Carter Boulevard, located in the City of Franklin, in Milwaukee County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 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 consists of removing pavement, grading, box culvert extensions, retention basin construction, retaining wall construction, aggregate base, the construction of concrete pavement, HMA pavement, concrete curb and gutter, storm sewer, sidewalk, traffic signals, signing and pavement marking, landscaping 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.

Provide the time frame for construction of the project within the 2014 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion date. Upon approval, the engineer will issue the notice to proceed within 10 calendar days before the beginning of the approved time frame.

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

Complete construction operations on South 76th Street (CTH U) to the stage necessary to reopen it to through traffic prior to 12:01 AM December 1, 2014. Do not reopen until completing the following work: Concrete Pavement, Concrete Curb and gutter, Concrete Sidewalk, and all Driveway Construction.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the work necessary to reopen South 76th Street (CTH U) to through traffic prior to 12:01 AM, December 1, 2014 the department will assess the contractor $1000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, December 1, 2014. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

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.

Submit the Erosion Control Implementation Plan (ECIP) to the engineer at least 14 calendar days prior to the preconstruction meeting. The plan shall include dewatering details.

Submit a Schedule of Operations to the engineer 14 days prior to the preconstruction conference.

The following is a general order of operations:

- Temporary pave the northbound shoulder while the existing two-way traffic is maintained.
- Switch traffic both northbound and southbound to two-way traffic on the northbound lane(s) and temporary pavement; close southbound lane(s) to through traffic.
- Temporary widen the surface adjacent to the southbound lane to allow for two-way traffic operation on the southbound lane(s).
- Switch traffic both northbound and southbound to two-way traffic on the southbound lane(s) and temporary surface; close northbound lane(s) to through traffic.
- Construct the new northbound lanes and the east side of Culvert C-40-0022. Excavate the retention basin.
- Switch two-way traffic both northbound and southbound from the southbound lane(s) and temporary surface to the new northbound lanes; close southbound lane(s) to through traffic.
- Construct the new southbound lanes and the west side of Culvert C-40-0022.

Be advised that there may be multiple mobilizations for such items as traffic control items, signing items, pavement marking, landscaping items and other incidental items related to staging. No additional payment will be made by the department for said mobilizations.

During construction operations, at intersecting streets, ramp all saw joints, and all protruding manholes, inlets, catch basins and valves within the roadway area with hot mix asphalt material between the existing pavement surface and adjacent milled surface, as directed by the engineer. The cost of materials, labor and equipment necessary to install such ramps shall be included in the contract unit price for HMA Pavement, Type E-1. If necessary, placement of HMA pavement may continue past October 15. Construction of concrete pavements, sidewalks, curb and gutter, and driveways may continue past November 1, 2014, but must be complete by December 1, 2014.

Storm sewer pipes which cross the road will need a bulkhead in stage 2. The cost of the bulkhead is incidental to the unit bid price of the pertinent pipe. No additional payment of the bulkhead will be made. Remove the bulkhead in stage 3 operations when the cross pipe is connected to the pipe laid in stage 3. The cost of removing the bulkhead and the connection shall be incidental to the unit price of the pertinent pipe. No additional payment for removing the bulkhead or connecting the pipes will be made.

The construction operations are divided into three stages. S. 76th St. (CTH U) will remain open to at least one lane, desirably 12-foot wide, but no less than 11-foot wide of through traffic in each direction during all construction staging. The intersections of W. Puetz Rd., W. Drexel Ave., W. Forest Hill Ave. and W. Imperial Dr. shall remain open to traffic at all times. The construction operation staging is as follows:

Stage 1
Preparation for Temporary Traffic Control Stages 2 and 3: work includes construction of all the temporary surface, temporary traffic signals, temporary driveways, temporary drainage and associated work necessary for maintaining temporary traffic control for Stages 2 and 3 of construction. Stage 1 consists of two parts, Stage 1A and Stage 1B described as follows:

- Stage 1A- Temporary Shoulder Paving: Work includes placing temporary asphaltic surface on the unpaved/gravel shoulder areas northbound along the project. Maintain the existing two-way traffic during Stage 1A. Refer to the temporary traffic control plans, the traffic control standard detail drawings and the MUTCD.

- Stage 1B- Temporary Surface Widening: Work includes widening the southbound lane(s) together with placing temporary asphaltic surface along the project. Maintain two-way traffic on the northbound lane(s) and temporary asphaltic surface during Stage 1B. Refer to the temporary traffic control plans, the traffic control standard detail drawings and the MUTCD.

Stage 2
Northbound under construction (two-way traffic southbound): Work includes total reconstruction of the northbound lane(s), including portions of the left turn lanes and side streets along the project. Maintain two-way traffic on the southbound lane(s) and

temporary asphaltic surface during Stage 2. Refer to the temporary traffic control plans. Construct the east portion of Culvert C-40-0022 during stage 2. Construct the retention basin early in stage 2.

Stage 3
Southbound under construction (two-way traffic northbound): Work includes total reconstruction of the southbound lane(s), including remaining portions of the left turn lanes and side streets not constructed in Stage 2. Maintain two-way traffic on the newly constructed northbound lane(s) during Stage 3. Refer to the temporary traffic control plans. Construct the western portion of Culvert C-40-0022 in stage 3.

Appropriate staging for sidewalk construction is required according to the MUTCD and following the Temporary Traffic Control Stage above.

4. Traffic.

Perform work under this item in accordance to the requirements of standard spec 643, and as approved by the engineer, except as hereinafter modified.

Substantially accomplish the construction sequence, including the associated traffic control as detailed in the Traffic Control Plan, and as described herein.

Maintain one lane, desirably 12-foot wide, but no less than 11-foot wide of traffic in each direction at all times during construction. Establish lane closures, if required, only for the time period necessary to safely accommodate nearby work. Notify the engineer a minimum of 48 hours in advance of any desired lane closures.

Milwaukee County owns the traffic signals along S. 76th St. (CTH U) at the intersections of W. Puetz Rd., W. Drexel Ave. and W. Imperial Dr. and will do any modifications required to the traffic signal timing during construction. Contact Daniel Murphy at (414) 278-4842 at least one week in advance of the need to modify the signal timing.

Do not proceed with any construction operation until all traffic control devices for such work are in the proper location.

Maintain adequate turning provisions for vehicles, including trucks and buses, at all intersections during construction operations, as directed by the engineer.

Maintain pedestrian access to abutting properties and at intersections as directed by the engineer.

In the event access to properties is needed by emergency vehicles and equipment such as fire, police, and rescue services, cooperate to the fullest extent in accommodating emergency access in the shortest time. The traffic requirements are subject to changes at the direction of the engineer in the event of an emergency.

5. Temporary Street Access / Driveways.

It is the responsibility of the contractor to construct and maintain in a satisfactory condition temporary street access and temporary driveways at locations determined in the field by the engineer to provide vehicular and/or pedestrian access.

Maintain or provide where necessary vehicular and/or pedestrian access to adjacent businesses as directed by the engineer. Prior to the start of construction activities, set-up a meeting with the commercial property owners located in the project area and the engineer to inform them of the proposed work schedule, to listen to their access requirements, and to find mutually acceptable working methods to minimize disruption of their businesses.

Maintain local access to residences within the project area to the maximum extent possible. Do not close or remove from service any residential or commercial approaches without giving 48-hour notice to the occupants of the premises to remove their vehicles prior to the removal or closing of the drive approach access. Maintain reasonable access to abutting business locations at all times.

Maintain access to all adjacent residences and businesses throughout the duration of this contract. If it becomes necessary to close a driveway temporarily for construction activities, notify the affected parties at least 48 hours in advance of the construction operation.

The time between driveway removal and grading and replacement with temporary stone shall be no longer than 4 hours. The time between replacing the temporary driveway with the permanent restoration shall be no longer than 4 hours for a HMA driveway and seven (7) days for a concrete driveway.

Construct the temporary street access and driveways with base aggregate dense 1 ¼-inch to the dimensions determined by the engineer. Base Aggregate Dense 1 ¼-inch for construction of temporary driveways and median openings will be paid under the item Base Aggregate Dense 1 ¼-inch.

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying S. 76th St. (CTH U) 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 Friday, May 23, 2014 to 6:00 AM Tuesday, May 27, 2014 for Memorial Day;
- 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 Friday, November 28, 2014 for Thanksgiving;
- From noon Friday, May 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day.

107-005 (20050502)

7. Utilities.

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

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 statutes. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Some utility work, as described below, is dependent on prior work being performed by the contractor at a specific site. Provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Give notice 14 to 16 calendar days in advance of when the site will be available to the utility. Follow up with a confirmation notice to the engineer and the utility not less than 3 working days before the site will be ready for the utility to begin its work.

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

The following utilities are located within the project area:

AT&T Wisconsin has buried telephone cable, manholes and vaults located primarily on the east side of the roadway along the project. There are buried telephone line crossings at approximately Station 157+80, Station 158+79, Station 159+50, Station 229+05, and Station 231+45. There are 8 manhole/vault frame and covers that require adjustment or reconstructing. This will be done by AT&T Wisconsin concurrently with construction operations under this contract. The locations of the AT&T Wisconsin manholes/vaults are as follows:

Station	Offset	Station	Offset
158+25*	55’ RT	215+40	45’ RT
185+55	55’ RT	223+45*	50’ RT
202+85*	55’ RT	231+45*	55’ RT
210+65	55’ RT	241+60*	55’ RT

Structures marked with an asterisk (*) are in paved areas. These manholes will be adjusted by AT&T after the contractor has completed grading in the area and the manholes can be set to final grade. Contact Mark Eder at (414) 535-7401 three business days in advance to coordinate work at these locations.

There are six telephone pedestals that require relocation. This will be done by AT&T Wisconsin concurrently with construction operations under this contract. The locations of the AT&T Wisconsin pedestals are as follows:

Station	Offset	Station	Offset
171+65	60’ RT	210+90	65’ RT
173+55	60’ RT	224+75	58’ LT
185+55	55’ RT	203+60	60’ RT

AT&T has identified the following replacements, adjustments and relocations of underground facilities:

Location	Description
Station 157+80	Replace 900-pair underground crossing
Station 170+00 to 176+00, 60’ RT	Lower existing cable
Station 190+50 to 194+00, 54’ LT	Lower existing copper cable
Station 195+50, 54’ LT	Lower existing copper cable
Station 206+00 to 209+00, 50’ RT	Lower existing cable
Station 211+75 to 216+50, 50’ LT	Replace copper cable
Station 211+85, 55’ LT	Remove pedestal behind guardrail
Station 224+50 to 226+50, 48’ RT	Retire existing in place, install new cable 57’ RT
Station 225+00, 57’ LT	Remove existing pedestal, Replace copper cable crossing Faith Dr.
Station 225+25, 55’LT	Set new pedestal
Station 238+00, 58’ RT	Lower existing copper cable

AT&T has identified the following replacements, adjustments and relocations of overhead facilities:

Station 201+00 to 204+00, 60’ RT	Raise aerial attachments on WE poles
Station 212+00 to 218+00, 60’ RT	Raise/ relocate aerial cable on WE poles

Overhead work will be coordinated with the relocation of We Energies’ poles.

All work will be done by AT&T Wisconsin after at least a 3-day notification from the contractor that the project is at the stage of needing the adjustments and/or reconstructions completed. Contact Mark Eder at (414) 535-7401 three business days in advance to coordinate work.

We Energies (Electric) has overhead (OH) and underground (UG) electric lines located the entire length of the project as indicated in the plans. The OH is mostly located along the east side of the roadway with crossings and guy poles located along the west side. Approximately 30 poles (OH) are in conflict with construction operations and will be relocated by We Energies (Electric) prior to the start of construction operations. Of the 30 poles, 11 are for street lighting purposes. The locations are as follows:

Southbound We Energies (Electric) Adjustments/Relocates

Station	Offset	Type	Location	Work
153+80	30’ LT	LIGHT POLE	MARGARET LN.	RELOCATE
158+35	45' LT	LIGHT POLE	PUETZ RD.	RELOCATE
169+25	60' LT	LIGHT POLE	LAKE POINTE DR.	RELOCATE
201+10	60' LT	LIGHT POLE	NORWOOD LN.	RELOCATE
206+45	60' LT	POWER POLE		RELOCATE
229+90	45' LT	POWER POLE		RELOCATE
233+90	45' LT	POWER POLE		RELOCATE

Northbound We Energies (Electric) Adjustments/Relocates

Station	Offset	Type	Location	Work
148+30	60’ RT	POWER POLE		RELOCATE
150+03	60’ RT	POWER POLE		RELOCATE
151+80	60’ RT	POWER POLE		RELOCATE
170+70	60’ RT	POWER POLE		RELOCATE
171+65	60’ RT	POWER POLE		RELOCATE
173+55	60’ RT	POWER POLE		RELOCATE
174+95	60’ RT	POWER POLE		RELOCATE
177+90	48' RT	POWER POLE	FOUNTAIN CT.	RELOCATE
185+05	25' RT	LIGHT POLE	FOREST HILL AVE.	RELOCATE
185+50	60’ RT	POWER POLE		RELOCATE
186+76	48' RT	LIGHT POLE	COUNTRYCLUB #1	RELOCATE
194+75	50' RT	LIGHT POLE	COUNTRY CLUB #2	RELOCATE
207+95	60’ RT	POWER POLE		RELOCATE

Station	Offset	Type	Location	Work
211+86	60' RT	POWER POLE	DREXEL AVE.	RELOCATE
213+40	60' RT	POWER POLE		RELOCATE
214+75	60' RT	POWER POLE		RELOCATE
216+20	60' RT	POWER POLE		RELOCATE
219+70	45' RT	LIGHT POLE	PINEBERRY RIDGE	RELOCATE
224+75	60’ RT	POWER POLE		RELOCATE
228+20	60’ RT	POWER POLE		RELOCATE
228+80	30' RT	LIGHT POLE	SOUTHVIEW DR.	RELOCATE
240+70	65’ LT	LIGHT POLE	IMPERIAL DR.	RELOCATE
240+85	50’ RT	LIGHT POLE	BRUNN DR.	RELOCATE

WE Energies - Electric has identified the following relocations of underground facilities:

Location	Description
Station 168+60	UG single phase primary
Station 171+62	UG single phase primary
Station 172+62	UG single phase primary
Station 179+90	UG 2-phase primary
Station 186+80 to 189+00 RT	Street light cable
Station 202+75	UG 3-phase primary
Station 209+85	UG secondary cable
Station 229+85	UG 3- phase primary
Station 242+17	UG single phase primary

Contact Ken Franecki at (414) 944-5531 for coordination of work.

We Energies (Gas) has gas mains that run along the entire length of the project as shown on the plans. The gas main is located on the west side of the roadway from approximately W. Puetz Rd. to W. Drexel Ave. and runs on both sides of the roadway approximately from W. Drexel Ave. to W. Imperial Dr., including a 2” gas main that runs along the existing shoulder on the east side of the roadway approximately from W. Puetz Rd. to W. Southview Dr. There are 20 gas main crossings at approximately Station 158+10, Station 171+27, Station 171+83, Station 180+71, Station 185+45, Station 192+10, Station 194+20, Station 194+70, Station 196+45, Station 199+01, Station 201+35, Station 210+90, Station 217+91, Station 220+12, Station 220+97, Station 221+90, Station 224+27, Station 228+92, Station 231+40 and Station 240+65.

WE Energies-Gas will abandon the existing high pressure gas main located in the west side of South 76th St (CTH U) north of Puetz Road.

WE Energies-Gas will relocate a steel high pressure pipe on the west side of South 76th St. from Station 151+50 +/- to Station 159+00+/-. 58' LT of the reference line of South 76th St. The existing pipe in this area will be abandoned in place by WE Energies - Gas.

WE Energies-Gas has indicated that they will remove and dispose of the hazardous materials in all affected sections which require removal. In other areas it will be the responsibility of the highway contractor to remove and dispose of abandoned facilities after WE Energies-Gas has deemed the affected line dead and free of hazardous materials as above. Contact Scott Holstein at (262) 949-0490 to verify the lines are abandoned, and that there is no hazardous material.

Removal of asbestos wrapped pipe will take place in the following areas:

Station 159+00 to 168+50
Station 190+00 to 199+00
Station 201+50 to 209+00
Station 216+00 to 224+50
Station 229+50 to 235+00

We Energies (Gas) has 10 gas valve boxes and 2 gas manholes that require adjustment. These adjustments are to be made by We Energies (Gas) as shown on the plans. This will be done by WE Energies-Gas with construction operations under this contract. Contact Scott Holstein at (262) 949-0490 three days prior to paving. The locations of the gas valves boxes are as follows:

Station (Location)	**Offset**
158+35	60' RT (gas valve)
158+95 (Puetz Rd.)	50' LT (manhole)
169+18 (Lake Pointe Dr.)	60' LT (gas valve)
169+22 (Lake Pointe Dr.)	60' LT (gas valve)
185+55 (Forest Hill Ave.)	55' LT (manhole)
194+80 (Country Club Cir.#1)	60' RT (gas valve)
194+85 (Country Club Cir.#1)	60' RT (gas valve)
201+10	62' RT (gas valve)
201+07	39' LT (gas valve)
201+50 (Norwood Ln.)	60' LT (gas valve)
219+65 (Pineberry Ridge)	60' RT (gas valve)
240+65 (Imperial Dr.)	60' LT (gas valve)

We Energies Gas will install a new 2" PE line from Station 206+50 to 210+50 at 58' Lt and from Station 210+50 to 210+89 at 46' LT

WE Energies – Gas will also perform the work as outlined below prior to construction:

Station	Offset	Description	Work
158+94to 162+25	43’ LT	MAIN	RELOCATE TO 57’ LT.
171+83	30’ RT.	MAIN	RELOCATE TO 70’ RT.
177+50	54’ RT	MAIN	RELOCATE
183+10	54’ RT	MAIN	RELOCATE
183+56	54’ RT.	MAIN	RELOCATE
192+00 TO 200+96	54’ RT.	MAIN	RELOCATE TO 57’ LT.
201+38		ROAD CROSSING	RELOCATE TO 200+99
210+63		ROAD CROSSING	INSTALL NEW
211+26 to 216+90	30’ RT.	MAIN	RETIRE
216+90 to 220+25	27’ RT.	MAIN	RELOCATE 3’ INTO ROAD LT.
220+25 to 228+82	25’ RT.	MAIN	RELOCATE TO 62’ LT.
226+55		ROAD CROSSING	INSTALL NEW
226+55 to 228+05		MAIN	INSTALL NEW AT 62’ RT.
228+05 TO 238+80	VARIES 20’–45’ RT.	MAIN	RETIRE
240+66		ROAD CROSSING	REPLACE AT 240+27
10+56	PUETZ RD.	ROAD CROSSING	RELOCATE TO 11+71
10+59 to 11+71	PUETZ RD.	MAIN	RELOCATE TO 37’ LT.
5+50 to 14+00	DREXEL AVE.	MAIN	RELOCATE

Contact Scott Holstein at (262) 949-0490 to verify that all abandoned facilities are free of product and properly abandoned.

Milwaukee County Department of Transportation (MCDOT) has 3 existing traffic signals along the project at the intersections of W. Puetz Rd., W. Drexel Ave. and W. Imperial Dr. that will be removed and replaced with new traffic signals by the contractor as shown in the plans. Temporary traffic signals are to be installed by the contractor at these three intersections.

Traffic signal operation coordination is required. Contact Daniel Murphy, Milwaukee County Traffic Engineering, at (414) 278-4842 for coordination involving the existing traffic signals during construction, including signal timing at least three days in advance.

City of Franklin has water main, storm sewer, sanitary sewer and street lighting located along the entire length of the project. All work performed by the contractor is to be approved by the City of Franklin and the engineer in the field before the work is started and after the work is completed.

Water Main

A 16" water main runs primarily on the east side of the roadway along the project as shown on the plans. There are 12 water main crossings at approximately Station 145+75, Station 149+80, Station 158+75, Station 169+85, Station 181+82, Station 185+10, Station 201+35, Station 210+75, Station 223+85, Station 226+35, Station 230+40 and Station 241+10.

There are 59 water valve boxes and 2 water manhole covers that require adjustment. There are 22 hydrants that require adjustment or relocation. These adjustments and relocations are to be done by the contractor as shown in the plans and in accordance to the City of Franklin provisions. The locations of the water valve boxes and hydrants are as follows:

Southbound Water Adjustments/Relocates

Station	Offset	Type	Location	Work
153+55	90' LT	WV BOX	MARGARET LN.	ADJUST
153+70	100' LT	HYDRANT	MARGARET LN.	ADJUST
158+25	80' LT	WV BOX	PUETZ RD.	ADJUST
158+45	80' LT	WV BOX	PUETZ RD.	ADJUST
158+80	60' LT	WV BOX	PUETZ RD.	ADJUST
168+60	30' LT	WV BOX	LAKE POINTE DR.	ADJUST
168+60	40' LT	HYDRANT	LAKE POINTE DR.	ADJUST
169+15	30' LT	WV BOX	LAKE POINTE DR.	ADJUST
169+55	60' LT	WV BOX	LAKE POINTE DR.	ADJUST
169+75	30' LT	WV BOX	LAKE POINTE DR.	ADJUST
185+15	55' LT	WV BOX	FOREST HILL AVE.	ADJUST
185+25	65' LT	WV BOX	FOREST HILL AVE.	ADJUST
185+28	65' LT	HYDRANT	FOREST HILL AVE.	RELOCATE
191+80	55' LT	HYDRANT		RELOCATE
191+80	50' LT	WV BOX		ADJUST
195+80	25' LT	HYDRANT		RELOCATE
198+25	20' LT	WV BOX		ADJUST
198+25	25' LT	HYDRANT		RELOCATE
200+95	20' LT	WV BOX	NORWOOD LN.	ADJUST
201+35	25' LT	WV BOX	NORWOOD LN.	ADJUST
201+45	65' LT	WV BOX	NORWOOD LN.	ADJUST
206+60	60' LT	WATER MH		ADJUST
241+00	65' LT	WV BOX	IMPERIAL DR.	ADJUST
241+05	80' LT	WV BOX	IMPERIAL DR.	ADJUST

NORTHBOUND WATER ADJUSTMENTS/RELOCATES

STATION	OFFSET	TYPE	LOCATION	WORK
145+75	35' RT.	HYDRANT		ADJUST
149+80	35' RT.	HYDRANT		ADJUST
153+70	25' RT.	WV BOX	MARGARET LN.	ADJUST
153+70	30' RT.	HYDRANT	MARGARET LN.	ADJUST
158+20	25' RT.	WV BOX	PUETZ RD.	ADJUST
158+20	35' RT.	HYDRANT	PUETZ RD.	RELOCATE
158+30	25' RT.	WV BOX	PUETZ RD.	ADJUST
159+10	50' RT.	WV BOX	PUETZ RD.	ADJUST
171+70	25' RT.	WV BOX		ADJUST
171+70	40' RT.	WV BOX		ADJUST
173+50	25' RT.	HYDRANT	TUCKAWAY SHORES	RELOCATE
173+50	30' RT.	WV BOX	TUCKAWAY SHORES	ADJUST
177+45	40' RT.	HYDRANT	FOUNTAIN CT.	RELOCATE
177+50	25' RT.	WV BOX	FOUNTAIN CT.	ADJUST
177+70	25' RT.	WV BOX	FOUNTAIN CT.	ADJUST
177+85	30' RT.	WV BOX	FOUNTAIN CT.	ADJUST
181+80	30' RT.	WV BOX		ADJUST
181+90	28' RT.	HYDRANT		RELOCATE
181+90	30' RT.	WV BOX		ADJUST
183+10	30' RT.	WV BOX	TUCKAWAY CREEK	ADJUST
183+20	35' RT.	WV BOX	TUCKAWAY CREEK	ADJUST
185+10	30' RT.	WV BOX	FOREST HILL AVE.	ADJUST
186+70	40' RT.	WV BOX	COUNTRY CLUB #1	ADJUST
186+70	65' RT.	WV BOX	COUNTRY CLUB #1	ADJUST
186+90	45' RT.	WV BOX	COUNTRY CLUB #1	ADJUST
194+75	40' RT.	WV BOX	COUNTRY CLUB #2	ADJUST
194+77	40' RT.	WV BOX	COUNTRY CLUB #2	ADJUST
194+77	65’ RT.	HYDRANT	COUNTRY CLUB #2	ADJUST
194+80	30' RT.	WV BOX	COUNTRY CLUB #2	ADJUST
198+50	30' RT.	HYDRANT		RELOCATE
198+50	40' RT.	WV BOX		ADJUST
201+35	30’ RT.	WV BOX	TUCKAWAY PINES	ADJUST
201+40	35' RT.	WV BOX	TUCKAWAY PINES	ADJUST
201+45	30' RT.	WV BOX	TUCKAWAY PINES	ADJUST
202+55	28' RT.	HYDRANT		RELOCATE
202+55	30' RT.	WV BOX		ADJUST

STATION	OFFSET	TYPE	LOCATION	WORK
205+85	28' RT.	HYDRANT		RELOCATE

NORTHBOUND WATER ADJUSTMENTS/RELOCATES, CONT.

STATION	OFFSET	TYPE	LOCATION	WORK
205+85	30' RT.	WV BOX		ADJUST
208+90	28' RT.	HYDRANT		RELOCATE
208+90	30' RT.	WV BOX		ADJUST
210+75	30' RT.	WV BOX	DREXEL AVE.	ADJUST
211+10	75' RT.	HYDRANT	DREXEL AVE.	ADJUST
211+12	75' RT.	WV BOX	DREXEL AVE.	ADJUST
211+20	65' RT.	WV BOX	DREXEL AVE.	ADJUST
214+80	55' RT.	WV BOX		ADJUST
215+30	45' RT.	WV BOX		ADJUST
215+30	30' RT.	HYDRANT		RELOCATE
216+65	65' RT.	WV BOX		ADJUST
217+75	55' RT.	WV BOX		ADJUST
219+95	60' RT.	WV BOX	PINEBERRY RIDGE	ADJUST
220+00	65' RT.	WV BOX	PINEBERRY RIDGE	ADJUST
220+05	65' RT.	HYDRANT	PINEBERRY RIDGE	ADJUST
220+10	55' RT.	WV BOX	PINEBERRY RIDGE	ADJUST
223+85	55' RT.	WATER MH		ADJUST
224+70	28' RT.	HYDRANT	FAITH DR.	RELOCATE
224+75	30' RT.	WV BOX	FAITH DR.	ADJUST
225+05	25' RT.	WV BOX	FAITH DR.	ADJUST
230+40	45' RT.	WV BOX		ADJUST
241+25	65' RT.	WV BOX	BRUNN DR.	ADJUST

Adjustments and/or relocate the water valve boxes and hydrants in accordance to the items.

Storm Sewer

There is limited storm sewer located along the entire length of the project. Remove, adjust or reconstruct as shown on the plans.

Sanitary Sewer

The sanitary sewer runs along the entire length of the project as shown on the plans. The sanitary sewer is located on the west side of the roadway from approximately W. Puetz Rd. to Tuckaway Shores Dr. and runs on the east side of the roadway approximately from Tuckaway Shores Dr. to W. Imperial Dr. There are 8 sanitary sewer crossings at approximately Station 153+50, Station 158+82, Station 165+25, Station 181+90, Station 185+05, Station 201+25, Station 212+15 and Station 241+00.

There are 47 sanitary manholes that require adjusting or reconstructing as shown in the plans and in accordance to the City of Franklin provisions. The sanitary manholes are at the following locations:

SOUTHBOUND SANITARY SEWER ADJUSTMENTS/RECONSTRUCTS

STATION	OFFSET	TYPE	LOCATION	WORK
153+45	80' LT.	SAN MH	MARGARET LN.	ADJUST
158+65	35' LT.	SAN MH	PUETZ RD.	ADJUST
158+65	70' LT.	SAN MH	PUETZ RD.	ADJUST
158+80	35' LT.	SAN MH	PUETZ RD.	ADJUST
160+75	45' LT.	SAN MH		ADJUST
163+05	45' LT.	SAN MH		RECONSTRUCT
165+25	45' LT.	SAN MH		RECONSTRUCT
168+50	45' LT.	SAN MH		ADJUST
171+30	45' LT.	SAN MH		ADJUST
180+55	65' LT.	SAN MH		ADJUST
195+50	35' LT.	SAN MH		RECONSTRUCT
198+25	35' LT.	SAN MH		ADJUST
201+25	35' LT.	SAN MH	NORWOOD LN.	RECONSTRUCT
211+50	70' LT.	SAN MH	DREXEL AVE.	RECONSTRUCT
212+15	75' LT.	SAN MH		RECONSTRUCT
214+50	75' LT.	SAN MH		ADJUST
218+00	75’ LT	SAN MH		ADJUST
240+90	65' LT.	SAN MH	IMPERIAL DR.	ADJUST
246+85	20' LT.	SAN MH		RECONSTRUCT

NORTHBOUND SANITARY SEWER ADJUSTMENTS/RECONSTRUCTS

STATION	OFFSET	TYPE	LOCATION	WORK
153+55	55' RT.	SAN MH	MARGARET LN.	ADJUST
165+25	50' RT.	SAN MH		ADJUST
167+40	50' RT.	SAN MH		ADJUST
177+75	45' RT.	SAN MH	FOUNTAIN CT.	ADJUST
179+35	45' RT.	SAN MH		RECONSTRUCT
181+90	45' RT.	SAN MH		RECONSTRUCT
183+30	45' RT.	SAN MH	TUCKAWAY CREEK	RECONSTRUCT
185+05	45' RT.	SAN MH	FOREST HILL AVE.	RECONSTRUCT
186+60	45' RT.	SAN MH	COUNTRY CLUB #1	RECONSTRUCT
189+05	45' RT.	SAN MH		RECONSTRUCT

193+05	45' RT.	SAN MH		ADJUST
194+60	45' RT.	SAN MH	COUNTRY CLUB #2	ADJUST
199+25	45' RT.	SAN MH		RECONSTRUCT
201+25	45' RT.	SAN MH	NORWOOD LN.	ADJUST
201+75	45' RT.	SAN MH	NORWOOD LN.	RECONSTRUCT
205+30	45' RT.	SAN MH		ADJUST
208+90	45' RT.	SAN MH		ADJUST
210+90	45' RT.	SAN MH	DREXEL AVE.	ADJUST
212+15	90' RT.	SAN MH		RECONSTRUCT
213+10	80' RT.	SAN MH		RECONSTRUCT
216+30	45' RT.	SAN MH		RECONSTRUCT
219+90	45' RT.	SAN MH	PINEBERRY RIDGE	ADJUST
222+55	45' RT.	SAN MH		RECONSTRUCT
223+30	45' RT.	SAN MH		RECONSTRUCT
225+50	45' RT.	SAN MH	FAITH DR.	RECONSTRUCT
228+50	45' RT.	SAN MH	SOUTHVIEW DR.	ADJUST
241+05	65' RT.	SAN MH	BRUNN DR.	ADJUST

SIDE STREET SANITARY SEWER ADJUSTMENTS/RECONSTRUCTS

STATION	OFFSET	TYPE	SIDE STREET	WORK
12+15	R/L	SAN MH	DREXEL AVE.	ADJUST

External sanitary manholes seals are required in compliance with the item.

Contact Ron Romeis at (414) 425-7510 to coordinate sanitary sewer, water main and hydrant inspections.

Street Lighting
The street lighting is located mostly at the intersections along the project. All the street lighting is owned and maintained by We Energies (Electric).

Time Warner Cable (TWC) has underground and overhead TV cable lines along the entire length of the project. TWC also has aerial cable and fiber on We Energies poles along the length of the project. TWC will perform the following work after WE Energies relocations are complete and before the start of the project. Contact Steve Cramer at (414) 277-4045 if coordinations are necessary.

UNDERGROUND FACILITIES WITH WE ENERGIES

STATION	DESCRIPTION	WORK
168+60	SINGLE COAX CABLE	RELOCATE
171+62	SINGLE COAX CABLE	RELOCATE

217+80	SINGLE COAX CABLE	RELOCATE
242+17	SINGLE COAX CABLE	RELOCATE

OVERHEAD FACILITIES ON WE ENERGIES POLES

STATION	OFFSET	DESCRIPTION	WORK
207+97	60' RT	CABLE	RELOCATE TO NEW POWER POLE
213+38	60' RT	CABLE	RELOCATE TO NEW POWER POLE
214+78	60' RT	CABLE	RELOCATE TO NEW POWER POLE
216+20	60' RT	CABLE	RELOCATE TO NEW POWER POLE
229+96	46' LT	CABLE	RELOCATE
233+95	45' LT	CABLE	RELOCATE

NEW UNDERGROUND FACILITIES

STATION	OFFSET	DESCRIPTION	WORK
173+55	60' RT	CATV	BORE FROM POLE NORTH TO STATION 174+55, THEN WEST TO EXISTING PEDESTAL 45'LT.
229+95	57' RT	CATV	BORE FROM POLE NORTH TO STATION 230+30 THEN WEST TO EXISTING PEDESTAL 55' LT.

The following utility companies or organizations have no facilities in the vicinity of project area: ATC Management Inc., West Shore Pipeline Co., Milwaukee Metropolitan Sewerage District (MMSD), Milwaukee County Transit System (MCTS) and Milwaukee Water Works.
107-127 (20120615)

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

Both the department and City of Franklin personnel will inspect construction of sanitary sewer and water main under this contract. However, construction staking, testing, and final acceptance of the sanitary sewer and water main construction will be by the City of Franklin.
105-001 (20061009)

9. Referenced Construction Specifications.

The specifications for the sanitary sewer and water main bid items reference the Standard Specifications for Sewer and Water Construction in Wisconsin and the City of Franklin Design Standards and Construction Specifications, May 2007. If there is a discrepancy or

conflict between the referenced specifications and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

10. Environmental Protection.

If swallow nests are present, do not remove or destroy them when the swallow are nesting or rearing young (May 1 to August 30). If swallow nests will be destroyed by this project, coordinate this activity in accordance to existing WISDOT/US Fish and Wildlife (FWS) guidelines.

Be aware that Emerald Ash Borer quarantines are currently in effect in Milwaukee County. Follow WISDOT provisions for working in the quarantine county and the DATCP restrictions regarding the emerald ash borer.

Abide by WISDOT provisions to prevent the spread of viral hemorrhagic septicemia (VHS) and other invasives during any in-water work.

Lateral encroachment and side-slope extension into the wetland areas along the project should be avoided to the extent possible. Do not place any fill in waterways or wetlands for work pads, equipment staging or vehicle access.

Grinding slurry should be contained and should not be allowed to drain to any wetlands or storm sewer inlets. Remove material that inadvertently enters the wetlands or waterways. Remove dust, dirt and concrete debris accumulating in the work areas during construction at periodic intervals to prevent discharge of these materials into wetlands or waterways.

No in-stream construction activity shall occur from March 1 to July 15 of any given year in order to protect endemic and migrating fish species downstream.

An unobstructed, live water condition must be maintained at all times during culvert replacement activities to assure continuous fish/aquatic invertebrate passage. Construction activity must be adequately separated from stream flow discharges.

All drums and containers used during construction should be stored in secure locations to prevent vandalism and unwanted dumping. If an abandoned container is discovered on the project site notify WDNR by calling 1-800-943-0003.

11. Erosion Control.

Perform the work under this item in accordance to the requirements of standard spec 107.20, and as hereinafter supplemented.

Take adequate precautions to install and maintain necessary erosion and sediment control during construction operations at curbs and gutters, and at other locations as determined by the engineer. Protect storm sewer inlets at locations determined by the engineer with a

filter fabric meeting accepted design criteria, standards and specifications. Protect all waterway crossings along the project from erosion and siltation

Provide an erosion control implementation plan (ECIP) 14 days prior to the pre-construction conference. Do not start construction operations until a written approval of the ECIP has been granted from the department.

Excess fill material, spoils and equipment should be stockpiled on upland areas an adequate distance away from wetlands, storm sewer inlets, floodplains, critical habitat and the waterways. Protect piles of stockpiled soil against erosion and do not create nuisance dust emissions.

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 a suitable self-contained particulate collector to prevent discharge from the collection bin into the atmosphere.

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. Sod and fertilize all topsoiled areas within 3 business days after placement of topsoil.

The construction site activities will be regulated under ch. 283, Wis. Stats., ch. NR216, Wis. Adm. Code, and in accordance to Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-S067831-3, Construction Site Storm Water Runoff. All erosion control and storm water management activities undertaken at the site must be done in accordance to the terms and conditions of the permit. A Certificate of Permit Coverage must be posted in a conspicuous place on the construction site. The Certificate of Permit Coverage (WDNR Publication #WT-813) and WPDES General Permit can be obtained from the engineer.

Do not locate construction staging areas or fill in any nearby wetlands.

Protect all waterway crossings along the project from erosion and siltation.

12. 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. This article also specifies contract bid items to be incorporated into the DCIP.

B (Vacant)

C Construction

C.1 General

Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter (PM) or nuisance dust conditions. The contractor has 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.

Include in the DCIP ,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 the contractor plans to employ various dust control or prevention strategies.
4. A matrix showing, for each anticipated land disturbing, dust generating activity, the following:
   - Preventive measures that will 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 will be employed. List the specific contract bid items that will 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 will be disposed of.

5. A description of how off-site impacts will 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.

Measurements under the DCIP include, but are not limited to, the contract bid items listed below:

624.0100 Water

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.

If the contractor fails to correct a dust control deficiency within the specified time, the department will deduct $5,000 per day from payments due the contractor for each calendar day, or fraction of a day, that the deficiency exists. The department will assess time beginning with contractor notification and ending when the engineer accepts the correction. After expiration of the specified time for correction, the engineer may correct, or have a third party, correct the deficiency. In addition to the $5,000 per day deduction, the department will deduct costs of this correction from payments due the contractor.
SEF Rev. 091120

13. Clearing and Grubbing, Emerald Ash Borer.

This applies to projects in the emerald ash borer (EAB) quarantined zones to include Fond du Lac, Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha counties.

Supplement standard spec 201.3 with the following:

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

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

- Green ash *(F. pennsylvanica*) is found throughout the state, but is most common in southern Wisconsin. It may form pure stands or grow in association with black ash, red maple, swamp white oak, and elm. It grows as an associate in upland hardwood stands, but is most common in and around stream banks, floodplains, and swamps.

- Black ash *(F. nigra*) is distributed over the entire state but is most frequently found in northern Wisconsin. It is most common in swamps, but is also found in other wet forest types.

- Blue ash (*F. quadrangulata*) is a threatened species that is currently found only at a few sites in Waukesha County. The species is at the edge of its range in Wisconsin, but is common in states farther south. The species is not of commercial importance. Blue ash twigs are 4-sided.

- White ash (*F. americana*) tends to occur primarily in upland forests, often with *Acer saccharum.*

The quarantine of ash trees includes all horticultural cultivars of the species listed above.

- Note that blue ash twigs are 4-sided. All other Wisconsin ash trees have round stems. Also, Mountain ash (*Sorbus americana and S. decora*) is not a true ash and is not susceptible to EAB infestation.

Hire a certified arborist to identify all ash trees that will be cleared and grubbed for the project. In addition, prior to scheduled clearing and grubbing activities, the arborist shall mark all ash trees with florescent lime flagging tied around the trunk perimeter.

Follow and obey the following Wisconsin Department of Agriculture, Trade, and Consumer Protection order:

ATCP 21.17 Emerald ash borer; import controls and quarantine.

Importing or Moving Regulated Items from Infested Areas; Prohibition.
Except as provided in subparagraph (3), no person may do any of the following:

(a) Import a regulated item under sub. (2) into this state if that item originates from an emerald ash borer regulated area identified in 7CFR 301.53-3.

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

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

Regulated Items. The following are regulated items for purposes of subparagraph (1):

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

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

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

Chipped Ash Trees

- May be left on site if used as landscape mulch within the project limits. If used as mulch on site, chips may not be applied at a depth greater than standard mulch applications as this will impede germination of seeded areas.

- May be buried on site within the right-of-way in accordance to standard spec 201.3 (14).

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

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

- Burning chips is optional if in compliance with standard spec 201.3.

- Chips must be disposed of immediately if not used for project mulching and may not be stockpiled and left on site for potential transport by others. Chips may be stockpiled temporarily if they will be used for project mulching and are not readily accessible to the public.

- Chipper equipment must be cleaned following post-chipping activities to ensure no spread of wood chip debris into non-quarantined counties.

Ash logs, Branches, and Roots

- May be buried without chipping within the existing right-of-way or on adjacent properties in accordance to standard spec 201.3 (14)(15).

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

- Burning is optional if in compliance with standard spec 201.3.

- Ash logs, branches, and roots must be disposed of immediately and may not stockpiled.

- All additional costs will be incidental to clearing and grubbing items.

- Do not bury or use mulch in an area that will be disturbed again during later phases of the project.

- Anyone moving firewood or ash products from the state or these counties is subject to state and federal fines up to $1,000.00. All fines are the responsibility of the contractor. Obtain updated quarantine information at the DNR Firewood Information Line at (800) 303-WOOD.

Furnishing and Planting Plant Materials
Supplement standard spec 632.2.2 with the following:

Ash trees may be obtained from inside or outside the quarantine area and planted within the quarantined area. Ash trees from within the quarantine area may not be transported and planted into the non-quarantined area.

Updates for Compliance
Each year, as a service, the Wisconsin department of agriculture, trade and consumer protection distributes an updated federal CFR listing to nursery license holders and other affected persons in this state. More frequent updates, if any, are available on the Department of Agriculture, Trade, and Consumer Protection (DATCP) website at ***www.datcp.state.wi.us***. Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from the DATCP. Persons may request update notices by calling (608) 224−4573, by visiting the DATCP website, or by writing to the following address:

Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Resource Management
P.O. Box 8911
Madison WI 53708−8911

Regulated Items
More frequent updates, if any, are available on the DATCP website at w*ww.datcp.state.wi.us.* Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from DATCP. Persons may request update notices by calling (608) 224−4573, by visiting the DATCP website, or by writing to the above address.

14. Construction Trenches.

Upon completion of each work day and when work is not in progress, plate all trenches within the roadway resulting from sewer installations or similar construction activities, which are not fully backfilled, with steel plates suitable for carrying a vehicle as directed by the engineer. The plating is in addition to the barricades and traffic control devices required for lane closure or traffic control. Plating is incidental to the item of work that caused the need for plating.

15. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Comply with the City of Franklin Noise ordinance Municipal Code Chapter 183, Article XIII, Section 183-40, Paragraph D, and as follows:

Do not operate or permit the operation of any tools or equipment between 9:00 PM and 7:00 AM the following day. Receive written approval of the engineer to extend hours of operation, except on Sundays, for operations or work under public contracts.

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Anthony Jernigan at (262) 547-4171 Ext 6.
107-054 (20080901)

17. Construction Over or Adjacent to Navigable Waters.

Supplement standard spec 107.19 with the following:

The Legend Creek is classified as a navigable waterway.
107-060 (20040415)

18. Notice to Contractor, Verification of Asbestos Inspection, No Asbestos Found.

John Roelke, License Number All 119523, inspected Structure C-40-0022 for asbestos on January 14, 2013. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Joseph A. Wieczorek, P.E. at (414) 278-4893.
107-127 (20120615)

19. Notice to Contractor.

If contamination is found during the construction of this project, immediately notify the engineer on the project site along with Michael Cape, Wisconsin Department of Transportation-SE Region, Hazard Materials Engineer at (262) 548-5930. The Hazardous Materials Report is available by contacting the engineer on the project site.

20. Coordination with Businesses.

Arrange and conduct a meeting between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting prior to the start of work under this contract and hold two meetings per month thereafter.
108-060 (20030820)

21. Removals.

Removals will be paid by the associated bid item as designated in the plans and as follows:

- Bid item Removing Curb & Gutter includes removing both concrete and asphaltic curb and/or gutter.
- Removing concrete corrugated median is paid as Removing Pavement.
- Bid item Removing Small Pipe Culverts includes removing the endwall(s), unless otherwise noted in the plans.
- Removing mortar rubble masonry endwall(s) is paid as Removing Masonry.
- Removing Asphaltic Surface Temporary is paid as Excavation Common.
- Removing brick pavers is paid as Excavation Common.
- Removing concrete or asphalt flumes is pad as Removing Surface Drains.
- Removing concrete slabs and removing concrete ditch lining are paid as Removing Pavement.

22. Excavation Below Subgrade (EBS).

Test roll all roadways as specified in the special provision Test Rolling in the presence of the engineer and prior to placement of the base courses to gain acceptance of the subgrade.

EBS may be necessary depending on the conditions found in the field and test rolling results. A copy of the Geotechnical Exploration Report is available upon request to the engineer in the field.

No payment to the contractor will be made for those areas where the contractor has performed EBS without approval of the engineer in the field.

23. 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 two consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:

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

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

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

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

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

B.8 Department Testing

B.8.1 General

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

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

A Description

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

(2) Profile the final riding surface of all mainline pavements, bridges, approaches, and railroad crossings. Roundabouts, and pavements within 150 feet of the points of curvature of roundabout intersections, are excluded from the testing requirements of this provision.

(3) Pavements that are excluded from localized roughness according to C.5.2(1), bridges, and roundabout intersections are subject to engineer-directed straightedging according to the standard specifications. All other surfaces being tested under this provision are exempt from straightedging requirements.

B (Vacant)

C Construction

C.1 Quality Control Plan

(1) Submit a written quality control plan to the engineer at or before the pre-construction conference. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of all quality control personnel.
2. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. The methods and timing used for monitoring and/or testing ride quality throughout the paving process.
4. The evaluation process that will be used to make improvements to the construction operations if poor ride quality is found during the process control testing.
5. The methods that will be used to ensure a smooth pavement transition when matching into existing surfaces such as bridges, bridge approaches, or railroad crossings.
6. The segment locations of each profile run used for acceptance testing.
7. The approximate timing of acceptance testing in relation to the paving operations.

C.2 Personnel

(1) Have a profiler operator, certified under the department's highway technician certification program (HTCP), operate the equipment, collect the required data, and document the results using the methods taught in the HTCP profiling course.

C.3 Equipment

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

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

(2) Unless the engineer and contractor mutually agree otherwise, arrange to have a calibrated profiler available when paving the final riding surface. Calibrate the profiler according to the manufacturer's recommendations. Provide the engineer with a copy of the most recent calibration results, signed by the certified profiler operator.

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

C.4 Testing

C.4.1 Run and Reduction Parameters

(1) Enter the equipment-specific department-approved filter settings and parameters listed on the department's ride web site.

C.4.2 Contractor Testing

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

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

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

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

(4) Treat partial segments as independent segments.

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

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

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

C.4.3 Verification Testing

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

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

(3) The engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's testing procedures and equipment. Both parties will document all investigative work.

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

C.4.4 Documenting Profile Runs

(1) Compute the IRI for each segment and analyze areas of localized roughness using the ProVAL software. Within 5 business days after completing a final acceptance profile run, submit a copy of the ProVAL smoothness assurance report showing the IRI for each segment and the areas of localized roughness exceeding an IRI of 175 in/mile. The ProVAL software and department-specified inputs are available on the department's web site:

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

(2) As part of the profiler software outputs and ProVAL reports, document the areas of localized roughness and the locations of individual features including construction joints, structure limits, design features, utility fixtures, and other features that might affect the department's evaluation of ride quality. Field-locate the areas of localized roughness prior to the engineer's assessment for corrective actions.

(3) Within 5 business days after completing profiling of the pavement covered under this special provision, unless the engineer and contractor mutually agree to a different timeline, submit the electronic ProVAL project file containing the .ERD files for each profiler acceptance run. Submit profile data using the department's Materials Reporting System (MRS) software available on the department's web site:

http://www.atwoodsystems.com/mrs

C.5 Corrective Actions

C.5.1 General

(1) Correct the ride as the engineer directs. The department will independently assess whether a repair will help or hurt the long-term pavement performance and/or public perception of the ride before deciding on corrective action.

C.5.2 Corrective Actions for Localized Roughness

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

(2) The engineer will review each individual wheel track for areas of localized roughness. The engineer will assess areas of localized roughness that exceed an IRI of 175 in/mile and do one of the following for each location:

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

Localized Roughness IRI (in/mile)	**Pay Reduction[1] (dollars)**
> 175	(Length in Feet) x (IRI – 175)

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

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

(4) Re-profile corrected areas to verify that the IRI is less than 140 in/mile after correction. Submit a revised ProVAL smoothness assurance report for the corrected areas to validate the results.

C.5.3 Corrective Actions for Excessive IRI

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

HMA I:	Correct to an IRI of 60 in/mile using whichever of the following methods the engineer directs: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Correct the full lane width using techniques approved by the engineer.
HMA II:	Correct to an IRI of 85 in/mile using whichever of the following methods the engineer directs: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Correct the full lane width using techniques approved by the engineer.
PCC II:	Correct to an IRI of 85 in/mile using whichever of the following methods the engineer directs: Continuous diamond grinding of the full lane width of the riding surface including adjustment of the paved shoulders Correct the full lane width using techniques approved by the engineer.

(2) Re-profile corrected segments to verify that the final IRI meets the above correction limits and there are no areas of localized roughness. Submit a revised ProVAL smoothness assurance report for the corrected areas to validate the results. Segments failing these criteria after correction are subject to the engineer's right to adjust pay for non-conforming work under standard specifications 105.3.

C.6 Dispute Resolution

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

(2) If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming pavement, the department will use third party testing to resolve the dispute. The department's Quality Assurance Unit, or a mutually agreed on independent testing company, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent tester. The department may use third party tests to evaluate the quality of questionable pavement and determine the appropriate payment.

D Measurement

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

E Payment

E.1 Payment for Profiling

(1) Costs for furnishing and operating the profiler, documenting profile results, and correcting the final pavement surface are incidental to the contract.

E.2 Pay Adjustment

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

ITEM NUMBER	DESCRIPTION	UNIT
440.4410.S	Incentive IRI Ride	DOL

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

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

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

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

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

(6) The department will adjust pay for 500-foot long standard segments nominally one wheel path wide using equation "QMP 1.03" as follows:

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

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

HMA IV and PCC IV	
Initial IRI (inches/mile)	**Pay Adjustment[1] [2] (dollars per standard segment)**
< 50	250
≥ 50 to < 75	750 – (10 x IRI)
≥ 75	0

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

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

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

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25. Protection of Concrete.

Supplement standard spec 415.3.16 as follows:

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

The cost for providing the finisher(s), the necessary equipment, and materials is incidental to the contract unit price for each concrete item.

26. Asphaltic Surface Patching for Temporary Roadway Maintenance.

It is the responsibility of the contractor for any roadway maintenance required in the open lanes of the existing roadway within the limits of the temporary traffic control staging plans. Respond within 12 hours of any call for maintenance. Cost of work, such as repairing potholes during construction will be paid for under bid item 465.0110, Asphaltic Surface Patching.

Roadway maintenance on the temporary asphaltic surface is paid under bid item 465.0125, Asphaltic Surface Temporary.

27. Temporary Crossovers.

The cost of all temporary crossover work, including installation and removal, will be paid under the items in the contract as shown in the plans. No extra items will be added to the contract for removing pavement, sawing pavement, mobilization, excavating areas, backfilling excavated areas and hand forming curb and gutter.

28. Asphaltic Surface Temporary.

Perform this work in accordance to the requirements of standard spec 465, except as hereinafter modified.

In standard spec 465.3.1(1) include placing earth fill and for grading and shaping existing ditches to drain properly during construction; and removal of material from saw cutting existing pavement.

29. Concrete Pavement 8 ½ Inch.

Concrete Pavement 8 ½ Inch shall conform to standard spec 415 and as follows:

- Do not tine the concrete pavement. Use an artificial turf drag approved by the engineer to texture the surface.
- Concrete Pavement 8 ½ Inch may be placed after November 1 with the approval of the engineer. Comply with standard spec 415.3.13 for Cold Weather Concreting. The cost of providing covering materials and insulation or other costs incurred with the protection of the pavement is incidental to the pertinent item. No additional payment will be made.
- Leave a 1 foot by 1 foot "box out" at section corner locations so that the section corner monuments may be replaced by others. Notify the engineer when the paving is complete so that arrangements can be made to have SEWRPC restore the section corner monuments. After the monument has been restored, place concrete in the "box out". The cost of this additional concrete shall be incidental to the item Concrete Pavement 8 ½ Inch. No additional payment will be made.

30. Retention Basin.

Construct the retention basin as shown on the plans, in conformity to the pertinent Sections of the Standard Specifications and as follows:

- The department will pay for the excavation of the basin under the item "Excavation Common".
- The department will pay for the excavation and earth moving for the tracking pad and the emergency spillway under the item "Excavation Common"
- The department will pay for the stone for the Tracking pad under the item "Breaker Run Stone".
- The department will pay for the Layout and staking of the basin under the item "Construction Staking Supplementary Control".
- The quantities for the above work have been added to the pertinent bid items.
- Restore all areas disturbed for retention basin construction with 4" topsoil, erosion mat urban class I type A, fertilizer, mulch, and seed.
- Do not disturb any vegetation outside of the limits of retention basin construction.
- Do not disturb wetland areas outside the limits of retention basin construction.
- Enter the site only from the existing driveway near Station 215+50, RT.
- Fill the basin to elevation 732.00. The department will pay for the filling of the basin under the item "Water".

31. Wall Modular Block Gravity, Item 532.0200.S.

A Description

This special provision describes designing, furnishing materials, and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components is 75 years.

B Materials

B.1 Proprietary Modular Block Gravity Wall Systems

The department specifies approved modular block gravity wall products on the department's approved products list.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the departments' Bureau of Structures, Structures Development Section. Furnish the name of the companies supplying pre-approved material within 25 days after the award of contract. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date.

Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of chapter 14 of the department's Bridge manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Development Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

Supply a design and supporting documentation as required by this special provision for review by the department to show that the proposed wall design is in compliance with the design specifications. Submit the following to the engineer for review and acceptance no later than 21 days before wall construction will begin.

Prepare the design/shop plans on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. Sign, seal, and date by a professional engineer licensed in the State of Wisconsin all plans and calculations. Submit four copies of the shop drawings and two copies of the design calculations and supporting materials.

The design of the Modular Block Gravity Wall shall be in conformance to the latest edition of the AASHTO Standard Specifications for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the department. The design must include analyses that clearly show the factors of safety for overturning, sliding, and soil bearing stress. The width of the modular block from front face to back face of the wall shall be given in the design computations and shown on the wall shop drawings.

The minimum embedment to the bottom of the modular block shall be 1 foot 6 inches, or as specified in the plan.

B.3 Wall System Components

Materials furnished under this contract shall conform to the requirements hereinafter provided.

B.3.1 Backfill

Wall Backfill, Type A, shall comply with the requirements for coarse aggregate No. 1 as given in standard spec 501.2.5.4. Wall Backfill, Type A is defined as all backfill placed within a zone from the base of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall. This includes all material used to fill openings in the wall facing units.

Place a layer of Geotextile Fabric Type "DF" (Schedule B) vertically between the retained soil and the Type A backfill. Extend the geotextile fabric from the top of the leveling pad to 6 inches below the surface of the retained soil. Wrap the geotextile across the top of the Type A backfill to the back of block wall facing.

B.3.2 Wall Facing

Provide wall facing units that consist of precast modular concrete blocks. All units shall incorporate a mechanism or devices that will develop a mechanical connection between vertical block layers. Do not use units that are cracked, chipped or have other imperfections in accordance to ASTM C1372 or excessive efflorescence within the wall. Use a single block type and style throughout each wall. Use the color and surface texture of the block given on the plan, or as chosen by the engineer.

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall. Bond the finishing course to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. Design a cap of this type to have texture, color, and an appearance that complements the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Place expansion joints in the cap to correspond with each 24-inch change in vertical wall height or at a maximum spacing of 10 feet. Use Grade A Concrete conforming to the requirements of standard spec 501.3 for all cast-in-place caps.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer, in accordance to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. Also the minimum allowed thickness of any other portion of the block is 2 inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

Cementitious materials and aggregates for modular blocks shall conform to the requirements of ASTM C1372 section 4.1 and 4.2. Modular blocks shall meet the following requirements:

Test	Method	Requirement
Compressive Strength (psi)	ASTM C140	5000 min.
Water Absorption (%)	ASTM C140	6 max.
Freeze-Thaw Loss (%)	ASTM	
40 cycles, 5 of 5 samples	C1262[(1)]	1.0 max.[(2)]
50 cycles, 4 of 5 samples		1.5 max.[(2)]

(1) Test shall be run using a 3% saline solution.

(2) Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable

Certify all blocks as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of the certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. Clearly identify the firm conducted the sampling and testing, the type of block, the date sampled, name of the person conducting the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification in the certified test report. A lot shall not exceed 5000 blocks. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected. Remove block lots that do not meet the requirements of this specification or blocks without supporting certified test reports from the project at the contractor's expense.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. Number and mark all pallets of blocks within the lot to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. Strap or wrap all pallets of blocks within a lot to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. Remove all rejected blocks from the project at no expense to the department.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not do freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), remove from the project site all blocks from the failed lot that have not been installed in the finished work, at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

B.3.3 Leveling Pad

For all walls over 5 feet tall measured from the top of the leveling pad to the top of the wall, the wall leveling pad shall consist of a poured concrete masonry pad made from Grade A concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for class II concrete as specified in standard spec 716. The depth of the leveling pad shall be as shown on the plans or 6-inches minimum. The leveling pad shall be as wide as the blocks plus 6-inches. Six inches of leveling pad shall extend beyond the front face of the blocks. The bottom of the blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad. Use a concrete leveling pad for the entire length of the wall. Build all walls with a Structure Number assigned (such as R-XX-XXX) using the concrete leveling pad given above. Step the leveling pad to follow the general slope of the ground line. The leveling pads steps shall keep the bottom of the wall within one block's thickness of the minimum embedment, i.e. minimum embedment plus up to the thickness of one block. Additional embedment may be detailed but will not be measured for payment.

On walls less than or equal to 5 feet in height without a wall number assigned, a compacted leveling pad made from base aggregate dense 1¼ inch as given in standard spec 305 may be used. The depth of the aggregate leveling pad shall be as shown on the plans or 12-inches minimum. The aggregate leveling pad shall be as wide as the blocks plus 12 inches with 12 inches of pad extending beyond the front face of the wall.

C Construction

C.1 General

Construct the modular block gravity wall in accordance to the manufacturer's instructions, at the locations and to the dimensions shown on the plan and as directed by the engineer. At the end of each working day, provide good temporary drainage such that the backfill does not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the front face of the wall.

Place materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units.

Compact each layer of wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units. At no expense to the department, correct any such damage or misalignment as directed by the engineer.

Do not operate tracked or wheeled equipment within 3 feet of the back face of the blocks. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the wall facing units.

After construction of the wall, restore the surrounding area located above and below all precast block retaining wall sites to its original condition and to the finished details on the plans.

C.2 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. The allowable soil bearing capacity is given on the plan. After completion of excavation, the department's Regional Soils Engineer will inspect the site and determine if the foundation is adequate for the intended loads. Allow the region's Soils Engineer two working days to perform the inspection.

D Measurement

The department will measure Wall Modular Block Gravity in area by the square foot of face on a vertical plane between the top of the leveling pad and a line indicating the top of wall including wall cap or copings as required and shown on the plans. Unless directed by the engineer, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
532.0200.S	Wall Modular Block Gravity	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of surplus materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system; providing backfill, backfilling, and compacting the backfill; and furnishing and installing geotextile fabric. Parapets, railings, and other items above the wall cap or coping will be paid for separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.
532-030 (20120615)

32. Adjusting Manhole Covers.

Protect and maintain sewer accessibility for the duration of the paving project to all City of Franklin sanitary sewer manholes located within the project limits. Perform this work in accordance to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Concrete grade rings shall conform to Section 8.39.11 of the Standard Specifications for Sewer and Water Construction in Wisconsin.

Thoroughly clean the mating surface on top of the precast concrete corbel section. Lay precast concrete adjustment rings in a full bed of mortar and completely fill joints.

33. Pipe Grates 12-Inch, Item 611.9800.S.01; 15-Inch, Item 611.9800.02; 18-Inch, Item 611.9800.S.03; 27-Inch, Item 611.9800.S.04; 30-Inch, Item 611.9800.S.05; 54-Inch, Item 611.9800.S.06; 34 x 53-Inch, Item 611.9800.S.07; 43 x 68-Inch, Item 611.9800.S.08.

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

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

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S.01	Pipe Grates 12-Inch	Each
611.9800.S.02	Pipe Grates 15-Inch	Each
611.9800.S.03	Pipe Grates 18-Inch	Each
611.9800.S.04	Pipe Grates 27-Inch	Each
611.9800.S.05	Pipe Grates 30-Inch	Each
611.9800.S.06	Pipe Grates 54-Inch	Each
611.9800.S.07	Pipe Grates 34 x 53-Inch	Each
611.9800.S.08	Pipe Grates 43 x 68-Inch	Each

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

34. Fence Safety, Item 616.0700.S.

A Description

This special provision describes furnishing and installing a plastic fence at locations shown on the plans and as hereinafter provided.

B Materials

Furnish notched conventional metal "T" or "U" shaped fence posts.

Furnish fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh Opening:	1 inch min to 3 inch max
Resin/Construction:	High density polyethylene mesh
Service Temperature:	-60° F to 200° (ASTM D648)
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

C Construction

Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.

Overlap two rolls at a post and secure with wire ties.

D Measurement

The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0700.S.	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.

616-030 (20070510)

35. Traffic Control, General.

Install and maintain all traffic control devices throughout the duration of the project. Sufficient quantities have been included for all traffic switches described in the "Prosecution and Progress" and "Traffic" special provisions. Any additional traffic control necessary for additional traffic switches completed for the contractor's convenience will not be paid for under this contract.

36. Signs Type II Reflective SH, Item 637.2220; Signs Type II Reflective SH Folding, Item 637.2225; Signs Type II Reflective F, Item 637.2230.

Replace any reference to type H sheeting in the sign plates included with the plan with type SH sheeting.

Replace standard spec 637.2.4.2.1 (1) with the following:

Furnish components to attach signs to ground mounted steel posts, traffic signal posts and light poles that are stainless steel with the exception of nylon washers as required by any applicable details in the plans and in the requirements of standard spec 637.3.3.3.

Replace standard spec 637.3.2.8.1 (1) with the following:

Provide type II and type III signs of the size and shape the plans show. Fabricate all signs using sheet aluminum and conform to the requirements of standard spec 637.2.1.3.

37. Removing Signs Type II, Item 638.2602.

Replace standard spec 638.3.4 (2) and (3) with the following:

Stockpile all signs that are removed at a location designated by the engineer. The removed signs become the property of Milwaukee County. The Cost of this work is incidental to the bid item Removing Signs Type II. The engineer will contact Milwaukee County Highway Maintenance, Greg Heisel, (414) 257-6566, to arrange for pickup of salvaged materials. Do not damage salvaged materials.

38. Removing Small Sign Supports, Item 638.3000.

Replace standard spec 638.3.5 (2) with the following:

Stockpile all small sign supports that are removed at a location designated by the engineer. The removed small sign supports become the property of Milwaukee County. The cost of this work is incidental to the bid item Removing Small Sign Supports. The engineer will contact Milwaukee County Highway Maintenance, Greg Heisel (414) 257-6566, to arrange for pickup of salvaged materials. Do not damage salvaged materials. Remove unused concrete footings as specified in 638.3.9, Restore the Site.

39. Electrical Service Meter Breaker Pedestal, S. 76th St. (CTH U) and W. Puetz Rd., Item 656.0200.01; Pedestal, S. 76th St. (CTH U) and W. Drexel Ave., Item 656.0200.02; S. 76th St. (CTH U) and W. Imperial Blvd., Item 656.0200.03.

Append standard spec 656.2.3 with the following:

Prepare and submit the electrical service installation request and pay under this item. The utility installation cost will be paid based on the invoice received from the utility company under the respective item titled electrical service utility charges. Submit the electrical service installation request a minimum of 120 days prior to the expected date of traffic signal turn on. Notify the engineer and Daniel Murphy at the Milwaukee County Department of Transportation, daniel.murphy@milwcnty.com, when the application is submitted to the utility.

Electrical utility company service energy cost will be billed to and paid for by the maintaining authority.

Install the cabinet base and meter breaker pedestal first, so the electrical utility company can install the service lateral. Do not install the control cabinet until after the service lateral has been completed by the utility company. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, water and mulch all areas that are disturbed by the electrical utility company.

Append standard spec 656.5(3) with the following:

Payment for Electrical Service Meter Breaker Pedestal is full compensation for providing all materials including the meter breaker pedestal, manual bypass meter socket if required, conduit and fittings, circuit breakers, grounding electrodes and connections, for preparing and submitting the electrical service installation request, grading the service trench, replacing topsoil, and for fertilizing, seeding, and mulching to restore the disturbed area of the service trench.

40. Traffic Signal Faces 3-12 Inch Vertical, Items 658.0110, 5-12 Inch Vertical 658.0120.

Replace standard spec 658.2.2.2(1) with the following:

Furnish polycarbonate resin housings, doors, visors, and backplates. Use federal highway yellow or black housings as specified in the plans and dull black door faces, visors, and backplates. Ensure that the door is sized for 12-inch nominal diameter lenses and is held shut with eyebolts secured with wing nuts. Use cut away or tunnel type visors as the plans show. Use backplates that project 5 inches beyond all sides of the signal housing unless the plans call for a larger size. Use only new materials as specified in standard spec 106.1.

Replace standard spec 658.2.2.2(3) with the following:

Use wire nuts to wire the traffic signal cable to the LED Module wire. The wire nuts shall be of sufficient size for the number and size of the wires being connected. 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.

41. Pedestrian Signal Face 16-Inch, Item 658.0416.

Replace standard spec 658.2.3.1(1) with the following:

Furnish polycarbonate resin housings, door and visors. The assembly shall be a 16-inch LED ready pedestrian signal housing that is federal highway yellow or black as specified in the plans, drilled for top/bottom pipe mount with the ability to rotate 360 degrees on any mounting bracket. At no rotation angle shall the mount interfere with the door hinge. Provide a tunnel visor on the 16-inch housing door. Furnish the door face and tunnel visor in dull black unless the contract specifies otherwise. Use only new materials as specified in standard spec 106.1.

Replace standard spec 658.2.3.1(2) with the following:

Use wire nuts to wire the traffic signal cable to the LED Module wire. The wire nuts shall be of sufficient size for the number and size of the wires being connected. 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.

42. Pedestrian Push Buttons, Item 658.0500.

Replace standard spec 658.2.5 with the following:

Pedestrian Push Buttons shall be round with 2” mushroom style cover assembly and shall be ADA compliant. The button shall be made of hard nickel-plated aluminum. The assembly shall be powder-coated aluminum painted yellow in color. The assembly hardware shall include stainless steel torx or star drive head screws. Coat the screws with anti-seize prior to installation.

Pedestrian Push Buttons shall be a pressure-activated, solid-state non-moving switch. The normal operating temperature range shall be -40°C to +74°C. The operating voltage shall be 30 VDC maximum, and the switching current shall be 0.1A maximum. The button shall have a minimum rated life of 10 million activations. The pedestrian push button mounting and hardware shall be moisture resistant and resistant to flame and ice. The button shall be resistant to vandalism.

The pedestrian push button assembly shall a beeper that sounds when the button is activated. This assembly shall not require additional power or wiring. Push buttons with a confirmation light shall only be permitted if the latching cabinet element, as required by the MUTCD, is provided at no cost to the department.

Mount the push button to the pole using a cast aluminum frame, which is vandal resistant and which is the same color as the button assembly. The frame shall accommodate a button assembly with either two or four screws. The frame shall be incidental to the push button and shall accommodate a 9" x 15" pedestrian push button sign. The sign shall be a R10-3ER, 3EL or 3ED and shall include instructions for push button and countdown pedestrian signal use with an arrow to specify which direction the push button is for (see pedestrian push button detail drawing). The sign and frame is incidental to the push button installation. Use only new materials as specified in standard spec 106.1.

43. Temporary Traffic Signals for Intersections S. 76th St. (CTH U) and W. Puetz Rd., Item 661.0200.01; S. 76th St. (CTH U) and W. Drexel Ave., Item 661.0200.02; S. 76th St. (CTH U) and W. Imperial Dr., Item 661.0200.03.

Append standard spec 661.2.1 with the following:

(5) Before beginning installation of the temporary signals, coordinate with the engineer. Give five working days notice to the engineer before turn on and turn off of temporary traffic signals. Milwaukee County will handle all programming of the controller. Provide Milwaukee County with the traffic signal controller for the temporary traffic signal at least five working days prior to the turn on for programming. At the contractors expense a subcontractor may be retained for programming of the controller, no extra payments will be made. 24 hours notice will be given to the contractor prior to any timing changes in either situation.

Append standard spec 661.2.1.7.2 (1) with the following:

Submit a certificate of compliance from the contractor or company that wired the cabinet certifying that the cabinet and equipment conform to the contract and to the Wisconsin State Electrical Code (WSEC). Ensure that the certificate of compliance is on company letterhead, signed by an authorized company official, and is notarized. Submit one copy to the Milwaukee County Traffic Engineering Section at least five days prior to turn on of the temporary traffic signal. If requested submit copies to the region management consultant and resident engineer.

Replace standard spec 661.3.2.7 (3) with the following:

Place all indications according to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) and as shown in the plans.

Replace standard spec 661.5 with the following:

(1) Measured quantities at the contract unit price will be paid under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
661.0200.01	Temporary Traffic Signals for Intersection S. 76th St. (CTH U) and W. Puetz Rd.	LS
661.0200.02	Temporary Traffic Signals for Intersection S. 76th St. (CTH U) and W. Drexel Ave.	LS
661.0200.03	Temporary Traffic Signals for Intersection S. 76th St. (CTH U) and W. Imperial Dr.	LS

(2) Payment for the Temporary Traffic Signals for Intersections bid item is full compensation for providing, operating, maintaining, and repairing the complete temporary installation; and for removal. Payment also includes the following:

1. Furnishing and installing the replacement equipment.
2. The cost of delivery and pick-up of the cabinet assemblies.
3. All utility service charges for installation, disconnection, and energy service through project completion.
4. Removal of service and site restoration.

44. Milwaukee County Qualified Products Listing.

Approved Signing Materials
All signing materials must be on the WisDOT Signing QPL, all permanent signs shall use Type SH or Type F sheeting as called for in the plans.

B Approved Electrical Materials

Append the Wisconsin Department of Transportation Electrical Qualified Products Listing with the following:

651.3.1 Rust, Corrosive and anti-seize compound:
Hightemp-E-Z Break (Markal)
Never-seez (marine grade)
LPS 100 Lubriplate

658.2.7 Pedestrian Push Buttons:
Solid State non-moving button without LED:
Polara Bulldog III (BDLM-Y) (Bulldog II is not acceptable)
Campbell 4EVR Rnd
Pelco Passport No LED or approved equal

Assembly:
Polara Bulldog (PBF 9x12-X)
Campbell 912 H
Pelco SE-2416 or approved equal
Stainless steel Star or Torx head screws
(1/4”-20 x 1-3/4”)

Pedestrian Push Button Signs:
Pelco SF-1013, 1014, 1015(05) or approved equal (diamond grade)
Polara
TAPCO
Traffic Parts Inc.
Traffic Signal Co.

659.3.2 Insulating Putty:
3M
Plymouth
Okonite

Photo Cells:
Area Lighting Research Inc.
Paragon
Precision
Tork
Intermatic (# 4021)
Fisher Pierce
Ripley

45. Signal Controller Training, Item 651.1000.S.

A Description
This special provision describes providing training and instruction relating to the operation, maintenance, and installation of the traffic signal controller and associated equipment.

B (Vacant)

C Construction
Provide a competent representative capable of instructing the operators of the system in (a) theory of application and operation; (b) electronic circuitry; and (c) hands-on, trouble shooting of the equipment. Conduct instruction and training at the job site or other approved location and furnish a partially assembled or breakdown equivalent model of the controller to assist in teaching the operators in theory, assembly, operation, and maintenance.

Provide a minimum of 16 hours of training. Provide operations and maintenance manuals for all training participants.

D Measurement
The department will measure Signal Controller Training as a single complete unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
651.1000.S	Signal Controller Training	LS

Payment is full compensation for furnishing the instructor, controller model, and operations and maintenance manuals; and for providing training.
651-005 (20030820)

46. Backfill Slurry, Item SPV.0035.01.

A Description
This work consists of furnishing and placing slurry backfill composed of aggregate, cement and water as directed by the engineer and in accordance to the pertinent requirements of standard spec 209 except as hereinafter modified.

B Materials
The aggregate shall comply with the proportions and gradations for aggregates for Grade A Concrete Masonry in accordance to standard spec 501. Weigh the aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver the aggregates to the project site in a truck mixer with sufficient water to enable the mixture to flow readily.

The slurry backfill material will be accepted on the basis of inspection and approval of the engineer.

C Construction
Discharge the mixture from the truck mixer in a manner to prevent voids or segregation. Immediately remove foreign material which falls into the excavated area to be backfilled prior to or during the placement of the Slurry Backfill. The excavation may be completely filled in a single operation. No further consolidation or compactive effort will be required. Do not pave over the backfill for a minimum of twelve hours.

D Measurement
The department will measure Backfill Slurry by the cubic yard in the truck mixer, based on batch weights, prior to the addition of mixing water, acceptably completed. Only material deposited as backfill on the project will be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Backfill Slurry	CY

Payment is full compensation for furnishing and mixing materials, and for hauling and placing.

47. Pond Liner Clay, Item SPV.0035.02.

A Description

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

B Materials

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

The sample for the hydraulic conductivity test shall be remolded clay at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test AASHTO T-99 and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test AASHTO T-99. The laboratory source testing shall be conducted at the frequency listed in Table 1. Submit the test results to the engineer for review, two week prior to construction.

C Construction

C.1 Low Permeable Clay Placement

C.1.1 Subgrade

Compact the subgrade to a minimum density as defined in standard spec 207.3.6.2 Standard Compaction.

C.1.2 Erosion Protection

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

C.1.3 Low Permeable Clay Placement

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

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

Compact the low permeable clay to a minimum of 95% Standard Proctor AASHTO T-99 Maximum Dry Density with footed compaction equipment having feet at least as long as the loose life height. As needed, clay shall be disked or otherwise mechanically processed prior to compaction to break up clods and allow moisture content adjustment. Clod size shall be no greater than 4-inches. All compaction equipment utilized shall have a minimum static weight of 30,000 pounds.

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

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

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

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

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

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

Table 1					
Reference	Number	Test Title	Requirements	Testing Frequency	
				Screening	QA/QC[12]
AASHTO[1]	T99-01	Moisture– Density Relationships of Soils Using a 2.5-kg(5.5lb) Rammer a 305mm (12-in.) Drop(Standard Proctor)	NA[11]	1/source	NA
AASHTO	T-88-00	Particle Size Analysis of Soils	P200[3] ≥ 50%	2/source	1/lift
AASHTO	T-89-02	Determining the Liquid Limit of Soils	LL[4] ≥ 22%	2/source	1/lift
AASHTO	T-90-00	Determining the Plastic Limit and Plasticity Index of Soils	PI[5] ≥ 12%	2/source	1/lift
AASHTO	T310-03	In-Place Density and Moisture Content of Soils and Soil Aggregates by nuclear Methods (Shallow Depth)	DD[6] ≥ 95% if the MDD[7]	NA	100’ x 100’ Grid/lift
ASTM[2]	D5084-03	Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	K[8] ≤ 1 x 10^{-7} cm/sec	1/source[9]	1/site[10]

Notes:
1. AASHTO = American Association of State Highway and Transportation Officials
2. ASTM = American Society of Testing and Materials
3. P200 = Percent by weight passing the #200 sieve (%)
4. LL = Liquid Limit (5)
5. PI = Plasticity Index (%)
6. DD = Dry Density (pcf)
7. MDD = Maximum Dry Density (pcf) as determined by the Standard Proctor Test
8. K = Hydraulic Conductivity (cm/sec)
9. The sample for the test shall be remolded at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test.
10. An undisturbed sample from a thinned walled sampler (Shelby tube)
11. NA = Not applicable
12. QA/QC = Quality Assurance/Quality Control

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

The department will perform the QA/QC testing at the frequency shown in Table 1. The department will record the thickness of low permeable clay on a 100-foot x 100-foot grid pattern.

Provide the following:

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

D Measurement

The department will measure Pond Liner Clay in volume by the cubic yards of liner clay, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.02	Pond Liner Clay	CY

Payment is full compensation for dewatering areas of site where the low permeable clay is to be placed; furnishing and placing the low permeable clay; and for performing all tests.

48. Electrical Service Utility Charges, Item SPV.0055.01.

A Description

The work under this item consists of furnishing a copy of the electrical service utility installation cost invoice to the engineer. Be responsible for the electrical service lateral installation request as noted in the revised provision of the Meter Break Pedestal Item. Notify the engineer and Daniel Murphy at the Milwaukee County Department of Transportation at (414) 278-4842 or daniel.murphy@milwcnty.com when the application is submitted to the utility.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Electrical Service Utility Charges by the dollar for each invoice received from the contractor.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.01	Electrical Service Utility Charges Expenses	DOL

Payment is full compensation for furnishing all electrical service utility charges accrued for each intersection.

49. Sign Posts U-Channel, Item SPV.0060.01.

A Description

The work under this item consists of furnishing and installing sign posts at the locations shown on the plans.

B Materials

The posts shall be U-channel, galvanized steel posts, 3 lb./ft. Bolts and other fasteners shall be stainless steel.

C Construction

Sign Posts, U-Channel shall be a two-part breakaway assembly as shown in the plans. The in-ground (lower) section shall have a length of not less than 4 feet. The upper section shall be of sufficient length to meet the requirements for vertical clearances for sign installation in the Manual on Uniform Traffic Control Devices. Fasten the two sections together with stainless steel bolts. Install in accordance to standard spec 637.3.2.

D Measurement

The department will measure Sign Posts, U-Channel as each individual sign supports installed and 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.0060.01	Sign Posts, U-Channel	Each

Payment is full compensation for furnishing and installing the two-part breakaway assembly; and for furnishing all necessary fasteners;.

50. External Sanitary Manhole Seals, Item SPV.0060.02.

A Description

This special provision describes furnishing and installing external sanitary manhole chimney seals.

B Materials

This seal shall conform to Section 3.5.4.1(c) of the Standard Specifications for Sewer and Water Construction in Wisconsin. An external manhole seal, such as supplied by Adaptor, Inc. of West Allis, or as accepted by the City of Franklin. Obtain prior approval of the external manhole seal material specifications from the City of Franklin before installing.

C Construction

Furnish a new seal to any sanitary manhole within the project limits that does not contain an internal/external manhole seal. If a sanitary manhole contains a seal and is to be adjusted in any way, remove the external manhole seal prior to any adjustments. Reuse the existing external manhole seal. If the external manhole seal cannot be reused, install a new external manhole seal. If any external manhole seal is damaged due to the fault of the contractor, replace the seal at the contractor's expense. Before project completion, ensure that all sanitary manholes contain a proper external manhole seal.

Field measure the inside diameter of the manhole frame and the manhole chimney, and determine as to whether the inside face of the frame is vertical or tapered in order to obtain the proper size and shape rubber seal.

Install rubber chimney seals no sooner than 24 hours following chimney back plastering.

The surfaces against which the sleeve is to be compressed shall be circular, clean, reasonably smooth and free of any loose materials and excessive voids. Repair all flaws in these surfaces with the approved low-shrink mortar or grind smooth. Apply a bead of butyl rubber caulk conforming to ASSHTO M-198 Type B to the lower sealing surface of sleeve.

Install the seal in accordance to the manufacturer's recommendation. It is intended that the external portion of this seal extend from the frame to the top of the cone as a single piece. The surface against which the seal is to be placed shall be circular without offsets,

clean, reasonably smooth and free of any loose material and excessive voids. Repair any flaws in these surfaces with the approved low-shrink mortar and ground smooth. Place the seal and have the seal approved by a City of Franklin inspector prior to placement of the stone base material.

D Measurement
The department will measure External Sanitary Manhole Seals as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	External Sanitary Manhole Seals	Each

Payment is full compensation for furnishing and installing external rubber chimney seals.

51. Adjusting Water Valve Boxes, Item SPV.0060.03.

A Description
This special provision describes adjusting, protecting and maintaining accessibility for the duration of the paving project to all City of Franklin water valve boxes located within the project limits.

B Materials
All valve boxes shall be three piece screw type box, as manufactured by Tyler or equally US manufactured and meeting city specifications.

C Construction
Adjustments consist of turning the upper segment of the valve box up to the proposed finish grade, minus ¼ inch. In some cases, it may be necessary to loosen or excavate some adjacent material to allow for turning. Some boxes may need repair. Furnish and install a new section to repair or to extend the valve box, should the top section not have sufficient length for upward adjustment.

The city will locate, mark, and inspect all water valve boxes within the limits of the project prior to commencement of work on the project.

Throughout the duration of the project, the contractor must ensure that all water valve boxes are adequately located and identified by blue paint, and that at all times, all water appurtenances remain accessible for operation by city forces. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility. During the project, any water facilities accessed by the Franklin Water Department and found to be inoperable, damaged or unidentified by the contractor, will be located or repaired by city forces; all costs to be charged to the contractor.

D Measurement
The department will measure Adjusting Water Valve Boxes 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.0060.03	Adjusting Water Valve Boxes	Each

Payment is full compensation for furnishing and installing all materials for the number and amount of adjustments made to the valve box.

52. Adjusting Hydrants, Item SPV.0060.04.

A Description
This special provision describes the adjustment of existing hydrants, including, addition or removal of hydrant extension piping, and furnishing and installing a reflectorized hydrant marker.

B Materials
Hydrant Extensions
Fabricate in multiples of 6 inches with rod and coupling to increase barrel length.

Maximum of one extension per hydrant may be used.

If additional extension is necessary on hydrant with existing extension, remove existing extension and replace with single, adequate extension.

Hydrant Barrel Piping
Barrel pipe shall be ductile iron, Class 53, conforming to AWWA C110. Encase sleeves in Polyethylene sheeting conforming to ASTM D4976, Type I, Class B, color black, Grade E-1, 1200 psi tensile strength, minimum thickness of 8 mil. Tube diameter or sheet width shall conform to AWWA C105.

Pipe shall have restrained rubber gasket push-on joints. Restraints shall be ASTM A536 ductile iron, circular or pair of semi-circles with wedges that grip ductile iron or PVC pipe.

Sleeves shall be ductile iron, Class 53, conforming to AWWA C110. Encase sleeves in Polyethylene sheeting conforming to ASTM D4976, Type I, Class B, color black, Grade E-1, 1200 psi tensile strength, minimum thickness of 8 mil. Tube diameter or sheet width shall conform to AWWA C105.

Hydrant Marker: Red, 4-feet high with reflectorized logo, facing traffic on each hydrant.

C Construction

Remove Hydrant and Barrel Piping

If lumped subsoil or rock is encountered, remove to provide a clearance of at least 6 inches below and on each side of pipe, valves and fittings.

Extend Barrel Piping: Determine length of barrel piping needed from existing end to new hydrant elevation, cut pipe accordingly and connect with sleeve.

Shorten Barrel Piping: Determine length of barrel piping needed from existing end to new hydrant elevation and cut existing barrel pipe accordingly.

Lower barrel piping and hydrants carefully into trench. With hydrant valve closed, disconnect and remove existing hydrant.

Secure pipe in place with bedding material, placed by hand or equally careful means, keeping end open. Remove pipe and fittings that do not allow sufficient and uniform space for joints and replace with pipe and fittings of proper dimensions to ensure such uniform space.

Keep interior and exterior of pipe clean and free from foreign material before installation. Provide necessary means to wipe, brush, swab or air blast to remove any foreign material from interior of pipe as instructed by pipe manufacturer and as directed by City of Franklin Water Utility Inspector.

Hydrant Reinstallation

Place crushed clear stone below base of hydrant to 6 inches above drain holes in hydrant stem.

Set hydrant plumb and centerline of hydrant vertical as blocked to firm trench wall.

Installation to be in strict conformance to Section 5.5 and Figure No. 22 of the City of Franklin Design Standards and Construction Specifications, May 2007

Set lowest hose connection to Utility standard dimension above proposed finished grade by 18 to 24 inches.

A City of Franklin Water Utility inspector will be on site during this adjustment.

D Measurement

The department will measure Adjusting Hydrants of a given adjustment height as each individual unit, acceptably completed.

E Payment

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

Item Number	Description	Unit
SPV 0060.04	Adjusting Hydrants	Each

Payment is full compensation for furnishing and installing all materials, including barrel pipe, buttresses and hydrant marker; for removing and reinstalling the existing hydrant; for furnishing all necessary excavation and backfill.

53. Cleaning Drainage Structures, Item SPV.0060.05.

A Description
This special provision describes cleaning drainage structures and the pipes attached to the structures where shown on the plans and as directed by the engineer.

B (Vacant)

C Construction
Completely remove all solids removed from the clogged sewers from the sewer system and haul them off the project for disposal. Silts resulting from any flushing or jetting operation must be prevented from escaping into sewers or waterways. Inspect the drainage structure for repair work and reinstall cover.

D Measurement
The department will measure Cleaning Drainage Structures 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.0060.05	Cleaning Drainage Structures	Each

Payment is full compensation for furnishing all materials to clean out drainage including silt and solid retention for removing and devices; for removing and properly disposing materials; paying all associated fees for permits, licenses or disposal of materials.

54. Inlet Covers Type 57, Item SPV.0060.06.

A Description
This special provision describes furnishing and installing a heavy duty cast iron frame and grate at the locations designated and in accordance to standard spec 611 and the details shown on the plans.

B Materials
Furnish all materials in accordance to the pertinent requirements of standard spec 611.2.

C (Vacant)

D Measurement
The department will measure Inlet Covers Type 57 by each individual unit installed and 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.0060.06	Inlet Covers Type 57	Each

Payment is full compensation in accordance to standard spec 611.5.4.

55. Removing Landmark Reference Monument, Item SPV.0060.07.

A Description
This special provision describes removing existing landmark reference monument.

B (Vacant)

C Construction
Remove **4** U.S.P.LS existing monument during construction operations. The monuments are located at section corners of S. 76th St. at the intersections of W. Puetz Rd. (Station 158+66.73), W. Forest Hill Ave. (Station 185+04.39), W. Drexel Ave. (Station 211+48.80) and near W. Imperial Dr. (Station 237+9.94) as shown on plans.

The existing monuments are standard SEWRPC concrete monument with brass cap which should be at or near the surface of the existing pavement and is approximately 6-inch square at the top, 36-inches long and 9-inches square on the bottom. The Southeastern Regional Planning Commission (SEWRPC) will tie off existing monuments prior to construction and replace/reset the monuments near the end of construction.

If any of the monument locations fall in an area of concrete pavement, a 2-foot by 2-foot square will need to be boxed out, during the pouring effort to accommodate the reinstallation of the monument. SEWRPC would provide the contractor with a point marking the center of the box at the appropriate time. When monument is reset SEWRPC will backfill the boxed area to the bottom of the concrete pavement and the contractor shall fill the remainder of the hole with concrete.

If the monument location falls in an area of asphalt pavement, SEWRPC would need to be scheduled to reset monument after the binder course is laid but before the final lift is applied.

If a monument location falls in a grassed median, the reinstallation effort would be done after landscaping and sod/seed work were completed.

It takes on average approximately 2 hours to install a new monument, and up to 4 hours, worst case condition.

Notify John Washburn of SEWRPC at (262) 547-6721 Ext. 295 (office) or (414) 218-2866 (mobile) or email (jwashburn@sewrpc.org) at least three weeks prior to removal of the existing monument and at least one (1) week prior to placing the pavement. SEWRPC will coordinate with the contractor in placing the new monument.

D Measurement
The department will measure Removing Landmark Reference Monument 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.0060.07	Removing Landmark Reference Monument	Each

Payment is full compensation for furnishing all excavating , and removing landmark reference monuments, box-outs, filling box-outs with concrete.

56. Utility Line Opening (ULO), Item SPV.0060.08.

A Description
This special provision describes excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown on the plans or as directed by the engineer.

B (Vacant)

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

Perform the utility line openings as soon as possible and at least 10 days in advance of proposed utility construction to allow any conflicts to be resolved with minimal disruption. Give the engineer a minimum of three working days once utility line opening information is received to review all relevant design information prior to proposed utility construction. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening will be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Utility line openings include a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

Approve and coordinate all utility line openings with the engineer. Notify the utility engineers or their agents of this work a minimum of 3 days prior to the work so they may be present when the work is completed.

Replace pavement over utility line opening trenches which are within the staged traffic area as directed by the engineer. Replace pavement and open to traffic within 24 hours of the excavation.

D Measurement
The department will measure Utility Line Opening 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.0060.08	Utility Line Opening (ULO)	Each

Payment is full compensation for the excavation required to expose the utility line; backfilling with existing material removed from the excavation; compacting the backfill material; restoring the site; and for cleanup.

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

57. Relocating Hydrants, Item SPV.0060.09.

A Description
This special provision describes the relocation of existing hydrants, including the addition or removal of hydrant branch piping, and furnishing and installing a reflectorized hydrant marker.

B Materials
Hydrant Extensions
Fabricate in multiples of 6 inches with rod and coupling to increase barrel length.

Maximum of one extension per hydrant may be used.

If additional extension is necessary on hydrant with existing extension, remove existing extension and replace with single, adequate extension.

Hydrant Branch Piping
Polyvinyl Chloride (PVC) water pipe shall conform to requirements of AWWA C-900, Pressure Class 200, DR-14.

Branch pipe shall have restrained rubber gasket push-on joints. Restraints shall be ASTM A536 ductile iron, circular or pair of semi-circles with wedges that grip ductile iron or PVC pipe.

Sleeves shall be ductile iron, Class 53, conforming to AWWA C110. Encase sleeves in Polyethylene sheeting conforming to ASTM D4976, Type I, Class B, color black, Grade E-1, 1200 psi tensile strength, minimum thickness of 8 mil. Tube diameter or sheet width shall conform to AWWA C105.

Hydrant Marker: Red, 4-feet high with reflectorized logo, facing traffic on each hydrant.

C Construction

Install or Remove Hydrant Branch Piping

If lumped subsoil or rock is encountered, remove to provide a clearance of at least 6 inches below and on each side of pipe, valves and fittings.

Extend Branch Piping: Determine length of branch piping needed from existing end of branch to new hydrant location, cut pipe accordingly and connect with sleeve.

Shorten Branch Piping: Determine length of branch piping needed from existing valve to new hydrant location and cut existing branch pipe accordingly.

Lower branch piping and hydrants carefully into trench. With hydrant valve closed, disconnect and remove existing hydrant.

Secure pipe in place with bedding material, placed by hand or equally careful means, keeping end open. Remove pipe and fittings that do not allow sufficient and uniform space for joints and replace with pipe and fittings of proper dimensions to ensure such uniform space.

Keep interior and exterior of pipe clean and free from foreign material before installation. Provide necessary means to wipe, brush, swab or air blast to remove any foreign material from interior of pipe as instructed by pipe manufacturer and as directed by engineer.

Hydrant Reinstallation

Place crushed clear stone below base of hydrant to 6 inches above drain holes in hydrant stem.

Set hydrant plumb and centerline of hydrant vertical as blocked to firm trench wall.

Installation to be in strict conformance to Section 5.5 and Figure No. 22 of the City of Franklin Design Standards and Construction Specifications, May 2007

Set lowest hose connection to Utility standard dimension above proposed finished grade by 18 to 24 inches.

A City of Franklin Water Utility inspector will be on site during this relocation.

D Measurement
The department will measure Relocating Hydrants of a given adjustment height as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Relocating Hydrants	Each

Payment is full compensation for furnishing and installing all materials, including branch pipe, buttresses and hydrant marker; for removing and reinstalling the existing hydrant; and for furnishing all necessary excavation and backfill.

58. Communications Vault, 24x36-Inch, Item SPV.0060.10.

A Description
Work under this item consists of constructing a communications vault and vault lid in accordance to the details shown on the Plans and as hereinafter provided.

B Materials
The communications vault and vault lid should be constructed of polymer concrete material, "Strongwell Quazite" or approved equivalent, and be gray in color.

Provide the Communications Vault, 17 x 30-Inch with an effective height of 40 inches (1-18-inch tall stackable vault and 1-24-inch stackable vault with 2-inch overlap). The Communications Vault, 24 x 36-Inch shall have an effective height of 39 inches (1-18-inch tall stackable vault and 1-24-inch stackable vault with 3-inch overlap.

Provide the communications vault with a minimum design load of 15,000 pounds and with a permanently recessed logo that reads "MILWAUKEE COUNTY COMMUNICATIONS". The communications vault and lid shall have two ½-inch x 4-inch pull slots. The lid surface shall have a coefficient of friction of 0.50 in accordance to ASTM C-1028.

Install manufacturer approved gasketing to resist water from entering the communications vault between the lid and the top 18-inch deep stackable vault.

Secure the communications vault lid to the vault with two 3/8-inch 16 UNC stainless steel penta-head bolts to lock the lid and include the appropriate washers

A fiber optic cable support assembly shall consist of multiple brackets, racks, and/or rails required to suspend the required surplus cabling and any splice enclosures for a single communications vault. The support assemblies shall be recommended and approved by the manufacturer of the fiber optic cable and splice enclosures. The support assembly shall be

made from or coated with weather resistant material such that there is no corrosion of the supports. The support assemblies shall be anchored to the existing vault using stainless steel hardware. The fiber optic cable support assemblies shall be gray in color.

Fill void areas between vault openings and conduit with self-curing caulking that will provide a permanent, flexible rubber which is unaffected by sunlight, water, oils, mild acids, and alkali. The caulking shall be mildew resistant and non-flammable. The material shall provide a permanent bond between the conduit entering the vault and the polymer concrete. The caulking shall be gray in color.

C Construction

Install the Communications Vault in accordance to applicable requirements of standard spec 611 and as hereinafter provided.

Use a manufacturer approved knockout punch driver to provide openings in the vaults for conduit. Alternatively, the required openings may be machined at the time of stackable vault fabrication.

Voids between entering conduits and the punch driven openings shall not exceed ½-inch. Caulk the void areas from the interior and the exterior of the communications vault. Allow the conduit and caulk to fully cure as per the manufacturer's specifications prior to backfilling.

D Measurement

The department will measure Communications Vault (Size) as each individual vault, 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.0060.10	Communications Vault, 24 x 36-Inch	Each

Payment is full compensation for furnishing and installing all materials, including stackable vaults, lids, gasketing, bolts, washers, stainless steel mounting hardware, fiber optic cable support assembly, caulking, and coarse aggregate; for furnishing all excavation, backfilling, topsoil, restoration, and disposal of surplus materials.

59. LED Luminaires, 10,000 Lumens, Item SPV.0060.11.

A Description

This special provision describes furnishing and installing LED luminaires at the locations shown in the plan.

B Materials

Furnish a complete list of documentation in accordance to standard spec 651.2 and the following requirements. Be prepared to provide the following materials and/or data to the

engineer and the Milwaukee County DOT, Daniel Murphy, 2711 W. Wells St., Milwaukee, WI 53208, (414) 278-4842, Daniel.Murphy@milwcnty.com.

Furnish the following list of specific documentation detailing the characteristics of the LED luminaire:

1. Fixture IES files (.ies format) for illumination modeling
2. Cut sheets, warranty information and parts list for all equipment.
3. Luminaire heat dissipation techniques.
4. Energy usage information.
5. Color spectrum with HID lamp comparison.
6. Optical design features.
7. Two references from municipalities currently using the same luminaires, unless Milwaukee County DOT is currently using the luminaires.

Do not order materials until the engineer approves the list.

Luminaires shall conform to applicable portions of standard spec 659.2.2. Luminaires shall be 100,000 hour luminaires consisting of modular LED light generators. Furnish IESNA Type III units in the closest available color to utility gray. Units shall mount on a standard slipfitter luminaire arm and shall be adjustable +/- 5 degrees to allow for leveling. A leveling device or bubble shall be integrated into the unit. Drivers shall operate across 120V, 50/60 Hertz as standard. LED drivers shall have a power factor greater than 90% and THD less than 20% of full load. All luminaires shall come equipped with an integral 10kV surge suppression protection standard and a quick disconnect harness suitable for mate and break under load provided on power feed to driver for ease of maintenance. LED Luminaires shall be compatible with the lighting control panel as specified in the Traffic Signal Controller and Cabinet item. Weight shall be no more than 30lbs per unit. Make available and install end user installable cutoff shields on any locations noted in the plans. Hand over any warranty to Milwaukee County DOT.

The required initial delivered photopic output shall be minimum 10,000 lumens. The 50,000 hour average delivered photopic output shall be minimum 9,000 lumens at 50° C. Power consumption shall be 160 watts maximum at 120 volts.

Luminaires shall be rated and/or certified as follows:

- U.L. listed for wet locations
- RoHS compliant for lead and mercury standards
- IP-65 minimum weather fastness rating
- IDA dark sky full cutoff compliant

C Construction

Conform to standard spec 659.3.3. In the pole handhole, delete the otherwise required dual-element fuses and substitute a fast-blow fuse.

D Measurement
The department will measure LED Luminaires, 10,000 Lumens as per standard spec 659.4(1).

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.11	LED Luminaires 10,000 Lumens	Each

Payment is full compensation on the basis of standard spec 659.5(2).

60. Poles Type 10, Item SPV.0060.12; Type 13, Item SPV.0060.13.

A Description
Work under this item consists of furnishing and installing monotube poles.

B Materials
Design support structures conforming to the minimum wall thickness the plan details show and to AASHTO design and fabrication standards for structural supports for highway signs, luminaries, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph (145 km/h). Do not use the methods of Appendix C of those AASHTO standards.

Use Category III criteria for Type 10 Poles. Use Category II criteria for Type 12 and Type 13 Poles.

For structures requiring a fatigue analysis, use 45 mph (72 km/h) for truck-induced gusts.

After welding and before zinc coating, clean the exterior surface of each steel pole free of all loose rust and mill scale, dirt, oil or grease, and other foreign substances.

Apply a zinc coating conforming to the process specified for steel sign bridges in standard spec 641.2.8. Ensure that the zinc coating is tight, free from rough areas or slag, and presents a uniform appearance.

After completing manufacturing, clean the exterior surfaces of each pole free of all loose scale, dirt, oil or grease, and other foreign substances.

Provide reinforced hand holes measuring 4 inches by 6 inches (100 mm by 150 mm) as the plans show. Locate the lower hand hole 18 inches (450 mm) from the bottom of the pole base to the center of the door. For the hand hole, include an access cover mounted to the pole by two ¼”-20 x ¾” (m6 x 1.00 x 19 mm) hex-head stainless steel bolts.

Provide a grounding lug complete with mounting hardware, as required, inside the pole as the plans show. Provide access to the grounding lug from the hand hole. Weld the ground lug directly opposite the hand hole on the inside wall of the pole.

Equip the top of the shaft with a removable, ventilated cap held securely in place by at least 3 ¼" -20 x ¾" (m6 x 1.00 x 19 mm) hex-head stainless steel set screws.

Ensure that all castings are clean, smooth, and with all details well defined and true to pattern.

Include cover plates for all luminaire attachment locations on the pole which will not have a luminaire attached to it under this project.

Attach base plates firmly to the pole shaft by welding or other approved method.

Include anchor bolts meeting AASHTO standards applicable to the pole type and loading. Provide a mounting template that ensures correct installation of anchor bots in foundation.

C Construction

Install poles as specified in the plan details and using appropriate contractor-furnished anchor bolts and hardware. Use the appropriate anchor bolt template to ensure correct installation. Secure pole to anchor assembly and document tensioning procedures conforming to standard spec 641.3.1.2.

After completing erection using normal pole shaft raking techniques, ensure the centerline of the shaft appears vertical.

Install identification plaques as the plans show following the structure numbering on the signal plan.

Secure rodent screening covering the space between the base plate and the concrete base.

D Measurement

The department will measure each Pole (Type) as each individual pole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.12	Poles Type 10	Each
SPV.0060.13	Poles Type 13	Each

Payment is full compensation for providing and installing poles including all hardware and fittings necessary to install the poles, and for installing identification plaques.

61. Monotube Arms 25-FT, Item SPV.0060.14; 30-FT, Item SPV.0060.15; 45-FT, Item SPV.0060.16; 50-FT, Item SPV.0060.17; 55-FT, Item SPV.0060.18.

A Description
Work under this item consists of furnishing and installing monotube arms.

B Materials
Design support structures conforming to the minimum wall thickness the plan details show and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph (145 km/h). Do not use the methods of appendix C of those AASHTO standards.

Use category III criteria for 15 to 30-foot arms. Use category II criteria for 35 to 55-foot arms.

For structures requiring a fatigue analysis, use 45 mph (72 km/h) for truck-induced gusts.

Base the designs on the completed maximum loading configuration the standard detail drawing shows. Along with the materials list, submit a certificate of compliance certifying that the arms as furnished, conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the certificate and a copy of the monotube arm shop drawings to the department electrical engineer.

Furnish monotube arms conforming to the following:

1. Consist of zinc coated steel round or oval members.

2. Have a mounting device welded to the pole end of the monotube arm that allows the attachment of the arm to a pole as the plans show.

3. Have stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.

4. Have a clean, uniform natural finish. No paint or other corrosion preventive maintenance coating is required.

After welding and before zinc coating, clean exterior surfaces of each arm free of all loose rust and mill scale, dirt, oil or grease, and other foreign substances.

Apply zinc coating as specified for sign bridge components in standard spec 641.2.8. Ensure that the zinc coating is tight, free from rough areas or slag, and presents a uniform appearance.

After manufacturing is complete, clean the exterior surfaces of each pole free of all loose scale, dirt, oil, or grease, and other foreign substances.

C (Vacant)

D Measurement
The department will measure Monotube Arm (Length) as each individual arm, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.14	Monotube Arms 25-FT	Each
SPV.0060.15	Monotube Arms 30-FT	Each
SPV.0060.16	Monotube Arms 45-FT	Each
SPV.0060.17	Monotube Arms 50-FT	Each
SPV.0060.18	Monotube Arms 55-FT	Each

Payment is full compensation for providing and installing all materials, including all hardware, fittings, mounting devices, shims, and attachments necessary to completely install the arms.

62. Luminaire Arms Steel 15-FT, Item SPV.0060.19.

A Description
Work under this item consists of furnishing and installing steel luminaire arms.

B Materials
Design support structures conforming to the minimum wall thickness the plan details show and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph (145 km/h). Do not use the methods of appendix C of those AASHTO standards.

Use category III criteria if mounted on top of a Type 10 pole and category II criteria if mounted on top of a Type 13 pole.

For structures requiring a fatigue analysis, use 45 mph (72 km/h) for truck-induced gusts.

Base the designs on the completed maximum loading configuration the standard detail drawing shows. Along with the materials list, submit a certificate of compliance certifying that the arms as furnished conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the

certificate and a copy of the luminaire arm shop drawings to the department electrical engineer.

Furnish luminaire arms conforming to the following:

1. Consist of zinc coated steel round or oval members.

2. Have a mounting device welded to the pole end of the luminaire arm that allows the attachment of the arm to a pole as the plans show.

3. Have stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.

4. Have a clean, uniform natural finish. No paint or other corrosion preventive maintenance coating is required.

After welding and before zinc coating, clean exterior surfaces of each arm free of all loose rust and mill scale, dirt, oil or grease, and other foreign substances.

Apply zinc coating as specified for sign bridge components in standard spec 641.2.8. Ensure that the zinc coating is tight, free from rough areas or slag, and presents a uniform appearance.

After manufacturing is complete, clean the exterior surfaces of each pole free of all loose scale, dirt, oil, or grease, and other foreign substances.

C Construction
Construct according to standard spec 657.3.

D Measurement
The department will measure Luminaire Arms Steel 15-Foot as each individual arm, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.19	Luminaire Arms Steel 15-FT	Each

Payment is full compensation for providing and installing all materials, including all hardware, fittings, mounting clamps, shims if required and attachments necessary to completely install arms.

63. PVC Lateral 6-Inch, Item SPV.0090.01; 8-Inch, Item SPV.0090.02; 12-Inch, Item SPV.0090.03.

A Description

This work consists of installing Polyvinyl Chloride (PVC) pipe lateral conforming to the size and details shown in the plans. Install the laterals at the place agreed upon by the engineer and the property owner.

B Materials

PVC Lateral shall be constructed of PVC pipe conforming to standard spec 612.2.6 of the Standard Specifications. Granular backfill shall conform to standard spec 209.

C Construction

Construct in accordance to applicable portions of standard spec 611 and the details shown in the plans. Core connections to mainline storm sewer, manholes, and inlets. Coring is defined as cutting a circular hole into the main sewer using a mechanically powered hollow cylindrical bit. The engineer approves the fitting and its method of attachment to the main sewer. All adhesives used shall be compatible with all pipe materials. Finish the connection flush with the inside of the main sewer. After the fitting has been permanently fixed to the opening in the main sewer, further secure by encasement in three-inch thick class D concrete for a distance of no less than one-foot in each direction from the connection. Use granular backfill for all PVC Laterals.

D Measurement

The department will measure PVC Lateral (Size) in length by linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	PVC Lateral 6-Inch	LF
SPV.0090.02	PVC Lateral 8-Inch	LF
SPV.0090.03	PVC Lateral 12-Inch	LF

Payment is full compensation for furnishing all materials, connectors, clean outs, end caps, locate and layout, removal of existing pipe, excavation, bedding, backfill and incidentals necessary for installing PVC Lateral.

64. Tracer Wire, 12 AWG, Item SPV.0090.04.

A Description

Work under this item consists of installing tracer wire alongside fiber optic communication equipment in accordance to the details shown on the plans and as hereinafter provided.

B Materials
All wire shall meet the requirements of standard spec 655.

C Construction
Install a 12 AWG XLP insulated, solid, copper, yellow in color tracer wire each run of conduit which contains fiber optic cable. The wire shall be approximately 5 feet (1.5 m) longer than the run of conduit and shall be doubled back at least 2 feet (0.6 m) at each raceway access point. Anchor the tracer wire at each access point in a manner acceptable to the engineer. At each access point the wires from all conduits entering shall be twisted and joined using an appropriately sized wire nut. Wire that is installed to a traffic signal cabinet shall extend 3 feet beyond the conduit it enters the cabinet through.

Test the tracer wire following installation. Use a megger to perform ground resistance testing. Ensure that all wire tests, read infinity to ground. Provide results to the department. Replace tracer not meeting the infinity test result at no expense to the department.

D Measurement
The department will measure Tracer Wire, 12 AWG by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Tracer Wire, 12 AWG	LF

Payment is full compensation for furnishing and installing all materials, including wire, wire nuts, and incidentals necessary to complete this item of work.

65. Pavement Marking Grooved Epoxy 4-Inch, Item SPV.0090.05; 8-Inch, Item SPV.0090.06.

A Description
This special provision describes furnishing, grooving, and installing wet reflective epoxy pavement marking as shown on the plans, in accordance to standard spec 646, and as hereinafter provided. This special provision also describes ensuring that temporary pavement marking is placed in the same location as the final marking on new lanes that are not grooved and open to traffic.

B Materials
Furnish a 20 mils application of modified epoxy binder pavement marking in a grooved slot. Provide a double drop system of 5.3 pounds per gallon of 3M elements Series 70E wet reflective beads for white marking and 71E for yellow and Utah Performance beads mixture at a drop rate of 12-22 pounds per gallon:

US Mesh	Percent Passing (ASTM D1214)
18	65-80
20	
25	
30	0-30
40	
50	0-5

The beads will follow standard spec 646.2.3 except for (1). This product shall achieve a minimum of 250 mcd, initial, and 80 mcd, for white one year after placement, per ASTM E 2177, 45 seconds after the pavement marking is wetted.

C Construction

C.1 General

For quality assurance, provide the engineer and the Milwaukee County Traffic Engineering Section evidence of manufacturer training in the proper placement and installation of the wet reflective epoxy/ bead marking.

Plane the grooved lines in accordance to details in the plan. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove. Remove all temporary lane line and center line pavement markings during the grooving process.

C.2 Groove Depth

Cut the groove to a depth of 60 mils ±10 mils from the pavement surface. Measure depth using a straightedge placed perpendicular to the groove. The department will periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the pavement marking.

C.4 Groove Position

Position the groove edge in accordance to the plan details at a minimum of 3 inches away from the joint edge. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the pavement marking segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.5.2 New Pavement

Groove pavement 10 or more days after paving.

If opening to traffic a lane that is not grooved, place temporary pavement marking. For lanes not open to traffic, temporary pavement marking is not required.

C.5.3 Existing Pavement
Check for structural integrity in supporting grooving operations. If the structural integrity of the pavement is inadequate to support grooving operations, immediately notify the engineer.

D Measurement
The department will measure Pavement Marking Grooved Epoxy (Width) in length by the linear foot placed, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.05	Pavement Marking Grooved Epoxy 4-Inch	LF
SPV.0090.06	Pavement Marking Grooved Epoxy 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the epoxy, elements and beads; removing lane line and/ or center line temporary pavement marking (during the grooving process).

66. Construction Staking, Concrete Sidewalk, Item SPV.0090.07.

A Description
Work under this item consists of contractor-performed construction staking required to establish the horizontal and vertical position for the concrete sidewalk and to establish the required positions of the pedestrian ramps. Perform all work under this item in accordance to standard spec 650. Construction Staking, Concrete Sidewalk includes staking of the pedestrian ramps and includes staking of all median noses.

B (Vacant)

C Construction
Set construction stakes or marks at 50-foot intervals, maximum. Set and maintain stakes as necessary to achieve the required accuracy and to support the method of operations. Set additional construction stakes as necessary to establish location and grade of concrete sidewalk, including points of change in alignment grade, along intersecting walks, at pertinent points of the pedestrian ramps, and at the radius points of intersecting walks.

D Measurement
The department will measure Construction Staking Concrete Sidewalk by the linear foot acceptably completed, measured along each sidewalk centerline. The staking of the pedestrian ramps is incidental to the item Construction Staking Concrete Sidewalk and will not be measured. The department will not measure construction staking for base underlying concrete sidewalk.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.07	Construction Staking Concrete Sidewalk	LF

Payment is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes and will be made in accordance to standard spec 650. The staking of the pedestrian ramps is incidental to the item Construction Staking Concrete Sidewalk and will not be paid.

67. Timber Fence, Item SPV.0090.08.

A Description

This work consists of the construction of timber fence with chain link fence, as shown on the plans, and in accordance to standard spec 615 and standard spec 616 and the contract.

B Materials

Furnish timber materials in accordance to the pertinent requirements of standard spec 615.2. Posts and rails shall be untreated. Furnish chain link fence materials in accordance to the pertinent requirements of standard spec 616.2.3. The chain link fence shall have a rubberized coating of a dark green color.

C Construction

Construction methods shall be in accordance to the pertinent requirements of standard specs 615.3 and standard spec 616.3.3. Staple the chain link fabric to the timber fence.

D Measurement

The department will measure Timber Fence by the linear foot of fence from end of rail to end of rail in place and acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.08	Timber Fence	LF

Payment is full compensation for furnishing all materials, including posts, rails, anchor plate assembly, bolts, paint, staples and incidentals; for furnishing all erecting, for attachment to the retaining walls and timber fence, and disposal of surplus materials; for preservative treatment and painting.

68. Furnish and Install 12 SM Fiber Optic Communications Cable, Item SPV.0090.09.

A Description

Work under this item consists of furnishing and installing 12 SM fiber optic communications cable as shown on the plans, and as hereinafter provided.

B Materials

The cable shall meet all requirements stated in this specification.

The 12SM communications cable shall include four fiber subunits. The first (blue) and second (orange) subunit shall include twelve singlemode (SM) optical fibers.

B.1 Fiber Characteristics – Singlemode

All fibers in the cable must be usable fibers and meet required specifications. Each optical fiber shall consist of a doped silica core surrounded by a concentric silica cladding. The singlemode fiber shall be matched clad design. The multimode fiber shall be graded index.

Core Diameter:	8.3 µm.
Cladding Diameter:	125.0 $\pm$ 1.0 µm.
Core-to-Cladding Offset:	< 0.8 µm.
Cladding Non-Circularity:	< 1.0%
Coating Diameter:	245 $\pm$ 10 µm.
Colored Fiber Diameter:	Nominal 250 µm.
Attenuation Uniformity:	No point discontinuity greater than 0.10 dB at either 1310 nm or 1550 nm.
Attenuation at the Water Peak:	The attenuation at 1383 at 3 nm shall not exceed 2.1 dB/km.
Cutoff Wavelength:	<1260 nm
Mode-Field Diameter:	9.30 $\pm$ 0.50 µm. at 1310 nm, 10.50 $\pm$ 1.00 µm. at 1550 nm.

The coating shall be a dual layered, UV-cured acrylate applied by the fiber manufacturer, and shall be mechanically strippable.

B.2 Fiber characteristics – Multimode

Core Diameter:	62.5 $\pm$ 3 µm.
Cladding Diameter:	125.0 $\pm$ 1.0 µm.
Core-to-Cladding Offset:	< 3 µm.
Cladding Non-Circularity:	< 5%
Coating Diameter:	245 $\pm$ 10 µm.
Colored Fiber Diameter:	nominal 250 µm.

B.3 Fiber Parameters

Fiber Type: Singlemode

Required Fiber Grade – Maximum Individual Fiber Attenuation.

The maximum dispersion shall be less than 3.2 ps/(nm · km) from 1285 nm to 1330 nm and shall be less than 18 ps/(nm · km) at 1550 nm.

Fiber Type: Multimode

Attenuation:	< 3.5 dB at 850 nm < 1.0 dB at 1300 nm
Bandwidth:	140 MHz*km at 850 nm 500 MHz*km at 1300 nm
Numerical Aperture (NA):	27.5 $\pm$ 0.015

The fiber manufacturers will proof-test 100% of the optical fiber to a minimum load of 100 kpsi.

B.4 Fiber Construction

Place optical fibers inside a loose buffer tube. Each buffer tube shall contain 6 fibers. The fibers shall not adhere to the inside of the buffer tube.

Each fiber shall be distinguishable by means of color-coding according to the TIA/EIA-298 Specifications, "Optical Fiber Cable Color Coding". Buffer tubes containing fibers shall be color-coded with distinct and recognizable colors according to the above references specification.

In buffer tubes containing multiple fibers, the colors shall be stable across the specified storage and operating temperature range and not subject to fading or smearing onto each other or into the gel filling material. Colors shall not cause fibers to stick together.

Buffer tubes shall be kink resistant within the specified minimum bend radius.

Fillers may be included in the cable core to lend symmetry to the cable cross-section where needed.

The central anti-buckling member shall consist of a glass reinforced plastic rod. The purpose of the central member is to prevent buckling of the cable.

Fill each buffer tube with a non-hygroscopic, non-nutritive to fungus, electrically non-conductive, homogenous gel. The gel shall be free from dirt and foreign matter. The gel shall be readily removable with conventional nontoxic solvents. Buffer tubes shall be stranded around a central member using the reverse oscillation, or "S-Z", stranding process.

The cable core shall contain a water-blocking material. The water blocking material shall be non-nutritive to fungus, electrically non-conductive and homogenous. It shall also be free from dirt and foreign matter and shall be readily removable with conventional (nontoxic) solvents.

Apply binders with sufficient tension to secure the buffer tubes to the central member without crushing the buffer tubes. The binders shall be non-hygroscopic, non-wicking and dielectric with low shrinkage. The cable shall contain at least one ripcord under the sheath for easy sheath removal. Tensile strength shall be provided by a combination of high tensile strength dielectric yarns. The high tensile strength dielectric yarns shall be helically stranded evenly around the cable core.

Sheath all dielectric cables with medium density polyethylene (MDPE). The minimum nominal jacket thickness shall be 1.4 mm. Apply the jacketing material directly over the tensile strength members and water blocking material. The polyethylene shall contain carbon black to provide ultraviolet light protection and shall not promote the growth of fungus.

The jacket or sheath shall be free of holes, splits, and blisters. The cable jacket shall contain no metal elements and shall be of a consistent thickness. Cable jackets shall be marked with manufacturer's name, sequential foot markings, year of manufacture, and a telecommunication handset symbol, as required by Section 350G of the National Electrical Safety Code (NESC). The actual length of the cable shall be within –0/+1% of the length markings. The marking shall be in contrasting color to the cable jacket. The height of the marking shall be approximately 2.5 mm.

The maximum pulling tension shall be 2700 N (608 lbf) during installation (short term) and 600 N (135 lbf) long term installed.

The shipping, storage, and operating temperature range of the cable shall be -40ºC to +70ºC. The installation temperature range of the cable shall be -30ºC to +70ºC.

When tested in accordance to FOTP-3, "Procedure to Measure Temperature Cycling Effects on Optical Fibers, Optical Cable, and Other Passive Fiber Optic Components", the average change in attenuation at extreme operational temperatures (-40ºC to +70ºC) shall not exceed 0.05 dB/km at 1550 nm for single-mode fiber. The magnitude of the maximum attenuation change of each individual fiber shall not be greater than 0.15 dB/km at 1550 nm.

B.5 General Cable Performance Specifications

When a one-meter static head or equivalent continuous pressure is applied at one end of a one-meter length of un-aged cable for 24 hours, no water shall leak through the open cable end. When a one-meter static head or equivalent continuous pressure is applied at one end of a one-meter length of aged cable for one hour, no water shall leak through the open cable end. The aging cycle is defined as exposing the cable to +85ºC $\pm$ 2ºC for 168 hours and two cycles of - 40ºC to +70ºC with cable held at these temperatures for 24 hours. At the end of this cycle, the cable will be decreased to +23ºC and held for 24 hours. The water penetration test is completed at the end of the 24-hour hold. Perform testing in accordance to the industry standard test, FOTP-82, "Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable".

When tested in accordance to FOTP-81, "Compound Flow (Drip) Test for Filled Fiber Optic Cable", the cable shall exhibit no flow (drip or leak) of filling and/or flooding material at +65ºC.

The cable shall withstand a minimum compressive load 220 N/cm (125 lbf/in) applied uniformly over the length of the compression plate. Test the cable in accordance to FOTP-41, "Compressive Loading Resistance of Fiber Optic Cables", except that the load shall be applied at the rate of 3 mm to 20 mm per minute and maintained for ten minutes. The magnitude of the attenuation change shall be within the repeatability of the measurement system for 90% of the test fibers. The remaining 10% of the fibers shall not experience an attenuation change greater than 0.1 dB at 1550 nm (SM). The repeatability of the measurement system is typically 0.05 dB or less. No fibers shall exhibit a measurable change in attenuation after load removal.

When tested in accordance to FOTP-104, "Fiber Optic Cable Cyclic Flexing Test", the cable shall withstand 25 mechanical flexing cycles at a rate of 30 cycles per minute around a sheave diameter not greater than 20 times the cable diameter. The magnitude of the attenuation change shall be within the repeatability of the measurement system for 90% of the test fibers. The remaining 10% of the fibers shall not experience an attenuation change greater than 0.1 dB at 1550 nm (SM). The repeatability of the measurement system is typically 0.05 dB or less. The outer cable jacket shall not exhibit evidence of cracking or splitting when observed under 5x magnification.

When tested in accordance to FOTP-25, "Repeated Impact Testing of Fiber Optic Cables and Cable Assemblies", the cable shall withstand 25 impact cycles. The magnitude of the attenuation change shall be within the repeatability of the measurement system for 90% of the test fibers. The remaining 10% of the fibers shall not experience an attenuation change greater than 0.1 dB at 1550 nm (SM). The repeatability of the measurement system is typically 0.05 dB or less. The cable jacket shall not exhibit evidence of cracking or splitting at the completion of the test.

When tested in accordance to FOTP-33, "Fiber Optic Cable Tensile Loading and Bending Test", using a maximum mandrel and sheave diameter of 560 mm, the cable shall withstand a tensile load of 2700 N (608 lbf) applied for one hour (using "Test Condition II" of the procedure). In addition, the cable sample, while subjected to a minimum load of 2660 N (600 lbf), shall be able to withstand a twist of 360 degrees in a length of less than 3 meters (9.9 feet). The magnitude of the attenuation change shall be within the repeatability of the measurement system for 90% of the test fibers. The remaining 10% of the fibers shall not experience an attenuation change greater than 0.1 dB at 1550 nm (SM). The repeatability of the measurement system is typically 0.05 dB or less. The cable shall not experience a measurable increase in attenuation when subjected to the rated residual tensile load, 890 N (200 lbf).

When tested in accordance to FOTP-85, "Fiber Optic Cable Twist Test", a length of cable no greater than 2 meters will withstand 10 cycles of mechanical twisting. The magnitude of the attenuation change will be within the repeatability of the measurement system for 90% of the test fibers. The remaining 10% of the fibers will not experience an attenuation change greater than 0.1 dB at 1550 nm. The repeatability of the measurement system is typically 0.05 dB or less. The average increase in attenuation for the fibers shall be < 0.40 dB at 1300 nm. The cable jacket will exhibit no cracking or splitting when observed under 5x magnification after completion of the test.

B.6 Quality Assurance Provision

All cabled optical fibers greater than 1000 meters in length shall be 100% attenuation tested. The attenuation of each fiber shall be provided with each cable reel. The cable manufacturer shall be ISO 9001 registered. The cable manufacturer shall provide installation procedures and technical support concerning the items contained in this specification. The manufacturer shall certify that the supplied cable meets all requirements of these specifications.

B.7 Packaging

The completed cable shall be packaged for shipment on non-returnable wooden reels. Top and bottom ends of the cable shall be available for testing. Both ends of the cable shall be sealed to prevent the ingress of moisture. Each reel shall have a weatherproof reel tag attached identifying the reel and cable.

A cable data sheet shall accompany each cable. Include the following information:

- Cable Number
- Factory Order Number
- Customer Purchase Order Number
- Measured Attenuation of Each Fiber (for lengths > 1000 m)
- Ordered Length
- Actual Shipped Length

C Construction

Install all cable as per Siecor Recommended Procedure 005-011, "Fiber Optic Cable Placing – Duct", and Siecor Recommended Procedure 005-012, "Fiber Optic Cable Placing – Direct Buried". These general procedures will be followed regardless of the manufacturer of the cable. If the cable manufacturer recommends an operation in conflict with these procedures, submit a request for installation procedure change for approval to the department. The maximum pulling tension shall be 2700 N (608 lbs) during installation (short term) and 600 N (135 lbs) long term installed.

Testing –Provide the date, time and location of any tests required by this specification to the engineer at least 24 hours before performing the test.

Upon completion of the cable installation, splicing, and termination, test all fibers for continuity, events above 0.30 dB, and total attenuation of the cable. The test procedure is as follows:

A Certified Technician utilizing an Optical Time Domain Reflectometer (OTDR) and Optical Source/Power Meter must conduct the installation test. The Technician is directed to conduct the test using the Standard Operating Procedure as defined by the manufacturer of the test equipment.

The method of connectivity between the OTDR and the cable shall be a factory patch cord of a length equal to the "dead zone" of the OTDR. Optionally, the Technician can use a factory "fiber box" of 100 meters minimum with no splices within the box. The tests shall be conducted at 1310 and 1550 nm for all singlemode fibers and at 850 and 1300 nm for multimode fibers.

At the completion of the test, provide two copies of documentation of the test results to the engineer. Bind the test documentation and include the following:

- Cable and Fiber Identification
- Cable ID
- Cable Location – begin and end point
- Fiber ID, including tube and fiber color
- Operator Name
- Date and Time
- Setup Parameters
- Wavelength
- Pulse width (OTDR)
- Refractory index (OTDR)
- Range (OTDR)
- Scale (OTDR)
- Test Results

a. OTDR Test:

- Total Fiber Trace
- Splice Loss/Gain
- Events > 0.10 dB
- Measured Length (Cable Marking)
- Total Length (OTDR)
- Attenuation (dB/km)

Traces shall also be provided electronically.

b. Optical Source/Power Meter

- Total Attenuation

Provide these results in tabular form.

Use the following criteria for the acceptance of the cable:

The test results shall demonstrate that the dB/km loss does not exceed +3% of the factory test or 1% of the cable's published production loss. The error rate for the test equipment will be taken into account.

No event shall exceed 0.10 dB. If any event is detected above 0.10 dB, the contractor must replace or repair that even point.

The total dB loss of the cable, less events, shall not exceed the manufacturer's production specifications as follows: 0.5 dB/km at both 1310 and 1550 nm for singlemode fibers; 3.5 dB/km @ 850 nm and 1.0 dB/km @ 1300 nm for multimode fibers.

If the total loss exceeds these specifications, replace or repair that cable run at the contractor's expense, both labor and materials. Elevated attenuation due to exceeding the pulling tension during installation will require the replacement of the cable run at the contractor's expense, both labor and materials.

D Measurement

The department will measure Furnish and Install 12 SM Fiber Optic Communications Cable by the linear foot of cable in place and acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.09	Furnish and Install 12 SM/12 MM Composite Fiber Optic Communications Cable	LF

Payment is full compensation for furnishing, installing, and testing the fiber optic cable; for disposal of surplus materials.

69. Traffic Signal Controller and Cabinet, Fully Actuated, 16-Phase, S. 76th St., CTH U and Puetz, Item SPV.0105.01; Traffic Signal Controller and Cabinet, Fully Actuated, 16-Phase, S. 76th St., CTH U and Drexel, Item SPV.0105.02; Traffic Signal Controller and Cabinet, Fully Actuated, 16-Phase, S. 76th St., CTH U and Imperial, Item SPV.0105.03.

A Description

This work consists of furnishing and installing a traffic signal controller and cabinet conforming to NEMA TS2 2003 specifications with single-mode or multi-mode fiber optic communication as shown on the plans and as hereinafter provided.

Deliver a completely wired controller cabinet at least 10 working days prior to planned installation date, which meets standard specifications except where modified by these specifications, which is ready for installation, including all required traffic signal control equipment, and any auxiliary equipment, wiring diagrams, and manuals as called for in the specifications, to the Milwaukee County Highway Department Electrical Shop, (414) 257-6593, 10190 West Watertown Plank Road, Wauwatosa, WI 53226 for testing. Notify Electrical Shop personnel 48 hours (minimum) before equipment delivery.

Submit two copies (one copy to the engineer and another copy to the Milwaukee County Chief Electrician) of the following: Detection wiring diagrams, cable and routing diagrams, pole to pull box wiring diagrams, conductor layout standards and the associated head arrangements and other pertinent details. The cabinet supplier shall submit three copies (one paper copy to remain in the cabinet, another paper copy to the Milwaukee County Chief Electrician and one .dwg digital file to the Milwaukee County Traffic Engineering Section) of the cabinet wiring diagram and prints.

Equipment will be examined and tests will be performed to ensure 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. Test and examine all equipment 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. Do not install the cabinet until it is in proper working order and approved by the Milwaukee County Electrical Shop personnel.

B Materials

Furnish a door-in-door ground mounted aluminum cabinet of clean-cut design and appearance. Provide a cabinet of minimum size 44 inches wide, minimum 24 inches deep, and minimum 52 inches to maximum 60 inches high. The size of the cabinet shall provide ample space for housing the controller, all of the associated devices which are to be furnished with the controller, all other auxiliary devices herein specified. Furnish the cabinet with a natural, uncoated, aluminum finish inside and outside.

Provide a door switch for the main cabinet door. When the door is opened the switch shall send a signal to the controller sufficient for the controller to log an alarm.

Mount a minimum of four vertical "C" channels, compatible with Unistrut channel nuts, on each interior side wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. Install three vertical "C" channels or three slotted rails on the interior back wall of the cabinet. All mounting channels and rails shall extend to within 7 inches of the top and bottom of the cabinets and shall be of sufficient strength to rigidly hold specified shelves and equipment. Provide two full-width, 11-inch deep, fully adjustable, aluminum shelves to support the controller and other equipment. Mount the lower shelf at a height above the bottom of the cabinet such that the shelf not interfere with the ability to tilt the terminal facility forward on its hinges for maintenance purposes.

Provide a under-shelf drawer beneath the lower shelf. The drawer shall be a minimum 20 inches wide and the full depth of the shelf. The drawer shall operate smoothly and shall have a stop to prevent inadvertently pulling the draw out of its support. Provide the stop to allow purposeful complete removal of the drawer without the use of tools.

The power panel consists of a separate module, securely fastened to the interior right side wall of the cabinet. Wire the power panel to provide the necessary power to the cabinet, controller, MMU, cabinet power supply, and all auxiliary equipment. Manufacture the power panel from 0.090-inch, 5052-H32 aluminum. Panel layout shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools.

Provide a light, tough, transparent, weather-resistant, non-yellowing, thermoplastic cover, rigidly mounted over the full power panel, with access holes for circuit breakers and other equipment, and open on the sides for ventilation. House in the power panel the following vertically mounted, single pole, 120 volts AC, 60 Hertz, bolt on circuit breakers, with the ON position being up:

- One 50-amp main breaker. This breaker shall supply power for all cabinet functions through one of the other breakers listed below. This breaker shall feed a signal bus supplied through a solid state bus relay and a radio interference line filter. The bus relay, in all cases, shall be a solid state contactor and shall not be jack mounted.

- One 15-amp auxiliary breaker. This breaker shall supply power to the fan and heater**.**

- One 10-amp auxiliary breaker. This breaker shall supply power for control equipment only: controller, MMU, and cabinet power supply.

- One 30-amp auxiliary breaker for video detection.

Breakers shall be thermal magnetic type, UL or NRTL listed, with a minimum of 22,000 amp interrupting capacity. Power the cabinet light through the GFI fuse, not a circuit breaker.

Equip each control cabinet with a single radio interference suppressor (RIS) of sufficient ampere rating to handle the load requirements. Install the RIS at the input power point. The RIS shall minimize interference in both the broadcast and the aircraft frequencies, and shall provide a maximum attenuation of 50 DB over a frequency range from 200 KHZ to 75 MHZ, when used in connection with normal installations. The RIS shall be hermetically sealed in a substantial metal case filled with a suitable insulating compound. The terminals shall be nickel-plated brass studs of sufficient external length to provide space to connect two #8 AWG wires and shall be so mounted that they cannot be turned in the case. Ungrounded terminals shall be properly insulated from each other, and shall maintain a surface leakage distance of not less than 6.35 mm between any exposed current conductor and any other metallic parts. The terminals shall have an insulation factor of 100-200 megohms dependent upon external conditions. The RIS shall be rated at minimum 50 amperes. Design the RIS for operation on 115 VAC +/- 10%, 60HZ, single-phase circuits, and to meet the standards of UL and Radio Manufacturer's Association.

Provide a normally-open, 60 amp, solid state relay.

The surge suppressor protecting the controller, conflict monitor, and detection equipment shall consist of two stages:

The design of the stage one suppressor shall be modular and it shall be installed in such a way that it may be removed and replaced with the intersection under power and in flashing operation. It shall have a permanently mounted and wired base and a removable circuit package. The status of the stage one surge protector shall be continuously and remotely monitored by alarm circuit 2. The stage one suppressor circuit package shall have two LED indicators for power ‘on’ and suppression ‘failure’ and shall be according to the following:

Stage One Suppressor	
Properties	Criteria
"Plug-in" suppression module	12 pin connector assembly
Clamp Voltage	250 V at 20,000 A typical
Response time	Less than 5 nanoseconds
Maximum Continuous service current	15 A at 120 VAC 60 Hz
High Frequency noise attenuation	At least 50 dB at 100,000 Hz
Operating temperature	-40 to 185 °F

The stage two, high speed, solid state, transient suppressor shall protect the system from transient over voltage without affecting power at the load. It shall suppress transients of either polarity and form either direction (source or load). The suppressor shall have a

visual ‘on’ indicator lamp when the unit is operating normally. It shall also have a UL plastic enclosure, a four position terminal strip for power connection, and it shall utilize silicon avalanche diode technology. The stage two suppressor shall be according to the following:

Stage Two Suppressor	
Properties	Criteria
Nominal service voltage	120 V at 50/60 Hz
Maximum voltage protection level	± 330V
Minimum voltage protection level	± 220 V ± 5 %
Minimum surge current rating	700 A
Stand by power	Less than 0.5 Watts
Hot to neutral leakage current at 120 V RMS	Less than 5 µA
Maximum Response Time	5 nanoseconds
Operating and Storage temperature	-4 to 122 °F

Ventilate the cabinet by means of a 120 VAC, 60HZ, tube axial compact type fan located in the top of the cabinet plenum. The fan’s free delivery airflow shall be greater than or equal to 100 cubic feet per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a seven year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The thermostat's turn on setting shall be adjustable from 90 to 120 degrees F. The fan shall run until the cabinet temperature decreases below the turn-on temperature setting by approximately 30 degrees F. The fan shall be fused.

The terminal facility panel shall be constructed from 5052-H32 brushed aluminum of 0.125 inches minimum thickness and formed so as to eliminate any flexing when plug-in components are installed. Mount the bottom of the terminal facility a minimum of nine inches from the bottom of the cabinet. Hinge the terminal facility at the bottom to allow easy access with simple tools to all wiring on the rear of the panel. It shall not be necessary to remove the lower shelf, drawer, or any shelf-mounted equipment to hinge down the terminal facility. Provide sufficient slack in the load bay wiring to allow for dropping the load bay.

The terminal facility panel shall incorporate a relay to remove +24VDC from the common side of the load switches when the intersection is placed into mechanical flash. The relay shall have a momentary push button to apply power to the load switch inputs for the ease of troubleshooting.

Provide two each, one on the left side of the cabinet and one on the right side of the cabinet of the following:

a. Minimum 8-position neutral bus bar capable of connecting three #12 AWG wires per position.
b. Minimum 6-position ground bus bar capable of connecting three #12 AWG wires per position.

Provide 5-20R Outlets at these locations:

a. On the right side above the power panel provide one Quad.
b. On the left side, at approximately the height of the upper shelf, provide one Quad.
c. On the back side of the police panel or on the power panel provide a GFCI Duplex.

Locate the following switches on a maintenance panel on the inside of the cabinet door:

a. Controller On/Off
b. Stop Time (Three Position)

Protect these switches with a switch guard to prevent accidental throwing of the switch. The guard shall be a single piece covering only the sides of the switch and shall have no moving parts.

Locate the following behind the police access door:

a. Signal/Off Switch
b. Flash/Normal Switch
c. Hand/Auto Switch
d. Coiled hand control and cable

Position	Switch Label	Function
Upper	Stop Time	Place stop time on the controller
Center	Run	Remove the stop time input to the controller
Lower	Normal	Connects the MMU to the controller stop time input

The above switches shall function as follows:
Off: Signals Dark

Signal: Signals On and operating as follows:

	Auto	Hand
Flash:	Signals Flash	Signals Flash
Normal:	Signals Normal	Signals Advance by use of hand control

Install a 250 W heater on the interior right side wall in the lower back corner of the cabinet with a protective ventilated cover and a thermostat that is adjustable from 0 to 100 degrees F. Locate it properly to prevent damage to equipment and wiring.

The control cabinet is peripheral to the traffic signal controller and MMU and shall be fully compatible with a NEMA TS2 fully actuated Eagle EPAC M51-TS2 or Econolite ASC/3-TS2 traffic signal controller with ethernet communication and fully compatible with a NEMA TS2 EDI MMU-16LEip Smart Monitor or a Reno MMU-1600G conflict monitor with ethernet communication. The cabinet shall have the wiring necessary to power both TS2-Type 1 controllers and TS2-Type 2 controllers, when one power assembly is in use the other shall be able to be disconnected.

The equipment items included shall be, but not necessarily limited to, cabinet, microprocessor controller, MMU, BIUs, shelf-mounted detector racks, detector amplifiers if needed, power supply, load switches, flash relays, power distribution panel, fiber optic communication components necessary to communicate via ethernet with controller, video detection, MMU and at least four other devices, 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.

The fiber optic communication components shall use small form pluggable (SFP) 1GB/s ports and optics for the fiber optic communication type shown in the plans and shall obtain power from one of the 5-20R outlets.

Equip the cabinet with one TS2 detector rack capable of handling 4 channels of video detection inputs.

If the plans call for inductive loop detection, modify the number of channels of detection inputs on the detector racks to meet the requirements of the intersection such that each loop detector is installed on an individual channel. If multiple racks are required they shall be capable of handling the same number of inputs. Provide a sufficient number of detector amplifiers to handle the number of detectors at the intersection. When required for proper cabinet operation provide a detector interface panel sized large enough to handle the requirements of the intersection. Interface panels shall allow for the connection of 32 or 16 independent field loops. The panels shall have barrier strip type terminals using 8-32 screws and be rated for 20 inch pounds of torque. Provide a ground bus terminal between each loop pair terminal to provide a termination for the loop lead-in cable ground wire. Secure the interface panels to a mounting plate attached to the left interior side wall of the cabinet.

The cabinet shall be EVP ready, with a rack and all items necessary to enable the use of confirmation beacons.

The MMU shall meet the NEMA TS2-2003 Specification and shall be a NEMA TS2 EDI MMU-16LEip, Reno MMU-1600G or approved equal. Built in ethernet communication

shall be provided with the MMU. Provide any computer programs necessary for communication with the MMU.

The controller shall be a TS2-Type 1, fully traffic actuated, solid state, digital microprocessor controller with built in ethernet communication, capable of providing the number and sequence of phases, overlaps, and any special logic as described herein and shown on the accompanying plan. The controller shall be ready to be programmed by the Milwaukee County engineer and shall be mounted in a control cabinet to operate as a complete and functioning intersection traffic signal control system. Dual ring, programmable for both single and dual entry concurrent timing, sixteen-phase frame or equivalent shall be provided. Volume density and pedestrian timing shall be provided for all phases. MUTCD flashing capability and NTCIP communication capability shall be provided. All controls shall be in accordance to the accompanying plans and with NEMA TS2-2003 standards and NTCIP Level 2 as defined by Section 3.3.6 of NEMA TS2-2003. NTCIP v02.06 capabilities shall include all NTCIP mandatory and optional objects. All NEMA TS2 and NTCIP Level 2 objects shall be programmable from computer software that will be provided to the Milwaukee County Department of Transportation and from the controller's keypad. Updates to controller firmware shall be made available to Milwaukee County upon release with no additional charge. A controller firmware update shall be accomplished via a download from a standard Windows XP/Vista/7 laptop with the software to perform such an update provided to Milwaukee County at no additional charge. The controller shall have a datakey which is capable of storing the entire timing program. The capability for flashing yellow left turn arrow operations shall be provided via a programming change.

The intersection controller unit shall be capable of up to 16-phase operation plus 4 programmable overlaps regardless of whether preemption, coordination or the special programming is used. The intersection cabinet shall be fully wired for phases 1 through 8; pedestrian phases 2, 4, 6 and 8; 4 overlaps and ready for operation. All functions as specified by TS2 – 2003 shall be wired and ready for use.

C Construction

Do not mount the cabinet on the foundation until any work by the utility to the meter breaker pedestal has been completed if required. After the contractor has mounted the cabinet on the cabinet foundation, connect all field wiring inside the cabinet and test the signal circuits for correct operation. Connect and test the signal circuits outside the cabinet as directed by the engineer. Conform all work to the latest version of the Wisconsin State Electrical Code (WSEC). Connecting and testing signal circuits are considered part of this item of work.

D Measurement

The department will measure Traffic Signal Controller and Cabinet, Fully Actuated, 16-Phase (Location), as a single complete lump sum unit of work, acceptably completed in accordance to the contract and to the satisfaction of the Milwaukee County Traffic Engineer or Milwaukee County Chief Electrician.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Traffic Signal Controller and Cabinet, Fully Actuated, 16-Phase, S. 76th St. (CTH U) and W. Puetz Rd.	LS
SPV.0105.02	Traffic Signal Controller and Cabinet, Fully Actuated, 16-Phase, S. 76th St. (CTH U) and W. Drexel Ave.	LS
SPV.0105.03	Traffic Signal Controller and Cabinet, Fully Actuated, 16-Phase, S. 76th St. (CTH U) and W. Imperial Blvd.	LS

Payment is full compensation for furnishing and installing the traffic signal controller and cabinet with fiber optic communication, switches for flashing operation, and a full complement of devices as are necessary to assure that the controller and cabinet will perform the said functions.

70. Vehicular Video Detection System, S. 76th St. (CTH U) and W. Puetz Rd., (4 Cameras), Item SPV.0105.04; Vehicular Video Detection System, S. 76th St. (CTH U) and W. Drexel Ave., (4 Cameras), Item SPV.0105.05; Vehicular Video Detection System S. 76th St. (CTH U) and W. Imperial Dr., (4 Cameras), Item SPV.0105.06.

A Description

This work consists of furnishing, installing and placing into operation a vehicular video detection system (VVDS) as shown on the plans, and as directed by the engineer in the field.

B Materials

This specification sets forth the minimum requirements for a system that detects vehicles on a roadway by processing video images and providing detection outputs to a traffic signal controller. Include all brackets, mounting hardware, cable, terminations, interface panels, and all other incidentals for the installation of the video detection equipment. This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications.

All video detection equipment, components, and terminations supplied under this item shall be fully compatible with Eagle EPAC 300 M51 and Econolite ASC/3 traffic signal controllers. The system architecture shall fully support Ethernet networking of system components. All required interface equipment needed for transmitting and receiving data and video shall be provided for with the VVDS.

B.1 Hardware

The machine vision system hardware shall consist of three components: 1) a color, zoom, Machine Vision Processor (MVP) sensor 2) a modular cabinet interface unit 3) a communication interface panel. Additionally, an optional personal computer (PC) shall host the server and client applications that are used to program and monitor the system

components. The real-time performance shall be observed by viewing the video output from the sensor with overlaid flashing detectors to indicate the current detection state (on/off). The MVP sensor shall optionally store cumulative traffic statistics internally in non-volatile memory for later retrieval and analysis.

The MVP shall communicate to the modular cabinet interface unit via the communications interface panel and the software applications using the industry standard TCP/IP network protocol. The MVP shall have a built-in, Ethernet-ready, Internet Protocol (IP) address and shall be addressable with no plug in devices or converters required. The MVP shall provide standard MPEG-4 streaming digital video.

The communication interface panel shall provide 4 sets of 3 electrical terminations for 3 wire power cables for up to 8 MVP sensors that may be mounted on a pole or mast arm with a traffic signal cabinet or junction box. The communications interface panel shall provide single-point Ethernet connectivity via RJ45 connector for communication to and between the modular cabinet interface module and the MVP sensors.

B.2 Machine Vision Processor Sensor

The MVP sensor shall be an integrated imaging color CCD array with zoom lens optics, high-speed, dualcore image processing hardware bundled into a sealed enclosure. The CCD array shall be directly controlled by the dual-core processor, thus providing high-quality video for detection that has virtually no noise to degrade detection performance. It shall be possible to zoom the lens as required for setup and operation. It shall provide JPEG video compression as well as standard MPEG-4 digital streaming video with flashing detector overlay. The MVP shall provide direct real-time iris and shutter speed control. The MVP image sensor shall be equipped with an integrated 22x zoom lens that can be changed using either configuration computer software. The digital streaming video output and all data communications shall be transmitted over the three-wire power cable.

B.3 Modular Cabinet Interface Unit

The modular cabinet interface unit shall provide the hardware and software means for up to 8 MVP sensors to communicate real-time detection states and alarms to a local traffic signal controller. It shall comply with the electrical and protocol specifications of the detector rack standards. The card shall have 1500 Vrms isolation between rack logic ground and street wiring. The modular cabinet interface unit shall be a simple interface card that plugs directly into a 170 input file rack or a NEMA type C or D detector rack. The modular cabinet interface unit shall occupy only 2 slots of the detector rack. The modular cabinet interface unit shall accept up to 16 phase inputs and shall provide up to 24 detector outputs.

B.4 Communications Interface Panel

The communications interface panel shall support up to eight MVPs. The communications interface panel shall accept 110/220 VAC, 50/60 Hz power and provide predefined wire termination blocks for MVP power connections, a Broadband-over-Power-Line (BPL) transceiver to support up to 10MB/s interdevice communications, electrical surge protectors to isolate the modular cabinet interface unit

and MVP sensors, and an interface connector to cable directly to the modular cabinet interface unit.

The interface panel shall provide power for up to eight (8) MVP sensors, taking local line voltage 110/220 VAC, 50/60 Hz and producing 110/220 VAC, 50/60 Hz, at about 30 watts to each MVP sensor. Two ½-amp SLO-BLO fuses shall protect the communications interface panel.

B.5 Functional

The vision sensor shall be able to be programmed with a variety of detector types that perform specific functions selectable by software. Detector types shall include stopline detectors capable of providing presence of moving vehicle detection based upon phase status, presence detectors, directional presence and input detectors. Additionally, phase green or red shall be displayed.

The unit shall monitor video contrast and apply video-loss timing parameters to the output by implementing minimum, maximum, or user defined fixed time recall for the assigned phase(s). The detector shall be capable of having Boolean logic applied to multiple detectors or a minimum number of detectors out of a total present, prior to placing a call.

B.6 Minimum detector requirements

Minimum detector requirements include the following:

a. Count detection – provide bi-directional vehicle counts, occupancy, and headway, and provide means to output these traffic volume statistics.
b. Speed and classification detection – define vehicle by speed, classification and length, with a minimum of 3 different categories for each.
c. Presence detection – indicate presence of a vehicle, stopped vehicle, or a vehicle traveling in the wrong direction.
d. Detector function combination – monitor outputs of multiple detectors via Boolean logic functions.
e. Label display – provide information on the video output and pass input information to other detectors.
f. Detector Station – collect and report traffic data gathered over specified time intervals including 1, 5, 10, 15, 30, 60-minute intervals and per cycle.
g. Incident detection – monitor traffic parameters for conditions that indicate an incident has occurred, such as an accident or a stalled vehicle that results in a sudden reduction in roadway capacity or throughput.
h. Schedulers – define plans that can be used by other detectors to specify different parameters for each time-of-day plan.
i. Contrast Loss detection – monitor the quality of the video image that the vision sensor is processing.
j. Speed Alarm – generate alarm outputs based on user-defined algorithms based on vehicle speed.

B.7 Power
The vision sensor shall operate on 110/220 VAC 50/60 Hz at a maximum of 25 watts. The camera and processor electronics shall consume a maximum of 10 watts. The remaining 15 watts shall support an enclosure heater.

B.8 Sensor Operations Log
The vision sensor shall maintain a non-volatile operations log, which minimally contains:

a. Revision numbers for the current vision sensor hardware and software components in operation.
b. Title and comments for the detector configuration.
c. Date and time the last detector configuration was downloaded to the vision sensor.
d. Date and time the operation log was last cleared.
e. Date and time communications were opened or closed with the vision sensor.
f. Date and time of last power up.
g. Time stamped, self-diagnosed hardware and software errors that shall aid in system maintenance and troubleshooting.

B.9 Sensor Vehicle Detection Performance
The real time detection performance of the vision sensor shall be optimized by following the guidelines for the traffic application including vision sensor mounting location; the number of traffic lanes to monitor; the sizing, placement, and orientation of vehicle detectors; traffic approaching and/or departing from the sensor's field of view; and minimizing the effects of lane changing maneuvers.

B.10 Detection Zone Placement
The video detection system shall provide flexible detection zone placement anywhere and at any orientation within the field of view of the vision sensor. Preferred detector configurations shall be detection zones placed across lanes of traffic for optimal count accuracy, detection zones placed parallel to lanes of traffic for optimal presence detection accuracy of moving or stopped vehicles. A single detection zone shall be able to replace one or more conventional detector loops connected in series. Detection zones shall be able to be overlapped for optimal road coverage. In addition, selective groups of detectors shall be able to be logically combined into a single output by using optional delay and extend timing and signal state information. Optimal detection shall be achieved when the vision sensor placement provides an unobstructed view of each traffic lane where vehicle detection is required.

B.11 Detection Zone Programming
Place the detection zones by means of a PC with a Windows XP or Vista operating system, a keyboard, and a mouse. The PC monitor shall be able to show the detection zones superimposed on images of traffic scenes.

Create the detection zones by using a mouse to draw detection zones on the PC monitor. Use the mouse and keyboard to place, size, and orient detection zones to provide optimal

road coverage for vehicle detection. Download detector configurations from the PC to the MVP sensor and cabinet interface module, to retrieve the detector configuration that is currently running in the MVP sensor, and to back up detector configurations by saving them to the PC fixed disks or other removable storage media.

Use the supervisor computer's mouse and keyboard to edit previously defined detector configurations to permit adjustment of the detection zone size and placement, to add detectors for additional traffic applications, or to reprogram the MVP sensor for different traffic applications or changes in installation site geometry or traffic rerouting.

B.12 Optimal Detection

The video detection system shall provide optimal detection of vehicle passage and presence when the vision sensor is mounted 30 feet or higher above the roadway, the image sensor is adjacent to the desired coverage area and the distance to the farthest detection zone locations is not greater than 10 times the mounting height of the vision sensor.

The vision sensor shall be able to view either approaching or departing traffic or both in the same field of view. The vision sensor, when placed at a mounting height that minimizes vehicle image occlusion and equipped with a lens to match the width of the road shall be able to monitor a minimum of 6 traffic lanes simultaneously.

B.13 Detection Zone Operation

The vision sensor’s real-time detection operation shall be verifiable through the following means:

a. View the video output of the sensor with any standard video display device (monitor).
b. The video output of the vision sensor (differential twisted pair) shall be capable of selectively transmitting:
    1. Camera video only.
    2. Analog video overlaid with the current real-time detection state of each detector.
    3. Camera video with overlaid, scaled crosshairs that are used for aiming the sensor (during installation).
    4. Individual detectors shall have the option of being hidden.
c. Electrically monitor assigned contact closure pinouts from a detector port master such as a detector rack interface card. Each pin of an interface card shall have one associated LED output to reflect its output state.
d. View the associated output LED state on the detector port master:
    1. An LED shall be ON when its assigned detector output or signal controller phase input is on.
    2. An LED shall be OFF when its assigned detector or signal controller input is off.

B.14 Count Detection Performance
Using a vision sensor installed within the optimal viewing specifications described above for count station traffic applications the system shall be able to accurately count vehicles with at least 96% accuracy under normal operating conditions (day and night) and at least 93% accuracy under adverse conditions. Adverse conditions are combinations of weather and lighting conditions that result from shadows, fog, rain, snow, etc. The data shall be optionally stored internally in non-volatile memory for later retrieval and anaylsis.

B.15 Demand Presence Detection Performance
Using a vision sensor installed within the optimal viewing specifications described above for intersection control applications the system shall be able to accurately provide demand presence detection. The demand presence accuracy shall be based on the ability to enable a protected turning movement on an intersection stop line, when a demand exists. The probability of not detecting a vehicle for demand presence shall be less than 1% error under all operating conditions. In the presence of adverse conditions, the vision sensor shall minimize extraneous (false) protected movement calls to less than 7%.

B.16 Speed Detection Performance
The vision sensor shall accurately measure average (arithmetic mean) speed of multiple vehicles with more than 98% accuracy under all operating conditions for approaching and departing traffic. The average speed measurement shall include more than 10 vehicles in the sample to ensure statistical significance. Optimal speed detection performance requires the sensor location to follow the specifications described above for count station traffic applications with the exception that the sensor must be higher than 40 feet. The vision sensor shall accurately measure individual vehicle speeds with more than 95% accuracy under all operating conditions for vehicles approaching the sensor (viewing the rear end of the vehicles). These specifications shall apply to vehicles that travel through both the count and speed detector pair and shall not include partial detection situations created by lane changing maneuvers.

C Construction
Install the Vehicular Video Detection System by supplier factory-certified installers and as recommended by the supplier and documented in installation materials provided by the supplier.

Mount the camera at the end of the 15-foot luminaire arm unless specified otherwise in the plans.

When luminares are not present on the arm feed the cable through the end of the luminare arm and seal. Provide slack in the cable at the camera sufficient for drip loops.

When luminares are present on the arm secure the cable to the luminaire arms with a maximum of three feet between secured points. Feed the cable through the cap of the luminaire pole and seal. Provide slack in the cable at the camera and at the pole sufficient for drip loops.

C.1 Sensor Electrical

Isolate the video output of the vision sensor from earth ground. Also isolate all video connections from the sensor to the interface panel from earth ground. The video output communication and power stages of the sensor shall include transient protection to prevent damage to the sensor due to voltage transients occurring on the cable leading from the vision sensor to other field terminations. The vision sensor shall have passed requirements for and received the CE mark. The power to the sensor shall be fused in the controller cabinet. Cable used between the vision sensor and the traffic control cabinet interface shall be a continuous unbroken run. This cable shall follow all local electrical codes, and be suitable for installation in conduit or overhead with appropriate span wire.

C.2 Auxiliary Equipment

The system shall be supplied with a color 10.4-inch LCD monitor to display a camera field of view with detection areas overlaid. The monitor shall have a contrast ratio of 300:1 and shall have a minimum resolution of 640 x 480. This monitor shall include sufficient cable and terminals to either be used in the controller cabinet or from within the engineer or technician's vehicle. All camera field-of-view displays shall also be viewable in real time with the use of a laptop computer connected to the video detection system.

C.3 Training and Support

The supplier of the video detection system will provide two days of training to maintenance and engineering personnel in the operation, setup, and maintenance of the video detection system.

The supplier shall maintain an ongoing program of technical support for the video detection system. This technical support shall be available via telephone, or via personnel sent to the installation site upon placement of an acceptable order at the supplier's then current pricing and terms of sale for on-site technical support services.

The supplier shall provide a two-year warranty on the video detection system from the date of installation. During the warranty period, technical support shall be available from the supplier via telephone within four hours of the time a call is made by a user, and this support shall be available from factory-certified personnel or factory-certified installers. Updates to the video detection system software shall be available from the supplier without charge.

D Measurement

The department will measure Vehicular Video Detection System (Location) as a lump sum unit of work for each individual system at each intersection, acceptably completed.

F Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.04	Vehicular Video Detection System S. 76th St. (CTH U) and W. Puetz Rd. (4-Cameras)	LS
SPV.0105.05	Vehicular Video Detection System S. 76th St. (CTH U) and W. Drexel Ave. (4-Cameras)	LS
SPV.0105.06	Vehicular Video Detection System S. 76th St. (CTH U) and W. Imperial Dr. (4-Cameras)	LS

Payment is full compensation for furnishing and installing all equipment, cabling, mounting each camera, necessary additional items, testing and setting up the system.

71. Remove Traffic Signal Equipment CTH U and Puetz, Item SPV.0105.07; Remove Traffic Signal Equipment CTH U and Drexel, Item SPV.0105.08; Remove Traffic Signal Equipment CTH U and Imperial Drive, Item SPV.0105.09.

A Description

This special provision describes removing and salvaging existing traffic signal hardware and equipment at the intersections of CTH U and Puetz, CTH U and Drexel and CTH U and Imperial in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted on the plans, which may be covered under separate special provisions.

B (Vacant)

C Construction

Arrange for de-energizing of any traffic signals, as needed, with the local electrical utility after receiving approval from the engineer that existing traffic signals can be removed.

Milwaukee County 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 for Milwaukee County's concurrence. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to Milwaukee County.

Notify Stanley Jackson, Milwaukee County Traffic Signal Electrical Shop, at (414) 257-6593 at least five working days prior to the removal of the traffic signals. Do not remove existing traffic signal equipment until Milwaukee County inspects and approves temporary traffic signals. Complete the removal work as soon as possible following the shut down of this equipment.

Remove all standards and poles from their concrete footings and disassemble out of traffic. Remove the signal heads, push buttons, 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 other associated hardware remain intact. County forces will remove the controller, MMU, communications equipment and video detection equipment

from the cabinet. Remove the cabinet from the footing after county forces have removed all equipment that is loose on shelves within the cabinet. Dispose of all cable and wiring off the public right-of-way in a manner consistent with state and federal regulations. Deliver the remaining materials to the Milwaukee County Traffic Signal Electrical Shop located at 10190 W Watertown Plank Road, Wauwatosa, WI 53226.

For the intersection of CTH U and Imperial remove the existing wood poles and dispose of properly off the right-of-way.

D Measurement

The department will measure Remove Traffic Signal Equipment (Location) as a single lump sum unit of work at the 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.0105.07	Remove Traffic Signal Equipment CTH U and Puetz Road	LS
SPV.0105.08	Remove Traffic Signal Equipment CTH U and Drexel Avenue	LS
SPV.0105.09	Remove Traffic Signal Equipment CTH U and Imperial 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 Milwaukee County Traffic Signal Electrical Shop.

72. Excavation For Structures Culverts, C-40-22, Special, Item SPV.0105.10.

A Description

A.1 General

This special provision describes excavating for culverts and removing old substructure units within the space occupied by the new structure. It also describes potholing existing utilities prior to excavation and providing temporary shoring for the 12" water main during construction.

Perform this work in accordance to standard spec 206.

B (Vacant)

C Construction
Supplement standard spec 206.3 with the following:

Verify the depth and location of utilities by potholing existing utilities as shown on the plans prior to placing sub-foundation course and construction of culvert. Inspect utilities to determine their condition.

Place any pile locations conflicting with utilities immediately adjacent to the specified location and pre-bore to a depth of 10'-0" as shown on the plans and as approved by the engineer. Concrete edge cover shall be a minimum of 1'-3" to the center of any piling immediately adjacent to the utility.

During excavation and construction near the 12" water main, provide temporary shoring for the utility along the length of the pipe as approved by the engineer in the field. Any damage to any utilities during construction is sole responsibility of the contractor to repair or replace.

D Measurement
The department will measure Excavation For Structures Culverts, C-40-22, Special 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.0105.10	Excavation For Structures Culverts, C-40-22, Special	LS

Supplement standard spec 206.5 with the following:

Payment is full compensation for excavation, encasing any utilities in concrete, and providing temporary shoring for the 12" water main. Potholing existing utilities and pre-boring are paid for under separate bid items.

73. Stone Fascia, Retaining Wall, Item SPV.0165.01.

A Description
The work under this item consists of excavation and backfill required to place concrete and stone fascia as shown on the plans. The work under this item also consists of designing, furnishing and erecting the stone fascia form liner on all retaining walls in accordance to the lines, dimensions, elevations and details as shown on the plans and provided in these special provisions. The design life of all wall components is 75 years.

B Materials
Materials used shall conform to standard spec 504.2.

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

Use form liners similar in pattern to that used on the retaining walls at 3737 W. Rawson Ave. in Milwaukee County and as approved by the engineer and Owner. The form liner produces a "fieldstone" pattern with a 1 ½"relief using stones from 3" to 12" diameter. Liners shall be re-usable and manufactured to produce an accurate simulated stone surface. Use a release agent that is compatible with the form liner and coloring materials. Cast two panels 3' x 3' as test samples and for the coloring samples.

Stains shall be water borne low VOC stain.

C Construction

C.1 Equipment

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

C.2 Form Liner Preparation

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

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

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

C.4 Form Liner Placement

Prepare shop drawings to show placement of liners and any special conditions. Place liners in order to lessen repeat appearance. Form ties shall be no closer than 1 ½" from the face of concrete.

C.5 Surface Finishing

Color and stain with many colors to accurately simulate river stones. Color a minimum of 30 days after the placing of the concrete or according to manufacturer recommendations. Pressure wash the wall surface with 3000 psi water to remove latent dirt and loose concrete immediately before coloring. Color grout joints to replicate grout.

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

D Measurement
The department will measure Stone Fascia, Retaining Wall by the square foot of exposed front face on a vertical plane between the ground line and top of wall including wall cap or copings as required and shown on the plans, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Stone Fascia, Retaining Wall	SF

Payment is full compensation for site preparation and restoration including excavation and backfill landscaping, for furnishing all necessary fasteners, form liners, stains and colors.

74. Test Rolling, Item SPV.0170.01.

A Description
This work consists of testing the stability of the finished earth subgrade by rolling with a tri-axle dump truck, the restoration of any soft or yielding areas evidenced by the test rolling, and retesting as determined by the engineer.

B Equipment
Fully load the tri-axle dump truck to within 3 tons of the vehicle legal load limit and provide a minimum gross vehicle weight of 27 tons. Uniformly inflate all tires to the pressure recommended by the manufacturer for the applicable wheel load when test rolling.

C Construction
Shape and completely compact the earth subgrade to be test rolled and shape to approximate grade and cross section; but not yet stake for blue top grades. The test rolling takes place at normal walking speed under the direction of the engineer or their representative.

Roll the earth subgrade to a width equal to the finished base course width. Make multiple passes with the truck throughout the length of the subgrade test area. Center each pass on a proposed lane or applicable shoulder. When the shoulder width is less than 8 feet, the engineer will determine the number and location of passes required such that any wheel track will be within 3 to 4 feet of the previous adjacent wheel track.

Repair and consolidate any soft or yielding areas or depressions evidenced under the action of the test rolling to withstand retesting. Corrective work may require the excavation and replacement of unstable material from the roadbed with selected materials. Correct yielding subgrade areas discovered during the test rolling operations prior to blue top staking and finish grading operations. Do corrective work in accordance to the standard specifications.

D Measurement
The department will measure Test Rolling of the earth subgrade per station along the roadway centerline or reference line, acceptably completed. When two or more separate roadways occur, the quantity of test rolling will be measured by the station along each separate roadway as designated on the plans.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0170.01	Test Rolling	STA

Payment is full compensation for performing all the work of Test Rolling; for any preparation of the subgrade, including the furnishing and incorporation of water, if required; for retesting as determined by the engineer and for restoration of the subgrade.

75. Geogrid Reinforcement, Item SPV.0180.01.

A Description
This work consists of furnishing and installing geogrids for subgrade stabilization, base reinforcement, or pavement structure applications in accordance to the plans and specifications.

B Materials
The geogrid shall consist of either single or joined multiple layers of a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The polymer shall consist of polyester, polypropylene, polyamide, or polyethylene. The grid shall maintain dimensional stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. Minimum geogrid width shall be 6.0 feet.

The geogrid shall comply with the following physical properties:

Test	**Method**	**Value** [(1)]
Tensile Strength at 5% Strain, Both Principal Directions (lb./ft.)	ASTM D 4595 **(2)**	700 min.
Flexural Rigidity Both Principal Directions (mg-cm)	ASTM D 1388 **(3)**	150,000 min.
Aperture Area (in^2)	Inside Measurement **(4)**	5.0 max.
Aperture Dimension (in.)	Inside Measurement **(4)**	0.5 min.

(1) (1) All numerical values represent minimum/maximum average roll values, i.e., the average minimum test results on any roll in a lot should meet or exceed the minimum specified value.

(2) (2) Compute the tensile strength (T) of a joined multi-layered geogrid using the following equation:

$$T = n(f)t$$

where n = the number of individual layers in the joined multi-layered geogrid;

t = the tensile strength of a single layer of geogrid as determined using testing method ASTM D4595; and

f = reduction factor based on the number of layers comprising the multi-layered system and determined by the equation $f = 1.00 - [0.04(n - 1)]$.

(3) (3) Determine values by Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches $\pm$ 0.04 inch long. Test specimen widths for differing geogrids shall be variable and equal to 1 element plus ½ the aperture width on both sides of that element. An element is defined as the minimum number of parallel strands which form a distinguishable repeating pattern.

(4) (4) Aperture Area and Aperture Dimension for joined multi-layered geogrids shall be determined based on measurement of a single layer of the geogrid.

Protect the geogrid from ultraviolet radiation and from damage due to shipping and handling. Keep the geogrid dry until it is installed. Clearly mark the geogrid rolls to identify the material contained.

Deliver a sample of the geogrid material to the engineer at least ten days prior to its incorporation into the work. At the same time, furnish a manufacturer's Certified Report of Test or Analysis that verifies that the geogrid delivered for use on the work meets the above requirements. Samples of geogrid for test purposes will be obtained from the job site for each 10,000 square yards or portions thereof used on the contract.

C Construction

Prior to placement of the geogrid, bring the indicated placement surface to the required line, grades, and dimensions as shown on the plans. Smooth and shape the surface to eliminate any rocks, clods, roots, or other items which may cause damage to the geogrid during placement or covering. Place the geogrid on the prepared surface at the locations and to the limits as shown on the plans. After placement, pull the geogrid taut and secure with pins, clips, staples, or other devices to prevent movement or displacement. Place parallel strips of geogrid with a minimum overlap of six inches. Lap butt joints between roll ends a minimum of 12 inches. Fasten all lapped sections together by the use of ties, straps, clips, or other devices to develop a secure joint which meets the approval of the engineer. Do not permit vehicles or construction equipment to operate directly on the geogrid.

Cover small rips, tears, or defects in the geogrid with an additional section of geogrid which and secure in place so as to overlap the damaged area by at least three feet in all directions. Remove and replace Geogrid sections with large rips, tears, defects, or other damage at the direction of the engineer. The contractor is responsible for all costs to repair or replace damaged or defective geogrid.

After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the Special Provisions. Placing, spreading, and compacting of this material shall comply with the applicable sections of the Standard Specifications or Special Provisions except that the initial lift of material placed on the geogrid must be at least four inches. Conduct placing, spreading, and compaction operations so that the geogrid is not displaced or damaged. The engineer may require changes in equipment and/or operations to prevent such damage or displacement.

D Measurement

The department will measure Geogrid Reinforcement by the square yard of surface area upon which the geogrid has been placed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Geogrid Reinforcement	SY

Payment is full compensation for furnishing, transporting, and installing the geogrid; for furnishing and installing all devices and materials necessary to join or secure the geogrid in place.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __8__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __5__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:

   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

   http://www.dot.wisconsin.gov/business/engrserv/dbe-main.htm

2. Definitions

a. Interpret these terms, used throughout this additional special provision, as follows:

   i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
   ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
   iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
   iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as “Disc” on the cover of the Highway Work Proposal, which is enforced as committed.
   v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
   vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
   vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized

comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. Department's DBE Evaluation Process

a. Documentation Submittal

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

i. Bidder Meets DBE Goal

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

ii. Bidder Does Not Meet DBE Goal

(1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.

(2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:

a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.

b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define “good faith” but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

c. Prime Contractors should:

i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, ***as required by federal rules***. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

(1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.

(2) SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.

a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.

(3) Second solicitation should take place within 5 days

a. An email solicitation is highly recommended for this second solicitation

(4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

(5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.

(6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

a. Email to all prospective DBE firms in relevant work areas
b. Phone call log to DBE firms who express interest via written response or call.
c. Fax/letter confirmation
d. Copy of the DBE quotes
e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.

i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its

capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.

ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

(1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.

(2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

e. After notification of contract award, submit **'Commitment to Subcontract'** form within the time period specified in the contract.

i. Provide the following information along with department form DT1202:

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.

(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.

(3) Photocopies or electronic copies of all written solicitations to DBE's.

(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.

(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office
6150 Fond du Lac Ave.
Milwaukee, WI 53218
Phone: 414-438-4583 / 608-266-6961
Fax: 414-438-5392
E-mail: DOTDBESupportServices@dot.wi.gov

6. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so

requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

7. Department's Criteria for DBE Participation

Department's DBE List

a. The department maintains a DBE list on the department's website at

http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx

b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

b. A DBE is performing a commercially useful function if the following conditions are met:

c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.

d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at

http://www.dot.wisconsin.gov/business/engrserv/docs/dbe-trucking-notice.pdf

11. Manufacturers and Suppliers

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

12. DBE Prime

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

13. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

14. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm

b. On every other project that the mentor protégé team identifies itself on.

c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

http://www.dot.wisconsin.gov/business/engrserv/docs/policyreplacingdbe.pdf

16. Changes to the approved DBE Commitment Form DT1506

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

17. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors, that were committed to equal work items, in the original contract.

18. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS

FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR

SUBJECT: **REQUEST FOR DBE QUOTES**

LET DATE & TIME

DATE: MONTH DAY YEAR

CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have some one contact me at this number

Prime Contractor 's Contact Person		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		Email	

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
    d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
    c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
    c. Add attachments to a sub-quote
    d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISIONS 5

Fuel Cost Adjustment

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $2.90 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

(1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.

(2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.

(3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.

(4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1 \right) x\ Q\ x\ BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

ADDITIONAL SPECIAL PROVISION 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2014 edition of the standard specifications:

101.3 Definitions

Replace the definition of semi-final estimate with the following effective with the December 2013 letting:

Semi-final estimate An estimate indicating the engineer has measured and reported all contract quantities and materials requirements.

105.11.1 Partial Acceptance

Replace paragraph two with the following effective with the December 2013 letting:

(2) Partial acceptance will relieve the contractor of maintenance responsibility for the designated portion of the work. By relieving the contractor of maintenance, the department does not relieve the contractor of responsibility for defective work or damages caused by the contractor's operations. Do not construe partial acceptance to be conditional final acceptance or final acceptance of any part of the project, or a waiver of any legal rights specified under 107.16.

105.11.2 Final Acceptance

Retitle and replace the entire text with the following effective with the December 2013 letting:

105.11.2 Project Acceptance

105.11.2.1 Inspection

105.11.2.1.1 General

(1) Notify the engineer when the project is substantially complete as defined in 105.11.2.1.3. As soon as it is practical, the engineer will inspect the work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete.
3. Complete.

105.11.2.1.2 Unacceptable or Not Complete

(1) The engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The engineer will assess contract time until the work is corrected or completed.

(2) Proceed as specified in 105.11.2.1.1 until the engineer determines that the work is complete.

105.11.2.1.3 Substantially Complete

(1) The project is substantially complete and the engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch-list. As applicable, the following must have occurred:

1. All lanes of traffic are open on a finished surface.
2. All signage and traffic control devices are in place and operating.
3. All drainage, erosion control, excavation, and embankments are completed.
4. All safety appurtenances are completed.

(2) The engineer will provide a written punch-list enumerating work the contractor must perform and documents the contractor must submit before the the engineer will categorize the work as complete.

1. Punch-list work includes uncompleted cleanup work required under 104.9 and minor corrective work. Immediately correct or complete the punch-list work. The engineer may restart contract time if the contractor does not complete the punch-list work within 5 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 5-day requirement.
2. Punch-list documents include whatever contract required documentation is missing. The engineer may restart contract time if the contractor does not submit the punch-list documents within 15 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 15-day requirement.

(3) Proceed as specified in 105.11.2.1.1 until the work is complete.

105.11.2.1.4 Complete

(1) The project is complete when the contractor has completed all contract bid items, change order work, and punch-list work including the submission of all missing documentation.

105.11.2.2 Conditional Final Acceptance

(1) When the engineer determines that the project is complete, the engineer will give the contractor written notice of conditional final acceptance relieving the contractor of maintenance responsibility for the completed work.

105.11.2.3 Final Acceptance

(1) The engineer will grant final acceptance of the project after determining that all contract is work complete; all contract, materials, and payroll records are reviewed and approved; and the semi-final estimate quantities are final under 109.7.

(2) Failure to discover defective work or materials before final acceptance does not prevent the department from rejecting that work or those materials later. The department may revoke final acceptance if the department discovers defective work or materials after it has accepted the work.

105.13.3 Submission of Claim

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than final acceptance of the project as specified in 105.11.2.3. If the contractor does not submit the claim before final acceptance of the project, the department will deny the claim.

107.17.3 Railroad Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the engineer determines that the work is complete as specified in 105.11.2.1.4.

107.26 Standard Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) Maintain the following types and limits of commercial insurance in force until the engineer determines that the work is complete as specified in 105.11.2.1.4.

TABLE 107-1 REQUIRED INSURANCE AND MINIMUM COVERAGES

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements with primary insurance coverage or with excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees shall be named as an additional insured under the general liability and automobile liability insurance.

108.14 Terminating the Contractor's Responsibility

Replace paragraph one with the following effective with the December 2013 letting:

(1) The contractor's responsibilities are terminated, except as set forth in the contract bond and specified in 107.16, when the department grants final acceptance as specified in 105.11.2.3.

109.2 Scope of Payment

Replace paragraph two with the following effective with the December 2013 letting:

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the applicable bid items including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
    - The nature of the work.
    - The action of the elements.
    - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.6.1 General

Replace paragraphs three and four with the following effective with the December 2013 letting:

(3) The department's payment of an estimate before conditional final acceptance of the work does not constitute the department's acceptance of the work, and does not relieve the contractor of responsibility for:

1. Protecting, repairing, correcting, or renewing the work.
2. Replacing all defects in the construction or in the materials used in the construction of the work under the contract, or responsibility for damage attributable to these defects.

(4) The contractor is responsible for all defects or damage that the engineer may discover on or before the engineer's conditional final acceptance of the work. The engineer is the sole judge of these defects or damage, and the contractor is liable to the department for not correcting all defects or damage.

109.7 Acceptance and Final Payment

Replace paragraphs one and two with the following effective with the December 2013 letting:

(1) After the engineer grants conditional final acceptance of the work as specified in 105.11.2.2 and reviews required document submittals and materials test reports, the engineer will issue the semi-final estimate.

(2) Within 30 calendar days after receiving the semi-final estimate, submit to the engineer a written statement of agreement or disagreement with the semi-final estimate. For an acceptable statement of disagreement, submit an item-by-item list with reasons for each disagreement. If the contractor does not submit this written statement within those 30 days, the engineer will process the final estimate for payment. The engineer and the contractor can mutually agree to extend this 30-day submission requirement.

450.3.3 Maintaining the Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the prepared foundation, tack coat, base, paved traffic lanes, shoulders, and seal coat. Correct all rich or bleeding areas, breaks, raveled spots, or other nonconforming areas in the paved surface.

455.3.2.5 Maintaining Tack Coat

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the existing surface and the tack coat. Correct areas with excess or deficient tack material and any breaks, raveled spots, or other areas where bond might be affected.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the January 2014 letting:

(1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for E-3 mixes.

[2] 15.5 for E-3 mixes.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the January 2014 letting:

(1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to the department's test method number 1559 as described in CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to the department's test method number 1559.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	___
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	50	50	45	45	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	___
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 - 78[4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)							
no antistripping additive	0.70	0.70	0.70	0.70	0.70	0.70	0.70
with antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Draindown at Production Temperature (%)	___	___	___	___	___	___	0.30

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

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

[3] For 9.5mm and 12.5 mm nominal maximum size mixtures, the specified VFB range is 70 - 76%.

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

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

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the January 2014 letting:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+/- 1.3	+/- 1.0
VMA in percent[1]	- 0.5	- 0.2

[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in Table 460-1.

(2) Warning bands are defined as the area between the JMF limits and the warning limits.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace the entire text with the following effective with the January 2014 letting:

(1) The contractor may request adjustment of the JMF according to the department's test method number 1559. Have an HTCP HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have an HMA technician certified at level III review the proposed adjustment and, if acceptable, issue a revised JMF.

(2) The department will not allow adjustments that do the following:

- Exceed specified JMF tolerance limits.
- Reduce the JMF asphalt content unless the production VMA running average meets or exceeds the minimum VMA design requirement defined in table 460-1for the mixture produced.

(3) Have an HMA technician certified at level II make related process adjustments. If mixture redesign is necessary, submit a new JMF, subject to the same specification requirements as the original JMF.

520.3.8 Protection After Laying

Delete the entire subsection.

614.2.1 General

Replace paragraphs five and six with the following effective with the December 2013 letting:

(5) Furnish zinc coated wire rope and fitting conforming to the plans and galvanized according to ASTM A741.

(6) Before installation store galvanized components above ground level and away from surface run off. The department may reject material if the zinc coating is physically damaged or oxidized.

(7) Provide manufacturer's drawings, and installation and maintenance instructions when providing proprietary systems.

614.2.3 Steel Rail and Fittings

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish galvanized steel rail conforming to AASHTO M180 class A, type II beam using the single-spot test coating requirements. Furnish plates, anchor plates, post mounting brackets, and other structural steel components conforming to 506.2.2.1 and hot-dip galvanized according to ASTM A123.

614.2.7 Crash Cushions

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish permanent and temporary crash cushions from the department's approved products list. Use cushions as wide or wider than the plan back-width. Furnish transitions conforming to the crash cushion manufacturer's design and specifications. Submit manufacturer crash cushion and transition design details to engineer before installing.

616.3.1 General

Replace paragraph six with the following effective with the December 2013 letting:

(6) Remove and dispose of all excess excavation and surplus materials from the fence site.

618.3.3 Restoration

Replace paragraph one with the following effective with the December 2013 letting:

(1) Upon termination of hauling operations and before conditional final acceptance, restore all haul roads, including drainage facilities and other components, to the equivalent of pre-hauling conditions.

627.3.1 General

Replace paragraph four with the following effective with the December 2013 letting:

(4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes.

637.3.2.1 General

Delete paragraph three effective with the December 2013 letting.

670.3.4.2 Post-Construction Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit 5 copies of ITS documentation including but not limited to the following:

- Operator's manual: for contractor furnished equipment, submit a manual containing detailed operating instructions for each different type or model of equipment and or operation performed.
- Maintenance procedures manuals: for contractor furnished equipment, submit a manual containing detailed preventive and corrective maintenance procedures for each type or model of equipment furnished.
- Cabinet fiber optic wiring diagram: submit a cabinet wiring diagram, identified by location for each cabinet. Include both electrical wiring and fiber optic conductor and cable connections. Place one copy of the fiber optic wiring diagram in a weatherproof holder in the cabinet. Deliver the other copies to the engineer.
- As-built drawings: submit final as-built drawings that detail the final placement of all conduit, cabling, equipment, and geometric modifications within the contract. Provide all documentation in an electronic format adhering to the region’s ITS computer aided drafting standards and according to the department’s as-built requirements. The department will review the as-built drawings for content and electronic format. Modify both the content and format of as-built drawings until meeting all requirements.
- Equipment inventory list: submit an inventory list including serial number, make, model, date installed, and location installed of all equipment installed under the contract.

Errata

Make the following corrections to the 2014 edition of the standard specifications:

415.3.14 Protecting Concrete

Correct errata by referencing the opening to service specification.

(1) Erect and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until it is opened for service as specified in 415.3.15. Conform to 104.6 for methods of handling and facilitating traffic.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(2) Furnish sheeting conforming to ASTM C171 for white opaque polyethylene film, except that the contractor may use clear or black polyethylene for cold weather protection.

607.2 Materials

Correct errata by changing AASHTO M198 to ASTM C990.

(1) Use materials conforming to the requirements for the class of material named and specified below.

Composite pipe, couplings, fittings and joint materials	ASTM D2680
Annular rubber and plastic gaskets for flexible, watertight joints	ASTM C990
External rubber gaskets, mastic, and protective film	ASTM C877
Mortar	519.2.3

637.2.1.3 Sheet Aluminum

Correct errata by changing ASTM B449 to B921 and eliminating the specification for coating thickness.

(4) Degrease, etch, and coat the sign blank on both sides with a chromate treatment conforming to ASTM B921, class 2.

637.3.3.4 Performance

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(1) Under 105.11.2.3 the department may revoke acceptance and direct the contractor to repair or replace previously accepted sign installations if the department subsequently discovers evidence of defective materials or improper installation. Deficiencies that warrant department action include but are not limited to the following:

- Sign posts more than five degrees out of plumb.
- Signs twisted by more than 5 degrees from plan orientation.
- Signs with delaminated or warped plywood.
- Signs with bubbling, fading, delaminating, or buckling sheeting.

646.3.3.4 Proving Period

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(4) Replace all marking within sections with a percent failing more than 10% and repair or replace all markings that, in the engineer's assessment, show evidence of improper construction. If post-acceptance inspections uncover evidence of defective materials or improper construction, the department may revoke acceptance under 105.11.2.3.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

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

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

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

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

DECEMBER 2013

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

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 September 1, 2013

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	35.58	19.20	54.78
Carpenter	32.93	19.81	52.74
Future Increase(s): Add $.75/hr on 6/3/2013. 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	30.69	17.53	48.22
Future Increase(s): Add $1.87 on 6/1/13; 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	31.54	21.14	52.68
Fence Erector	28.00	4.50	32.50
Ironworker	31.31	21.99	53.30
Line Constructor (Electrical)	31.29	15.34	46.63
Painter	29.22	16.69	45.91
Pavement Marking Operator	29.22	16.69	45.91
Piledriver	29.56	23.86	53.42
Roofer or Waterproofer	29.40	15.05	44.45
Teledata Technician or Installer	24.65	15.67	40.32
Tuckpointer, Caulker or Cleaner	34.35	11.13	45.48
Underwater Diver (Except on Great Lakes)	37.45	19.45	56.90
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	29.64	17.06	46.70
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	14.64	45.24
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day,			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.94	13.57	39.51
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.08	12.96	37.04
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.90	33.65
TRUCK DRIVERS			
Single Axle or Two Axle	33.22	18.90	52.12
Three or More Axle	23.31	17.13	40.44
Future Increase(s): Add $1.85/hr on 6/1/2013.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	27.77	19.90	47.67
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Pavement Marking Vehicle	23.84	14.90	38.74
Shadow or Pilot Vehicle	33.22	18.90	52.12
Truck Mechanic	22.50	16.19	38.69
LABORERS			
General Laborer	25.39	18.40	43.79
Future Increase(s): Add $1.70/hr on 6/1/2013; 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	18.00	0.00	18.00
Landscaper	25.39	18.40	43.79
Future Increase(s): Add $1.70/hr on 6/1/13; 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	21.88	18.40	40.28
Future Increase(s): Add $1.70/hr on 6/1/2013; 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.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.24	15.03	32.27
Railroad Track Laborer	14.50	3.53	18.03
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 $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	35.22	19.90	55.12
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 $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.72	19.90	54.62
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);	34.22	19.90	54.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
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 $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	33.96	19.90	53.86
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 $2/hr on 6/1/13; Add $1.75/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 $1.50/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	33.67	19.90	53.57
Fiber Optic Cable Equipment.	20.00	7.88	27.88
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	37.45	19.45	56.90
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.	37.45	19.45	56.90
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.	27.75	19.15	46.90
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.	27.75	19.15	46.90

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: December 20, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$26.06	18.15
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	26.21	18.15
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	26.41	18.15
Group 4: Line and Grade Specialist	26.56	18.15
Group 5: Blaster and Powderman	26.71	18.15
Group 6: Flagperson traffic control person	22.55	18.15

CLASSES OF LABORER AND MECHANICS

Bricklayer	35.58	16.07
Carpenter	30.52	14.41
Piledriverman	27.25	19.46
Ironworker	30.52	23.47
Cement Mason/Concrete Finisher	30.69	17.53
Electrician		See Page 3
Line Construction		
Lineman	38.25	18.00
Heavy Equipment Operator	34.43	16.71
Equipment Operator	30.60	15.41
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	21.04	12.16
Millwrights	26.32	13.98
Painter, Brush	29.52	18.79
Painter, Spray and Sandblaster	30.27	18.79
Painter, Bridge	29.87	18.79
Well Drilling:		
Well Driller	16.52	3.70

	Basic Hourly Rates	Fringe Benefits
Truck Drivers:		
1 & 2 Axles	23.82	18.32
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	23.97	18.32

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0, dated January 4, 2013; Modification #1 dated February 1, 2013; Modification #2 dated June 7, 2013; Modification #3 dated July 19, 2013; Modification #4 dated August 23, 2013; Modification #5 dated September 13, 2013; Modification #6 dated September 27, 2013; Modification #7 dated December 20, 2013.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: December 20, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$36.72	$20.10
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.	$36.22	$20.10
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$35.72	$20.10
Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	$35.46	$20.10
Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.	$35.17	$20.10
Group 6: Off – road material hauler with or without ejector	$29.27	$20.10

Premium Pay:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hours

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: December 20, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$28.40	16.676
Area 2:		
Electricians	29.13	17.92
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.10	17.24
Area 5	28.61	16.60
Area 6	35.25	19.30
Area 8		
Electricians	30.60	24.95% + 10.33
Area 9:		
Electricians	32.94	18.71
Area 10	28.97	19.55
Area 11	31.91	23.60
Area 12	32.87	19.23
Area 13	32.82	22.51
Teledata System Installer		
Area 14		
Installer/Technician	21.89	11.83
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	24.75	16.04

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 PARTICIPATING ROADWAY ITEMS					
0010	201.0105 CLEARING	7.000 STA		.		.
0020	201.0115 CLEARING	3.000 ACRE		.		.
0030	201.0120 CLEARING	1,210.000 ID		.		.
0040	201.0205 GRUBBING	7.000 STA		.		.
0050	201.0215 GRUBBING	3.000 ACRE		.		.
0060	201.0220 GRUBBING	1,210.000 ID		.		.
0070	203.0100 REMOVING SMALL PIPE CULVERTS	54.000 EACH		.		.
0080	203.0200 REMOVING OLD STRUCTURE (STATION) 01. 212+51.15	LUMP	LUMP			.
0090	204.0100 REMOVING PAVEMENT	28,950.000 SY		.		.
0100	204.0110 REMOVING ASPHALTIC SURFACE	27,960.000 SY		.		.

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	325.000 SY		.		.
0120	204.0150 REMOVING CURB & GUTTER	4,150.000 LF		.		.
0130	204.0155 REMOVING CONCRETE SIDEWALK	125.000 SY		.		.
0140	204.0165 REMOVING GUARDRAIL	955.000 LF		.		.
0150	204.0185 REMOVING MASONRY	41.000 CY		.		.
0160	204.0190 REMOVING SURFACE DRAINS	4.000 EACH		.		.
0170	204.0195 REMOVING CONCRETE BASES	21.000 EACH		.		.
0180	204.0210 REMOVING MANHOLES	6.000 EACH		.		.
0190	204.0220 REMOVING INLETS	20.000 EACH		.		.
0200	204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH	170.000 LF		.		.
0210	204.0245 REMOVING STORM SEWER (SIZE) 02. 15-INCH	440.000 LF		.		.

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	204.0245 REMOVING STORM SEWER (SIZE) 03. 18-INCH	110.000 LF		.		.
0230	204.0245 REMOVING STORM SEWER (SIZE) 04. 21-INCH	30.000 LF		.		.
0240	204.0245 REMOVING STORM SEWER (SIZE) 05. 24-INCH	530.000 LF		.		.
0250	204.0245 REMOVING STORM SEWER (SIZE) 06. 48-INCH	70.000 LF		.		.
0260	205.0100 EXCAVATION COMMON	69,330.000 CY		.		.
0270	205.0400 EXCAVATION MARSH	7,143.000 CY		.		.
0280	206.5000 COFFERDAMS (STRUCTURE) 01. C-40-22	LUMP	LUMP			.
0290	208.0100 BORROW	32,520.000 CY		.		.
0300	210.0100 BACKFILL STRUCTURE	1,310.000 CY		.		.
0310	213.0100 FINISHING ROADWAY (PROJECT) 01. 2160-10-70	1.000 EACH		.		.
0320	305.0110 BASE AGGREGATE DENSE 3/4-INCH	1,580.000 TON		.		.

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0330	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	41,700.000 TON		.		.
0340	311.0110 BREAKER RUN	6,000.000 TON		.		.
0350	415.0085 CONCRETE PAVEMENT 8 1/2-INCH	85,230.000 SY		.		.
0360	415.0210 CONCRETE PAVEMENT GAPS	12.000 EACH		.		.
0370	415.1085 CONCRETE PAVEMENT HES 8 1/2-INCH	1,000.000 SY		.		.
0380	416.0170 CONCRETE DRIVEWAY 7-INCH	1,915.000 SY		.		.
0390	416.0270 CONCRETE DRIVEWAY HES 7-INCH	150.000 SY		.		.
0400	416.1010 CONCRETE SURFACE DRAINS	11.000 CY		.		.
0410	440.4410.S INCENTIVE IRI RIDE	11,000.000 DOL	1.00000		11000.00	
0420	455.0115 ASPHALTIC MATERIAL PG64-22	175.000 TON		.		.
0430	455.0605 TACK COAT	270.000 GAL		.		.

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0440	460.1101 HMA PAVEMENT TYPE E-1	2,370.000	TON	.		.	
0450	460.2000 INCENTIVE DENSITY HMA PAVEMENT	5,000.000	DOL	1.00000		5000.00	
0460	465.0110 ASPHALTIC SURFACE PATCHING	50.000	TON	.		.	
0470	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	500.000	TON	.		.	
0480	465.0125 ASPHALTIC SURFACE TEMPORARY	5,710.000	TON	.		.	
0490	502.5005 MASONRY ANCHORS TYPE L NO. 5 BARS	128.000	EACH	.		.	
0500	504.0100 CONCRETE MASONRY CULVERTS	346.000	CY	.		.	
0510	504.0500 CONCRETE MASONRY RETAINING WALLS	63.000	CY	.		.	
0520	504.0900 CONCRETE MASONRY ENDWALLS	3.000	CY	.		.	
0530	505.0410 BAR STEEL REINFORCEMENT HS CULVERTS	18,110.000	LB	.		.	
0540	505.0415 BAR STEEL REINFORCEMENT HS RETAINING WALLS	1,870.000	LB	.		.	

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0550	505.0610 BAR STEEL REINFORCEMENT HS COATED CULVERTS	35,830.000 LB		.		.
0560	506.3008 WELDED STUD SHEAR CONNECTORS 5/8X5-INCH	512.000 EACH		.		.
0570	509.1500 CONCRETE SURFACE REPAIR	45.000 SF		.		.
0580	512.0500 PILING STEEL SHEET PERMANENT DELIVERED	3,625.000 SF		.		.
0590	512.0600 PILING STEEL SHEET PERMANENT DRIVEN	3,625.000 SF		.		.
0600	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	55.000 SY		.		.
0610	520.4072 CULVERT PIPE TEMPORARY 72-INCH	250.000 LF		.		.
0620	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH	460.000 LF		.		.
0630	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	22.000 EACH		.		.
0640	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	22.000 EACH		.		.

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0650	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	2.000 EACH		.		.
0660	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	3.000 EACH		.		.
0670	522.1027 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 27-INCH	2.000 EACH		.		.
0680	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	1.000 EACH		.		.
0690	522.1054 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 54-INCH	3.000 EACH		.		.
0700	523.0534 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 34X53-INCH	2.000 EACH		.		.
0710	523.0543 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 43X68-INCH	2.000 EACH		.		.
0720	532.0200.S WALL MODULAR BLOCK GRAVITY	765.000 SF		.		.
0730	550.0010 PRE-BORING UNCONSOLIDATED MATERIALS	160.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0740	550.0600 PILE REDRIVING	15.000 EACH		.		.
0750	550.1100 PILING STEEL HP 10-INCH X 42 LB	3,745.000 LF		.		.
0760	601.0331 CONCRETE CURB & GUTTER 31-INCH	20,100.000 LF		.		.
0770	602.0410 CONCRETE SIDEWALK 5-INCH	41,500.000 SF		.		.
0780	602.0420 CONCRETE SIDEWALK 7-INCH	1,650.000 SF		.		.
0790	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	200.000 SF		.		.
0800	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	3,830.000 LF		.		.
0810	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	3,830.000 LF		.		.
0820	606.0200 RIPRAP MEDIUM	380.000 CY		.		.
0830	606.0300 RIPRAP HEAVY	153.000 CY		.		.
0840	608.0327 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 27-INCH	759.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0850	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	634.000 LF		.		.
0860	608.0354 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 54-INCH	165.000 LF		.		.
0870	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	1,235.000 LF		.		.
0880	608.0421 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 21-INCH	352.000 LF		.		.
0890	608.0424 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 24-INCH	1,274.000 LF		.		.
0900	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	4,853.000 LF		.		.
0910	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH	1,267.000 LF		.		.
0920	610.0134 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 34X53-INCH	284.000 LF		.		.
0930	610.0143 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 43X68-INCH	121.000 LF		.		.
0940	611.0420 RECONSTRUCTING MANHOLES	21.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0950	611.0430 RECONSTRUCTING INLETS	1.000 EACH		.		.
0960	611.0555 MANHOLE COVERS TYPE Q	39.000 EACH		.		.
0970	611.0612 INLET COVERS TYPE C	6.000 EACH		.		.
0980	611.1003 CATCH BASINS 3-FT DIAMETER	71.000 EACH		.		.
0990	611.2004 MANHOLES 4-FT DIAMETER	30.000 EACH		.		.
1000	611.2005 MANHOLES 5-FT DIAMETER	2.000 EACH		.		.
1010	611.2006 MANHOLES 6-FT DIAMETER	23.000 EACH		.		.
1020	611.3003 INLETS 3-FT DIAMETER	7.000 EACH		.		.
1030	611.3220 INLETS 2X2-FT	6.000 EACH		.		.
1040	611.8110 ADJUSTING MANHOLE COVERS	34.000 EACH		.		.
1050	611.8115 ADJUSTING INLET COVERS	2.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1060	611.9800.S PIPE GRATES 01. 12-INCH	19.000 EACH		.		.
1070	611.9800.S PIPE GRATES 02. 15-INCH	2.000 EACH		.		.
1080	611.9800.S PIPE GRATES 03. 18-INCH	1.000 EACH		.		.
1090	611.9800.S PIPE GRATES 04. 27-INCH	2.000 EACH		.		.
1100	611.9800.S PIPE GRATES 05. 30-INCH	1.000 EACH		.		.
1110	611.9800.S PIPE GRATES 06. 54-INCH	3.000 EACH		.		.
1120	611.9800.S PIPE GRATES 07. 34 X 53-INCH	2.000 EACH		.		.
1130	611.9800.S PIPE GRATES 08. 43 X 68-INCH	2.000 EACH		.		.
1140	612.0108 PIPE UNDERDRAIN 8-INCH	250.000 LF		.		.
1150	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	160.000 LF		.		.
1160	616.0204 FENCE CHAIN LINK 4-FT	117.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1170	616.0700.S FENCE SAFETY	500.000 LF		.		.
1180	619.1000 MOBILIZATION	1.000 EACH		.		.
1190	620.0300 CONCRETE MEDIAN SLOPED NOSE	300.000 SF		.		.
1200	624.0100 WATER	793.000 MGAL		.		.
1210	625.0100 TOPSOIL	60,500.000 SY		.		.
1220	627.0200 MULCHING	30,500.000 SY		.		.
1230	628.1504 SILT FENCE	9,050.000 LF		.		.
1240	628.1520 SILT FENCE MAINTENANCE	9,050.000 LF		.		.
1250	628.1905 MOBILIZATIONS EROSION CONTROL	4.000 EACH		.		.
1260	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	4.000 EACH		.		.
1270	628.2006 EROSION MAT URBAN CLASS I TYPE A	2,750.000 SY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1280	628.6510 SOIL STABILIZER TYPE B	14.400 ACRE		.		.
1290	628.7010 INLET PROTECTION TYPE B	115.000 EACH		.		.
1300	628.7504 TEMPORARY DITCH CHECKS	950.000 LF		.		.
1310	628.7555 CULVERT PIPE CHECKS	20.000 EACH		.		.
1320	629.0210 FERTILIZER TYPE B	30.000 CWT		.		.
1330	630.0110 SEEDING MIXTURE NO. 10	425.000 LB		.		.
1340	630.0200 SEEDING TEMPORARY	950.000 LB		.		.
1350	631.0300 SOD WATER	190.000 MGAL		.		.
1360	631.1000 SOD LAWN	30,000.000 SY		.		.
1370	637.2220 SIGNS TYPE II REFLECTIVE SH	363.990 SF		.		.
1380	637.2225 SIGNS TYPE II REFLECTIVE SH FOLDING	134.280 SF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1390	637.2230 SIGNS TYPE II REFLECTIVE F	46.660 SF		.		.
1400	638.2602 REMOVING SIGNS TYPE II	85.000 EACH		.		.
1410	638.3000 REMOVING SMALL SIGN SUPPORTS	68.000 EACH		.		.
1420	642.5001 FIELD OFFICE TYPE B	1.000 EACH		.		.
1430	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 2160-10-70	390.000 DAY		.		.
1440	643.0300 TRAFFIC CONTROL DRUMS	159,820.000 DAY		.		.
1450	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	15,300.000 DAY		.		.
1460	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	101,750.000 EACH		.		.
1470	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	101,750.000 EACH		.		.
1480	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	18,300.000 DAY		.		.
1490	643.0800 TRAFFIC CONTROL ARROW BOARDS	220.000 DAY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1500	643.0900 TRAFFIC CONTROL SIGNS	31,000.000 DAY		.		.
1510	643.1050 TRAFFIC CONTROL SIGNS PCMS	28.000 DAY		.		.
1520	645.0120 GEOTEXTILE FABRIC TYPE HR	535.000 SY		.		.
1530	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	17.000 EACH		.		.
1540	647.0356 PAVEMENT MARKING WORDS EPOXY	11.000 EACH		.		.
1550	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	640.000 LF		.		.
1560	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	1,460.000 LF		.		.
1570	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	390.000 LF		.		.
1580	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	68,450.000 LF		.		.
1590	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	53,750.000 LF		.		.
1600	649.0701 TEMPORARY PAVEMENT MARKING 8-INCH	525.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1610	649.0900 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH	260.000 LF		.		.
1620	649.1000 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH	75.000 LF		.		.
1630	649.1700 TEMPORARY PAVEMENT MARKING ARROWS	9.000 EACH		.		.
1640	650.4000 CONSTRUCTION STAKING STORM SEWER	165.000 EACH		.		.
1650	650.4500 CONSTRUCTION STAKING SUBGRADE	13,000.000 LF		.		.
1660	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	30.000 EACH		.		.
1670	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	13,000.000 LF		.		.
1680	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2160-10-70	LUMP	LUMP			.
1690	650.9920 CONSTRUCTION STAKING SLOPE STAKES	13,000.000 LF		.		.
1700	651.1000.S SIGNAL CONTROLLER TRAINING	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1710	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	55.000 LF		.		.
1720	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	325.000 LF		.		.
1730	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	785.000 LF		.		.
1740	652.0615 CONDUIT SPECIAL 3-INCH	1,960.000 LF		.		.
1750	653.0140 PULL BOXES STEEL 24X42-INCH	22.000 EACH		.		.
1760	653.0145 PULL BOXES STEEL 24X48-INCH	2.000 EACH		.		.
1770	653.0180 PULL BOXES STEEL COMMUNICATIONS (INCH) 01. 24 X 42 - INCH	19.000 EACH		.		.
1780	653.0905 REMOVING PULL BOXES	21.000 EACH		.		.
1790	654.0101 CONCRETE BASES TYPE 1	18.000 EACH		.		.
1800	654.0110 CONCRETE BASES TYPE 10	6.000 EACH		.		.
1810	654.0113 CONCRETE BASES TYPE 13	6.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1820	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	3.000 EACH		.		.
1830	655.0210 CABLE TRAFFIC SIGNAL 3-14 AWG	500.000 LF		.		.
1840	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	1,420.000 LF		.		.
1850	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	170.000 LF		.		.
1860	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	2,100.000 LF		.		.
1870	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG	1,150.000 LF		.		.
1880	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED	2,170.000 LF		.		.
1890	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	4,580.000 LF		.		.
1900	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. S76TH ST (CTH U) & W. PUETZ RD	LUMP	LUMP			.
1910	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. S 76TH ST & W. DREXEL AVE	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1920	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 03. S 76TH ST & W. IMPERIAL BLVD	LUMP	LUMP			.
1930	657.0100 PEDESTAL BASES	18.000 EACH		.		.
1940	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	5.000 EACH		.		.
1950	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	12.000 EACH		.		.
1960	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	1.000 EACH		.		.
1970	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	38.000 EACH		.		.
1980	658.0120 TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL	4.000 EACH		.		.
1990	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	38.000 EACH		.		.
2000	658.0225 BACKPLATES SIGNAL FACE 5 SECTION 12-INCH	4.000 EACH		.		.
2010	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	8.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2020	658.0500 PEDESTRIAN PUSH BUTTONS	8.000 EACH		.		.
2030	658.0600 LED MODULES 12-INCH RED BALL	42.000 EACH		.		.
2040	658.0605 LED MODULES 12-INCH YELLOW BALL	42.000 EACH		.		.
2050	658.0610 LED MODULES 12-INCH GREEN BALL	42.000 EACH		.		.
2060	658.0620 LED MODULES 12-INCH YELLOW ARROW	4.000 EACH		.		.
2070	658.0625 LED MODULES 12-INCH GREEN ARROW	4.000 EACH		.		.
2080	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	8.000 EACH		.		.
2090	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 01. S76TH ST (CTH U) & W. PUETZ RD	LUMP	LUMP			.
2100	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 02. S 76TH ST & W. DREXEL AVE	LUMP	LUMP			.
2110	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 03. S 76TH ST & W. IMPERIAL BLVD	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2120	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 01. S76TH ST (CTH U) & W. PUETZ RD	LUMP	LUMP			.
2130	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 02. S 76TH ST & W. DREXEL AVE	LUMP	LUMP			.
2140	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 03. S 76TH ST & W. IMPERIAL BLVD	LUMP	LUMP			.
2150	671.0112 CONDUIT HDPE 1-DUCT 2-INCH	7,880.000 LF		.		.
2160	671.0212 CONDUIT HDPE DIRECTIONAL BORE 1-DUCT 2-IN	910.000 LF		.		.
2170	678.0300 FIBER OPTIC SPLICE	20.000 EACH		.		.
2180	678.0400 FIBER OPTIC TERMINATION	12.000 EACH		.		.
2190	690.0150 SAWING ASPHALT	22,300.000 LF		.		.
2200	690.0250 SAWING CONCRETE	32,500.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2210	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	675.000 DOL	1.00000		675.00	
2220	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	5,000.000 HRS	5.00000		25000.00	
2230	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	3,200.000 HRS	5.00000		16000.00	
2240	SPV.0035 SPECIAL 01. BACKFILL SLURRY	50.000 CY	.		.	
2250	SPV.0035 SPECIAL 02. POND LINER CLAY	3,400.000 CY	.		.	
2260	SPV.0055 SPECIAL 01. ELECTRICAL SERVICE UTILITY CHARGES	5,500.000 DOL	1.00000		5500.00	
2270	SPV.0060 SPECIAL 01. SIGN POSTS U-CHANNEL	58.000 EACH	.		.	
2280	SPV.0060 SPECIAL 02. EXTERNAL MANHOLE SEALS	47.000 EACH	.		.	
2290	SPV.0060 SPECIAL 03. ADJUSTING WATER VALVE BOXES	59.000 EACH	.		.	
2300	SPV.0060 SPECIAL 04. ADJUSTING HYDRANTS	9.000 EACH	.		.	
2310	SPV.0060 SPECIAL 05. CLEANING DRAINAGE STRUCTURES	7.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2320	SPV.0060 SPECIAL 06. INLET COVER TYPE 57	94.000 EACH		.		.
2330	SPV.0060 SPECIAL 07. REMOVING LANDMARK REFERENCE MONUMENT	4.000 EACH		.		.
2340	SPV.0060 SPECIAL 08. UTILITY LINE OPENING (ULO)	10.000 EACH		.		.
2350	SPV.0060 SPECIAL 09. RELOCATING HYDRANTS	14.000 EACH		.		.
2360	SPV.0060 SPECIAL 10. COMMUNICATIONS VAULT, 24 X 36-INCH	4.000 EACH		.		.
2370	SPV.0060 SPECIAL 11. LED LUMINAIRES 10K LUMENS	12.000 EACH		.		.
2380	SPV.0060 SPECIAL 12. POLES TYPE 10	6.000 EACH		.		.
2390	SPV.0060 SPECIAL 13. POLES TYPE 13	6.000 EACH		.		.
2400	SPV.0060 SPECIAL 14. MONOTUBE ARMS 25-FT	4.000 EACH		.		.
2410	SPV.0060 SPECIAL 15. MONOTUBE ARMS 30-FT	2.000 EACH		.		.
2420	SPV.0060 SPECIAL 16. MONOTUBE ARMS 45-FT	3.000 EACH		.		.

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2430	SPV.0060 SPECIAL 17. MONOTUBE ARMS 50-FT	2.000 EACH		.		.
2440	SPV.0060 SPECIAL 18. MONOTUBE ARMS 55-FT	1.000 EACH		.		.
2450	SPV.0060 SPECIAL 19. LUMINAIRE ARMS 15-FT	12.000 EACH		.		.
2460	SPV.0090 SPECIAL 01. PVC LATERAL 6-INCH	100.000 LF		.		.
2470	SPV.0090 SPECIAL 02. PVC LATERAL 8-INCH	100.000 LF		.		.
2480	SPV.0090 SPECIAL 03. PVC LATERAL 12-INCH	200.000 LF		.		.
2490	SPV.0090 SPECIAL 04. TRACER WIRE 12 AWG	8,940.000 LF		.		.
2500	SPV.0090 SPECIAL 05. PAVEMENT MARKING GROOVED EPOXY 4-INCH	52,420.000 LF		.		.
2510	SPV.0090 SPECIAL 06. PAVEMENT MARKING GROOVED EPOXY 8-INCH	3,720.000 LF		.		.
2520	SPV.0090 SPECIAL 07. CONSTRUCTION STAKING CONCRETE SIDEWALK	9,500.000 LF		.		.
2530	SPV.0090 SPECIAL 08. TIMBER FENCE	316.000 LF		.		.

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2540	SPV.0090 SPECIAL 09. FURNISH AND INSTALL 12SM FIBER OPTIC COMMUNICATIONS CABLE	9,740.000 LF		.		.
2550	SPV.0105 SPECIAL 01. TRAFFIC SIGNAL CTLR & CABINET FULL ACTUATED CTH U & W PUETZ RD	LUMP	LUMP			.
2560	SPV.0105 SPECIAL 02. TRAFFIC SIGNAL CTLR & CABINET FULLY ACTUATED CTH U & DREXEL AVE	LUMP	LUMP			.
2570	SPV.0105 SPECIAL 03. TRAFFIC SIGNAL CTLR & CABINET FULLY ACTUATED CTH U & IMPERIAL DR	LUMP	LUMP			.
2580	SPV.0105 SPECIAL 04. VEHICULAR VIDEO DETECTION SYSTEM CTH U & PUETZ RD (4 CAMERAS)	LUMP	LUMP			.
2590	SPV.0105 SPECIAL 05. VEHICULAR VIDEO DETECTION SYSTEM CTH U & DREXEL AVE (4 CAMERAS)	LUMP	LUMP			.
2600	SPV.0105 SPECIAL 06. VEHICULAR VIDEO DETECTION SYSTEM CTH U & IMPERIAL DR (4 CAMERAS)	LUMP	LUMP			.
2610	SPV.0105 SPECIAL 07. REMOVE TRAFFIC SIGNAL EQUIPMENT CTH U & PUETZ RD	LUMP	LUMP			.
2620	SPV.0105 SPECIAL 08. REMOVE TRAFFIC SIGNAL EQUIPMENT CTH U & DREXEL AVE	LUMP	LUMP			.

CONTRACT: 20140211010 PROJECT(S): 2160-10-70 FEDERAL ID(S): WISC 2014022

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2630	SPV.0105 SPECIAL 09. REMOVE TRAFFIC SIGNAL EQUIPMENT CTH U & IMPERIAL DR	LUMP	LUMP			.
2640	SPV.0105 SPECIAL 10. EXCAVATION FOR STRUCTURES CULVERTS C-40-22 SPECIAL	LUMP	LUMP			.
2650	SPV.0165 SPECIAL 01. STONE FASCIA, RETAINING WALL	800.000 SF		.		.
2660	SPV.0170 SPECIAL 01. TEST ROLLING	250.000 STA		.		.
2670	SPV.0180 SPECIAL 01. GEOGRID REINFORCEMENT	15,000.000 SY		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE