HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
06/2017 s.66.0901(7) Wis. Stats

Proposal Number: 008

COUNTY	STATE PROJECT	FEDERAL	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	1360-00-76	N/A	W Fond Du Lac Avenue; 6 Highway Intersections	STH 145
Milwaukee	2984-00-73	WISC 2019194	West Vliet Street; N 27th Street To N 12th Street	LOC STR

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 Date: June 11, 2019 Time (Local Time): 9:00 am	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time October 15, 2021	
Assigned Disadvantaged Business Enterprise Goal 12%	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)	(Bidder Signature)
(Print or Type Name, Notary Public, State Wisconsin)	(Print or Type Bidder Name)
(Date Commission Expires)	(Bidder Title)

Notary Seal

Type of Work: **For Department Use Only**

Grading, base aggregate dense, concrete pavement, asphaltic surface, curb and gutter, sidewalk, storm sewer, street lighting, traffic signals, 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 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

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

The contractor is responsible for reviewing this web site for general notices as well as information regarding proposals in each letting. The department will also post special notices of all addenda to each proposal through this web site no later than 4:00 PM local time on the Thursday before the letting. Check the department's web site after 5:00 PM 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 PM 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:
https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, 4th floor, 4822 Madison Yards Way, Madison, WI, during regular business hours.

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

1. Have a properly executed annual bid bond on file with the department.

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

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

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

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

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

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at:
https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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

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

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1360-00-76, West Fond du Lac Avenue, 6 Highway Intersections, STH 145, Milwaukee County, and Project 2984-00-73, West Vliet Street, North 27th Street to North 12th Street, Local Street, 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, 2019 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 (20181119)

2. Scope of Work.

The work under this contract shall consist of removing the existing roadway, concrete pavement, grading, base aggregate, concrete curb and gutter, sidewalk and driveway approaches, storm sewer, monotube poles and mast arms, conduit, pavement marking 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 start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

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

Notice to Contractor – Northern Long-eared Bat (Myotis Septentrionalis).

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

According to the final 4(d) rule issued for the NLEB, the department has determined that the proposed activity will not disturb hibernating NLEBs in a known hibernaculum. The activity does not involve tree removal, and will not occur within 0.25 miles of a known hibernacula, nor will the activity remove a known maternity roost tree or any other tree within 150 feet of a known maternity roost tree.

Construction ID 1360-00-76

Do not commence work under this contract until the required traffic control devices and markings are in place and the engineer approves the installations. Once work has started on the contract, work continually until the contract work is complete. The contract will not be considered complete until all items on the contract are completed, including seeding and roadway finishing. If the contractor desires to work on Saturday, Sunday, or nationally recognized legal holidays, he must obtain approval from the engineer at least 24 hours in advance. If scheduling changes after approval has been obtained, the engineer must be notified as soon as possible, but not later than 12:00 PM.

Do not take any sidewalk out of service for more than 48 hours without providing temporary sidewalk accommodations meeting ADA guidelines. Maintain access to crosswalks and bus stops at all times during construction. Place Temporary Surface (type) and temporary curb ramps in a manner compliant with all ADA design criteria and as described in the plans, standard details drawings and these special provisions.

In an effort to maintain a safe environment for pedestrians, the contractor shall minimize the amount of time between excavating for and placing the monotube bases. If the engineer in the field believes the time between the contractor's construction activities poses a safety hazard, the contractor shall place pedestrian safety fence around the excavated area at no cost to the project.

Arrange weekly construction/progress meetings to apprise all sub-contractors and work being done by others of current status of project.

Provide proposed sequence of operations, methods of handling traffic, submit revisions in traffic handling to the engineer for approval at least 48-hours in advance of making any changes in traffic operations.

Obtain permission from the engineer a minimum of 48 hours prior to any construction schedule change.

Emergency Vehicle Access

Maintain emergency vehicular access at all times to roadways located within the project limits.

Supplement standard spec 107.18 with the following:

Use equipment having vacuum or water-spray mechanisms to eliminate the dispersion of dust when performing roadway-cleaning operations. Provide suitable, self-contained particulate collectors, if vacuum equipment is used, to prevent discharge from collection bin into the atmosphere.

Amend standard spec 108.9.2 by adding the following paragraphs:

Coordinate work in accordance to standard spec 105.5.2.

Take special precautions to avoid damage to all existing utility facilities in the proximity of the construction area.

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

No extra cost will be allowed for “cold weather protection” as addressed in standard spec 415.13.

Except where noted, keep all intersections accessible at all times. Include any costs associated with staging operations at intersections that are to remain accessible at all times in the unit bid price for Traffic Control (Project).

Maintain or provide where necessary, as directed by the engineer, pedestrian access to adjacent properties, businesses, recreation areas, and bus stops. Provide adequate temporary sidewalk and bridging between the curb and the right-of-way line over freshly paved concrete or other obstructions on the sidewalk area at entrances to buildings or as directed by the engineer. The cost of bridging shall be included in the unit bid price for Concrete Sidewalk 5-Inch.

Maintain vehicular access to all business and commercial properties at all times except as noted in the traffic control plans and specifications.

Store drums, buckets and other containers related to construction operations in a secure area to prevent vandalism, spills, and unwanted dumping. If an abandoned container is discovered on the project site, notify the WDNR at (800) 943-0003.

Construction ID 2984-00-73

Do not commence work under this contract until the required traffic control devices and markings are in place and the engineer approves the installations. If the contractor desires to work on Saturday, Sunday, or nationally recognized legal holidays, he must obtain approval from the engineer at least 24 hours in advance. If scheduling changes after approval has been obtained, the engineer must be notified as soon as possible, but not later than 12:00 PM.

Arrange weekly construction/progress meetings to apprise all sub-contractors and work being done by others of current status of project.

Avoid damage to all existing utility facilities in the proximity of the construction area.

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

No extra cost will be allowed for “cold weather protection”, if needed.

Access shall include provisions for mail service, utility meter reading and garbage pickup to all properties.

During construction operations, ramp sawed joints at intersecting streets with asphaltic surface material between the existing pavement surface and the adjacent milled surface, as directed by the engineer, to permit the safe passing of vehicles. The cost of the materials, labor, and equipment necessary to install such ramps is to be paid under bid item 465.0125, Asphaltic Surface Temporary.

Inform property owners at least 48 hours prior to removing a driveway approach that serves that property. Driveway approach removal and replacement shall be scheduled, so that the time lapse between the removal and replacement is:

- Seven days for normal strength concrete driveways.
- Three days for HES concrete driveways.

Do not close or remove from service any commercial or residential approach without at least 48 hours notice given to the occupants of the premises to remove their vehicles prior to driveway removal or closing of the driveway approach access.

Maintain driveway access for special needs residents at all times. The placement of the temporary surface shall conform to the requirements outlined in 644.1420.S Temporary Pedestrian Surface Plywood. Plating of concrete work as directed by the engineer to accommodate special needs residents shall be considered incidental to the Concrete Driveway 7-Inch bid item.

Private utilities will be responsible for adjusting their manholes in conjunction with the paving contractor’s operations. Please allow adequate time for utility companies to respond.

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

Do not store equipment, vehicles, or materials on sidewalks without specific approval by the engineer.

Store drums, buckets and other containers related to construction operations in a secure area to prevent vandalism, spills, and unwanted dumping. If an abandoned container is discovered on the project site, notify the WDNR at (800) 943-0003.

Do not disturb or store equipment or materials in the median. Any damage to the median or city forestry objects shall be repaired or replaced by City of Milwaukee forces and be deducted from money due to the contractor according to the requirements set forth in the Article “Preserving Trees, Shrubs, and Planting Areas for the City of Milwaukee Forestry Division.

Plate all trenches within the roadway resulting from construction activities that are not fully backfilled prior to the end of each construction work day, or as directed by the engineer. Steel plates shall be suitable for carrying vehicles and shall be in addition to the barricades and traffic control devices required for lane closure and traffic control. Cost for steel plates shall be included in the unit bid price for the related underground bid items that are under construction at each location.

Utilize steel plates at locations where sewer work is across the traveling width of the roadway. Cost for steel plates shall be included in the unit bid price for the related sewer bid items.

When performing the roadway cleaning operations, use equipment having vacuum or water-spray mechanisms to eliminate the dispersion of dust. If using vacuum equipment, it must have suitable, self-contained particulate collectors to prevent discharge from collecting bin into the atmosphere.

Sidewalk Construction

Hollow sidewalks exist within the project limits at the following properties:

- 2636 W Vliet St
- 1326 W Vliet St
- 1231 W Vliet St
- 1211 W Vliet St

These hollow sidewalks may or may not have been abandoned by others prior to construction. Exercise caution when working on or near them. Coordinate any repairs that will be done in conjunction with the project with the engineer and property owner. Notify the property owner and the engineer at least three working days prior to working on or near the hollow sidewalks.

Maintain all pedestrian access to adjacent properties, and businesses. The sidewalk adjacent to the roadway pavement work must either remain in place through the duration and be replaced after or be removed and replaced prior to undertaking the adjacent roadway pavement work to ensure adequate pedestrian access while vehicular access to properties is restricted. Removal and replacement of sidewalk should be scheduled, so that the time lapse between the removal and replacement is than less than 48 – hours. Provide temporary pedestrian surface plates when directed by the engineer. Provide Temporary Pedestrian Surface Plates where necessary, or as directed by the engineer. Provide temporary sidewalk accommodations and bridging between the curb and right-of-way line over freshly paved concrete or other obstructions on the sidewalk area at entrances to buildings and temporary bus stops as directed by the engineer. The cost of bridging shall be included in the unit bid price for 602.0410 Concrete Sidewalk 5-Inch. Construction of temporary pedestrian access will be paid for under the bid item 644.1410.S Temporary Pedestrian Surface Asphalt, or 644.1420.S Temporary Pedestrian Surface Plywood.

Interim Completion Dates (ID 1360-00-76)

Contract work shall not commence until April 15, 2020.

Complete all contract work with all streets open to through traffic prior to 12:01 AM September 15, 2020.

If the contractor fails to complete all contract work prior to 12:01 AM September 15, 2020 the department will assess the contractor $2070.00 in interim liquidated damages, for each calendar day that the roadways remain closed after 12:01 AM September 15, 2020. An entire calendar day will be charged for any period of time within a calendar day that the roads remain closed beyond 12:01 AM.

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

Interim Completion Dates (ID 2984-00-73)

Complete all work from 17th Street to 12th Street with all streets open to through traffic, except for monotube materials associated with delayed deliveries (poles, arms, signals, wiring), furnishing and planting all trees and Landscape Planting Surveillance and Care Cycles prior to 12:01 AM November 2, 2019.

If the contractor fails to complete all contract work, except for monotube materials associated with delayed deliveries (poles, arms, signals, wiring), furnishing and planting all trees and Landscape Planting Surveillance and Care Cycles and open all streets to through traffic prior to 12:01 AM November 2, 2019 the department will assess the contractor $2070.00 in interim liquidated damages, for each calendar day that the roadways remain closed after 12:01 AM November 2, 2019. An entire calendar day will be charged for any period of time within a calendar day that the roads remain closed beyond 12:01 AM.

Complete all work from 27th Street to 17th Street with all streets open to through traffic, except for furnishing and planting all trees and Landscape Planting Surveillance and Care Cycles prior to 12:01 AM September 15, 2020.

If the contractor fails to complete all contract work, except for furnishing and planting all trees and Landscape Planting Surveillance and Care Cycles and open all streets to through traffic prior to 12:01 AM September 15, 2020 the department will assess the contractor $2070.00 in interim liquidated damages, for each calendar day that the roadways remain closed after 12:01 AM September 15, 2020. An entire calendar

day will be charged for any period of time within a calendar day that the roads remain closed beyond 12:01 AM.

Furnishing and planting all trees and plants shall not commence until May 1, 2021. Complete all plantings prior to 12:01 AM, May 15, 2021. Complete all landscape planting surveillance and care cycles prior to 12:01 AM, October 15, 2021.

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

4. Traffic.

Construction ID 1360-00-76

In order to maintain access to the area during construction the work for Construction ID 1360-00-76 shall be staged as follows:

Stage 1

Place traffic control at each location as needed. The duration of how long the items are in place, at each location, shall be based on the time required to construct the concrete base, install the pull box and conduit. After the construction items are in place at a location the traffic control shall be removed, from that location. No traffic control item is to remain in place for the entire construction period.

Stage 2

Place traffic control at each location as needed. The duration of how long the items are in place, at each location, shall be based on the time required to install the monotube pole and mast arm. After the construction items are in place at a location the traffic control shall be removed, from that location. No traffic control item is to remain in place for the entire construction period.

Maintain, where possible, two lanes of traffic during the rush hour periods as indicated below:

- West Fond du Lac Avenue and all streets that intersect at signalized intersections, between the morning rush hours of 6:30 AM and 9:00 AM, Monday through Friday.
- West Fond du Lac Avenue and all streets that intersect at signalized intersections, between the evening rush hours of 3:00 PM and 6:00 PM, Monday through Friday.

Work zone traffic control devices and signs shall not be placed over or within 50 feet of the railroad right-of-way located at the intersection of STH 145 and Locust St.

Construction ID 2984-00-73

Undertake traffic control for 2984-00-73 according to the traffic control plans and standard spec 643, or as approved by the engineer, except as hereinafter modified.

Maintain access on a paved portion of the roadway at all times during construction operations according to the traffic control plans.

Submit to the engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as shown on the plans. Submit this plan ten days prior to the preconstruction conference.

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore lights, signs, or other traffic control devices that are damaged or disturbed, in accord with standard spec 643.3.1(6). The cost to maintain and restore the above items shall be considered incidental to the item as bid and no additional payment will be made.

Supply the name and telephone number of a local contact person for traffic control repair prior to or at the preconstruction conference.

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

The contractor shall conduct operations in a manner that will cause the least interference to traffic movements and adjacent business and residential access within the construction areas.

The parking and storage of construction vehicles, equipment and material shall be approved by the engineer and shall be restricted to the minimum required and the minimum time necessary at the work sites to prosecute the work. At such location, the material and equipment involved shall not constitute a hazard to the traveling public.

Prior to Stage 1

Install temporary asphalt on existing westbound lanes to provide a smooth riding surface. Install temporary asphalt on North 17th Street to provide enough width for shifted northbound traffic.

Stage 1A (North 17th Street to North 12th Street)

Close and reconstruct the eastbound roadway of West Vliet Street from North 17th Street to North 12th Street. Eastbound traffic will be suspended during Stage 1A. One lane of traffic will continue to operate in the westbound direction with a minimum of one 11-foot lane of traffic.

North 17th Street will be restricted to a minimum 11-foot lane in each direction. The outside lanes of the south side of the intersection will be reconstructed.

Maintain side road access to and from West Vliet Street westbound from the north.

North 14th Street will temporarily become a two-way street between West Juneau Avenue and West Vliet Street to maintain access to the parking lot of the Martin Luther King Center. The two-way temporary pattern must be in place prior to closing any lanes on West Vliet Street.

Stage 1B (North 17th Street to North 12th Street)

Shift northbound and southbound traffic along North 17th Street to the outside and reconstruct the south side median, adjacent traffic lane and turn lane.

Stage 2A (North 17th Street to North 12th Street)

Close and reconstruct the westbound roadway of West Vliet Street from North 17th Street to North 12th Street. Westbound traffic will be suspended during Stage 2A. One lane of traffic will continue to operate in the eastbound direction with a minimum of one 11-foot lane of traffic.

North 17th Street will be restricted to a minimum 11-foot lane in each direction. North 17th Street shall remain open to at least one lane of north and southbound traffic at all times, in accord with the traffic control plans, during construction operations. The north side median, adjacent traffic lane and turn lanes will be reconstructed (Stage 2A).

Maintain side road access to and from West Vliet Street eastbound from the south.

The North 12th Street intersection shall remain open to 4-way traffic at all times, in accord with the traffic control plans, during construction operations.

North 14th Street shall be changed to operate as a two-way street during Stage 1 between West Vliet Street and West McKinley Avenue to allow access the Martin Luther King Center parking lot.

Stage 2B (North 17th Street to North 12th Street)

Shift northbound and southbound traffic along North 17th Street to the inside lanes adjacent to the median. Reconstruct the north side, outside lanes.

Prior to Stage 3

Install temporary asphalt on existing westbound lanes to provide a smooth riding surface.

Stage 3 (27th Street to 17th Street)

Close and reconstruct the eastbound roadway of West Vliet Street from North 27th Street to North 17th Street. Eastbound traffic will be suspended during Stage 3. One lane of traffic will continue to operate in the westbound direction with a minimum of one 11-foot lane of traffic.

Maintain side road access to and from West Vliet Street westbound from the north.

The North 27th Street intersection shall remain open to 4-way traffic at all times, in accord with the traffic control plans, during construction operations.

Stage 4 (27th Street to 17th Street)

Close and reconstruct the westbound roadway of West Vliet Street from North 27th Street to North 17th Street. Westbound traffic will be suspended during Stage 4. One lane of traffic will continue to operate in the eastbound direction with a minimum of one 11-foot lane of traffic.

Maintain side road access to and from West Vliet Street eastbound from the south.

Include all concrete paving costs, including any necessary hand work, under bid item 415.0080, Concrete Pavement 8.0-Inch.

Driveway Construction/Access

Stage construction activities in order to maintain through vehicular access on West Vliet Street according to the traffic control plans. The staging of work activities shall provide driveway access to the property owners at all times as specified below. Staging for driveway access shall include, but is not limited to the following methods:

Construct driveway one half at a time at the following locations: 50+85 to 51+20 Right, and 55+52 to 55+70 Left.

Construct driveways with HES concrete at the following locations: 15+19 to 15+35 Right and 22+15 to 22+27 Right.

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

Local access to residences and businesses within the project area shall be maintained to the maximum extent possible. No residential or commercial drive approach shall be closed without sufficient notice given to the occupants of the premise to remove their vehicles prior to removal or closing of the drive approach access. Reasonable access to abutting business locations shall be maintained at all times.

On-Street Parking will not be allowed during construction.

All posting of parking restrictions required to facilitate construction operations will be provided by the City of Milwaukee, Traffic and Lighting Design Section, only as directed by the engineer. Contact Cameron Potter at (414) 286-3276 three days prior to start of construction operations.

In the event where emergency vehicles and equipment which provide fire, police, and rescue service for the public need access to properties, the contractor shall cooperate to the fullest extend in accommodating emergency access in the shortest possible time.

All construction vehicles and equipment entering or leaving traffic lanes shall yield to through traffic.

When a pavement area is temporarily closed to traffic, the portion of the roadway remaining open will be signed and delineated for traffic operations according to the accepted signing and delineation standards and according to Part VI of the Federal Highway Administration's "Manual on Uniform Traffic Control Devices". Sign and delineation design and placement, lane tapers, and transitions, and all other traffic control devices shall comply with the methods shown in the aforementioned manuals.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying West Vliet Street 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 24, 2019 to 6:00 AM Tuesday, May 28, 2019 for Memorial Day;
- From noon Wednesday, July 3, 2019 to 6:00 AM Friday, July 5, 2019 for Independence Day;
- From noon Friday, August 30, 2019 to 6:00 AM Tuesday, September 3, 2019 for Labor Day;
- From noon Wednesday, November 27, 2019 to 6:00 AM Monday, December 2, 2019 for Thanksgiving;
- From noon Friday, May 22, 2020 to 6:00 AM Tuesday, May 26, 2020 for Memorial Day;
- From noon Thursday, July 2, 2020 to 6:00 AM Monday, July 6, 2020 for Independence Day;
- From noon Sunday, July 12, 2020 to 6:00 AM Friday, July 17, 2020 for Democratic National Convention;
- From noon Friday, September 4, 2020 to 6:00 AM Tuesday, September 8, 2020 for Labor Day;
- From noon Wednesday, November 25, 2020 to 6:00 AM Monday, November 30, 2020 for Thanksgiving.

There may be restrictions required as determined by the engineer for the annual King Advisory Back to School event typically held the second Saturday in August.

stp-107-005 (20050502)

6. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.

stp-107-066 (20080501)

Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities that have facilities in the area as required by statutes. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Note: Bidders are advised to contact each utility company listed in the plans prior to preparing their bid to obtain current information on the status of each utility company's work required in association with the project. Existing trees, street light poles, hydrants and utility poles are to remain in place during construction unless noted on plans. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between the trees, hydrants, poles, other utilities and any other physical structures and the paving equipment. All bidders shall be capable of providing zero clearance behind the curb to accommodate existing obstructions at no additional cost to the project. During paving operations keep all manholes accessible to utility companies for emergencies.

Construction ID 1360-00-76

ATC

Facilities exist within the project limits. There are no anticipated conflicts, and no relocation of their facilities is required.

Contact Chris Dailey at (262) 506-6884, with concerns or questions.

AT&T Wisconsin

Underground facilities exist within the project limits. There are no anticipated conflicts, and no relocation of their facilities is required.

There is conduit located in the following intersection:

- West Roosevelt Drive
- West Townsend Street
- West Burleigh Street
- West Center Street

- North 27th Street
- West Walnut Street

Contact Jay C. Bulanek at (262) 896-7669 office and (414) 491-2855 mobile, with concerns or questions.

City of Milwaukee – Communications

Call boxes are present where West Fond Du Lac Avenue intersects West Burleigh Street and West Center Street. There are no impacts to them, and relocations are not needed.

Contact DPW/Communications dispatch at (414) 286-3686, with concerns or questions.

City of Milwaukee - City Underground Conduit (CUC)

Underground facilities exist within the project limits. There are no anticipated conflicts, and no relocation of their facilities is required.

Contact Karen Rogney at (414) 286-3243 office, with concerns or questions.

City of Milwaukee – Forestry

Underground facilities exist within the project limits. Two water taps will be relocated in the fall of 2018, prior to construction. Contact James Kringer at (414) 708-2428 mobile, with concerns or questions.

City of Milwaukee – Sanitary Sewers

Underground facilities exist within the project limits. There are no anticipated conflicts, and no relocation of their facilities is required.

Contact Zafar Yousuf at (414) 286-2467 office, with concerns or questions.

City of Milwaukee - Street Lighting

Facilities exist within the project limits. City forces will install and maintain temporary lighting at all streets that intersect with West Fond Du Lac Avenue, and remove existing facilities, when in conflict with new traffic signal installations. Proposed work activities are:

- Work before construction

City forces will install temporary poles, permanent direct bury poles, luminaires, and overhead cabling to sufficiently illuminate intersections, and remove any conflicting street lighting facilities, within the construction zones. Underground bases and conductors will be discontinued.

- Work during construction

The contractor will have to contact and coordinate, with the street lighting field personnel, for either hogging or boring of conduit crossings, between traffic islands and at intersections. Work during construction will take 8 days, four days at the Walnut intersection and four days at the Roosevelt intersection. Contractor must give 10 days' notice to notify the utility that the site is ready.

- Work after construction

City forces will make final terminations to permanent facilities. Temporary facilities will be removed after the permanent lighting is in service.

Contact Mark MacRae at (414) 286-5942 office and (414) 708-4251 mobile with questions and concerns.

City of Milwaukee - Traffic Signals

Facilities exist within the project limits. Prior to construction city forces will remove, relocate, or discontinue existing traffic signal facilities that are in conflict with this project. This is to include traffic signal poles/mast arms, traffic signal standards, traffic control cabinets, and underground conduit. City forces will also install temporary traffic signals and overhead cabling, as needed, to operate the signals

throughout construction. Upon completion of the project, all temporary traffic signal facilities will be removed.

Contact Alfonzo Nichols Jr. at (414) 286-5941 office and (414) 708-5148 mobile, with concerns or questions.

City of Milwaukee - Water Works

Milwaukee Water Works has large size water mains and other facilities within the limits of the project. No work on water mains is proposed. Hydrants will be adjusted, by city forces, prior to the start of construction, at the following locations:

- Station 06+20, 66' LT
- Station 16+41, 71' RT
- Station 07+43, 28' LT
- Station 97+32, 36' RT

Water service box adjustment will be performed by the roadway contractor, perform this work in accordance with the requirements of the Adjusting Water Box bid item, SPV.0060.002.

Contact Mr. Dave Goldapp at (414) 286-6301 office and (414) 708-2695 mobile, with concerns or questions.

Milwaukee Metropolitan Sewage District (MMSD)

Facilities are located within the project limits. No work and or adjustments of these facilities are anticipated, in conjunction with this project.

Contact Mr. Larry Anderson at (414) 225-2241 office and (414) 617-1429 mobile, with concerns or questions.

Spectrum

Underground facilities exist within the project limits. There are no anticipated conflicts, and no relocation of their facilities is required.

Contact Steve Cramer at (414) 277-4045 office, with concerns or questions.

WE Energies – Electric

Facilities are located within the project limits.

There is 1 electric manhole (MH82-0815) that will need to be adjusted during road construction. It is anticipated to take 3-5 working days to do the manhole adjustment. At least 14 working days' notice (and 3 day reminder) must be given to We Energies to notify the utility that he site is ready. This electric manhole can only be adjusted by We Energies.

The contact person, for this work is Zachary St. Martin at (414) 540-5782 office and zachary.stmartin@we-energies.com.

Any facilities not explicitly identified as being relocated or removed have been deemed to be not in conflict and will remain in place as is. It is expected that contractors will work safely around any facilities left within the work zone.

If the need arises the contact person is Alex Dantinne at (920) 621-690 and alex.dantinne@we-energies.com.

NOTE: It is imperative that the contractor contact We Energies prior to removing any electrical underground cables, to verify that they have been discontinued and carry no electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour Dispatch lines to arrange for this verification. We Energies Electric Dispatch #1 (800) 662-4797.

WE Energies – Gas

Facilities are located within the project limits.

Any facilities not explicitly identified as being relocated or removed have been deemed to be not in conflict and will remain in place as is. It is expected that contractors will work safely around any facilities left within the work zone.

It is expected that the road contractor will work safely around any We Energies gas facility, especially when digging. A watchdog will be required during the installation of the type 10 base at the NW corner of W Fond du Lac Ave and W Burleigh St (8+52; 27LT) near an existing 12" ST gas main. A watchdog will also be required during the installation of the type 10 base at the NW corner of W Fond du Lac Ave and W Center St (7+47; 28LT) near an existing 12" ST gas main.

The watchdogs will be assigned when the Digger's Hotline tickets are called in by the contractor.

If the need arises the contact person is Alex Dantinne at (920) 621-690 or alex.dantinne@we-energies.com.

NOTE: It is imperative that the contractor contact We Energies prior removing any gas facilities, to verify that they have been discontinued and carry no natural gas. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour Dispatch lines to arrange for this verification. We Energies Gas Dispatch #1 (800) 261-5325.

Windstream

Underground facilities exist within the project limits. There are no anticipated conflicts, and no relocation of their facilities is required.

Contact Mary Beth Fisher at (262) 792-7938 office, (414) 313-9032 mobile, with concerns or questions.

Construction ID 2984-00-73

American Transmission Company (ATC)

American Transmission Company has a 138kV pipe that crosses Vliet St at Station 23VL+37. No relocation is required or planned.

Contact Ron Latus at (262) 832-8688 with concerns or questions.

AT&T Wisconsin

AT&T has facilities within the limits of the project from the 1920's. If the ducts aren't already usable, it is expected they will not withstand any adjustment process or road construction activities. AT&T will need to replace large sections of the existing underground duct package running below Vliet Street. As a result, several of the manholes are undersized and will require rebuilds to accommodate the duct relocations.

Additionally, AT&T will be stubbing spare ducts at project limits to prevent future capacity problems while Vliet Street is under guarantee.

It should be noted that parts of AT&T relocation are dependent on the discontinuation of the exiting watermain.

It is anticipated that AT&T facilities will be substantially adjusted by June 2019 prior to construction, except for frame and cover adjustments, which require 1 working day per structure.

1) Manhole rebuilds prior to construction: This work will include the removal of the existing structure and replacing with a new larger precast structure that meets OSHA requirements and can accommodate AT&T facilities.
    - Station 16+83, 23' RT, AT&T MH 2A07 (Existing 8'x3.8'x5.5) – Proposed Precast 10'x6'x7'
    - Station 19+97, 20' RT, AT&T MH 2A08 (Existing 5.8'x3.8'x5') – Proposed Precast 10'x6'x7'
    - Station 46+67, 12' LT, AT&T MH 2D04 (Existing 7.75'x4'x4.8') – Proposed Precast 10'x6'x7'
    - Station 51+85, 12' LT, AT&T MH 2D70 (Existing 6.75'x3.6'x5.5') – Proposed Precast 10'x6'x7'

- Station 55+62, 12’ LT, AT&T MH 2D71 (Existing 6’x3.5’x4.5’) – This manhole to be removed/eliminated
- Station 57+42, 13’ LT, AT&T MH 2D72 (Existing 8’x3’x5’) – Proposed Precast 8’x4’x7’
- Station 59+39, 13’ LT, AT&T MH 2D73 (Existing 5.5’x3.2’x5’) – Proposed Precast 10’x6’x7’
- Station 61+25, 13’ LT, AT&T MH 2D74 (Existing 7.8’x4’x5.4’) – Proposed Precast 8’x4’x7’
- Station 63+24, 13’ LT, AT&T MH 2D75 (Existing 5.7’x3’x4.8’) – Proposed Precast 10’x6’x7’

2) Manhole Improvements prior to construction: Coring into exiting manhole walls or breaking out and rebuilding wall to accommodate AT&T facilities
   - Station 65+36, 6’ LT, AT&T MH 2D76 (Existing 11.6’x5.3’x6.6’) – Wall rebuild

3) Duct Package Relocation prior to construction:
   a) From Station 16+83, AT&T MH 2A07 to Station 19+97, AT&T MH 2A08, AT&T will be installing a 4-duct package for approximately 314’ at 20’ Rt.
   b) From Station 46+67, AT&T MH 2D04 to Station 65+36, AT&T MH 2D76, AT&T will be installing a new 4-duct package via directional bore to avoid conflicts with proposed drainage and pavement via directional bore. This duct run will be broken up from manhole to manhole:
   - 510’ from Station 46+67, AT&T MH 2D04 to Station 51+85, AT&T MH 2D70 at 13.5’ LT
   - 543’ from Station 51+85, AT&T MH 2D70 to Station 57+42, AT&T MH 2D72 (Interim MH 2D71 to be eliminated) at 8.7' LT
   - 192’ form Station 57+42, AT&T MH 2D72 to Station 59+39, AT&T MH 2D73 at 11.3’ LT
   - 178’ from Station 59+39, AT&T MH 2D73 to Station 61+25, AT&T MH 2D74 at 11.6’ LT
   - 192’ from Station 61+25, AT&T MH 2D74 to Station 63+24, AT&T MH 2D75 at 7.9’ LT
   - 209’ from Station 63+24, AT&T MH 2D75 to Station 65+36, AT&T MH 2D76 at 8.5’ LT

4) Replacing of Laterals for Services prior to construction:
   - AT&T to place 1 duct from Station 14+08, AT&T MH 1004 South to ROW at 2605 W Vliet Street
   - AT&T to place 1 duct from Station 16+83, AT&T MH 2A07 North on 25th Street to North project limit
   - AT&T to place 1 duct from Station 19+97, AT&T MH 2A08 North on 24th Place to North project limit
   - AT&T to place 1 duct from Station 19+97, AT&T MH 2A08 South on 24th Place to South project limit
   - At Station 26+48, place proposed pedestals at North and South ROW. AT&T to place 2 ducts from ped to ped via directional bore
   - At Station 33+44 on 21st Street, AT&T to place 2 ducts from North to South project limit
   - AT Station 40+00 (mid-block), AT&T to place 2 ducts from North to South project limit
   - AT&T to place 1 duct from Station 46+67, AT&T MH 2D04 North on 17th Street to North project limit
   - AT&T to place 1 duct from Station 46+67, AT&T MH 2D04 South on 17th Street to South project limit
   - AT&T to place 1 duct from Station 46+67, AT&T MH 2D04 to AT&T Existing Crossbox,1404 N 17th Street
   - AT&T to place 1 duct from Station 51+85, AT&T MH 2D70 North to North project limit
   - AT&T to place 1 duct from Station 51+85, AT&T MH 2D70 South to South project limit

- AT&T to place 2 ducts from Station 57+42, AT&T MH 2D72 North on 14th Street to North project limit
- AT&T to place 1 duct from Station 59+39, AT&T MH 2D73 South to South project limit
- AT&T to place 2 ducts from Station 61+25, AT&T MH 2D74 North to North project limit
- AT&T to place 1 duct from Station 63+24, AT&T MH 2D75 North to ROW at 1220 W Vliet Street
- AT&T to place 1 duct from Station 63+24, AT&T MH 2D75 South to South project limit
- AT&T to place 1 duct from Station 65+36, AT&T MH 2D76 South to ROW at 1201 W Vliet Street

5) AT&T will need to complete frame and cover adjustments of the exiting AT&T Manholes during construction to adjust the lids to final roadway grade within the project limits. Provide AT&T with a minimum 10 working days advanced notice. It is anticipated the adjustments will require 1 working day per structure. These manholes are additionally listed in sections 1 & 2 above.
   - Station 14+08, 14’ LT, AT&T MH 1004
   - Station 16+83, 23’ RT, AT&T MH 2A07
   - Station 19+97, 20’ RT, AT&T MH 2A08
   - Station 46+67, 12’ LT, AT&T MH 2D04
   - Station 51+85, 12’ LT, AT&T MH 2D70
   - Station 55+62, 12’ LT, AT&T MH 2D71
   - Station 57+42, 13’ LT, AT&T MH 2D72
   - Station 59+39, 13’ LT, AT&T MH 2D73
   - Station 61+25, 13’ LT, AT&T MH 2D74
   - Station 63+24, 13’ LT, AT&T MH 2D75
   - Station 65+36, 6’ LT, AT&T MH 2D76

Contact Mr. Jay Bulanek at (262) 896-7669 office, (414) 491-2855 cell with concerns or questions.

Charter Communications

Charter has underground facilities within the project limits. Relocation plans were determined based on cross sections shown on project plans. Relocations and adjustments of Charters’ facilities are anticipated to occur prior to construction and require 60 working days after permits are approved. The facilities will be constructed at the following general locations:

1. Along the west side of N. 17th Street near the station 46+50.
2. Between stations 51+75 and 54+25 near N. 15th Street.
3. Along the west side of N. 14th Street near station 57+25.

The remainder of Charter facilities are located aboveground on We Energies poles. Should We Energies decide to relocate any pole with Charter facilities additional adjustments will be necessary.

All contractors’ equipment must maintain minimum OSHA clearances at all times from Charter overhead facilities. All other Charter facilities not shown as adjusted in this work plan will remain "as is". The highway contractor must contact Charter before removing or adjusting any coax or fiber optic facility to verify that the facility has been discontinued. The contractor must not assume that an unmarked facility has been discontinued. The road contractor may have to work around these facilities following the guide lines set by NESC and Diggers Hotline.

Provide Charter with a minimum of 10 working days advance notice, by contacting Pete Kruezela at (414) 908-1339 office.

City of Milwaukee – Water Works

Milwaukee Water Works has facilities within the limits of the project. The previous dual water main system with mains running parallel on both the north and south sides of the roadway was replaced in the summer and fall of 2018 with a system primarily on the north side. The previous system is discontinued. Plans are available detailing the new construction. No additional work is proposed during roadway construction.

Water service box adjustments will be performed by the roadway contractor in accordance with the requirements of the Adjusting Water Box bid item SPV.0060.002.

Contact Mr. Dave Goldapp of the City of Milwaukee at (414) 286-6301 with concerns or questions.

City of Milwaukee - Sewer

The City of Milwaukee has sanitary sewer facilities within the limits of the paving project. There are no relocation plans for existing sewer facilities during construction.

Contact Mr. Zafar Yousuf of the City of Milwaukee at (414) 286-2467 with concerns or questions.

City of Milwaukee - Underground Conduits and Communications (CUC)

There is an existing City Underground Conduit package running east/west in West Vliet Street through the entire project that will be discontinued in place. The contractor shall remove and/or discontinue the existing manholes as shown on the plan set. A new conduit package will be installed in West Vliet Street for the entire length of the project by the contractor as part of the project as shown in the plan set and incorporated into the construction contract. The adjustment of existing and proposed CUC manholes to grade is also included in the construction contract.

Contact Karen Rogney at (414) 286-3243 office, with concerns or questions.

City of Milwaukee – Communications

There is communication cabling through existing conduit that will be discontinued from Existing CUC Manhole, Station 10+53.1, 39.5' RT. (27th & Vliet) to Existing CUC Manhole, Station 00+00.0, 00' RT. (12th & Vliet). City forces will relocate circuits off of this cabling prior to construction. Cables will be removed or cut and discontinued in place at these two manholes in advance of the project. Cabling facilities will be restored to new conduits when construction is complete.

City forces will remove all call boxes in the project area that are impacted by construction prior to construction start. These are as follows:

12th St & Vliet, SW Corner of Intersection – No impact from construction anticipated.

14th St & Vliet, SE Corner of Intersection – Call box will be removed by City forces prior to start of construction.

16th St (Vacated) & Vliet, North of roadway and walk. – No impact from construction anticipated. When installing new conduits to the base of the call box.

19th St (Vacated) & Vliet, North of roadway and walk – Call box will be removed by City forces prior to start of construction.

22nd St & Vliet, SW Corner of Intersection – No impact from construction anticipated. When installing new conduits to the base of the call box.

24th St & Vliet, SE Corner of Intersection – Call box will be removed by City forces prior to start of construction.

27th St & Vliet, SW Corner of Intersection – No impact from construction anticipated.

For any call boxes within the project area that are not removed prior to construction, please contact the field contact person with 2 days of advanced notice so necessary field adjustments can be coordinated when installing new conduits to the base of the call box or if unanticipated conflicts arise.

Contact DPW/Communications dispatch or Bryan M. Pawlak at (414) 286-3686, with concerns or questions.

City of Milwaukee - Street Lighting

The City of Milwaukee has street lighting facilities within the limits of the project. Some work locations have traffic signals that are attached to street lighting facilities that will be impacted by the proposed work. Temporary overhead will be installed along the entire scope of this project. The City of Milwaukee Street Lighting and Traffic Signal forces will be coordinating some of their work together.

Before Construction:

The City of Milwaukee street lighting personnel will install temporary overhead cable on wood and concrete poles. The wood poles will be installed in an area from the face of curb to a point 5 feet back of curb within the limits of the project along West Vliet Street and all the intersecting streets. There are light poles that will be removed that conflict with the locations of the proposed pedestrian ramps.

During Construction:

The contractor will need to contact and coordinate throughout the project with the street lighting field contact person for inspection of contractor installed street light poles, conduit, pull boxes, cable installation, electrical connections and for all connections to existing street lighting facilities. The contactor will use extreme caution when working near street lighting facilities. The contractor is responsible for damage to our facilities. Please call (414) 286-5944 immediately to report damages to our facilities.

After Construction:

Street lighting personnel will install the remaining permanent underground facilities beyond what the contractor has installed. After completion of construction, street lighting personnel will make the final connections to place the newly installed material into service and remove the temporary overhead.

Contact Mark MacRae at (414) 286-5942 office and (414) 708-4251 mobile with questions and concerns.

City of Milwaukee - Traffic Signals

City of Milwaukee Traffic Signals has four signalized intersections maintained by the City of Milwaukee within the proposed project that require traffic signal reconstruction:

West Vliet Street & North 24th Street (Station 22+00 to Station 24+00)

West Vliet Street & North 20th Street (Station 36+00- Station 38+00)

West Vliet Street & North 17th Street (Station 46+00 to Station 48+00)

West 13th Street (Station 60+00 to Station 62+00).

Prior to construction, the City of Milwaukee will build temporary overhead, install temporary traffic signals as needed, and remove/relocate conflicting traffic signal equipment including traffic signal poles/mast arms, traffic signal standards, and traffic control cabinets. During the project, plan specified installations and removal of discontinued underground facilities are to be done by the contractor. Upon project completion, the City of Milwaukee will remove all temporary signal facilities in coordination with the roadway project.

Contact Mr. Alfonzo Nichols Jr. at (414) 286-5941 office, (414) 708-5418 cell, with concerns or questions.

Midwest Fiber Networks, LLC

Midwest Fiber Networks (MWFN) is clear of underground facilities within the scope of this project. MWFN does have one aerial line that crosses Vliet St north and south, on the east side of N 21st St running parallel with N 21st St.

WE Energies – Electric

WE Energies – Electric has underground and overhead facilities within the limits of the project.

Relocations and adjustments of We Energies facilities will be made during construction and require 20 working days.

We Energies electric manholes will be adjusted during the road construction only by We Energies crews.

1) Manhole at Station 13+93 20’L

2) Manhole at Station 16+78 20’L
3) Manhole at Station 19+84 18’L
4) Manhole at Station 23+18 19’L
5) Manhole at Station 26+69 19’L
6) Manhole at Station 30+28 18’L
7) Manhole at Station 33+60 16’L
8) Manhole at Station 36+90 16’L
9) Manhole at Station 40+13 13’L
10) Manhole at Station 43+51 15’L
11) Manhole at Station 46+78 16’L
12) Manhole at Station 47+44 16’L
13) Manhole at Station 51+93 16’L
14) Manhole at Station 52+48 5’L
15) Manhole at Station 57+65 5’L
16) Manhole at Station 61+02 5’L
17) Manhole at Station 61+34 14’L
18) Manhole at Station 63+32 16’L

Please contact Zach St Martin with We Energies at (414) 540-5782 at least 10 days prior to this road construction.

Any facilities not explicitly identified as being relocated or removed have been deemed to be not in conflict and will remain in place as is. It is expected that contractors will work safely around any facilities left within the work-zone.

1) The electric duct package on the north side of W Vliet St from the electric manhole at Station 10+26 19’L to the electric manhole at 47+44 16’L has been discontinued. No conflicts are anticipated.
2) The electric duct package that runs from north-south in N 23rd St at Station 26+87 has an active cable and needs to be kept in place. No conflicts are anticipated.
3) The electric duct package that runs from north-south in N 21st St at Station 33+60 has no active cables and could be discontinued if there is a conflict. This duct package could be left in place. No conflicts are anticipated.
4) The electric duct package that runs from north-south in N 20th St at Station 37+01 has an active cable and needs to be kept in place. No conflicts are anticipated.
5) The electric duct package that runs from north-south at Station 40+13 has an active cable and needs to be kept in place. No conflicts are anticipated.
6) The electric duct package that runs from north-south at Station 46+25 has an active cable and needs to be kept in place. No conflicts are anticipated.
7) The electric duct package that runs north from the manhole at Station 47+44 16’L has an active cable and needs to be kept in place. No conflicts are anticipated.
8) The electric duct package on the north side of W Vliet St from the electric manhole at Station 47+44 16’L to the electric manhole at 65+44 16’L has been discontinued. No conflicts are anticipated.
9) The electric duct package on the north side of W Vliet St from Approx. Station 47+60 4’L to the electric manhole at Approx. Station 61+02 5’L has active cables and needs to be kept in place. No conflicts are anticipated.
10) The electric duct package that runs south from the manhole at Station 61+02 5’L has an active cable and needs to be kept in place. No conflicts are anticipated.

Locations of new facilities may change based on negotiated agreements between landowners and We Energies.

NOTE: It is imperative that the highway contractor contact We Energies before removing any electrical underground cables, to verify that they have been discontinued and carry no natural gas or electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour.

Dispatch lines to arrange for this verification.

We Energies Electric Dispatch #1 (800) 662-4797

WE Energies - Gas

WE Energies – Gas has facilities within the limits of the project. Discontinuations and relocations are anticipated to occur prior to construction and require 60 working days to complete.

Gas mains to be discontinued in place at the following locations:

- 16+71; 18.5RT – 60.5RT
- 26+62; 55.5LT – 37RT
- 36+65; 68LT – 65RT
- 43+27; 67RT – 21.5LT
- 43+50; 21.5LT to 63LT
- 43+50; 21.5LT to 46+06; 21.5LT
- 47+99; 21.5LT to 53+58; 21.5LT to 53+61; 32.5LT to 50LT
- 57+29; 48LT to 29.5RT to 58+11; 30RT
- 58+54; 22.5LT to 61+09; 22.5LT
- 61+12; 80LT to 45.5LT to 61+09; 42.5LT to 36.5RT to 61+11; 38.5RT to 60RT
- 60+67; 29RT to 62+17; 29.5RT to 26.5RT to 63+70; 27RT
- 64+71; 29RT to 23RT to 65+08; 23RT

Proposed gas mains to be installed at the following locations:

- 26+62; 56LT to 26+57; 56LT to 37RT to 26+62; 37RT
- 36+65; 68LT to 36+50; 68LT to 36+54; 33RT to 36+51; 36RT to 65RT to 36+56; 65RT
- 43+27; 67RT to 43+66; 67RT to 41RT to 43+84; 29.5RT to 44+06; 29.5RT to 31.5LT
- 43+51; 70.5LT to 43+67; 70.5LT to 31LT to 46+14; 31LT to 21.5LT
- 47+91; 21.5LT to 31LT to 50+12; 31.5LT to 50+15; 29LT to 50+19; 29LT to 50+22; 31.5LT to 53+44; 31.5LT to 57LT to 53+61; 57LT
- 58+87; 30LT to 60+95; 31.5LT to 87LT to 61+12; 87LT
- 60+64; 31.5LT to 31RT to 60+90; 31RT to 60+93; 33RT to 60RT to 61+10; 60RT
- 63+46; 57RT to 33RT to 63+72; 34RT to 63+77; 29RT

Any facilities not explicitly identified as being relocated have been deemed to be not in conflict and will remain in place as is. It is expected that contractors will work safely around any facilities left within the work-zone.

Contact Alex Dantinne at (414) 218-2053; alex.dantinne@we-energies.com with concerns or questions.

NOTE: It is imperative that the highway contractor contact We Energies before removing any gas facilities or electrical underground cables, to verify that they have been discontinued and carry no natural gas or electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour Dispatch lines to arrange for this verification.

We Energies Gas Dispatch #1 (800) 261-5325

7. Referenced Construction Specifications.

Some traffic signal and street lighting work is required to be executed according to City of Milwaukee Standards. The contact person for acquiring said standards is provided in the articles where the reference to City of Milwaukee Standards is made. If there is a discrepancy or conflict between the referenced specification and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

Construct the work enumerated below conforming to the Standard Specifications for Sewer & Water Construction in Wisconsin (latest edition). If there is a discrepancy or conflict between the referenced specification and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

Conform to the referenced construction specifications for the following:

Internal Sanitary Manhole Seals, Item SPV.0060.001

stp-105-002 (20130615)

8. Information to Bidders, WPDES General Construction Storm Water Discharge Permit.

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting David Tapia at (414) 286-2453. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

9. Notice to Contractor – Survey.

Digital design file information/existing surface data, including design surface DTMs and/or coordinate system GPS information will not be available for this project. As such, machine grading will not be possible.

10. Notice to Contractor – City of Milwaukee Parking Meters.

Prior to construction, the removal of the existing parking meters will be completed by City of Milwaukee forces. Contact Natalie Herman (414) 286-5929 three weeks in advance.

Prior to the construction of the sidewalk, City of Milwaukee forces will place sign sockets for the new parking meters to be poured around. Contact Natalie Herman (414) 286-5929 ten working days in advance.

11. Notice to Contractor – Restoration within Right-of-Way.

Excavation and restoration for installation of sidewalk will be limited to 9 inches, beyond the back (high side) of the sidewalk, unless otherwise shown on the plans. This includes installation of sod lawn. Contractor must stay within right-of-way unless a construction permit has been obtained.

12. Notice to Contractor – Work without a Construction Permit.

All work including the removal and replacement of sidewalk and sod must be done within the right-of-way, unless construction permit authority has been obtained, to work on private property abutting the project.

13. Notice to Contractor – Historic Properties.

There are two properties along the project that are on the National Register of Historic Places (Register), or eligible to be on the Register, and those are shown within the plans. The contractor shall avoid these properties to the extent possible and shall not make design changes in the field without previously discussing with the design engineer. All work including the removal and replacement of sidewalk, driveway, and lawn must be done within the right-of-way.

The historic properties are located at:

- 1445 North 24th Street – St. Michael's Roman Catholic Church Complex

  There shall be no encroachment on this facility. A saw cut shall be made in the sidewalk 1-foot away from the historic property boundary line and the sidewalk shall be replaced to that point. No work shall take place behind that line. The fencing and stone curbing are to remain unaffected. The cost for staking the saw cut is to be paid under bid item SPV.0090.001, Construction Staking Concrete Sidewalk.

- 1220 West Vliet Street – Schuster's Department Store (presently the Milwaukee County Health and Human Services Building)

  There shall be no encroachment on this facility. A saw cut shall be made in the sidewalk along the right-of-way line and the sidewalk shall be replaced to that point. No work shall take place behind that line. The cost for staking the saw cut is to be paid under bid item SPV.0090.001, Construction Staking Concrete Sidewalk.

14. Notice to Contractor - Archaeological Site.

There is an archaeological site (47MI210 (Cannon's Pond)) that extends into the project area. ESS will need to petition WHS to work within the site boundaries.

Site location: As currently recorded in WHPD, the site location is centered along where what would be North 16th Street (if it continued to West Vliet Street) intersects West Vliet Street. Scaled from WHPD mapping, it is approximately 215 feet wide in the east/west direction and 390 feet long in the north/south direction.

As such, a qualified archaeologist is required to monitor the construction related ground disturbing activities, in the specified area. The site shall not be used for borrow or waste disposal, and the site area not currently capped by asphalt/concrete should not be used for the staging of personnel, equipment and/or supplies.

The WisDOT Department of Environmental Services Section (ESS) will provide the archaeologist. Contact James Becker at (608) 261-0137 or Lynn Cloud at (608) 266-0099, at least 10 working days prior to working in the area, to arrange for a qualified archaeologist to be present.

15. Notice to Contractor – Contamination Beyond Construction Limits.

The department completed a review of environmental documents and databases for soil contamination at locations within this project where excavation is required. The review indicated that petroleum-contaminated soil and groundwater may be present beyond the project limits at the following locations:

- Station 25VL+50 to 26VL+50, beyond project limits left (Former Filling Station, 2302-06 W. Vliet St., Former Filling Station on 1951 Sanborn Map).
- Station 37VL+00 to 38VL+00, beyond project limits left (Former Tire Sales & Service, 1414 N. 20th St., One gasoline tank on 1951 Sanborn Map).

- Station 42VL+25 to 43VL+10, beyond project limits right (Former Filling Station, 1801-03 W. Vliet St., Former Filling Station on 1951 Sanborn Map).
- Station 43VL50 to 44VL+50, beyond project limits right (Former Filling Station, 1731 W. Vliet St., Former Filling Station on 1951 Sanborn Map).

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

The Hazardous Materials Report is available by contacting:

Andrew Malsom
WisDOT SE Region
141 NW Barstow St.
Waukesha, WI 53187
(262) 548-6705

107-100 (20050901)

16. Notice to Contractor – Coordination with Milwaukee County Transit System (MCTS).

The Milwaukee County Transit System (MCTS) operates the following bus routes within and/or directly adjacent to the construction limits: 33, 12, 23, Blueline, RR3, 27, and Purpleline. Invite MCTS to all coordination meetings between the contractor, the department, local officials and business stakeholders to discuss the project schedule of operations including vehicular and pedestrian access during construction operations.

During construction, bus routes along West Vliet Street will be suspended. The contractor must coordinate with MCTS to determine where temporary bus stops should be installed for routes involving North 17th Street. The removal of the sidewalk, at any existing, functional bus stop location must occur in conjunction with the placement of the temporary surface that will provide access to the temporary bus stop location. MCTS will install temporary signage. The bus stops at the intersections of North 27th, and North 12th should remain operational during construction.

Notify MCTS at least 10 business days prior to beginning work. If necessary, MCTS will remove their existing bus stop shelters before work begins and reinstall bus stop shelters before new pavement opens to vehicular traffic. The contactor may remove bus stop standards and signs and stow nearby within the work zone during construction. MCTS will be responsible for the reinstallation of bus stop standards and signs, with the contractor granting access to MCTS personnel for the purposes reinstallation before new pavement opens to vehicular traffic.

MCTS contacts:
David Locher
Milwaukee County Transit System – Routes/Detours
1942 N. 17th St.
Milwaukee, WI 53205
Phone: (414) 343-1727
dlocher@mcts.org

Andy Tillman
Milwaukee County Transit System – Bus Stops
1942 N. 17th St.
Milwaukee, WI 53205
Phone: (414) 343-1728
Atillman@MCTS.org

17. Erosion Control.

The contractor shall prepare and submit an erosion control implementation plan (ECIP) for the project including borrow sites, material disposal sites, dust control, and dewatering according to Chapter TRANS 401 requirements. The erosion control implementation plan shall supplement information shown on the plans and shall not reproduce it. The erosion control implementation plan shall identify how the contractor intends to implement the project's erosion control plan.

Provide the ECIP 14 calendar days prior to the pre-construction conference. Provide 1 copy of the ECIP to WisDOT and 1 copy of the ECIP to the WDNR Liaison (Ms. Kristina Betzold; WDNR Southeast Region Headquarter; 2300 N. Dr. Martin Luther King Jr. Dr.; Milwaukee, WI 53212). 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. Do not implement the ECIP until it has been approved by the department.

Re-topsoil graded areas, as designated by the engineer, immediately after grading is completed within those areas. Place sod, as designated by the engineer, within 5 calendar days after placement of topsoil. If graded areas are left exposed for more than 14 calendar days, seed those areas with temporary seed.

When performing roadway cleaning operations, the contractor shall use equipment having vacuum or water spray mechanism to eliminate the dispersion of dust. If vacuum equipment is employed, it shall have suitable self-contained particulate collectors to prevent discharge from the collection bin into the atmosphere.

18. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply the City of Milwaukee's Code of Ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.

stp-107-001 (20060512)

The City of Milwaukee's Department of Neighborhood Services (DNS) will issue a construction noise variance, upon request, to work outside of the hours listed above.

Department of Neighborhood Services
4001 South 6th Street
Phone: (414) 286-2268

19. Construction Trenches

Upon completion of the normal work day and when work is not in progress, plate all trenches within the roadway resulting from construction activities that are not fully backfilled with steel plates suitable for carrying a vehicle as directed by the engineer. The plating shall be in addition to the barricades and traffic control devices required for lane closure or traffic control, and the cost of the steel plates shall be included in the bid prices for the related bid items that are under construction.

20. Preserving Trees, Shrubs, and Planting Areas for the City of Milwaukee Forestry Division.

Replace standard spec 205.3.15 with the following:

The following requirements apply to all trees, shrubs, planters, and medians located within the project area, which are NOT marked for removal.

General

All necessary cutting and removal of sod and soil in order to establish a finished grade within 4-feet of existing trees must be completed manually without the use of power tools.

No construction equipment, vehicles, or materials shall be parked or stored on any median, planter, or tree border within the project limits or adjacent roadways. Root foundations must remain adequate to withstand heavy windstorms. If it is determined that there are insufficient foundations, the contractor shall contact the City of Milwaukee Forestry Division.

Root systems for trees and other vegetation shall not be cut for the installation of any type of construction operation by the contractor or other city department. Contact the City of Milwaukee Forestry Division at (414) 708-2428 for directional boring specifications.

Sidewalk Construction

Cut the root system on the walk side of the tree no deeper than 9-inches below the finished grade of the new walk and not more than 5-inches from the edge of the new walk. Remove roots in the walk area to a maximum depth of 9-inches below the finished grade of the new walk.

When replacing walks adjacent to the following tress, a slip or thin form must be used. Additionally, soil disturbance in the tree boarder should be limited to not more than ¼-inch beyond the edge of the new walk.

- Station 62+38 Left
- Station 63+12 Left
- Station 63+82 Left

Adjacent to the following trees, the new walk should be arced.

- Station 62+38 Left
- Station 63+12 Left
- Station 63+82 Left

Sidewalks are to be removed and the roots cut by the use of non-motorized hand equipment only.

Curb, Gutter, and Road Construction

Do not cut the root system on the curbside more than 2-inches behind the back edge of the new curb, and not more than 18-inches in depth while constructing new curb ramps or gutter.

The root system on the curb side shall be cut not more than ¼-inch from the back edge of the new curb, and a ¼-inch slip or thin form, or slip form paver, shall be used for the following trees.

- Station 62+38 Left
- Station 63+12 Left
- Station 63+82 Left

The root system on the curb side shall not be cut at the following tree locations. A zero clearance slip or integral from paver can be used or the tree must be gaped and hand formed using ¼-inch steel plate.

- Station 62+38 Left
- Station 63+12 Left
- Station 63+82 Left

While constructing or replacing driveways or driveway approaches, roots shall be cut manually without the use of power tools and not be cut by means of mechanical root cutting machines. If root removal is essential to driveway replacement, roots shall be manually cut using hand tools.

Cover exposed tree roots with mulch and water immediately after curb and gutter removal until the area is backfilled. The cost of providing mulch and water shall be incidental and included in the unit bid price for topsoil.

21. Inspection of City of Milwaukee Drainage Facilities.

Notify the City of Milwaukee construction section at least three working days in advance of performing drainage facilities construction. Contact Mr. R.C. Tally at (414) 286-2497, City of Milwaukee Drainage Engineer. Drainage facilities include storm sewers and combined flow sewers.

22. Work by Others.

Signs

Give the city ten business days advance notice of his schedule for beginning work in areas where city signs are to be removed. The city's contact for coordination of this work is Mr. Kevin Antczak, City of Milwaukee, at (414) 286-3236.

Milwaukee County

Milwaukee County will replace the entrance way sidewalk at 1220 West Vliet Street beyond the right-of-way to improve ADA compliance of the entrance way.

23. Coordination with Businesses and Residents.

The contractor shall arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the meeting at least one week before the start of work under this contract and no further meetings will be required unless directed by the engineer. The contractor shall arrange for a suitable location for meetings that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for meetings. The contractor shall schedule meetings with at least two weeks' prior notice to the engineer to allow for these notifications.

24. 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 the contractor shall incorporate into their 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.

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

1. A single contact person with overall responsibility for the DCIP development as well as surveillance and remediation of job related dust. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
2. Individual contact persons and their respective areas of responsibility. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
3. A site map locating project features, the job site boundaries, all ingress and egress points, air intakes and other dust-sensitive areas, and all public and private paved surfaces within and immediately adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where 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.

Measurement under the DCIP shall include following contract bid item:

623.0200 Dust Control Surface Treatment

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.

25. Sod Lawn.

Revise standard spec 631.3.5 by replacing with the following:

Water sod for 10 consecutive days after placement, and keep all sodded areas thoroughly moist by watering or sprinkling, if rainfall is not sufficient to achieve sod rooting to the earth bed.

26. Furnishing and Planting Materials.

The work under this item shall be according to the plans, standard spec 632, and as herein after provided.

Furnish all plants which have been grown within the states of Wisconsin, Minnesota, or the parts of Iowa and/or Michigan located within Zone 5 of the “Plant Hardiness Zone Map” produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475 issued January 1990; unless otherwise approved by the engineer.

Replace standard spec 632.2.6 Mulch with the following:

Provide mulch conforming to standard spec 627 that consists of shredded hardwood bark that is substantially free of noxious weed seeds and objectionable foreign material. Obtain the engineer's approval for the type of mulch used.

27. Landscape Planting Surveillance and Care Cycles.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $500.00 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.

There is a one year care cycle for this project.

28. Signs.

Aluminum signs and steel poles are the City of Milwaukee property. Remove any sign in conflict with pavement removal item. Cost to remove and stockpile signs shall be incidental to pay item for associated pavement removal item. Stockpile signs and poles for pick up by the City of Milwaukee.

New signs will be installed by City of Milwaukee forces. Contact Mike Chaneske, Sign Shop Manager, (414) 286-5965, at least seven business days in advance to coordinate installation of signs prior to opening roadway.

29. Concrete Identification Stamping.

Stamp ends of all monolithic Portland cement concrete surfaces with a stamp bearing the contractor's name and the year of construction. Make all letters 2-inches in height.

Include the cost of this work in the contract unit price for other Portland cement concrete items and no additional payment will be made.

30. Protection of Concrete.

Supplement standard spec 415.3.14 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. Finisher must actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above.

Include the cost for providing the finisher(s), the necessary equipment, and materials in the contract unit price for each concrete item.

31. Drilled Tie Bars.

The work under this item shall be according to the requirements of standard spec 416.3.3 and as hereinafter provided.

Install drilled tie bars at locations where the new concrete pavement abuts existing concrete pavement and where the new Concrete Curb and Gutter abuts the existing concrete base. Space tie bars 3 feet from center to center and install on skew horizontally. Alternate the direction of the skew after every two bars.

32. Temporary Roadway Maintenance.

Perform all temporary roadway maintenance required in the open lanes of the existing roadway. Respond within 2 hours of any call for maintenance. The cost of this work, such as repairing potholes during construction, assumes a 2" riding surface is required the length of the project and shall be included in the bid item 465.0125, Asphaltic Surface Temporary.

33. Concrete Sidewalk 5-Inch.

The labor associated with construction of concrete sidewalk box outs to facilitate placement of street lighting conduit junction boxes, and tree cutouts will be incidental the bid item 602.0410, Concrete Sidewalk 5-Inch.

34. Adjusting Manhole Covers.

This work shall be according to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Make manhole cover adjustments as shown in plans, construction detail drawings or otherwise directed by the engineer. The costs for adjusting manholes by the contractor will be paid under the appropriate bid items.

Each utility owner, at their own cost, will adjust their utility company manholes.

Adjustment of manholes in asphaltic areas, including sawing and patching materials used, are incidental to bid item 611.8110 Adjusting Manhole Covers.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than ⅝ inches, reset the manhole frame to the correct plane and elevation. If this average is ⅝ inches or less but greater than ⅜ inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.

35. Traffic Control.

Perform the work under this item according to the requirements of standard spec 643, as shown on the plans or as approved by the engineer, except as herein modified.

Permanently label each barricade, sign or other traffic control device with the name and telephone number for 24-hour emergency service, printed in letters at least 3/4-inches in height.

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

During the life of this contract, provide 24 hour-a-day availability of equipment and forces to promptly restore barricades, lights, or other traffic control devices that are damaged or disturbed. In no case may any barricade, light, or other traffic control device be out of service for more than 2 hours. The cost to maintain and restore the above items is incidental to the item of traffic control and no additional payment will be made therefore.

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

Provide the City of Milwaukee Police Department and the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a safety hazard develops.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency. Traffic control devices will be adjusted to fit field conditions as directed by the engineer.

Receive prior approval from the engineer for the location of egress or ingress for construction vehicles to prosecute the work.

Park or store equipment and materials only at work sites approved by the engineer. Do not disturb, remove, or obliterate any traffic control signs, advisory signs, shoulder delineators, or beam guard in place along the traveled roadways without the approval of the engineer.

Install appropriate advance and intermediate warning signs of standard design. Install the signs at locations indicated on the plan and at locations as directed by the engineer according to Part VI of the Manual of Uniform Traffic Control Devices. Sign shape, message and color must be according to Part VI of the Manual of Uniform Traffic Control Devices. All signs must be reflectorized.

36. Construction Staking.

Supplement standard spec 650 with the following:

1. Stake each plan grade so that the form-setters and inspector can check the grade and alignment.
2. Item 650.4000 includes staking for the adjustment of TES manhole covers.
3. Item 650.9910 includes verification of benchmark control points.

37. Abandoning Sewer, Item 204.0291.S.

A Description

This special provision describes abandoning existing sewer by filling it with cellular concrete as the plans show and conforming to standard spec 204 and standard spec 501as modified in this special provision.

B Materials

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

C Construction

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

D Measurement

The department will measure Abandoning Sewer in volume by the cubic yard as specified in standard spec 109.1.3.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0291.S	Abandoning Sewer	CY

Payment is full compensation for furnishing all materials and excavating and backfilling where necessary.

stp-204-050 (20080902)

38. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil, Item 205.0501.S.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of petroleum contaminated soil at a WDNR-approved bioremediation facility. The closest WDNR-approved bioremediation facilities are:

Advanced Disposal Emerald Park Landfill
W124 S10629 S. 124th St.
Muskego, WI 53150
(414) 529-1360

Waste Management Orchard Ridge Landfill
W124 N9355 Boundary Rd.
Menomonee Falls, WI 53051
(866) 909-4458

Perform this work according to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2 Notice to the Contractor – Contaminated Soil Locations

The department completed testing for soil and groundwater contamination at locations within this project where excavation is required.

Construction ID 1360-00-76

Testing indicated that petroleum-contaminated soil is present at the following locations as shown on the plans:

- W. Center St. at W. Fond du Lac Ave. Station 7+30 to 7+75 from reference line to 65 feet left of reference line, from approximately 1 to 14 feet below grade. The estimated volume of

contaminated soil to be excavated at this location is 6.5 cubic yards (approximately 11 tons using a conversion factor of 1.7 tons per cubic yard).

- W. Walnut St. at W. Fond du Lac Ave. Station 7+15 to 8+20 from reference line to 115 feet left of reference line, from approximately 1 to 14 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 61 cubic yards (approximately 104 tons using a conversion factor of 1.7 tons per cubic yard).

- W. Walnut St. at W. Fond du Lac Ave. Station 8+20 to 9+00 from 50 feet left of reference line to 80 feet right of reference line, from approximately 1 to 14 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 107 cubic yards (approximately 182 tons using a conversion factor of 1.7 tons per cubic yard).

- W. Townsend St. at W. Fond du Lac Ave. Station 14+20 to 14+70 from reference line to 80 feet left of reference line, from approximately 1 to 15 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 6.5 cubic yards (approximately 11 tons using a conversion factor of 1.7 tons per cubic yard).

- W. Townsend St. at W. Fond du Lac Ave. Station 14+70 to 15+20 from reference line to 80 feet left of reference line, from approximately 1 to 8+ feet below grade. The estimated volume of contaminated soil to be excavated at this location is 6.5 cubic yards (approximately 11 tons using a conversion factor of 1.7 tons per cubic yard).

Construction ID 2984-00-73

Testing indicated that petroleum-contaminated soil is present at the following locations as shown on the plans:

- Station 13VL+80 to 14VL+15, from approximately 60 feet left of reference line to 5 feet right of reference line, from 3 to 7+ feet below grade. The estimated volume of contaminated soil to be excavated at this location is 0 CY (approximately 0 tons using a conversion factor of 1.7 tons per cubic yard).
- Station 14VL+05 to 14VL+50, from approximately 15 feet right of reference line to 60 feet right of reference line, from 1 to 10 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 84 CY (approximately 143 tons using a conversion factor of 1.7 tons per cubic yard).
- Station 27VL+55 to 28VL+15, from approximately project limits left to 5 feet right of reference line, from 1 to 8 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 58 CY (approximately 99 tons using a conversion factor of 1.7 tons per cubic yard).
- Station 42VL+55 to 43VL+10, from reference line to project limits right, from 2.5 to 8+ feet below grade. The estimated volume of contaminated soil to be excavated at this location is 8 CY (approximately 14 tons using a conversion factor of 1.7 tons per cubic yard).
- Station 44VL+70 to 45VL+30 from project limits left to reference line, from 1 to 8 feet below grade. The estimated volume of contaminated soil to be excavated at this location is 58 CY (approximately 99 tons using a conversion factor of 1.7 tons per cubic yard).

Directly load soil excavated by the project at the above locations into trucks that will transport the soil to a WDNR-licensed bioremediation facility.

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer.

An active groundwater monitoring well was observed within the construction limits at approximately Station 17VL+48, 30 feet left of reference line. The contractor shall protect the wells during construction to maintain their integrity. If active groundwater monitoring wells are encountered elsewhere during construction, notify the engineer and protect the wells to maintain their integrity. The environmental consultant will determine if monitoring wells need to be maintained. For monitoring wells that do need to be maintained, adjust the wells that do not conflict with structures or curb and gutter to be flush with the final grade. For wells that conflict with the previously mentioned items or if monitoring wells are not required to be maintained, they will be abandoned by others.

A.3 Excavation Management Plan

The excavation management plan for this project has been designed to minimize the offsite disposal of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding previous investigations, remediation activities and waste characterization within the project limits, contact:

Name:	Andrew Malsom
Address:	141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone:	(262) 548-6705
Fax:	(262) 548-6891
E-mail:	andrew.malsom@dot.wi.gov

A.4 Coordination

Coordinate work under this contract with the environment consultant:

Consultant:	TRC Environmental Corporation
Address:	150 N. Patrick Blvd., Ste. 180, Brookfield, WI 53045
Contact:	Bryan Bergmann
Phone:	(262) 901-2126 office / (262) 227-9210 cell
Fax:	(262) 879-1220
E-mail:	bbergmann@trcsolutions.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Identifying contaminated soils to be hauled to the bioremediation facility;
3. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of contaminated soil from the bioremediation facility.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in the contaminated area.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated area. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed.

Identify the DNR approved bioremediation facility that will be used for disposal of contaminated soils, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal of contaminated soils from the bioremediation facility. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.5 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, expect to encounter soil contaminated with gasoline, diesel fuel, fuel oil, or other petroleum related products and metals. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction

Add the following to standard spec 205.3:

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated.

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite bioremediation. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

Directly load and haul soils designated by the environmental consultant for offsite bioremediation to the DNR approved bioremediation facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of petroleum-contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site bioremediation so as not to contain free liquids.

If dewatering is required in an area of known contamination, water generated from dewatering activities may contain contaminants and require testing, special handling, temporary storage, and disposal. Contaminated groundwater may be discharged to the sanitary sewer with prior approval from the City of Milwaukee and the Milwaukee Metropolitan Sewerage District.

Contractor shall ensure continuous dewatering and excavation safety at all times. Provide, install, operate, maintain adequate pumping equipment, disassemble, and remove pumping equipment.

Costs associated with excavation and dewatering in the contaminated area are considered incidental to this pay item. The Wisconsin Department of Transportation will be the generator of regulated solid waste from the construction project.

Limit excavation in the location described in A.2 to minimize the handling of groundwater. Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge or dispose of contaminated water. Provide copies of such Permit to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Petroleum Contaminated Soil in tons of contaminated soil, accepted by the bioremediation facility as documented by weight tickets generated by the bioremediation facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	TON

Payment is full compensation for excavating, segregating, loading, hauling, and treatment via bioremediation of contaminated soil; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; and dewatering of soils prior to transport, if necessary.

39. QMP Ride Quality.

Delete standard spec 740. Ride quality does not apply to this contract.

40. QMP Base Aggregate Dense 1 1/4-Inch Compaction, Item 371.1000.S.

A Description

(1) This special provision describes modifying the compaction and density testing and documentation requirements of work done under the Base Aggregate Dense 1 1/4-Inch bid items. Conform to standard spec 305 as modified in this special provision and to the contract QMP Base Aggregate article.

(2) Provide and maintain a quality management program. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process related to construction of dense graded base which meets all the requirements of this provision.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes sampling and testing procedures.

http://wisconsindot.gov/rdwy/cmm/cm-08-00toc.pdf

(4) This special provision applies to Base Aggregate Dense 1 1/4-Inch material placed on the mainline traveled way and adjacent mainline shoulders according to the typical finished sections. Unless otherwise specified by the contract, all Base Aggregate Dense 1 1/4-Inch material placed on side roads, private and public entrances, ramps, tapers, turn lanes, and other locations not described as the mainline traveled way and its adjacent mainline shoulders is exempt from the compaction and density requirement modifications and testing contained within this special provision.

B (Vacant)

C Construction

C.1 General

(1) The engineer shall approve the grade before placement of the base. Approval of the grade shall be in accordance with applicable provisions of the Standard Specifications.

Add the following to standard spec 305.3.2.2:

(3) Compact the 1 1/4-Inch dense graded base to a minimum of 93.0% of the material target density. Ensure that adequate moisture is present during placement and compaction operations to prevent segregation and to help achieve compaction.

(4) The material target density will be identified using one of the following methods:

1. For 1 1/4-Inch dense graded base composed of ≤20% reclaimed asphaltic pavement (RAP) or crushed concrete (RCA), as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve: maximum dry density in accordance with AASHTO T-180, Method D, with correction for coarse particles as determined by AASHTO T224, and modified to require determination of Bulk Specific Gravity (Gm) in accordance with AASHTO T 85. Bulk Specific Gravities determined in accordance with standard spec 106.3.4.2.2 for aggregate source approval may be utilized
2. For 1 1/4-Inch dense graded base composed of >20% RAP or RCA, as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve, the contractor may choose from the following options:
   - 2.1. Maximum dry density as determined by AASHTO T-180, Method D, with correction for coarse particles as determined by AASHTO T224, and modified to require determination of Bulk Specific Gravity (G_m) in accordance with AASHTO T 85.
   - 2.2. Maximum wet density as determined by AASHTO T-180, Method D, modified to define *Maximum Density* as the wet density in pounds per cubic foot of soil at optimum moisture content using Method D specified compaction, with correction for coarse particles as determined by AASHTO T224, and modified to require determination of Bulk Specific Gravity (G_m) in accordance with AASHTO T 85.
   - 2.3. Average of 10 random control strip wet density measurements as described in section C.2.5.1.

(5) Base Aggregate Dense 1 1/4-Inch will be accepted for compaction on a target density lot basis.

(6) Field density tests on materials using contractor elected target density methods C.1(4).2.2 or C.1(4).2.3 will not be considered for lot acceptance on the basis of compaction under the requirements of this provisions until the moisture content of the in-place material is less than 2.0 percentage points above the

maximum wet density optimum moisture or 2.0 percentage points of the average moisture content of the 10 density tests representing a control strip, respectively.

C.2 Quality Management Program

C.2.1 Quality Control Plan

(1) Submit a comprehensive written quality control plan to the engineer no later than 10 business days before placement of material. Do not place any dense graded base before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A description of placement methods and operations. Including, but not limited to: staging, construction of an initial working platform, lift thicknesses, and equipment.

C.2.2 Pre-Placement Meeting

A minimum of two weeks before the start of placement of Base Aggregate Dense 1 1/4-Inch material, hold a pre-placement meeting at a mutually agreed upon time and location. Present the Quality Control Plan at the meeting. Attendance at the pre-placement meeting is mandatory for the project superintendent, quality control manager, project inspection and testing staff, all appropriate contractor personnel involved in the sampling, testing, and quality control including subcontractors, and the engineer or designated representatives.

C.2.3 Personnel

(1) Perform the quality control sampling, testing, and documentation required under this provision using technicians certified by the Department's Highway Technician Certification Program (HTCP). Have a HTCP Nuclear Density Technician I, or ACT certified technician, perform field density and field moisture content testing.

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

C.2.4 Equipment

(1) Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.

(2) Furnish nuclear gauges from the department's approved product list at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

(3) Ensure that the nuclear gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.

(4) For all target density methods, conform to ASTM D 6938 and CMM 8.15 for wet density testing and gauge monitoring methods.

(5) For the specified target density determined using method C.1(4).1, compute the dry densities for the compacted dense graded base, composed of ≤20% RAP or RCA, according to ASTM D 6938.

(6) For contractor elected target density method C.1(4).2.1 compute dry densities of dense graded base composed of >20% RAP or RCA using a moisture correction factor and the nuclear wet density value. Determine the moisture correction value, for each Proctor produced under the requirements of C.2.5, using the moisture bias as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the 5 random tests is not required. Conduct a moisture bias test for every 9000 tons of Base Aggregate Dense 1 1/4-Inch placed. Determine natural moistures in the laboratory.

(7) Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position on the same date of placement of the Base Aggregate Dense 1 1/4-Inch material. Backscatter may be used only if the material being tested cannot reliably maintain an undistorted direct transmission test hole. Direct transmission tests must be performed at the greatest possible probe depth of 2 inches, 4 inches, or 6 inches, but not to exceed the depth of the compacted layer being tested. Perform each test for 4 minutes of nuclear gauge count time.

C.2.5 Contractor Testing

(1) Perform compaction testing on the mainline dense graded base material, as defined by A.(4). Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians as required in C.2.3. Conform to CMM 8.15 for testing and gauge monitoring methods.

(2) Select test sites randomly using ASTM Method D3665. Do not test less than 1 ½ feet from the unsupported edge of the dense graded base layer. Test sites must be located within the mainline traveled way or the traveled way's adjacent mainline shoulder.

C.2.5.1 Contractor Required Quality Control (QC) Testing

(1) Conduct testing at a minimum frequency of one test per lot. A lot will consist of each 1500 tons for each layer with a minimum lift thickness of 2" of Base Aggregate Dense 1 1/4-Inch material placed, regardless of the location of placement. Each lot of in-place mainline, as defined by A.(4), Base Aggregate Dense 1 1/4-Inch material compacted will be accepted when the lot field density meets the required minimum 93.0% of target density. Lots that don't achieve 93.0% of target density must be addressed and approved in accordance with C.2.7.

(2) Notify the engineer, if a lot field density test falls below the required minimum value. Document and perform corrective actions in accordance with C.2.7. Deliver documentation of all compaction testing results to the engineer at the time of testing.

C.2.5.1.1 Target Density Determination

C.2.5.1.1.1 Density Control Strip Method

(1) For contractor elected target density method C.1(4).2.3, construct a control strip for each layer of placement to identify the target wet density for the base aggregate dense material. The control strip construction and density testing will occur under the direct observation and/or assistance of the department QV personnel.

(2) Unless the engineer approves otherwise, construct control strips to a minimum dimension of 300 feet long and one full lane width.

(3) Completed control strips may remain in-place to be incorporated into the final roadway cross-section.

(4) Construct additional control strips, at a minimum, when:

1. The four point moving average gradation on any one sieve differs from the original gradation test result for that sieve by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip. A previously determined Proctor value will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.
2. The source of base aggregate changes.
3. The four point moving average percentage of blended recycled materials, from classification of material retained on the No. 4 sieve in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip. A previously determined Proctor value will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.
4. The layer thickness changes more than 2.0 inches.
5. The percent target density exceeds 103.0% on two consecutive density measurements.

(5) Construct control strips using equipments and methods representative of the operations to be used to place and compact the remaining 1 1/4–Inch Base Aggregate Dense material. Wet the base, as mutually agreed upon by the contractor and engineer, to obtain and/or maintain adequate moisture content to ensure proper compaction. Discontinue water placement if the base begins to exhibit signs of saturation or instability.

(6) After compacting the control strip with a minimum of 2 passes, mark and take density measurements at 3 random locations, at least 1 ½ feet from the edge of the base. Subsequent density measurements will be taken at the same 3 locations.

(7) After each subsequent pass of compaction equipment over the entirety of the control strip, take density measurements at the 3 marked locations. Continue compacting and testing until the increase in density measurements is less than 2.0 lb/ft^3, or the density measurements begin to decrease.

(8) Upon completion of control strip compaction, take 10 randomly located density measurements within the limits of the control strip, at least 1 ½ feet from the edge of the base. The final measurements recorded at the 3 locations under article C.2.4.1.1.1(6) may be included as 3 of the 10 measurements. Average the ten measurements to obtain the control strip target density and target moisture for use in contractor elected method C.1(4).2.3.

C.2.5.1.1.2 Maximum Wet and/or Dry Density Methods

(1) For contractor elected target density methods C.1(4).2.1, C.1(4).2.2, and contractually specified target density method C.1(4).1; perform one gradation and 5-point Proctor test before placement of 1 1/4-Inch dense graded base. Perform additional gradations every 3000 tons. If sampling requirements are identical, samples/testing performed for the QMP Base Aggregate specification may be used to fulfill the gradation testing requirements of this specification.

(2) Perform additional 5-point Proctor tests, at a minimum, when:

1. The four point moving average gradation on any one sieve differs from the original gradation test result for that sieve, by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to create a 5-point Proctor. Each 5-point Proctor test will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.
2. The source of base aggregate changes.
3. The four point moving average percentage of blended recycled materials ; from classification of material retained on the No. 4 sieve; in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip. A previously determined Proctor value will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test
4. Percent target density exceeds 103.0% on two consecutive density tests.

(3) Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

(4) Split each contractor QC Proctor sample and identify it according to CMM 8.30. Deliver the split to the engineer within one business day for department QV Proctor testing.

(5) Split each non-Proctor 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.

C.2.5.2 Optional Contractor Assurance (CA) Testing

(1) CA Testing is optional and is conducted to further validate QC testing. The contractor may submit recorded CA data to provide additional information for the following:

1. Process control decisions
2. Troubleshooting possible sampling, splitting, or equipment problems.

C.2.6 Department Testing

C.2.6.1 General

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

C.2.6.2 Quality Verification (QV) Testing

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.2.3 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 30% of the required gradation, density and Proctor contractor tests.

(3) The department will utilize contractor's QC Proctor results for determination of the material target density. The department will verify QC Proctor values by testing QC Proctor split sample. The department will use QC Proctor value as a target density if the QC and QV Proctor test results meet the tolerance requirements specified in section 2.6.2.(7).

(4) The department will locate gradation and nuclear density test samples, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will split each QV sample, test half for QV, and retain the remaining half for 7 calendar days.

(5) 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.

(6) The department will utilize control strip target density testing results in lieu of QV Proctor sampling and testing when the contractor elected C.1 (3).2.3 target density method is used.

(7) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If QV test results are nonconforming, take corrective actions in accordance with C.2.7 until the requirements of this special provision are met. Differing QC and QV nuclear density values of more than 2.0 pcf will be investigated and resolved. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.2.6.3 Independent Assurance (IA)

(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. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.2.6.4.

C.2.6.4 Dispute Resolution

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor shall review the data, examine data reduction and analysis methods, evaluate sampling and testing methods/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 project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.2.7 Corrective Action

(1) Lots not achieving 93.0% of target density may be addressed and accepted for compaction in accordance with the requirements of this section. Unless otherwise stated, the actions taken to address an unacceptable lot must be applied to the entire lot.

> Passing CA test results in accordance with section C.2.5.2 will reduce the limits of lot investigations and/or corrective actions.

(2) Investigate the moisture content of material in an unacceptable lot. Moisture content testing/samples collected under the QC and/or QV testing articles of this specification may be used to complete this investigation. Obtain moisture content readings in accordance with ASTM D 6938. For material composed of >20% RAP or RCA, correct the moisture content with the moisture correction value using the moisture bias, as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the 5 random tests is not required.

(3) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods C.1(4).1, C.1(4).2.1, or C.1(4).2.2, or within 2.0 percentage points of the target moisture content for target density method C.1(4).2.3, and exhibiting no signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, shall be compacted a minimum of one more pass using equipment and methods representative of the operations used to place and compact the Base Aggregate Dense 1 1/4–Inch, and density tested at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(4) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods C.1(4).1, C.1 (4).2.1, or C.1(4).2.2, or within 2.0 percentage points of the target moisture content for target density method C.1 (4).2.3, and exhibiting signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, will be reviewed by the engineer. The engineer may request subgrade improvement methods, such as excavation below subgrade (EBS), installation of geotextile fabrics, installation of breaker run material, or others to be completed, or may request an additional pass of compactive effort using equipment and methods representative of the operations used to place and compact the base aggregate dense and density test.

1. If, after an additional pass, the change in density at the same location (station and offset) as the failing QC and/or QV density tests exceeds 2.0 lb/ft^3 in a lot continue subsequent compactive efforts and density testing on that lot. If the change in density at the same location (station and offset) as the failing QC and/or QV density tests is less than or equal to 2.0 lb/ft^3, and subgrade improvement methods are not requested by the engineer, the lot is accepted as satisfying the compaction requirements of this provision.
2. If subgrade improvement methods are requested by the engineer, upon completion, including compaction of the restored base material, conduct a density test within the improved subgrade limits. This density test result will replace the prior field density value. If the lot field density equals or exceeds 93.0% of target density the lot is accepted as satisfying the compaction requirements of this provision. If the lot field density fails to achieve 93.0% of target density, compact the lot a minimum of one more pass using equipment and methods representative of the operations used to place and compact the base aggregate dense; and density test at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(5) Unacceptable lots, with moisture contents in excess of 2.0 percentage points above or below optimum moisture for target density methods C.1(4).1, C.1(4).2.1, or C.1(4).2.2 ; or in excess of 2.0 percentage points above or below the target moisture content for target density method C.1(4).2.3; shall receive contractor performed and documented corrective action; including additional density testing.

(6) Density tests completed subsequent to any corrective action will replace previous field density test results for that lot. Continue corrective actions until 93.0% of target density is achieved or an alternate compaction acceptance criteria is met in accordance with this section.

(7) Field moisture contents of materials tested using contractor elected target density methods C.1(4).2.2 or C.1(4).2.3 cannot exceed 2.0 percentage points of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively. Density tests on materials using contractor elected target density methods C.1(4).2.2 or C.1(4).2.3 will not be considered for lot compaction acceptance until the moisture content of the corresponding density test of the in-place material is less than 2.0 percentage points above of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively.

D Measurement

(1) The department will measure QMP Base Aggregate Dense 1 1/4-Inch Compaction by the ton acceptably completed. The measured tons of QMP Base Aggregate Dense 1 1/4-Inch Compaction equals the tons of Base Aggregate Dense 1 1/4-Inch acceptably completed, regardless of placement location and density testing eligibility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
371.1000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	TON

(2) Payment is full compensation for performing compaction testing; for sampling and laboratory testing; and for developing, completing, and documenting the compaction quality management program. The department will pay separately for providing aggregate under the Base Aggregate Dense 1 1/4-Inch bid item.

stp-370-010 (20171130)

41. Concrete Pavement Joint Layout, Item 415.5110.S.

A Description

This special provision describes providing a concrete pavement or concrete base joint layout design for intersections and marking the location of joints in the field

B (Vacant)

C Construction

Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete to prevent uncontrolled cracking. Submit a joint layout design to the engineer at least 7 calendar days before paving each intersection. Do not lay out joints until the engineer has reviewed the joint layout design. Mark the location of concrete joints in the field. Follow the plan details for joints in concrete making adjustments as required to fit field conditions.

D Measurement

The department will measure Concrete Pavement Joint Layout as a single lump sum unit for all joint layout designs and marking 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
415.5110.S	Concrete Pavement Joint Layout	LS

Payment is full compensation for providing the intersection joint layout designs and marking all joints in the field.

The department will adjust pay for crack repairs as specified in standard spec 415.5.3.

stp-415-020 (20170615)

42. Pedestrian Accommodations in Temporary Work Zone.

The contractor shall provide and maintain fully accessible, safe, and direct passage for pedestrians, through the temporary work zone, which must be fully compliant with access requirements for people with disabilities, as specified in the American with Disabilities Act. All traffic control devices used to provide and maintain safe access, must be fully consistent with specifications for traffic control devices included in the Manual on Uniform Traffic Control Devices. Specific locations for pedestrian access accommodations are to be maintained during construction, per direction of the City of Milwaukee construction supervisor and the field inspector.

43. Fence Safety, Item 616.0700.S.

A Description

This special provision describes providing plastic fence at locations the plans show.

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
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

C Construction

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

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

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0700.S	Fence Safety	LF

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

stp-616-030 (20160607)

44. Field Office Type C, Item 642.5201.

The field office shall be located within one half mile of the West Vliet Street paving project limits.

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

A Description

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

B Materials

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

- Asphaltic surface conforming to standard spec 465.2.
- Pressure treated 2x4 framing lumber, pressure treated 3/4 inch plywood with skid resistant surface coating, and weather resistant deck screws 3 1/2 inch minimum for framing and 1 5/8 inch minimum for plywood.

C Construction

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

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

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

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

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

D Measurement

The department will measure temporary pedestrian surface by the square foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
644.1410.S	Temporary Pedestrian Surface Asphalt	SF
644.1420.S	Temporary Pedestrian Surface Plywood	SF

Payment is full compensation for providing, maintaining, and removing temporary pedestrian surface.

46. Temporary Curb Ramp, Item 644.1601.S.

A Description

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

B Materials

Furnish materials as follows:

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

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

C Construction

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

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

D Measurement

The department will measure temporary curb ramps by each individual ramp, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
644.1601.S	Temporary Curb Ramp	EACH

Payment is full compensation for providing, maintaining, and removing temporary curb ramps.

stp-644-020 (20150630)

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

A Description

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

B Materials

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

Furnish select 2x4 dimensional lumber.

Furnish fence fabric meeting the following requirements.

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

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

C Construction

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

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

D Measurement

The department will measure Temporary Pedestrian Safety Fence by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
644.1616.S	Temporary Pedestrian Safety Fence	LF

Payment is full compensation for providing, maintaining, and removing the temporary pedestrian safety fence.

stp-644-025 (20150630)

48. Internal Sanitary Manhole Seals, Item SPV.0060.001.

A Description

The work under this item consists of furnishing and installing internal manhole chimney seals.

B Material

The contractor shall furnish and install frame-to-chimney seals on all sanitary manholes within the limits of this contract. The seals shall be as specified in the *Standard Specification for Sewer and Water Construction in Wisconsin (Sixth Edition with addendum) Chapter 8.42.0*

C Construction

The inside diameter of the manhole frame and the manhole chimney shall be field measured, and a determination as to whether the inside face of the frame is vertical or tapered shall be made in order to obtain the proper size and shape rubber seal.

Internal rubber chimney seals shall be installed 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. Any flaws in these surfaces shall be repaired with the approved low-shrink mortar or ground smooth. A bead of butyl rubber caulk conforming to ASSHTO M-198 Type B shall be applied to the lower sealing surface of sleeve.

The seal shall be installed according to the manufacturer's instructions. (Refer to the plan data for configuration of chimney seal.)

D Measurement

The department will measure Internal 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.0060.001	Internal Sanitary Manhole Seals	EACH

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

49. Adjusting Water Box, Item SPV.0060.002.

A Description

This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the paving project, to all city water service boxes and water gate valve boxes located within the project limits.

B Material

All material for the adjustment of these facilities must meet City of Milwaukee specifications and will be provided by the City of Milwaukee by contacting Gil Taylor, Milwaukee Water Works, at (414) 708-9005. If there is contractor damage, the materials must still be provided by the City of Milwaukee, however, in this case, the contractor will be charged for all materials. Materials furnished by the City of Milwaukee and not used on the project shall be delivered back to DPW Field Headquarters – Infrastructure, Operations, Water Works at 3850 N. 35th Street. Materials being returned must be accompanied with a "surplus material" form completed by the Public Works Inspector assigned to the project.

C Construction

All water service boxes and water gate valve boxes within the project limits shall be adjusted to proposed elevations by the contractor using materials meeting city specifications.

The city will locate, mark, inspect and repair all water service boxes and water gate 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 service boxes and water gate 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.

Upon completion of the contract, the city will inspect all water facilities to ensure the water boxes are clean, properly aligned, and accessible. The contractor shall be responsible to make identified repairs and adjustments, and if any repairs or adjustments are made by the city, the cost will be charged to the contractor.

D Measurement

The department will measure Adjusting Water Box 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.0060.002	Adjusting Water Box	EACH

Payment is full compensation for furnishing all excavation, backfilling, disposal of surplus materials, water box clean-out, and restoration of the work site.

50. Temporary Bus Loading Zone, Item SPV.0060.005.

A Description

This special provision describes providing, maintaining, and removing temporary bus loading zone within the construction area.

B Materials

Furnish temporary asphaltic surface conforming to standard spec 465.2.

C Construction

Place, maintain, and remove temporary bus loading zone as shown on the plans and as directed by the engineer.

Connect the variable thickness asphalt ramp and the 6-inch thick asphalt pad as shown on the plan details. Compact asphalt surface with compactors, tampers, or rollers.

Align ramp to face towards the pedestrian crossing. Provide longitudinal ramp slope of 12Horizontal:1Veritical. Construct 4 feet wide and 6 feet long ramp, but may be longer if the roadway slope requires. Construct the loading zone pad, which connects to the ramp, 8 feet wide and 8 feet long, with a 4-foot opening for bus loading. Provide a backslope for the temporary bus pad with a slope of 1Horizontal:1Vertical.

Repair or reconstruct installations disturbed during construction operations. Remove and dispose of as specified in standard spec 203.3.4 when no longer required.

D Measurement

The department will measure Temporary Bus Loading Zone 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.0060.005	Temporary Bus Loading Zone	EACH

Payment is full compensation for providing, maintaining, and removing temporary bus loading zone.

51. Installing City-Furnished Bike Rack, Item SPV.0060.006.

A Description

This special provision describes installing a city-furnished heavy duty inverted “U” surface mounted bike rack.

B Materials

Heavy duty inverted “U” surface mounted bike racks furnished by the City of Milwaukee are fabricated using steel tube ASTM A513, electric welded steel tubing, or ASTM A500B steel pipe.

The City of Milwaukee will provide all necessary mounting hardware.

C Construction

The City of Milwaukee will deliver bike racks to the project site. Contact James Hannig at (414) 286-8750 two working days in advance to coordinate delivery.

Contractor to install into hardened concrete sidewalk at the locations shown in the plans.

D Measurement

The department will measure Installing City-Furnished Bike Rack as a unit, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.006	Installing City-Furnished Bike Rack	EACH

Payment is full compensation for installation of the city-furnished bike rack, and for all labor tools, equipment, transportation, and incidentals necessary to complete the work.

52. Utility Line Opening (ULO), Item SPV.0060.007.

A Description

This special provision describes excavating to uncover utilities for the purpose of determining elevation or location 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 (ULO) 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.0060.007	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; 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.

53. Water Main Protection, Item SPV.0060.008.

A Description

This special provision describes protecting existing water mains from newly constructed storm drainage facilities. No structures will be allowed over the existing water main or hydrant branch with less than 18" of vertical out-to-out clearance. Alternate drainage structures shall be used to provide minimum sewer-water clearances required by Wisconsin DNR.

B Materials

Contractor shall furnish and install materials as detailed on the construction plans and in the Construction section below.

C Construction

Construct drainage structure, located above and across an existing water main, by utilizing materials and joints that are water tight. For all catch basins and inlets that have less than 24" out-to-out of horizontal clearance, the following water main protections shall be made:

1. The catch basins and inlets shall be altered to provide 18" of vertical clearance to the water mains or hydrant branches.
2. The catch basins and inlets shall be wrapped with 2 layers of 8 mil polyethylene around the base and extending 1 foot vertically on all sides of the drainage structure.

D Measurement

The department will measure Water Main Protection as each individual water main protection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.008	Water Main Protection	EACH

Payment is full compensation for protecting existing water mains; and for all excavation, backfilling, disposal of surplus materials, restoration of the work site, and for furnishing all labor, equipment, materials, tools and incidentals necessary to complete the work.

54. Marking Symbol Grooved Preformed Plastic, Item SPV.0060.050; Marking Arrow Grooved Preformed Plastic, Item SPV.0060.051; Marking Word Grooved Preformed Plastic, Item SPV.0060.052.

A Description

This special provision describes furnishing and installing grooved preformed plastic pavement marking as shown on the plans, according to the standard spec 646, and as hereinafter provided.

B Materials

Furnish preformed pavement marking and sealant material, if required, from the department's approved products list. Furnish Preformed plastic pavement marking tape conforming to ITE standards. Deliver preformed marking materials to the project in manufacturer's containers legibly marked with the contents, color batch number, and manufacturer's name and address.

C Construction

Construct according to standard spec 646 and the manufacturer's requirements. For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of preformed pavement marking items.

C.1 General

Plane the grooved lines according to the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Position

Position the groove edge according to the plan details.

C.3 Groove Depth

Cut the groove to a depth of 120 mils ±10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.4 Groove Width

Cut the groove 1-inch wider than the width of the preformed plastic.

C.5 Linear Marking

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.6 Groove Cleaning

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the adhesive, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

D Measurement

The department will measure Marking Symbol Preformed Plastic, Marking Arrow Preformed Plastic, and Marking Word Preformed Plastic 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.0060.050	Marking Symbol Grooved Preformed Plastic	EACH
SPV.0060.051	Marking Arrow Grooved Preformed Plastic	EACH
SPV.0060.052	Marking Word Grooved Preformed Plastic	EACH

Payment is full compensation for cleaning and preparing the pavement surface, including grooving, furnishing and installing the material; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

55. Inlet Cover Type MS 57, Item SPV.0060.102; Manhole Cover Type MS 58-A, Item SPV.0060.103; Catch Basin Type 44A, Item SPV.0060.110; Storm Inlet Type 45A, Item SPV.0060.112.

A Description

Perform work under these items according to the requirements of standard spec 611 and the details as shown on the plans.

B Materials

Furnish materials under these items according to the requirements of standard spec 611 and the details as shown on the plans.

C (Vacant)

D Measurement

The department will measure Inlet Cover Type MS 57, Manhole Cover Type MS 58-A, Catch Basin Type 44A and Storm Inlet Type 45A by 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.0060.102	Inlet Cover Type MS 57	EACH
SPV.0060.103	Manhole Cover Type MS 58-A	EACH
SPV.0060.110	Catch Basin Type 44A	EACH
SPV.0060.112	Storm Inlet Type 45A	EACH

Payment is full compensation for removing and salvaging the existing covers; providing new covers, including frames, lids, and for furnishing all labor, equipment, tools, and incidentals necessary for installing and adjusting each cover. Old covers removed remain the City of Milwaukee's property.

56. Install Precast Control Cabinet Base, Item SPV.0060.201.

A Description

This special provision describes the installation of precast control cabinet bases furnished by the City of Milwaukee, for traffic signals as shown on the plans.

B Materials

The 36"x21"x20" pre-cast concrete foundation for traffic signal cabinets P1 and P2 will be furnished by the City of Milwaukee.

C Construction

Install concrete traffic cabinet bases according to the plans. Plan changes must be approved by a City of Milwaukee Electric Services Supervisor or Traffic Engineer. The primary contacts are Mr. Al Nichols, Traffic Operations Supervisor (414) 286-5941 office, (414) 708-5148 mobile; or Mr. Scott Reinbacher, Traffic Control Engineer III (414) 286-3232.

D Measurement

The department will measure Install Precast Control Base 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.0060.201	Install City Precast Controller Base	EACH

Payment is full compensation for installing all materials; for excavation, backfilling and disposal of surplus material; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

57. Concrete Base Type 10 Special, Item SPV.0060.203.

A Description

This special provision describes constructing a concrete base type 10 special with a 36-inch diameter for monotube mast arm structures according to standard spec 654 with modifications as shown on the plans, and as hereinafter provided.

B Materials

Construction of this item shall conform with standard spec 654.

Contractor shall supply templates, anchor rods, nuts, and washers for installation as shown on the plans.

C Construction

Construction of this item shall conform with standard spec 654.

Contractor shall contact City of Milwaukee sewer engineering three working days prior to excavating any concrete bases. Please contact Mr. Bob Brooks at (414) 286-3241 or Ms. Nancy Alvarado at (414) 286-2013 to confirm lateral clearance with sewer facilities.

D Measurement

The department will measure each Concrete Base Type 10 Special as each individual concrete base, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.203	Concrete Base Type 10 Special	EACH

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

58. Remove Controller Cabinet, Item SPV.0060.204.

A Description

Remove controller cabinet according to current City of Milwaukee standards.

B (Vacant)

C Construction

Remove controller cabinet according to current City of Milwaukee Standards.

D Measurement

The department will measure Remove Controller Cabinet as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.204	Remove Controller Cabinet	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

59. ATC Controller and Cabinet Installed, Item SPV.0060.205.

A Description

This special provision describes the furnishing and installing ATC Traffic Signal Controller and NEMA TS2 Type 1 Traffic Signal Control Cabinet.

B General Requirements

B.1 General

Furnish equipment and assemble the cabinet conforming to the latest revision of NEMA Standards Publication TS 2-2003, Traffic Controller Assemblies with NTCIP requirements, National Electrical Manufacturers Association, hereinafter called NEMA TS2 Standard, except where modified in this specification. Conform all work to the Wisconsin State Electrical Code (WSEC). Conform all work to standard spec 651, as supplemented or modified in this specification.

Provide cabinets designed for TS2 Type 1 operation. Pre-wire cabinets for a minimum of sixteen phases as specified herein.

All equipment, materials, and cabinet features shall be the same type, make, and model on all cabinets delivered under any one order.

Furnish and mount at no extra cost any equipment and materials not specifically described but required in order to perform the intended functions in the cabinet.

The controller shall provide a method for programming special user created logic functions. User created logic functions shall include, but not be limited to: nonstandard overlaps, special detector logic based on user selected parameters, coordination plan selection, and phase and pedestrian omits. Programming these special functions shall be accomplished through the use of the controller front panel keyboard. The need for special programming applications will not be considered acceptable; however, it is acceptable to provide the programming functionality as part of a computer based controller programming application. Special user created logic functions shall be stored as intersection programming and be capable of being transferred from controller to controller through the use of a data-key or computer based controller programming application.

B.2 Definitions

Vendor – the firm under contract with the department for furnishing the fully equipped and operational traffic signal cabinet

Construction contractor – the firm under contract with the department or another agency to construct a roadway facility. The construction contractor will install the traffic signal cabinet or may designate a subcontractor, such as an electrical subcontractor, to represent them with regards to the signal cabinet installation.

Department – Wisconsin Department of Transportation

Owner – City of Milwaukee

Manufacturer – the firm that builds or produces the traffic signal equipment other than the cabinet. For example, the “controller manufacturer”

C Cabinet

C.1 Design

Furnish a door-in-door ground mounted (without anchor bolts) aluminum cabinet of clean-cut design and appearance. Provide a cabinet 36 inches wide, 18 inches deep, and 51 inches high.

The cabinet shall include the Milwaukee “L” base.

The cabinet shall comply with the environmental and operating standards outlined in the NEMA TS2 Standard.

Construct the cabinet from type 5052-H32 aluminum with a minimum thickness of 0.125 inches. Furnish the cabinet with a natural, uncoated, aluminum finish inside and outside. The surface shall be smooth, free of marks and scratches. Use stainless steel for all external hardware.

On the top of the cabinet, incorporate a 1-inch slope toward the rear to prevent rain accumulation. Incorporate a rain channel into the design of the main door opening to prevent

liquids from entering the enclosure.

Include an exhaust plenum with a vent screen into the roof of the cabinet. Perforations in the vent screen shall not exceed 0.125 inches in diameter.

Equip the lower section of the cabinet door with a louvered air entrance. The air inlet shall be large enough to allow sufficient air flow per the rated fan capacity. Louvers must satisfy the NEMA rod entry test for Type 3R ventilated enclosures. Secure a washable, fiberglass, removable air filter to the air entrance. The filter shall fit snugly against the cabinet door wall. Attach an aluminum, easily removable, gasketed cover over the air filter and louver.

C.2 Doors

The main door and police door-in-door shall each close against a weatherproof and dust-proof, closed-cell neoprene gasket seal. The gasket material for the main door shall be a minimum of 0.188 inches thick by 1.00 inch wide. The gasket material for the police door shall be a minimum of 0.188 inches thick by 0.500 inches wide. Permanently bond the gaskets to the cabinet.

Equip the main door with a three-point latching mechanism. The upper and lower locking points of the latching mechanism shall each have a pair of nylon rollers. The handle on the main door shall utilize a shank of stainless steel 3/4 inches minimum diameter. The handle shall be a removable hex handle. The cabinet door handle may turn either clockwise or counterclockwise to open and shall not extend outwards past the edge of the door at any time. Position the lock assembly so the key will not cause any interference with the handle, or a person’s hand on the handle, when opening the cabinet door.

Include on the main door a solid stainless steel rod stop and catch mechanism capable of rigidly holding the door open at approximately 90, 120, and 180 degrees under windy conditions. The operator must be able to engage and disengage the catch with a shoed or booted foot.

The main door hinge shall be a one-piece, continuous piano hinge with a minimum 0.25 inch

stainless steel pin running the entire length of the right side of the door (right-handed). Attach the hinge in such a manner that no rivets or bolts are exposed.

Equip the main door with a brass Corbin tumbler lock No. 2, swing away dust cap, and provide two keys No. 2. Equip the police door-in-door with a standard police lock and provide one key.

Electrically bond the door to the rest of the cabinet with a braided copper grounding conductor. The length of the grounding conductor shall allow the door to swing fully open, without using the stop bar, without stretching or breaking the grounding conductor. The grounding conductor shall not interfere with normal door operation.

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

C.3 Shelves and Mountings

Mount a minimum of three vertical "C" channels, compatible with Unistrut channel nuts, on each interior side wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. Install three vertical "C" channels or three slotted rails on the interior back wall of the cabinet. All mounting channels and rails shall extend to within 7 inches of the top and bottom of the cabinets and shall be of sufficient strength to rigidly hold specified shelves and equipment.

Provide two full-width, 11-inch deep, fully adjustable, aluminum shelves to support the controller and other equipment. Mount the lower shelf at a height above the bottom of the cabinet such that the shelf and attached drawer does not interfere with the ability to tilt the terminal facility forward on its hinges for maintenance purposes. Mount the top shelf at least 13 inches above the surface of the lower shelf.

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

C.4 Auxiliary Cabinet Equipment

Ventilate the cabinet by means of a 120 VAC, 60HZ, tube axial compact type fan located in the top of the cabinet plenum. The fan’s free delivery airflow shall be equal to or greater than 100 cubic feet per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a seven-year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The thermostat's turn on setting shall be adjustable from 90 to 120 degrees F. The fan shall run until the cabinet temperature decreases below the turn-on temperature setting by approximately 30 degrees F. The fan shall be fused. Mount an incandescent lamp and socket in the cabinet to sufficiently illuminate the field terminals. Wire the lamp to a 15-amp ON/OFF toggle switch mounted on the rear cover of the police panel as specified in the Cabinet Switches section of this specification.

D Terminals and Facilities

D.1 Terminal Facility

The terminal facility panel shall be constructed from 5052-H32 brushed aluminum of 0.125 inches minimum thickness and formed so as to eliminate any flexing when plug-in components are installed.

Mount the bottom of the terminal facility a minimum of nine inches from the bottom of the cabinet. Hinge the terminal facility at the bottom to allow easy access with simple tools to all wiring on the rear of the panel. It shall not be necessary to remove the lower shelf, the shelf drawer, or any shelf-mounted equipment to hinge down the terminal facility. Provide sufficient slack in the load bay wiring to allow for dropping the load bay.

Fully wire the terminal facility with sixteen load switch sockets: eight phases of vehicular, four phases of pedestrian, and four phases of overlap operation; eight flash transfer relay sockets; one flasher socket; and two terminal facility BIU rack slots. The use of printed circuit boards is not acceptable on the terminal facility, except printed circuit boards are acceptable for the BIU interface with the load bay. Position the

16 load switch sockets in two horizontal rows of eight sockets each. Support the load switches and flasher by a bracket or shelf extending at least three inches from the terminal facility.

Label all terminals, load switches, and flash transfer relay sockets. Label reference designators by silk-screening on the front and rear of the terminal facility to match drawing designations.

Provide rack mounted BIU's. Provide a dual-row, 64-pin female DIN 41612 Type B connector for each BIU rack position. Provide card guides for both edges of the BIU. Terminal and facilities BIU mounting shall be an integral part of the terminal facility.

Provide a 16-channel, 8-position, TS2 detector racks, each with an integrally mounted BIU mounting. Racks shall be addressable. Power a detector rack by the cabinet power supply. Fasten the loop detector rack towards the left side of the lower shelf.

For BIU rack connectors, provide pre-wired address pins or jumper plugs corresponding to the requirements of the NEMA TS2 Standard. The address pins or jumper plugs shall control the BIU mode of operation. BIUs shall be capable of being interchanged with no additional programming.

For the terminal facility, contain all field wires within one or two rows of horizontally-mounted. Marathon heavy duty terminal blocks. Terminate all field output circuits on an unfused terminal block with a minimum rating of 10 amps. Use mechanical connector lugs rated for copper wire.

Angle the lower section of the terminal block out from the back of the cabinet at approximately a 45-degree angle.

Identify all field input/output (I/O) terminals by permanent alphanumeric labels. All labels shall use standard nomenclature per the NEMA TS2 Standard.

All field flash sequence programming at the field terminals shall be able to be accomplished with the use of only a screwdriver.

Wire field terminal blocks to use three positions per vehicle or overlap phase (green, yellow,red).

Wire one RC network in parallel with each flash transfer relay coil.

Permanently label all logic-level, NEMA-controller and MMU input and output terminations on the terminal facility. Identity the function of each terminal position on the cabinet drawings.

Terminal blocks for DC signal interfacing shall have a number 6-32 x 7/32-inch screw as minimum. Functions to be terminated shall be as specified in the listing of Input/ Output Terminals in Section 5 of the NEMA TS2 Standard.

Conform all terminal facility and cabinet wiring to the WSEC. The green/ walk, yellow, and red/ don't walk load switch outputs shall be minimum 16-gauge wire. The MMU (other than AC power), controller I/O, and logic ground shall be minimum 22-gauge wire. All wire colors shall be consistent.

D.2 Auxiliary Panels

D.2.1 Vehicle Detection Interface Panel

Provide a 16-position interface panel. Interface panel shall allow for the connection of 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.

Provide a cable consisting of 20 AWG twisted pair wires to enable connection to and from the interface panel to a detector rack. The twisted pair wires shall be color-coded wires. Provide a cable of sufficient length to allow the detector rack to be placed on either shelf.

Identify all termination points by a unique number silk screened on the panel.

D.3 Conductors and Cabling

Final wiring/ terminations in all cabinets that are to be city owned shall be performed by city forces. Coordinate final cabinet wiring with the City of Milwaukee's Traffic Signal Field Operations unit.

All conductors in the cabinet shall be copper 22 AWG or larger. All 14 AWG and smaller wire shall conform to MIL-W-16878/1, Type B, 600V, 19-strand tinned copper. The wire shall have a minimum of 0.010 inches thick PVC insulation without clear nylon jacket and rated to 105 degrees Celsius. All 12 AWG and larger wire shall be UL or NRTL listed THHN/THWN 90 degrees Celsius, 600V, 0.020 inches thick PVC insulation, and clear nylon jacketed.

Provide controller and MMU cables of sufficient length to allow the units to be placed on either cabinet shelf in the operating mode. Connecting cables shall be sleeved in a braided nylon mesh. Exposed tie-wraps and interwoven cables are unacceptable.

Provide the cabinet configuration with enough SDLC RS-485 Port 1 communication cables to allow full capabilities of that cabinet. Each communication cable connector shall be a 15-pin metal shell D subminiature type. The cable shall be a shielded cable suitable for RS-485 communications. Secure all connecting cables and wire runs by mechanical clamps. Stick-on type clamps are not acceptable.

Pre-wire the terminal facility for a Type 16 MMU.

All wiring shall be neat in appearance. Stow excess cable behind the terminal facility or below the shelves in order to allow easy access to the terminal facility and cabinet components. All cabinet wiring shall be continuous from its point of origin to its termination point. Butt type connections/splices are not acceptable.

Wire the grounding system in the cabinet into three separate circuits: AC Neutral, EarthGround, and Logic Ground.

Optoisolate all pedestrian pushbutton inputs from the field to the controller through the BIU and operate at 12 VAC.

Hook or loop all wire, size 16 AWG or smaller, at solder joints around the eyelet or terminal block post prior to soldering to ensure circuit integrity. Lap joint soldering is not acceptable.

D.4 Cabinet Switches

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

a. Controller On/Off
b. Cabinet Light
c. Stop Time (Three Position)
d. Manual Detector Switches (Three Position)

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

Locate the following switches behind the police access door:

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

The above switches shall function as follows:

Off: Signals Dark

Signal: Signals On and operating as follows:

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

Provide manual detector switches. Provide four pedestrian detector switches. The switches shall be spring loaded and automatically return to the center position. Wire the pedestrian switches to the T&F BIU slot 1. The switches shall operate as follows:

Position	Function
Up	Detector Disabled
Center	Detector Enabled
Down	Detector Called

E Power Panel

E.1 Design

The power panel shall consist of a separate module, securely fastened to the interior right side wall of the cabinet. Wire the power panel to provide the necessary power to the cabinet,

controller, MMU, cabinet power supply, and all auxiliary equipment. Manufacture the power panel from 0.090-inch, 5052-H32 aluminum. Panel layout shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools. Provide a light, tough, transparent, weather-resistant, non-yellowing, thermoplastic cover, rigidly mounted over the full power panel, with access holes for circuit breakers and other equipment, and open on the sides for ventilation.

E.2 Bus Bar

Provide a minimum 20-position neutral bus bar capable of connecting three #12 AWG wires per position.

E.3 Circuit Breakers

House in the power panel the following vertically mounted, single pole, 120 volts AC, 60 Hertz circuit breakers, with the ON position being up:

One 30-amp signal breaker. This breaker shall supply power for all cabinet functions not powered through one of the other breakers or fuses listed below. Streetlights will be powered from outside the cabinet in the meter breaker pedestal. This breaker shall feed a signal bus supplied through a solid state bus relay and a radio interference line filter. The bus relay, in all cases, shall be a solid state contactor and shall not be jack mounted. Breakers shall be thermal magnetic type, UL or NRTL listed, with a minimum of 22,000 amp interrupting capacity.

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

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

One 20-amp circuit breaker for future use.

Power the cabinet light through the GFI fuse, not a circuit breaker.

E.4 Radio Interference Suppressor

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

E.5 Bus Relay

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

E.6 Surge Protector

Install a plug-in type EDCO SHA-1250, or Atlantic/Pacific approved equal, surge protector across the load terminal of the 10-amp circuit breaker. Install a General Electric Varistor, catalog #V130PA20A, at the load terminals of the circuit breaker from the hot line to the grounded current carrying neutral conductor

E.7 Power receptacles

Mount a 120 VAC 20 amp**,** NEMA 5-20R GFCl convenience outlet at each of these two locations:

On the interior right side wall above the power panel. The outlet shall be fully operational and fuse protected.

Near the power panel where it will not interfere with power panel maintenance**.** This outlet is to be wired by field installation personnel.

E.8 Suppressors and RC Network

Provide a suppressor for each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, to protect the controller's solid state devices from excessive voltage surges. Such suppressors shall be in addition to the surge protector at the input power point. Wire one RC network in parallel with each inductive device.

F Auxiliary Devices

F.1 Load Switches

Provide 16 solid state load switches conforming to the requirements of section 6.2 of the NEMA TS2 Standard.

F.2 Flashers

Provide one solid state flasher conforming to the requirements of section 6.3 of the NEMA TS2 Standard.

F.3 Flash Transfer Relays

Provide 4 flash transfer relays conforming to the requirements of section 6.4 of the NEMA TS2 Standard.

F.4 Inductive Loop Detector Units

Provide 8 inductive loop detector units conforming to the requirements of section 6.5 of the NEMA TS2 Standard for 2-channel, rack mount detector units, type C.

F.5 Cabinet Power Supply

Provide one cabinet power supply with each cabinet conforming to the requirements of section 5.3.5 of the NEMA TS2 Standard. Provide LED indicators for the 12 VDC, 12 VAC, and 24 VDC outputs. Provide jack plugs on the front panel for access to the +24 VDC for test purposes.

G Bus Interface Units (BIU)

Provide three BIUs conforming to the requirements of section 8 of the NEMA TS2 Standard. Provide two BIUs with the main panel and one BIU with one of the detector racks.

H Malfunction Management Unit (MMU)

Provide one shelf-mountable, 16 channel solid-state MMU with Ethernet capability. The MMU shall meet the requirements of Section 4 of the NEMA TS2 Standard. The MMU shall be an Eberle Design Inc. Model MMU2-16LE.

The MMU shall be capable of the following:

Detecting simultaneously active inputs of Green (Walk), Yellow, or Red (Don’t Walk) on the same channel. Determining if the field signal input states detected as active or inactive by the MMU correspond with the data provided by the Controller Unit.

Monitoring an optional external watchdog output from a Controller Unit or other external cabinet device.

Monitoring an intersection with up to four approaches using the Flashing Yellow Arrow (for protected/permissive left and right turn movements).

Event logging for the following; AC Line log, Prior/Previous Faults log, and Monitor Reset Log. All log entries shall include a date and time stamp.

All monitor functions shall be capable of being programmed through the front panel, without the need for computers or special programs cards.

A built-in Diagnostic Wizard shall be provided that displays detailed diagnostic information regarding the fault being analyzed. This mode shall provide a concise view of the signal states involved in the fault, pinpoint faulty signal inputs, and provide guidance on how the technician should isolate the cause of the malfunction.

The MMU shall have an LCD display that allows for viewing of log files and field indications, as well as the viewing and setting of date and time and configuration parameters.

I Traffic Signal Controller

Provide a fully actuated, solid state, digital microprocessor based controller capable of providing the number and sequence of phases, overlaps, and any special logic as described herein. The controller unit shall meet NEMA TS2 Standard.

The traffic signal controller shall be: Econolite Cobolt “Classic” ATC Controller with Software Version 32.56.30.

J Documentation

J.1 Cabinet Intersection Wiring Diagrams

For each individual cabinet ordered, within 10 calendar days after receipt of the procurement order, furnish to the City of Milwaukee’s electrical lead electrician two sets of 22X34-inch detailed printed cabinet intersection wiring diagrams for information only.

At the time of the cabinet delivery, furnish to the City of Milwaukee’s electrical lead electrician two sets of printed 22X34-inch cabinet intersection wiring diagrams and one set of dgn CAD files per cabinet. Printing the 22X34-inch sheet in smaller sizes is not acceptable. Leave a third drawing in the under-shelf drawer in the signal cabinet. After cabinet acceptance is complete, if any cabinet wiring changes were made, revise the cabinet wiring diagrams, leave one drawing in the under-shelf drawer in the signal cabinet, and furnish to the City of Milwaukee’s electrical lead electrician two sets of as-built printed cabinet wiring diagrams and one set of as-built .dgn CAD files per cabinet. If no changes were made from time of cabinet delivery, notify the City of Milwaukee’s lead electrical technician in writing.

J.2 MMU and Controller Programming

At the time of cabinet delivery, furnish to the City of Milwaukee’s lead electrician two printed copies of the MMU programming and two copies of the signal timing in the traffic signal controller. Leave a third copy in the under-shelf drawer in the signal cabinet. After cabinet acceptance is complete, if any MMU or controller timing changes were made, revise the documents, leave one copy in the under-shelf drawer in the signal cabinet, and furnish to the City of Milwaukee’s electrical lead electrician two copies per cabinet. If no changes were made from time of cabinet delivery, notify the department’s Region lead electrical technician in writing.

J.3 Manuals

At the time of the cabinet delivery, furnish to the City of Milwaukee’s electrical lead electrician one set of installation, operations, and maintenance manuals per cabinet including each type of equipment in the cabinet. The manuals shall as a minimum include the following information: a) table of contents, b) operating procedure, c) step-by-step maintenance and trouble-shooting information for the entire assembly, d) schematic diagrams, e) pictorial diagrams of parts locations, f) itemized parts lists with parts numbers, g) theory of operation, and h) maintenance checklists.

The itemized parts lists shall include the manufacturer’s name and parts number for all components (such as IC, diodes, switches, relays, etc.) used. The list shall include cross-references to parts numbers of other manufacturers who make the same replacement parts.

For each of the traffic signal controller and MMU, in addition to the above manual requirements, furnish one reference manual for the processor and components proposed to perform the controller and MMU functions. Include a complete set of schematics for the controller, MMU, and any auxiliary circuit boards either in the reference manual or in a separate volume. In addition, furnish a written narrative describing the controller and MMU operation and front panel configuration, and a conceptual flow chart illustrating the control logic for comparison with these specifications. The narrative shall include a discussion of any limitation or exceptions to the performance described in these specifications, and a discussion of any control capabilities provided in addition to that required in these specifications.

K Cabinet Delivery

The construction contractor will provide the traffic signal specifications and plans, including the sequence of operation, to the vendor. The vendor shall determine the required cabinet equipment and assembly requirements from the plans and specifications and provide the department a list of procurement items. The department will order the procurement items. The vendor shall request the traffic signal timing from the City of Milwaukee at the same time the list of procurement items is provided to the department. The

City of Milwaukee will provide the signal timing to the vendor a minimum of two weeks before the scheduled cabinet delivery date.

For cabinets to be installed in the field by the construction contractor, provide the list of procurement items to the department a minimum of 60 days before the cabinet is scheduled to be installed in the field. The vendor is responsible for coordinating with the project construction contractor to determine the scheduled cabinet installation date. Cabinets shall be completed, delivered, and accepted within 50 calendar days after the department initiates the procurement request. The department reserves the right to require up to five cabinets per month to be completed, delivered, and accepted within 15 calendar days after the department initiates the procurement request.

If the department makes a modification to any cabinet order before the entire cabinet is completely built in the vendor's shop, the delivery time does not change. If the department accepts a vendor requested cabinet order or other modification at any time, the delivery time

does not change. All cabinet modifications will be made without additional cost to the department, except if an additional equipment item is added that is under procurement contract, the established price in the procurement contract will be paid the vendor.

For cabinets to be installed in the field by the construction contractor, deliver the fully wired and equipped cabinets to a secure, nonhazardous location designated by the project construction contractor. Delivery will be received by the department. Schedule the delivery directly with the construction contractor. The vendor is responsible for arranging the unloading of the cabinet. Notify the department's region electrical shop of the intent to deliver a minimum of two business days ahead of the desired delivery time. The department will provide the vendor a list of names, phone numbers, and email addresses for contact information within each region.

The vendor is notified that delivery times and schedules may be changed or delayed at any time for any reason. The vendor may be required to store completed cabinets at their facility for extended periods of time.

L Acceptance Testing

Complete on-site traffic signal acceptance testing in the presence of the department. The acceptance testing will occur after the signal cabinet is fully installed at the project intersection by the construction contractor and before the traffic signal is turned on. The construction contractor and the department will determine the time for the acceptance testing. In addition to the cabinet as specified in this specification, add-on accessory items, traffic signal interconnect, system communication, and closed loop system operation are included in the acceptance testing.

Provide an IMSA certified Traffic Signal Bench Technician, Level II, or an IMSA certified Traffic Signal Field Technician, Level II, with a minimum of three years' experience in construction and operation of traffic signal cabinets similar to the cabinets specified in this specification. Alternatively, provide a technician or electrician with a minimum of three years' experience in construction and operation of traffic signal cabinets similar to the cabinets specified in this specification. The technician shall be on-site during the entire acceptance testing, and shall be capable and equipped to make in-field revisions / repairs to the signal cabinet to conform to this specification.

Upon successful completion of the acceptance testing as determined by the department, a 30-day conditional acceptance of the signal cabinet will be provided to the vendor. Should the cabinet within the 30-day conditional acceptance period fail to perform in any way as determined by the department, the vendor shall repair the cabinet to bring it into conformance with this specification and the acceptance testing shall be repeated. Repair times shall conform to the warranty service response times in this specification. The acceptance testing shall be repeated. Upon successful completion of the retesting, a new 30-day conditional acceptance period shall begin. After the signal cabinet runs 30 days without failure, the cabinet will be fully accepted by the department.

The vendor will be allowed up to two 30-day conditional acceptance periods. If the cabinet fails during the second 30-day period, an entirely new cabinet shall be furnished and made

operational in the field by the vendor at no cost to the department and a new acceptance testing procedure shall begin. Cabinet replacement times shall conform to the warranty service response times in this specification. The original cabinet becomes the property of the vendor.

The department reserves the right to perform its own tests on the traffic signal cabinet at any time using the department's control equipment. Should an individual traffic signal cabinet be found to not meet the requirements of these specifications, the vendor shall pick up the traffic signal cabinet from the department or from the field, perform at their shop repairs / revisions as necessary to bring the traffic

signal cabinet into conformance with these specifications, and deliver the repaired / revised traffic signal cabinet back to the designated location, all at no additional cost to the department.

M Certification

Provide a written certification with the cabinet delivery that the equipment meets the requirements of the plans and specifications and will fully run the sequence of operation and the signal timing, including closed loop system operation if applicable. The certification shall be on the vendor's company letterhead, shall be addressed to both the City of Milwaukee and the construction contractor, and shall be signed by a company officer authorized to legally obligate the company.

N Warranty

The warranty shall start upon delivery of the cabinet and all supplied equipment to the department designated location. Provide a warranty and guarantee statement which stipulates that the cabinet and all supplied equipment, including add-on accessory items, to be, individually and as a cabinet system, free from defects in materials and workmanship for a period of at least one year from the date of final cabinet acceptance in the field, or in the case of a cabinet that is to be delivered to the department for use by the department, from the date of delivery of an accepted cabinet to the department. Final cabinet acceptance in the field is after a successful 30-day conditional acceptance period is completed. Delivery of a cabinet for testing does not constitute acceptance of the cabinet. Turn over to the City of Milwaukee warranties and guarantees that are offered by the manufacturer as a customary trade practice. Name the City of Milwaukee as the obligee on all manufacturers' warranties and guarantees. Shipping costs, both to the factory or an Authorized Repair Depot, and return, shall be paid by the vendor.

The warranty shall provide for full repair or replacement, as determined by the department, of the failed item or cabinet system, including removal and making the item or system fully operational in the cabinet, at no cost to the department. Vendor warranty service response times after notification by the department:

- 4 hours to have qualified service personnel on site at the intersection.
- 12 hours to have the signal safely operational, including all phases and enough detection to run the intersection phasing (minimum 8 detectors).
- 48 hours on business days to restore the signal to full original operations.

If a malfunction in the controller unit, MMU, module, or any auxiliary equipment occurs during the warranty period, the vendor shall, within 24 hours after notification (excluding Saturday and Sunday), furnish and make fully operational in the cabinet, an identical, programmed, controller unit, MMU, module, or auxiliary equipment, for use while the warranted unit is being repaired or replaced. The isolation of any malfunction during the warranty period shall be the responsibility of the vendor.

The department or City of Milwaukee reserves the right to make repairs to malfunctioning cabinets and equipment that are under warranty, up to and including complete replacement of the cabinet, when in the department's determination the safety of the traveling public is best served. Such repair work will not in any way void or limit the vendor's warranty and guarantee specified above. The department will notify the vendor in writing of the repair.

The vendor shall within five business days after notification replace, at the Region electrical shop, all cabinets, equipment, and supplies used by the department in making repairs, with new parts meeting the requirements of this specification.

If any cabinet has three or more equipment or cabinet system failures, resulting from poor workmanship, within the first six months of operation after department acceptance, an entirely new cabinet exactly matching the existing cabinet shall be furnished and made fully operational by the vendor at no additional cost to the department. Any traffic control, including but not limited to signing, channelizing devices, temporary signals, police control, and flaggers, that becomes necessary as determined by the department in order to safely replace the cabinet is the full responsibility of the vendor. The original cabinet becomes the property of the vendor.

Provide, at no additional cost, firmware / software maintenance, problem resolution phone technical support, problem resolution technical support in the supplier's facility, firmware / software patches, and firmware / software upgrades for a minimum of three years. The lead for technical support and primary department contact for support shall be a qualified person employed by the vendor's local office who is personally familiar with the department's software and signal operations. Help desks and manufacturer's representatives may be utilized by the lead technical support person as resources, but are not acceptable for lead technical support.

Maintain an inventory of the firmware / software version on each controller provided. Notify the City of Milwaukee's electrical shop supervisor or lead electrician in writing when a firmware / software patch or upgrade is available. The City of Milwaukee will direct the vendor when to load the patch or upgrade for each controller. Load the patch or upgrade and provide a usable copy of the patch or upgrade to the department. Alternatively, when requested by the City of Milwaukee, provide the patch or upgrade to the City of Milwaukee for installation by the City of Milwaukee.

O Measurement

The department will measure ATC Controller and Cabinet Installed as each unit of work, in place and accepted.

P Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.205	ATC Controller and Cabinet Installed	EACH

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

60. Fiber Optic Patch Panel, Item SPV.0060.212.

A Description

Furnish and install a fiber optic patch panel in accordance with current City of Milwaukee standards.

B Materials

Furnish a Fiber Optic Patch Panel with cable lengths as specified in the plans.

C Construction

Install fiber optic patch panel according to current City of Milwaukee Standards. Contact Scott Reinbacher at (414) 286-3232 for a copy of the city standards.

D Measurement

The department will measure Fiber Optic Patch Panel 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.0060.212	Fiber Optic Patch Panel	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

61. Ethernet Switch, Item SPV.0060.213.

A Description

Furnish and install an Ethernet switch in accordance with current City of Milwaukee standards.

B Materials

Furnish an Ethernet Switch with a compatible power supply.

Environmental: This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications.

Mounting: This equipment must be DIN Rail mountable.

Interfaces: This equipment must support a minimum of 10 Ethernet interfaces, with a minimum of three being shared or dedicated SFP interfaces for pluggable optical connections and support for PoE+ on four or more interfaces.

Management: This equipment must be a managed switch with the ability to support 802.1Q VLAN Tagging, 802.1D Spanning Tree Protocol, and 802.1p Quality of Service.

C Construction

Install Ethernet switch according to current City of Milwaukee Standards. Contact Scott Reinbacher at (414) 286-3232 for a copy of the city standards.

D Measurement

The department will measure Ethernet Switch 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.0060.213	Ethernet Switch	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

62. EVP 1 Channel 1 Direction Infrared Detector, Item SPV.0060.218; EVP 1 Channel 2 Direction Infrared Detector, Item SPV.0060.219; EVP Phase Selector Card 4 Channel, Item SPV.0060.221; EVP Confirmation Light Assembly, Item SPV.0060.223.

A Description

Furnish and install EVP detectors, phase selector cards, or flood lights according to current City of Milwaukee standards.

B Materials

Furnish 1 or 2 channel EVP infrared detector, 4 channel EVP selector card, or a typical confirmation light assembly.

C Construction

Install EVP detector, phase selector card, or confirmation light assembly according to current City of Milwaukee Standards. Contact Scott Reinbacher at (414) 286-3232 for a copy of the city standards.

D Measurement

The department will measure EVP 1 Channel (x) Direction Infrared Detector, EVP Phase Selector Card 4 Channel, and EVP Confirmation Light Assembly 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.0060.218	EVP 1 Channel 1 Direction Infrared Detector	EACH
SPV.0060.219	EVP 1 Channel 2 Direction Infrared Detector	EACH
SPV.0060.221	EVP Phase Selector Card 4 Channel	EACH
SPV.0060.223	EVP Confirmation Light Assembly	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

63. Vehicular Video Detection System, Item SPV.0060.224.

A Description

This specification describes furnishing and installing a system that detects vehicles on a roadway using only video images of vehicle traffic. This item includes all materials and labor necessary to install a completely functional vehicle detection system as shown in the plans, including but not limited to cameras, processors, video monitor, mounting hardware, power cable, and coaxial cable.

B Materials

This specification sets forth the minimum requirements for a system that detects vehicles on a roadway and provides detection outputs to a traffic signal controller. The materials shall also include all brackets, mounting hardware, cable, terminations, interface panels, and all other incidentals for the installation of the non-intrusive vehicle detection equipment. This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications.

All detection equipment, components, and terminations supplied under this item shall be fully compatible with the ATC Cabinet and Controller item supplied for the project. The system architecture shall fully support Ethernet networking of system components. All required interface equipment needed for transmitting and receiving data shall be provided with the video detection system.

The video detection system shall provide flexible detection zone placement anywhere and at any orientation. 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. Detection zones shall be able to be overlapped for optimal road coverage.

C Construction

The video detection system shall be installed by supplier factory-certified installers and as recommended by the supplier and documented in installation materials provided by the supplier.

In the event, at installation or turn on date, a noticeable obstruction is present in line with the detection zone(s), the contractor shall be obligated to advise the engineer before setting the zone.

All cables associated with the video detection system shall be routed to the controller. Each lead shall be appropriately marked as to which street or avenue it is associated.

The video detection system, as shown in the traffic signal plans, shall be complete, in place, tested, and in full operation.

Install Vehicular Video Detection System in accordance with current City of Milwaukee Standards. Contact Scott Reinbacher at (414) 286-3232 for a copy of the city standards.

D Measurement

The department will measure Vehicular Video Detection System 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.0060.224	Vehicular Video Detection System	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

64. Vehicular Microwave Detection System, Item SPV.0060.226.

A Description

Furnish and install a Vehicular Microwave Detection System in accordance with current City of Milwaukee standards.

B Materials

Furnish a Vehicular Microwave Detection system.

C Construction

Install Vehicular Microwave Detection System in accordance with current City of Milwaukee Standards. Contact Scott Reinbacher at (414) 286-3232 for a copy of the city standards.

D Measurement

The department will measure Vehicular Microwave Detection System 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.0060.226	Vehicular Microwave Detection System	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

65. Poles Type 12 Special, Item SPV.0060.247.

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 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 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 Poles Type 12 Special 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.0060.247	Poles Type 12 Special	EACH

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

66. Poles Type 13 Special, Item SPV.0060.249.

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 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 Poles Type 13 Special 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.0060.249	Poles Type 13 Special	EACH

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

67. Pedestrian Countdown Signal Face 12-Inch, Item SPV.0060.267.

A Description

Furnish and install Pedestrian Countdown Signal Face 12-Inch in accordance with current City of Milwaukee standards.

B Materials

Furnish a 12-Inch Light Emitting Diode (LED) Pedestrian Countdown Module that meets ITE PTCSI-STD Part 2 from March 2004 or current Institute of Transportation Engineer (ITE) standards. The countdown digits shall be displayed with an LED color/type of Portland Orange. The unit shall be able to operate when exposed to temperatures between -40 to 165 degrees Fahrenheit. The operating voltage shall be between 80 to 135VAC, and the wattage drawn shall be 7W.

C Construction

Install Pedestrian Countdown Signal Face 12-Inch according to current City of Milwaukee Standards. Contact Scott Reinbacher at (414) 286-3232 for a copy of the city standards.

D Measurement

The department will measure Pedestrian Countdown Signal Face 12-Inch by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.267	Pedestrian Countdown Signal Face 12-Inch	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

68. Poles Type-10 Special 26 FT., Item SPV.0060.274.

A Description

Work under this item consists of furnishing and installing monotube poles with modifications as shown in the plans.

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 three 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 9 and Type 10 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 Poles Type-10 Special 26 Ft., by each unit of measure, 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.0060.274	Poles Type-10 Special 26 Ft.	EACH

Payment is full compensation for the pole, riser cable or cables, pea gravel, and all connections. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

69. Signal Housing Relocated, Item SPV.0060.277.

A Description

Relocate and install signal equipment according to current City of Milwaukee standards.

B (Vacant)

C Construction

Relocate and install signal equipment according to current City of Milwaukee standards.

D Measurement

The department will measure Signal Housing Relocated 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.0060.277	Signal Housing Relocated	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

70. Tunnel Visor, Item SPV.0060.280.

A Description

Furnish and install a tunnel visor according to current City of Milwaukee standards.

B Materials

Furnish a removable 12-inch tunnel-type visor according to City of Milwaukee standards

C Construction

Install tunnel-type visor according to current City of Milwaukee standards.

D Measurement

The department will measure Tunnel Visor 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.0060.280	Tunnel Visor	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

71. 24”x24” Blankout Sign No Turn, Item SPV.0060.291.

A Description

Furnish and install a blankout sign according to current City of Milwaukee standards.

B Materials

Furnish an electronic sign, 24 inches by 24 inches in size, with the ability to display one or more messages compliant with the Manual on Uniform Traffic Control Devices, as indicated on the plans, to be controlled by the traffic signal controller or other approved controllers. The electronic sign shall also have the ability to be dark, in which no message is seen.

C Construction

Install blank out sign according to current City of Milwaukee Standards.

D Measurement

The department will measure 24”x24” Blankout Sign No Turn 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.0060.291	24”x24” Blankout Sign No Turn	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

72. Fiberglass/Polymer Concrete Pull Box 13-Inch x 24-Inch x 24-Inch; Item SPV.0060.302.

A Description

This special provision describes providing furnishing and installing Fiberglass/Polymer Concrete Pull Box at the locations shown on the plans according to standard spec 653.

B Materials

Furnish fiberglass/polymer concrete pull box of rectangular composite enclosure with Tier 15 Rating (15,000 lb Design Load) and (22,500 lb Test Load), and nominal 13” wide x 24” long and 24” total depth, flared wall style #CHB132424 as by Highline Products or #B12132424A as by Hubbell Power Systems or approved equal. Cover shall be Tier 15 Rating (15,000 lb Design Load) and (22,500 lb Test Load), bolted cover with logo “Street Lighting” #CHC1324HL1 as by Highline Products or #C12132402A41 as by Hubbell Power Systems or approved equal. The pull box shall be listed and labeled by (UL) or other Nationally Recognized Testing Laboratory.

C Construction

Conform to standard spec 673.3 and applicable details within design set. The pull box shall be installed on 12-inches of crushed stone, set flush with grade and backfilled.

D Measurement

The department will measure Fiberglass/Polymer Concrete Pull Box 13-Inch x 24-Inch x 24-Inch 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.0060.302	Fiberglass/Polymer Concrete Pull Box 13-Inch x 24-Inch x 24-Inch	EACH

Payment is full compensation for furnishing and installing all materials, including pull box, crushed aggregate, for excavation, backfill, for disposing of surplus material.

73. Fiberglass/Polymer Concrete Pull Box 17-Inch x 30-Inch x 24-Inch, Item SPV.0060.303.

A Description

This special provision describes furnishing and installing Fiberglass/Polymer Concrete Pull Box at the locations shown on the plans according to standard spec 653.

B Materials

Furnish fiberglass/polymer concrete pull box of rectangular composite enclosure with Tier 15 Rating (15,000 lb Design Load) and (22,500 lb Test Load), and nominal 17” wide x 30” long and 24” total depth, flared wall style #CHB173024 as by Highline Products or #B12173024A as by Hubbell Power Systems, or approved equal. Cover shall be Tier 15 Rating (15,000 lb Design Load) and (22,500 lb Test Load), bolted cover with logo “ Street Lighting” #CHC1730HL1 as by Highline Products or #C12173002A41 as by Hubbell Power Systems, or approved equal. The pull box shall be listed and labeled by (UL) or other Nationally Recognized Testing Laboratory.

C Construction

Conform to standard spec. 673.3 and applicable details within design set.. The pull box shall be installed on 12-inches of crushed stone, set flush with grade and backfilled.

D Measurement

The department will measure Fiberglass/Polymer Concrete Pull Box 17-Inch x 30-Inch x 24-Inch 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.0060.303	Fiberglass/Polymer Concrete Pull Box 17-Inch x 30-Inch x 24-Inch	EACH

Payment is full compensation for furnishing and installing all materials, including pull box, crushed aggregate, for excavation, backfill, for disposing of surplus material.

74. Pole Type-2, Item SPV.0060.312.

A Description

This special provision describes providing and installing Poles Type-2 (A26 Concrete, Direct Bury) as shown in the plans and according to the following. All work shall be according to standard spec 651.

B Materials

B.1. General

The concrete poles to be furnished are shown on the print of drawings that form a part of this specification and are attached hereto. The dimensions given are not intended to be exact or precision measurements. Slight variations in dimensions and design that are immaterial to strength and appearance will be permitted, but all such variations shall be approved by the Street Lighting Division.

The total height of pole from the butt of pole to the top is 31 feet +/-. The pole shall be concrete, one-piece with dimensions, taper and cross section as shown in drawings. The butt section may be round or octagonal in shape as indicated in the drawings. The pole shall be manufactured as a prestressed and reinforced centrifugally spun pole as set forth in A.S.T.M. C1089-88 unless otherwise directed. The pole has a removable ornamental aluminum pole cap, firmly and securely fastened in place by set screws or other approved device which will securely retain it in place.

The concrete pole shall have a hollow raceway at least 1 1/2 inches in diameter and continuous in a straight line, without appreciable offset, throughout its entire length.

The raceway shall be free from sharp projections or edges that might injure the insulated wire or cable sheath.

Dimensions and locations for lateral opening in the raceway are shown on the drawing (E-53-55).

All poles shall be furnished with hand hole. The hand hole shall be located on the face 90 degrees from the lateral opening in the butt of pole and shall have the minimum dimensions of 2-1/2" x 8"*. The cover shall be heat-treated cast aluminum, or other material as approved by the city, fastened to non-ferrous insert in the pole. The cover shall be secured to the pole using 1/4"-20 NC by 3/4" long 18-8 stainless button head Torx T27H tamper proof screws. Bolt down poles are to have the hand hole 90º to the slot opening at the top of the pole and be 2½” x 8”.

The pole, when manufactured, should be polished and include a non-sacrificial anti-graffiti shield coating on the entire above ground length.

Manufacturer

1. Traditional Concrete Inc. catalog number:
2. Enterprise lighting catalog number:
3. Ameron Concrete catalog number:
4. Or approved equal

B.2. Pea Gravel

The pea gravel must consist of particles from natural gravel deposits and shall be composed of clean, hard, tough, durable pebbles free from adherent coatings, soft, flat, or elongated particles, and organic or other deteriorative matter. The following limits apply to deteriorative substances in the pea gravel.

- Chert — not over 4% by weight
- Coal — not over ½% by weight
- Clay lump and friable particles — not over ½% by weight
- Soft fragments — not over 1% by weight

- Any combination of the above — not over 4% by weight
- Flat, elongated or laminated pcs. (Flat and elongated particles are those having a length more than five times the average thickness) — not over 10% by weight

Grading requirements of the pea gravel are as follows:

- Passing 3/8 inch sieve — 95% to 100%
- Passing No.4 sieve — 25% to 50%
- Passing No.8 sieve — 0% to 5%

Each unit will require approximately 0.25 cubic yard of pea gravel.

B.3. Riser Cable

Pole is to be wired as shown on the plans. A separate riser cable will be required to be installed inside of pole for each lighting fixture on the pole. The riser cable shall be 35 feet in length and cut from copper 2#12 UF with ground cable. One wire shall be black, the other shall be white, and the ground can be either bare or green. All splicing is to be done inside the metal housing. The ground wires shall be spliced inside the metal housing and grounded to the housing and each fixture. The cable shall conform to NEC Article 340. The riser cable shall be continuous without splices. The electrical system in use utilizes a full system ground. The neutral is not to be grounded at any point.

C Construction

C.1

The direct bury pole is to be set as illustrated in the plans. The holes are to be 14 or 16 inches in diameter and to a depth of 5 feet 6 inches depending on manufacturers' pole butt length. The holes can be bored, hydrovaced, or hand dug but all shall be cylindrical. If any part of the hole is within three feet of a buried utility, the holes must be hand dug or hydrovaced. No other method of setting poles is acceptable. The poles should be parallel and perpendicular to the horizon once set.

C.2

In some cases, the poles are to be installed in areas of concrete walk. Prior to concrete removal, the concrete should be saw cut to allow adequate room for pole and cable installation. Saw cutting for removal should be square or rectangular in shape. The contractor shall be responsible for disposing all debris from excavation and removed from site.

C.3

There is to be a minimum 6-inch bed of tamped pea gravel for the pole to set on. Then pea gravel is to be backfill around the pole and be tamped every 12 inches and filled to within 3 inches of finished grade.

C.4

In areas where concrete walk was removed, felt paper is to be installed around the base of pole and 3 inches of concrete installed. Concrete shall be the standard 5 bag mix, and the finished surface should match adjacent grades.

C.5

Grass areas that were disturbed during construction shall be filled with 3 inches of topsoil and sod to match the adjacent finished grade. Addresses are to be stenciled to the pole as shown on the plan.

D Measurement

The department will measure Poles Type-2, by each unit of measure, 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.0060.312	Poles Type-2	EACH

Payment is full compensation for the pole, riser cable or cables, pea gravel, and all connections. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

75. Pole Type-3 Direct Bury, Item SPV.0060.313.

A Description

The work under this item is for furnishing and installation of the following material as shown in plans and according to the following:

B Materials

1. General: The concrete poles to be furnished are shown on the print of drawing that form a part of this specification and are attached hereto. The dimensions given are not intended to be exact or precision measurements. Slight variations in dimensions and design that are immaterial to strength and appearance will be permitted, but all such variations shall be approved by the Street Lighting Division.

Manufacturer	Catalog Number
StressCrete	E-370-BPD-G-S35-AG
Traditional Concrete	City of Milwaukee A-31, drawing E-54-56 or approved equal

2. DESCRIPTION: The pole shall be concrete, one-piece with dimensions, taper and cross section as shown in the drawings. The butt section shall be square in shape or as indicated in the drawings. The pole shall be manufactured as a prestressed and reinforced centrifugally spun pole as set forth in A.S.T.M. C1089-88 unless otherwise directed.

3. MATERIALS:

3.1 Concrete Aggregates: Concrete aggregates shall meet all the requirements of A.S.T.M. C33. All aggregate employed in the manufacture of the concrete poles shall be white crystalline stone. The texture and color of the aggregates shall be approved by Street Lighting Division.

The aggregates shall be of adequate strength in resisting crushing stresses and impervious to moisture; of such character as not to deteriorate or change as a result of continued exposure for years to the weather; and of such character that it crushes into masses approximately cubical in form, not in flakes. Aggregates shall all pass a three-eight inch sieve, with a minimum size passing a #100 sieve.

3.2 Cement: The cement shall be fresh and free from lumps and shall conform to specifications of the American Society of Testing Materials, serial designation C-150, Type I or Type III.

3.3 Water: The water employed shall be free from acids, alkalis, oil, or organic matter.

3.4 Materials Proportion: The materials combined to produce the concrete shall be proportioned by weight.

3.5 Steel: The surface of all steel shall be free from dirt, oil, or grease. The steel used as either reinforcing or prestressing shall be adequately sized to meet the strength requirements of the finished poles, as herein specified. Longitudinal reinforcement, prestressing and spiral wrap shall comply with the latest version of the applicable ASTM standards. All prestressed wire shall be stressed to not less than 60% or more than 70% of its tensile strength.

3.6 Test of Materials: Any and all of the above materials shall be subject to test at any time before use, as may be directed, and samples for this purpose shall be furnished by the contractor upon request.

3.7 POLE STRENGTH: All poles furnished shall withstand a 90 mph wind load plus 3S gust factor and a 400 lbs working load.

3.7.1 The pole design shall allow for a maximum load of not less than twice the working load.

3.7.2 The elastic limit at which any pole will actually fail to withstand any additional stress without permanent injury shall not be less than two and one-half (2-1/2) times the working load.

4. LOADING AND STABILITY All the square poles furnished under this specification shall support two bracket mounted 36 inch, 40 pound arms each with an one hundred pound fixture of an EPA of 5. All pole designs shall meet the latest revision of the AASHTO specifications for these poles as defined in their STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS handbook.

The manufacturer shall submit engineering calculations for lighting poles to show that maximum stress and deflections do not exceed specified performance requirements under full design loading, as well as other certified reports and data which indicate that the poles meet all load requirements, within 30 days of the bid award. Engineering calculations shall be prepared and sealed by an engineer licensed in the State of Wisconsin.

The entire horizontal and vertical “wind sail” area of the pole assembly subject to wind load including arm and luminaire shall be designed to withstand the AASHTO standard specifications, from above, for wind load requirements for a 90 MPH wind load with gust factor computed per section 3.8.5.and height and exposure factors from table

5. CABLE RACEWAY: Each concrete pole shall have a hollow raceway at least one and one-half inches in diameter and continuous in a straight line, without appreciable offset, throughout its entire length.

   5.1 The raceway shall be free from sharp projections or edges that might injure the insulated wire or cable sheath.

   5.2 Dimensions and locations for lateral opening in the raceway are shown on the drawings.

   5.3 All poles shall be furnished with hand hole. The hand hole shall be located on the face 90 degrees from the lateral opening in the butt of pole and shall have the minimum dimensions of 3-1/2" x 10-1/2". The cover shall be heat-treated cast aluminum, or other material as approved by the city, fastened to non-ferrous insert in the pole. The cover shall be secured to the pole using 1/4"-20 NC by 3/4" long 18-8 stainless button head Torx T27H tamper proof screws.

   5.4 Two lateral openings into the raceway, of dimensions and locations as shown on the drawings, shall be provided in the butt of the pole.

6. CONCRETE:

   6.1 Strength: The concrete strength shall meet the following requirements when tested according to A.S.T.M. C39.

      a. Release of Prestressing Steel: Concrete cylinders made according to A.S.T.M. C31 shall attain a minimum strength of 3,500 p.s.i. at the time that prestressing is released.

      b. Twenty-Eight Days: Concrete cylinders made according to A.S.T.M. C31 shall attain a minimum strength of 8,000 p.s.i. at twenty-eight days.

   6.2 Admixture: All poles shall be manufactured with quality HSF (high silica fume) cement to reduce porosity in the concrete and increase compressive strength.

   6.3 The city may sample and test the concrete at any time. Concrete samples made according to A.S.T.M. C31 shall be furnished by the contractor upon request of the city.

   6.4 Process and Surface Finish: The finished concrete used in the manufacture of poles shall be a very dense product, free from undesirable air pockets or voids.

      a. The concrete shall be compacted by the centrifugal process so that the surface is dense, with the coarse and fine aggregate evenly distributed. If requested to do so by the Purchasing Division - DOA, a sample shall be produced that is representative of the pole cross-section and at least three inches in length. The sample shall be submitted to the city for approval with respect to color, texture and finish. The concrete mix from which the sample was made shall be noted and submitted with the sample. A representative sample of all aggregates used also shall be submitted.

      b. The mixture of aggregates shall be essentially uniform over the entire exterior surface of concrete poles furnished.

      c. Size of the duct shall be controlled so that the prestressed and/or reinforcing rods are not embedded in "slurry" (i.e., water-cement-sand mix that collects in the pole core during the spinning process).

      d. Following the casting operation, the pole shall be cured with low-pressure steam for as long as needed to reach the necessary strength to allow handling and release of prestressing wires. Poles shall remain in storage for as long as needed for the concrete to reach the required compressive strength. Poles shall meet the design strength before shipment is allowed.

      e. To assure that poles are not prematurely exposed to freeze-thaw action and deicer, adequate curing of the concrete for development of sufficient strength to resist scaling and for reduction of water content of the concrete shall be the responsibility of the manufacturer.

      f. The finished surface must be polished so that the color and surface smoothness are uniform over the entire surface. The face surface shall be sealed with a siloxane penetrating sealer and a high molecular weight acrylic copolymer or other sealing compounds that will yield equivalent degree of protection from water, salt, and/or other chemical infiltration and does not discolor or fade.

      g. The entire lot of concrete poles to be furnished under this specification shall be uniformly consistent in color and finish.

      h. Treatment with diluted acid to obtain the desired finish is not permitted.

      i. The finished surface of all poles shall be free from visible pits, fins, grooves, patches, or other surface markings not specifically enumerated herein.

      j. The top of the pole shall be flat and perpendicular to the longitudinal axis of the pole so that the pole cap will have a positive seat.

      k. Chloride accelerators shall not be used in the manufacturing process.

7. REINFORCEMENT: The reinforcing cage, spiral reinforcement and prestressing steel shall be placed in position and maintained in place during the centrifugal manufacturing process. The longitudinal reinforcement, prestressing and spiral reinforcement shall continue throughout the entire length of the pole.

7.1 COVER: All steel shall be covered at all points by at least one-half inch (1/2") of concrete, except where it may be necessary in the process of manufacture to have the rods and/or wire extend beyond the ends of the poles. In such case, the rods and/or wires shall be cut off afterward, even with the face of the molded product, unless otherwise noted on the drawings included herein.

Where the above minimum coverage cannot be maintained next to cable entrance, wire outlet, etc., the reinforcing shall be protected with a suitable sleeve.

Drawings of the reinforcing cage, spiral reinforcement and prestress steel that the manufacturer proposes to use in the manufacture of concrete poles, showing the size, shape and arrangement of reinforcing prestressing spiral reinforcement, ties, method of holding cage in place, etc. SHALL BE SUBMITTED TO Street Lighting Dept.

8. WATERPROOFING: The top and bottom of the poles shall be properly coated with bitumastic waterproofing material.

8.1 Waterproofing material shall be of such quality and consistency that it will not crack or chip when subjected to extremely cold weather, and that it will not flow when subjected to extremely hot weather.

9. ACCESSORIES:

9.1 Pole cap: Each pole, when the design calls for a pole cap, shall have a removable aluminum pole cap, firmly and securely fastened in proper position by the contractor.

9.2 Miscellaneous: All pipes, bolts, nut wire, washers, pole caps, casting, fittings, and appurtenances of any sort are to be furnished by the contractor and made of approved rust-proof metal of such design, composition, and dimensions as may be approved by the city before the contractor begins manufacture.

10. MARKING: Every pole shall bear an impressed marking, or other type of marking acceptable to the city, of the type of pole, contractor's insignia, and casting date (month and year). Type of pole and contractor's insignia shall have letters at least on inch (1") tall. The casting date shall have digits not less than one-half inch (1/2") tall. All markings shall be located in line with the cable entrance in the butt of the pole and shall be placed fifteen inches (15") to twenty inches (20") above the ground line.

11. COLOR PIGMENTS: Poles with a colored finish shall be furnished where specified. The coloring is to be done by mixing a pigment into the concrete before casting. The color of the pole shall be uniform throughout the body of the pole, shall not fade and shall be maintenance free. The type of coloring pigment shall be indicated with the bid and a sample which represents the finished colored pole shall be furnished for approval of the Street Lighting Dept. at 841 N. Broadway, Room 920, Milwaukee WI 53202.

12. INSPECTION:

12.1 General inspection for acceptance of the concrete poles shall be made upon delivery at job-site in Milwaukee. Decision as to the compliance with the specification and the quality of the poles shall be made by the city.

12.2 Tests and inspections for compliance of any of the specified characteristics of the poles also may be made upon the finished product after delivery, at any time before installation.

13. REJECTION:

13.1 Poles failing to meet the requirements of this specification will be rejected by the city, and the contractor shall immediately remove the same, and furnish at their own expense, poles in conformity with this specification. The contractor shall pay all freight charges for all material furnished under this contract and all unloading and handling charges for any material that may be rejected by the city, including freight charges for return or disposal of such rejected material.

13.2 The cost of testing poles that are subsequently rejected for non-compliance with the specification shall be charged to the contractor.

14. PEA GRAVEL: The pea gravel must consist of particles from natural gravel deposits and shall be composed of clean, hard, tough, durable pebbles free from adherent coatings, soft, flat, or elongated particles, and organic or other deteriorative matter. The following limits apply to deteriorative substances in the pea gravel.

Chert	not over 4% by weight
Coal	not over ½% by weight
Clay lump and friable particles	not over ½% by weight
Soft fragments	not over 1% by weight
Any combination of the above	not over 4% by weight
Flat, elongated or laminated pcs.	not over 10% by weight

(Flat and elongated particles are those having a length more than five (5) times the average thickness)

Grading requirements of the pea gravel are as follows:

Passing 3/8 inch sieve	95% to 100%
Passing No.4 sieve	25% to 50%
Passing No.8 sieve	0% to 5%

Each unit will require approximately 0.25 cubic yard of pea gravel.

C Construction

The direct bury pole is to be set as illustrated in the plans. The excavated holes are to be 14 or 16 inches in diameter and to a depth of 6 feet 6 inches depending on manufacturers' pole butt length. The holes can be bored, hydrovaced, or hand dug but all shall be cylindrical. If any part of the hole is within three feet of a buried utility, the holes must be hand dug or hydrovaced. No other method of setting poles is acceptable. The poles should be parallel and perpendicular to the horizon once set.

In some cases, the poles are to be installed in areas of concrete walk. Prior to concrete removal, the concrete should be saw cut to allow adequate room for pole and cable installation. Saw cutting for removal should be square or rectangular in shape. The contractor shall be responsible for disposing all debris from excavation and removed from site.

There is to be a minimum 6-inch bed of tamped pea gravel for the pole to set on. Then pea gravel is to be backfill around the pole and be tamped every 12 inches and filled to within 3 inches of finished grade.

In areas where concrete walk was removed, felt paper is to be installed around the base of pole and 3 inches of concrete installed. Concrete shall be the standard 5 bag mix, and the finished surface should match adjacent grades.

Grass areas that were disturbed during construction shall be filled with 3 inches of topsoil and sod to match the adjacent finished grade. Addresses are to be stenciled to the pole as shown on the plan.

Pole is to be wired as shown on the plans. A riser cables in pole shall be 50 feet in length and cut from copper 2#12 UF with ground cable. One wire shall be black, the other shall be white, and the ground can be either bare or green. All splicing is to be done inside the hand hole. The ground wires shall be spliced inside the hand hole and grounded to the housing of each fixture. The cable shall conform to NEC Article 340. The riser cable shall be continuous without splices. The electrical system in use utilizes a full system ground. The neutral is not to be grounded at any point.

D Measurement

The department will measure Pole Type 3 Direct Bury 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.0060.313	Pole Type 3 Direct Bury	EACH

Payment is full compensation for the pole, riser cable or cables, pea gravel, and all connections. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

76. Poles Type-8, Item SPV.0060.316.

A Description

This special provision describes providing and installing Poles Type-8 (26 Ft. Aluminum, Direct Bury) as shown in the plans and according to the following.

The minimum requirements for a Poles Type-8 (26 Ft. Aluminum, Direct Bury) assembly. All parts not specifically mentioned, which are necessary, or which are regularly furnished in order to provide this pole, shall be furnished, and shall conform in strength, quality of material and workmanship to that usually provided by the engineering practice indicated in this specification. All work shall be according to standard spec 651.

The aluminum street lighting pole assembly to be furnished under this specification is to be round and tapered. The pole assembly shall be complete with shaft, pole cap, hardware, and base coating. All screws and fasteners shall be stainless steel or other approved materials.

The Poles Type-8 (26 Ft. Aluminum, Direct Bury) street lighting pole assembly shall be according to this specification and City of Milwaukee (DPW-Infrastructure Services Division) Drawing #B-86-32 dated October 27, 1986.

Minor deviations on the rest of the pole assembly that will not affect the strength, appearance, vertical and horizontal stability of the pole will be permitted, but all such deviations shall be approved by the City of Milwaukee Street Lighting Engineering.

B Materials

B.1. General

The Poles Type-8 (26 Ft. Aluminum, Direct Bury) shaft shall be tapered from the top of the pole to the ground line. Horizontal and vertical stability shall be obtained by welding a 4" channel across the bottom of the shaft in line with the cable entrance holes. The channel is to extend 1" past the shaft wall. Dimensions from the pole top to the bracket mounting plate and the ground line to the top of the pole shall be rigidly adhered to.

B.1.2. Cable Entrance

Cable entrance holes shall be provided on both sides of the pole and shall be 2” diameter (minimum) shall be located 12” below ground line and shall have grommets installed to prevent damage to the cable. They shall be 90 degrees from the mounting brackets.

B.1.3. Pole Cap

The pole cap may be either cast, stamped, spun, etc., and have provisions to affix the cap firmly to the shaft.

B.1.4. Base Coating

The base coating shall be painted, sprayed or dipped. Both the inside and outside of the shaft shall be coated from the bottom of the shaft to a point 2" ± above the ground line. The base coating shall be a Polyamide Epoxy Pittsburgh Aquapon or equal, applied unthinned and shall be applied before installing the grommets in the cable entrance holes. The channel welded to the bottom of the shaft must be coated with the same material as above.

B.1.5. Hand Hole

The hand hole shall be 4" x 6" nominal. A ¼”-20 tapped hole and ¼"-20 NC by ¾" long 18-8 stainless steel button head Torx T27H tamper proof screw shall be provided in the shaft opposite the hand hole for grounding purposes. Hand hole cover shall be secured to the pole using ¼"-20 NC by ¾" long 18-8 stainless steel button head Torx T27H tamper proof screws. The hand hole is to be 90 degrees from the bracket arms and in the same plane with the cable entrance holes.

B.1.6. Pole Design

The 26 ft. aluminum pole assembly furnished under this specification shall support a 50 pound fixture of an EPA of 3 on each arm when equipped with a pair of 6' upsweep arms. The pole design shall meet the latest revision of the AASHTO specifications for this pole as defined in the Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. The manufacturer shall submit engineering calculations for lighting poles to show that maximum stress and deflections do not exceed specified performance requirements under full design loading, as well as other certified reports and data which indicate that the poles meet all load requirements.

B.1.7. Engineering Calculations

Engineering calculations shall be prepared and sealed by an engineer licensed in the State of Wisconsin. The entire horizontal and vertical “wind sail” area of the pole assembly subject to wind load including arm and luminaire shall be designed to withstand the AASHTO standard specifications, from above, for wind load requirements for a 90 MPH wind load with gust factor computed per section 3.8.5.and height and exposure factors from table 3- B.1.6. Pole Design.

B.1.8. Welding

All Welding shall be according to the latest applicable A.S.M.E. Standards.

B.1.9. Manfacturer Warranty

The manufacturer warrants that the pole supplied will be of merchantable quality will conform to applicable specifications, drawings, designs, samples, or descriptions, will be free from defects in materials and workmanship and will be fit for the particular purpose intended.

B.2. Pea Gravel

The pea gravel must consist of particles from natural gravel deposits and shall be composed of clean, hard, tough, durable pebbles free from adherent coatings, soft, flat, or elongated particles, and organic or other deteriorative matter. The following limits apply to deteriorative substances in the pea gravel.

Chert	not over 4% by weight
Coal	not over ½% by weight
Clay lump and friable particles	not over ½% by weight
Soft fragments	not over 1% by weight
Any combination of the above	not over 4% by weight
Flat, elongated or laminated pcs. (Flat and elongated particles are those having a length more than five times the average thickness)	not over 10% by weight

Grading requirements of the pea gravel are as follows:

Passing 3/8-inch sieve	95% to 100%
Passing No.4 sieve	25% to 50%
Passing No.8 sieve	0% to 5%

Each unit will require approximately 0.25 cubic yard of pea gravel.

B.3. Riser Cable

Pole is to be wired as shown on the plans. A separate riser cable will be required to be installed inside of pole for each lighting fixture on the pole. The riser cable shall be 35 feet in length and cut from copper 2#12 UF with ground cable. One wire shall be black, the other shall be white, and the ground can be either bare or green. All splicing is to be done inside the metal housing. The ground wires shall be spliced inside the metal housing and grounded to the housing and each fixture. The cable shall conform to NEC Article 340. The riser cable shall be continuous without splices. The electrical system in use utilizes a full system ground. The neutral is not to be grounded at any point.

C Construction

C.1.

The direct bury pole is to be set as illustrated in the plans. The holes are to be 12 or 14 inches in diameter and to a depth of 5 feet 6 inches. The holes can be bored, hydrovac, or hand dug but all shall be cylindrical. If any part of the hole is within three feet of a buried utility, the holes must be hand dug or hydrovac. No other method of setting poles is acceptable. The poles should be parallel and perpendicular to the horizon once set.

C.2.

In some cases, the poles are to be installed in areas of concrete walk. Prior to concrete removal, the concrete should be saw cut to allow adequate room for pole and cable installation. Saw cutting for removal should be square or rectangular in shape. The contractor shall be responsible for disposing all debris from excavation and removed from site.

C.3.

There is to be a minimum 6 inch bed of tamped pea gravel for the pole to set on. Then pea gravel is to be backfill around the pole and be tamped every 12 inches and filled to within 3 inches of finished grade.

C.4.

In areas where concrete walk was removed, felt paper is to be installed around the base of pole and 3 inches of concrete installed. Concrete shall be the standard 5 bag mix, and the finished surface should match adjacent grades.

C.5.

Grass areas that were disturbed during construction shall be filled with 3 inches of topsoil and sod to match the adjacent finished grade. Addresses are to be stenciled to the pole as shown on the plan.

D Measurement

The department will measure Poles Type-8, by each unit of measure, 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.0060.316	Poles Type-8	EACH

Payment is full compensation for the pole, riser cable or cables, pea gravel, and all connections. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

77. Poles Type-13 (30 ft Aluminum, Bolt Down), Item SPV.0060.321.

A Description

A.1

The minimum requirements for a 30'-0" bolt down aluminum street lighting pole assembly. All parts not specifically mentioned, which are necessary, or which are regularly furnished in order to provide this pole, shall be furnished, and shall conform in strength, quality of material and workmanship to that usually provided by the engineering practice indicated in this specification. All work shall be according to standard spec 651.

A.2

The aluminum street lighting pole assembly to be furnished under this specification is to be round and tapered. The pole assembly shall be complete with shaft, pole cap, hardware, and base coating. All screws and fasteners shall be stainless steel or other approved materials.

A.3

The bolt down 30'-0" aluminum street lighting pole assembly shall be according to this specification and City of Milwaukee (DPW-Infrastructure Services Division) Drawing #B-14-14.

A.4

Minor deviations on the rest of the pole assembly that will not affect the strength, appearance, vertical and horizontal stability of the pole will be permitted, but all such deviations shall be approved by the City of Milwaukee Street Lighting Engineering.

A.5

The work under this item is for furnishing and installation of the following material as shown in plans and according to the following.

B Materials

B.1.1 Pole

The 30'-0" aluminum pole shaft shall be tapered from the top of the pole to the mounting plate. Dimensions from the pole top to the bracket mounting plate and from the base plate to the top of the pole, as shown on the drawing, shall be rigidly adhered to.

B.1.2

The base plate shall be cast from either type 319 or 356T6 aluminum. The four elongated mounting holes shall be on 90-degree centers on an 11" bolt circle. The mounting slots shall be sized for 1 inch mounting bolts. The base shall be welded to the shaft so the arms bisect the angle between mounting holes at 45 degrees.

B.1.3

The poles shall be built as a double bracket unit and supplied with one cover plate per pole.

B.1.4
The pole cap is to be cast aluminum, and be secured to the pole by three equally spaced ¼”-20 hex head stainless steel screws.

B.1.5 Hand Hole and Grounding
The hand hole shall be 4" x 6" nominal. A ¼”-20 NC taped hole and bolt shall be provided in the shaft opposite the hand hole for grounding purposes. The hand hole cover shall be secured to the pole using ¼"-20 NC by ¾" long 18-8 stainless steel button head Torx T27H tamper proof screws. The hand hole is to be 90 degrees from the arms. The center line of the hand hole shall be 14 inches above the mounting plate.

B.1.6 Loading and Stability
The 30’-0” assembly furnished under this specification shall support a 50 pound fixture of an EPA of 3 on each arm when equipped with a pair of 6' upsweep arms. All pole designs shall meet the latest revision of the AASHTO specifications for these poles as defined in their Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. The manufacturer shall submit engineering calculations for lighting poles to show that maximum stress and deflections do not exceed specified performance requirements under full design loading, as well as other certified reports and data which indicate that the poles meet all load requirements, within 30 days of the bid award. Engineering calculations shall be prepared and sealed by an engineer licensed in the State of Wisconsin.

The entire horizontal and vertical “wind sail” area of the pole assembly subject to wind load including arm and luminaire shall be designed to withstand the AASHTO standard specifications, from above, for wind load requirements for a 90 MPH wind load with gust factor computed per section 3.8.5.and height and exposure factors from table 3-5.

B.1.7
All welding shall be according to the latest applicable A.S.M.E. Standards.

B.1.8
The manufacturer warrants that the pole supplied will be of merchantable quality will conform to applicable specifications, drawings, designs, samples, or descriptions, will be free from defects in materials and workmanship and will be fit for the particular purpose intended.

B.2 Riser Cable
Pole is to be wired as shown on the plans. A separate riser cable will be required to be installed inside of pole for each lighting fixture on the pole. The riser cable shall be 35 feet in length and cut from copper 2#12 UF with ground cable. One wire shall be black, the other shall be white, and the ground can be either bare or green. All splicing is to be done inside the metal housing. The ground wires shall be spliced inside the metal housing and grounded to the housing and each fixture. The cable shall conform to NEC Article 340. The riser cable shall be continuous without splices. The electrical system in use utilizes a full system ground. The neutral is not to be grounded at any point.

C Construction
Install the bolt down pole as specified in the plan and details. After razing the pole use normal pole shaft raking techniques to ensure the centerline of shaft appears vertical to the horizon.

D Measurement
The department will measure Poles Type-13 (30 ft Aluminum, Bolt Down) 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.0060.321	Poles Type-13 (30 ft Aluminum, Bolt Down)	EACH

Payment is full compensation for the pole, riser cables, and all connections. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

78. Metal Pedestal Cabinet (4-Inch x 4-Inch x 36-Inch), Item SPV.0060.332.

A Description

The metal housing is a cabinet housing that is 4” x 4” x 36” and is for secondary cable slices. All work shall be according to standard spec 651.

B Materials

The housing shall be constructed of 14 Gauge G90 Galvanized steel. The housing shall be painted inside and out with a baked powder coat of RAL #6021 Pale Green enamel. The housing shall be according to Drawing Number B-04-07 of the typical details in the plan set.

C Construction

Metal housing is to be located 180 degrees from hand hole on pole. The metal housing is to be attached by using 3/4 inch by 0.20 inch stainless steel banding. A mini raceway between the pole and housing needs to be established. This is accomplished by drilling through the backside of the metal housing and into the aluminum pole. A 1-1/4" chase nipple to be inserted through both the metal housing and pole. The chase nipple is to be secured with a 1-1/4" lock nut attached from inside of pole. After all splices have been completed, and have been approved the housing shall be closed and sealed with a Fargo model GM #320 locking device or approved equal. All splices in metal housings are to be made in approved manner as illustrated on the plans.

D Measurement

The department will measure Metal Pedestal Cabinet (4-Inch x 4-Inch x 36-Inch) 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.0060.332	Metal Pedestal Cabinet (4-Inch x 4-Inch x 36-Inch)	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

79. Water Tight Junction Box Splicing; Item SPV.0060.342.

A Description

This section describes materials, general requirements, personnel qualifications, construction methods, and testing requirements used to perform electrical work required.

All work shall be according to standard spec 651.

B Materials

B.1

Furnish materials conforming to the WSEC, consisting of chapter comm. 16 of the WEC combined with the NEC.

B.2

All materials furnished under this contract for street lighting installation are subject to approval by the City of Milwaukee street lighting engineer. A prototype with the cable installed and spliced shall be submitted to the engineer for approval prior to field installation.

B.3

The contractor shall furnish a complete list of materials to be furnished and used for street lighting. Such list shall include names and addresses of manufactures, together with catalog numbers, certificates of compliance, specifications, and other product information requests by the engineer. The list shall be submitted within 10 calendar days of execution of contract. No material shall be incorporated into the lighting system prior to the written approval of the engineer. Approval does not change the intent of the specifications. The contractor shall not substitute or make changes in material without resubmitting for approval

C Construction

C.1 General Requirements

Work under items related to the street lighting system shall conform to the National Electrical Code (NEC), 2011 Edition, or the latest edition adopted by the State of Wisconsin, Wisconsin Department of Commerce Chapter Comm 16 (Electrical) State of Wisconsin electrical code, City of Milwaukee code, and these special provisions and good electrical practices. The contractor shall not take advantage of lack of details in plans or these specifications where to do so would conflict with the applicable code and standards.

C.2 Personnel Qualifications

An electrician holding all appropriate licenses (including City of Milwaukee Licenses) shall supervise all work done referring to the street lighting system. All splices shall be made by an electrician. For the purposes of this contract, an electrician is a person who served a four year apprenticeship and passed state exams.

C.3 Splices

The contractor shall perform splicing in a water tight junction box with materials listed on Street Lighting Standard Details 139. Cable runs shall be continuous between pole locations, and no splicing of cable outside the water tight junction box will be allowed. The water tight junction box shall reside in the vault and above the cable coils called for in Street Lighting Standard Details 139. The 3#12UF cable with the liquid tight conduit coming out from the splice box shall be brought to the pole hand hole where it will be spliced with the riser cable to the light fixture. Oxide inhibitor (OX4) or equivalent shall be applied on all splices points.

All cable direction shall be tagged in the junction box and vault.

Hand hole splices should be completed using a multi-tap connector. The connector should be rated for 600 volts, conductor range #1/0 through #14 AL-CU, have an insulating cover rated at 105 degrees Celsius, and meet or exceed ANSI 119.4 Class A specifications for reliability.

C.4 In Service Distribution Systems

The contractor shall not make splices to any underground connections or to any existing distribution system. As indicated on plans, underground splices and connections to existing underground circuitry will be completed by city electricians.

C.5.Testing

After the city makes preliminary acceptance of the street lighting system, it shall be monitored by the City of Milwaukee, Street Lighting Electrical Services during a 60 calendar day operational “burn in”. Final acceptance of the lighting system will be based on its meeting standard operational criteria as stated in these specifications. The contractor shall be responsible for all necessary repairs and adjustments to the lighting system to meet standard operational criteria.

D Measurement

The department will measure Water Tight Junction Box Splicing 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.0060.342	Water Tight Junction Box Splicing	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

80. Luminaire Arms Mounting Clamps Poles Type -1 & 2 Single Bracket., Item SPV.0060.355.

A Description

The Luminaire Arms Mounting Clamps Poles Type -1 & 2 Single Bracket (A21 & A26 Pole) two piece mounting clamp is fabricated by the City of Milwaukee. The clamp is furnished by the City of Milwaukee

and installed by the contractor as hereinafter specified. All work shall be in accordance with standard spec 651.

B Materials

The two piece mounting clamp is cast aluminum alloy #713 and is fabricated per City Specification. Drawings: D-79-9 (*Front Bracket Plate*), D-79-10 (*Rear Bracket Plate*).

Contractor can pick up the mounting clamps from the City of Milwaukee;

Contact Storeroom Inventory Manager at (414) 286-5947 at least 5 days in advance

C Construction

The clamp shall be attached to the pole by aligning the cable slot on the pole with cable slot on bracket and securing bracket to pole using four stainless steel 1/2" bolts, washers, lock washers and nuts.

D Measurement

The department will measure the two halves of the Luminaire Arms Mounting Clamps Poles Type -1 & 2 Single Bracket as one complete unit by each unit of measure, 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.0060.0355	Luminaire Arms Mounting Clamps Poles Type -1 & 2 Single Bracket	EACH

Payment is full compensation for furnishing labor, equipment, coordination and incidentals necessary to complete the work.

81. Luminaire Utility LED 2, Item SPV.0060.375.

A Description

This special provision describes furnishing and installing Luminaire Utility LED 2 street lighting fixture according to current City of Milwaukee Electrical methods and National Electrical Code standards. All work shall be according to standard spec 651.

B Materials

Furnish
Luminaire Utility LED 2 with I.E.S. Type 2 Light Distribution (NEMA label '2LED2')

1. American Electric ATBM-D-MVOLT-R2-4B--3K-20-NL-P7-SH
2. Leotek GC1-40F-MV-WW-2-GY-700-PCR7-SC-WL-BBL
3. or approved equal

and/or

Furnish
Luminaire Utility LED 2 with I.E.S. Type 3 Light Distribution (NEMA label '2LED3')

1. American Electric ATBM-D-MVOLT-R3-4B--3K-20-P7-SH
2. Leotek GC1-40F-MV-WW-3-GY-700-PCR7-SC-WL-BBL
3. or approved equal

TECHNICAL SPECIFICATIONS: All features below shall be incorporated into the equipment and all items shall be furnished and installed into a complete unit ready for operation.

TYPE: The LED luminaires purchased under this contract will be of American Electric ATBM, Leotek GC1 series, or approved equal with the above order number. The luminaires shall be designed so it can efficiently produce uniform illumination according to I.E.S. Type II light distribution and/or the I.E.S. Type III light distribution according to the lighting plan.

HOUSINGS: The housing and door shall be rugged, high quality, cast aluminum for maximum strength, durability and lasting beauty. All castings shall be free from pits, blowholes, or other irregularities. All edges are to be free from burrs.

1. Housing: The housing shall have an integral leveling pad or other suitable means for quick, easy and proper positioning of the luminaire.
2. Door: The door shall be hinged and easily opened for routine maintenance. All component parts shall be easily accessible with the lower housing opened. Tool-less entry is required.
3. Leveling: A Bubble level is to be located inside the electrical compartment for easy leveling at installation.
4. Hinges: Hinges shall be so constructed and designed to accurately position the door and assure a positive locking with the housing. The hinges shall be provided with a safety catch to prevent the accidental disengagement of the door during servicing.
5. Finish: The entire housing shall be polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process shall yield a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117)
6. Color: The luminaire shall be grey in color unless otherwise specified.
7. Label: There shall be a NEMA label '2LED2' and/or '2LED3' clearly visible at 30 feet height attached to the door of the luminaire.
8. In addition, the luminaire complete model number and manufacturing date shall be indicated inside the housing.

LED/OPTICAL ASSEMBLY:

The LED assembly is to be chip on board. The LED module is to be enclosed and sealed with a borosilicate Prismatic Glass optical assembly. The combination shall be NEMA IP66 rated for dust and water resistant. The L_{70}, per IES TM-21, must be greater or equal to 100,000 hours of operational time at 25 degrees Centigrade.

The color temperature is to be 3,000K CCT.

POWER SUPPLY:

The Electronic driver must have an expected life of 100,000 hours at a 25°C ambient.

It is to be rated at 240 volts, 60Hz. A driver with multiple input voltages can be supplied as long as it can operate at 240 volts.

SURGE PROTECTION:

A surge protector which provides a minimum of 10kV/10kA protection as per IEEE/ANSI C62.41 Category C is to be included. There shall be a visual indicator showing the surge protector is operational.

TERMINAL BLOCK: A heavy duty terminal block shall be provided which will accept wire sizes up to #6 A.W.G. The terminal block shall be compatible with either aluminum or copper wire.

MOUNTING: Mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter. Provide a 4 bolt clamping mechanism with 3G vibration rating per ANSI C136.

HARDWARE: All nuts, bolts, latches, etc. furnished with the luminaire shall be fabricated from stainless steel or non-ferrous materials.

PHOTOCONTROL: There is to be no photocell supplied.

WARRANTY: The contractor and/or the manufacturer warrants that goods sold hereunder will be merchantable quality, will conform to applicable specifications, drawings designs, samples or descriptions, will be free from defects in material and workmanship and will be fit for the particular purpose intended by City of Milwaukee.

i. This warranty will remain in effect for five years from date of acceptance.

   Under this provision, the contractor and/or manufacturer agrees to repair or replace within a reasonable time, any part, feature or product found to be defective during the warranty period at no cost to the city.

C Construction

Install lighting fixture on the mounting bracket on the pole according to manufacturer standards. Provisions for inserting 2#12UF cable between the fixture and cable connecting point at the transformer base shall be included per applicable details within design set.

D Measurement

The department will measure Luminaire Utility LED 2 by each 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.0060.375	Luminaire Utility LED 2	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

82. Luminaire Utility LED 3, Item SPV.0060.376.

A Description

This special provision describes furnishing and installing Luminaire Utility LED 3 street lighting fixture according to current City of Milwaukee Electrical methods and National Electrical Code standards. All work shall be according to standard spec 651.

B Materials

Furnish
Luminaire Utility LED 3 with I.E.S. Type 2 Light Distribution (NEMA label '3LED2')

1. American Electric ATBM-H-MVOLT-R2-4B-3K-20-NL-P7-SH
2. Leotek GC2-96G-MV-WW-2R-GY-450-PCR7-SC-WL-BBL
3. or approved equal and/or

Furnish
Luminaire Utility LED 3 with I.E.S. Type 3 Light Distribution (NEMA label '3LED3')

1. American Electric ATBM-H-MVOLT-R3-4B-3K-20-NL-P7-SH
2. Leotek GC2-96G-MV-WW-3R-GY-450-PCR7-SC-WL-BBL
3. or approved equal

TECHNICAL SPECIFICATIONS: All features below shall be incorporated into the equipment and all items shall be furnished and installed into a complete unit ready for operation.

TYPE: The LED luminaires purchased under this contract will be of American Electric ATBM, Leotek GC2 series, or approved equal with the above order number. The luminaires shall be designed so it can efficiently produce uniform illumination according to I.E.S. Type II light distribution and/or the I.E.S. Type III light distribution according to the lighting plan.

HOUSINGS: The housing and door shall be rugged, high quality, cast aluminum for maximum strength, durability and lasting beauty. All castings shall be free from pits, blowholes, or other irregularities. All edges are to be free from burrs.

1. Housing: The housing shall have an integral leveling pad or other suitable means for quick, easy and proper positioning of the luminaire.
2. Door: The door shall be hinged and easily opened for routine maintenance. All component parts shall be easily accessible with the lower housing opened. Tool-less entry is required.
3. Leveling: A Bubble level is to be located inside the electrical compartment for easy leveling at installation.
4. Hinges: Hinges shall be so constructed and designed to accurately position the door and assure a positive locking with the housing. The hinges shall be provided with a safety catch to prevent the accidental disengagement of the door during servicing.
5. Finish: The entire housing shall be polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process shall yields a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117)
6. Color: The luminaire shall be grey in color unless otherwise specified.

7. Label: There shall be a NEMA label ‘3LED2’ and/or ‘3LED3’ clearly visible at 30 feet height attached to the door of the luminaire.

8. In addition, the luminaire complete model number and manufacturing date shall be indicated inside the housing.

LED/OPTICAL ASSEMBLY: The LED assembly is to be chip on board. The LED module is to be enclosed and sealed with a borosilicate Prismatic Glass optical assembly. The combination shall be NEMA IP66 rated for dust and water resistant. The L_{70}, per IES TM-21, must be greater or equal to 100,000 hours of operational time at 25 degrees Centigrade.

The color temperature is to be 3,000K CCT.

POWER SUPPLY: The electronic driver must have an expected life of 100,000 hours at a 25°C ambient.

It is to be rated at 240 volts, 60Hz. A driver with multiple input voltages can be supplied as long as it can operate at 240 volts.

SURGE PROTECTION: A surge protector which provides a minimum of 10kV/10kA protection as per IEEE/ANSI C62.41 Category C is to be included. There shall be a visual indicator showing the surge protector is operational.

TERMINAL BLOCK: A heavy duty terminal block shall be provided which will accept wire sizes up to #6 A.W.G. The terminal block shall be compatible with either aluminum or copper wire.

MOUNTING: Mast arm mount is adjustable for arms from 1-1/4” to 2” (1-5/8” to 2-3/8” O.D.) diameter. Provide a 4 bolt clamping mechanism with 3G vibration rating per ANSI C136.

HARDWARE: All nuts, bolts, latches, etc. furnished with the luminaire shall be fabricated from stainless steel or non-ferrous materials.

PHOTOCONTROL: There is to be no photocell supplied.

WARRANTY: The manufacturer warrants that goods sold hereunder will be merchantable quality, will conform to applicable specifications, drawings designs, samples or descriptions, will be free from defects in material and workmanship and will be fit for the particular purpose intended by City of Milwaukee.

i. This warranty will remain in effect for five years from date of acceptance.

   Under this provision, the manufacturer agrees to repair or replace within a reasonable time, any part, feature or product found to be defective during the warranty period at no cost to the city.

C Construction

Install lighting fixture on the mounting bracket on the pole according to manufacturer standards. Provisions for inserting 2#12UF cable between the fixture and cable connecting point at the transformer base shall be included per applicable details within design set.

D Measurement

The department will measure Luminaire Utility LED 3 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.0060.376	Luminaire Utility LED 3	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

83. Remove Luminaire; Item SPV.0060.387.

A Description

This work shall consist of the removal of existing street lighting luminaire.

B (Vacant)

C Construction

C.1

The contractor is responsible to disconnect all cables and wiring that is mounted on or in the poles and carefully remove luminaire from street light pole.

C.2

Contractor is responsible to protect and deliver the removed street lighting equipment to 1540 West Canal Street, Milwaukee, Wisconsin. The contractor should make arrangements for the delivery of this material between the hours of 7:30 AM and 2:30 PM and call 24 hours in advance (telephone (414) 286-5944). No delivery will be accepted after 2:30 PM.

D Measurement

The department will measure the Remove Luminaire complete per pole 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.0060.387	Remove Luminaire	EACH

Payment is full compensation for removal of complete measured as provided above, will be paid for at the contract unit price each, which price will be payment in full for the removal of luminaire. This also will include all other necessary materials, labor and equipment required for the removal of this material.

84. Adjusting CUC Manhole Cover, Item SPV.0060.400.

A Description

This special provision describes adjusting the existing chimney of the block, precast, or brick round manholes; furnishing, installing and removing protection of the cables in the manhole during adjustment operations. Perform work according to the standard specifications, the provisions of the article Adjusting Manhole Covers, as shown on the plans, and as hereinafter specified.

B Materials

Furnish and install materials that conform to the requirements of standard spec 519. Salvage and reinstall existing covers on the manholes. The city will supply covers designated for replacement. Contractor shall contact Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frames and lids from the DPW Field Headquarters at 3850 N. 35th St. Contractor must have the “Castings Requisitions Form” which shall be supplied by the city at the Preconstruction Meeting to obtain the covers.

C Construction

Report any pre-existing problems to Ms. Karen Rogney of City Underground Conduits Section at (414) 286-3243 three working days in advance of any construction on manholes.

Before removing the pavement around the manhole, the contractor shall place a ¾-inch plywood cover or equal over existing active Street Lighting, Traffic Control, Communication or private vendor electrical cables. This cover shall be properly supported to/at the manhole floor.

Break out and remove pavement around manhole. Remove existing covers and store and secure them properly. Any damaged, lost, or stolen covers shall be the responsibility of the contractor and shall be replaced at contractor’s expense.

Remove existing chimney to surface of concrete roof slab. If manhole does not have an existing concrete roof slab, remove sufficient chimney as to provide adequate corbel to fit new cast iron frame and cover.

Adjust manhole cover to proposed grade using bricks or concrete rings as necessary. Completely underpin entire flange area of manhole frame with mortar, bricks and/or concrete rings. Remove wedges/shims. Fill voids with grout. Do not back plaster inside walls.

After completion of paving, remove the temporary ¾-inch plywood cover or equal which is over the existing electrical cables in the manhole as mentioned above.

Notify Ms. Rogney three working days in advance of completion of each manhole adjustment, for inspection and acceptance of work performed. The contractor will receive no payment until the above work is approved by City Underground Conduits.

D Measurement

The department will measure Adjusting CUC Manhole Cover as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.400	Adjusting CUC Manhole Cover	EACH

Payment is full compensation for furnishing all required materials, exclusive of frames, grates, or lids available and designated for adjusting; for removing, reinstalling and adjusting the covers; and for furnishing all labor, tools, equipment and incidentals necessary for adjusting each cover, complete according to the requirements of the plans and contract. Covers to be adjusted and which are rendered unfit for use by the contractor through the contractor's operations will be replaced by the contractor in kind at the contractor's own cost and expense.

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85. 4' Diameter Manhole Type CUC, Item SPV.0060.401.

A Description

The work under this special provision consists of a 4'-0" round manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, according to standard spec 301, 611 and 501, and as hereinafter provided.

B Materials

Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the single cage circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3" horizontally and lines of #10 steel wire spaced 8" vertically located in the center of the wall.

Two lifting inserts for 1-1/2" diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8" diameter galvanized steel 1-11/16" pulling-in eyes shall be cast in the wall of the base section directly across from each duct entrance.

Four 5/8" diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary.

Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes and/or rack bolt inserts.

The city will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the "Casting Requisition Form" which shall be supplied by the city at the Preconstruction Meeting.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

4' Diameter Manholes Type CUC shall be installed according to standard spec 611.3.

Install the top of the roof deck at a standard depth of 18" below finished grade where possible. A minimum depth of 12" from finished grade to the top of the roof deck must be maintained.

D Measurement

The department will measure 4' Diameter Manhole Type CUC by each individual manhole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.401	4’ Diameter Manhole Type CUC	EACH

Payment is full compensation for all excavation work and disposal of material; for, furnishing and installing all materials, including bricks, and coarse aggregate, bedding and backfilling, concrete forms, concrete placement, appurtenances, and backfilling; and for all labor, tools, equipment and incidentals necessary to complete the work.

86. Installing Conduit Into Existing Manhole, Item SPV.0060.425.

A Description

This special provision describes providing locating existing conduit system manholes and installing new conduit into those manholes at the locations shown on the plans. The contractor shall verify existing conduit manhole locations with the City of Milwaukee, and shall maintain any existing conductors, fibers, and conduit paths without interruption or damage. Repair and restoration of all disturbed areas resulting from the work shall be according to the pertinent provisions of the standard specifications, and as hereinafter provided.

B Materials

Furnish conduit, as provided and paid for under other items in this contract. All materials shall conform to the pertinent provisions of the standard specifications unless otherwise noted.

C Construction

Carefully expose the outside of the existing structure without disturbing any existing conduits or cabling.

Drill the appropriate sized hole in a concrete structure or saw and remove full sections of block or bricks from the existing structure for the entering of conduit at a location within the structure that will not disturb the existing cabling and will not hinder the installation of new cabling within the installed conduit. This work may include the removal of the existing abandoned conduit from the structure to allow for the installation of the new conduits as indicated on the plans.

Fill any void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure.

Carefully tamp backfill into place.

All disturbed areas shall be repaired and restored in kind.

D Measurement

The department will measure Installing Conduit Into Existing Manhole by each individual unit, acceptably installed. Up to six conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of six, or conduits entering at significantly different entry points into the existing manhole will constitute multiple units.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.425	Installing Conduit Into Existing Manhole	EACH

Payment is full compensation for drilling holes; removing blocks: removing bricks: removing abandoned conduit; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for disposal of surplus materials; for making inspections; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

87. Sawing Concrete-Encased Duct Package, Item SPV.0060.426.

A Description

The work under this provision consists of full depth sawing of cement encased multiple duct conduit below grade; preparing sawed conduit ends to accept adaptor couplings needed to allow transition of new PVC conduit from existing clay, fiber or PVC conduit (See Item SPV.0090.402).

B (Vacant)

C Construction

C.1 Equipment

Use ring saw or concrete cutting chainsaw for all full-depth cuts. Use diamond blades. The contractor may use a high speed 16” construction saw on duct systems with less than 4-ducts when approved by the engineer.

C.2 Sawing Encasement

Carefully expose the outside of the existing cement encasement. The contractor is to verify that the conduit lines are free of all cabling. Saw a full depth transverse cut through the encasement. Saw straight cuts with the surface remaining vertical over its full depth. Hand chip concrete away from sawed conduit duct ends to allow transition fittings to be placed over the ends. The exposed conduit will be protected from damage. Any damaged conduit ends will be the responsibility of the contractor and will require a resaw at the contractor’s expense.

D Measurement

The department will measure Sawing Concrete-Encased Duct Package as each individual unit, acceptably completed. Up to 6 conduits per cement encasement will be considered a single unit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.426	Sawing Concrete-Encased Duct Package	EACH

Payment is full compensation for sawing concrete encased duct packages full depth and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work according to the requirements of the plans and contract.

88. Poles Type 5 Concrete H17, Item SPV.0060.800.

A Description

The work under this item is for furnishing and installation of the following material as shown in plans and according to the following.

B Materials

The pole shall be concrete, one-piece with dimensions, taper and cross section as shown in the plan set. The butt section may be round or octagonal in shape. The pole shall be manufactured as a prestressed and reinforced centrifugally spun pole as set forth in ASTM C1089-88 unless otherwise directed.

B.2

B.2.1 Concrete Aggregates:

Concrete aggregates shall meet all the requirements of ASTM C33. All aggregate employed in the manufacture of the concrete poles shall be a combination of hard black stone and white crystalline stone. The texture and color of the aggregates shall be approved by the City of Milwaukee Purchasing Division DOA.

The aggregates shall be of adequate strength in resisting crushing stresses and impervious to moisture; of such character as not to deteriorate or change as a result of continued exposure for years to the weather; and of such character that it crushes into masses approximately cubical in form, not in flakes. Aggregates shall all pass a three-eight inch sieve, with a minimum size passing a #100 sieve.

B.2.2 Cement:

The cement shall be fresh and free from lumps and shall conform to specifications of the American Society of Testing Materials, serial designation C-150, Type I or Type III.

B.2.3 Water:

The water employed shall be free from acids, alkalis, oil, or organic matter.

B.2.4 Materials Proportion:

The materials combined to produce the concrete shall be proportioned by weight.

B.2.5 Steel:

The surface of all steel shall be free from dirt, oil, or grease. The steel used as either reinforcing or prestressing shall be adequately sized to meet the strength requirements of the finished poles, as herein specified. Longitudinal reinforcement, prestressing and spiral wrap shall comply with the latest version of the applicable ASTM standards. All prestressed wire shall be stressed to not less than 60% or more than 70% of its tensile strength.

B.2.6 Test of Materials:

Any and all of the above materials shall be subject to test at any time before use, as may be directed, and samples for this purpose shall be furnished by the contractor upon request.

B.3 Pole Strength

All poles furnished shall withstand a 90 mph wind load plus 30 percent gust factor and 400 lbs working load.

B.3.1

The pole design shall allow for a maximum load of not less than twice the working load.

B.3.2

The elastic limit at which any pole will actually fail to withstand any additional stress without permanent injury shall not be less than two and one-half times the working load.

B.4 Loading and Stability

The H17 supplied under this specification shall support a tenon mount 100 pound fixture with an EPA of 5. All pole designs shall meet the latest revision of the AASHTO specifications for these poles as defined in their Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals handbook.

The manufacturer shall submit engineering calculations for lighting poles to show that maximum stress and deflections do not exceed specified performance requirements under full design loading, as well as other certified reports and data which indicate that the poles meet all load requirements. Engineering calculations shall be prepared and sealed by an engineer licensed in the State of Wisconsin.

The entire horizontal and vertical “wind sail” area of the pole assembly subject to wind load including arm and luminaire shall be designed to withstand the AASHTO standard specifications, from above, for wind load requirements for a 90 MPH wind load with gust factor computed per section 3.8.5.and height and exposure factors from table

B.5 Cable Raceway

Each concrete pole shall have a hollow raceway at least 1 1/2 inches in diameter and continuous in a straight line, without appreciable offset, throughout its entire length.

B.5.1

The raceway shall be free from sharp projections or edges that might injure the insulated wire or cable sheath.

B.5.2

Dimensions and locations for lateral opening in the raceway are shown on the drawings.

B.5.3

All poles shall be furnished with hand hole. The hand hole shall be located on the face 90 degrees from the lateral opening in the butt of pole and shall have the minimum dimensions of 2-1/2" x 8". The cover shall be heat-treated cast aluminum, or other material as approved by the engineer, fastened to non-ferrous insert in the pole. The cover shall be secured to the pole using 1/4"-20 NC by 3/4" long 18-8

stainless button head Torx T27H tamper proof screws. Bolt down poles are to have the hand hole 90º to the slot opening at the top of the pole and be 2½" x 8".

B.5.4

Two lateral openings into the raceway, of dimensions and locations as shown on the drawings, shall be provided in the butt of the pole.

B.6. Concrete

B.6.1 Strength

The concrete strength shall meet the following requirements when tested according to A.S.T.M. C39.

a. Release of Prestressing Steel: Concrete cylinders made according to A.S.T.M. C31 shall attain a minimum strength of 3,500 p.s.i. at the time that prestressing is released.

b. 28 Days: Concrete cylinders made according to A.S.T.M. C31 shall attain a minimum strength of 8,000 p.s.i. at 28 days.

B.6.2 Admixture

All poles shall be manufactured with quality HSF (high silica fume) cement to reduce porosity in the concrete and increase compressive strength.

B.6.3 Testing

The engineer may sample and test the concrete at any time. Concrete samples made according to ASTM C31 shall be furnished by the contractor upon request of the engineer.

B.6.4 Process and Surface Finish

The finished concrete used in the manufacture of poles shall be a very dense product, free from undesirable air pockets or voids.

The concrete shall be compacted by the centrifugal process so that the surface is dense, with the coarse and fine aggregate evenly distributed. If requested to do so by the City of Milwaukee Purchasing Division - DOA, a sample shall be produced that is representative of the pole cross-section and at least 3 inches in length. The sample shall be submitted to the engineer for approval with respect to color, texture and finish. The concrete mix from which the sample was made shall be noted and submitted with the sample. A representative sample of all aggregates used also shall be submitted.

The mixture of aggregates shall be essentially uniform over the entire exterior surface of concrete poles furnished.

Size of the duct shall be controlled so that the prestressed and/or reinforcing rods are not embedded in "slurry" (i.e., water-cement-sand mix that collects in the pole core during the spinning process).

Following the casting operation, the pole shall be cured with low-pressure steam for as long as needed to reach the necessary strength to allow handling and release of pre-stressing wires. Poles shall remain in storage for as long as needed for the concrete to reach the required compressive strength. Poles shall meet the design strength before shipment is allowed.

To assure that poles are not prematurely exposed to freeze-thaw action and deicer, adequate curing of the concrete for development of sufficient strength to resist scaling and for reduction of water content of the concrete shall be the responsibility of the manufacturer.

The finished surface must be polished so that the color and surface smoothness are uniform over the entire surface. The face surface shall be sealed with a siloxane penetrating sealer and a high molecular weight acrylic copolymer or other sealing compounds that will yield equivalent degree of protection from water, salt, and/or other chemical infiltration and does not discolor or fade.

The entire lot of concrete poles to be furnished under this specification shall be uniformly consistent in color and finish.

Treatment with diluted acid to obtain the desired finish is not permitted.

The finished surface of all poles shall be free from visible pits, fins, grooves, patches, or other surface markings not specifically enumerated herein.

The top of the pole shall be flat and perpendicular to the longitudinal axis of the pole so that the pole cap will have a positive seat.

Chloride accelerators shall not be used in the manufacturing process.

B.7 Reinforcement

The reinforcing cage, spiral reinforcement and prestressing steel shall be placed in position and maintained in place during the centrifugal manufacturing process. The longitudinal reinforcement, prestressing and spiral reinforcement shall continue throughout the entire length of the pole.

B.7.1 Cover

All steel shall be covered at all points by at least 1/2 inch of concrete, except where it may be necessary in the process of manufacture to have the rods and/or wire extend beyond the ends of the poles. In such case, the rods and/or wires shall be cut off afterward, even with the face of the molded product, unless otherwise noted on the drawings included herein.

Where the above minimum coverage cannot be maintained next to cable entrance, wire outlet, etc., the reinforcing shall be protected with a suitable sleeve.

Drawings of the reinforcing cage, spiral reinforcement and prestress steel that the manufacturer proposes to use in the manufacture of concrete poles, showing the size, shape and arrangement of reinforcing prestressing spiral reinforcement, ties, method of holding cage in place, etc. shall be submitted to the engineer.

B.8 Waterproofing

The top and bottom of the poles shall be properly coated with bitumastic waterproofing material.

B.8.1

Waterproofing material shall be of such quality and consistency that it will not crack or chip when subjected to extremely cold weather, and that it will not flow when subjected to extremely hot weather.

B.9 Accessories

B.9.1 Miscellaneous

All pipes, bolts, nut wire, washers, pole caps, casting, fittings, and appurtenances of any sort are to be furnished by the contractor and made of approved rust-proof metal of such design, composition, and dimensions as may be approved by the engineer before the contractor begins manufacture.

B.10 Marking

Every pole shall bear an impressed marking, or other type of marking acceptable to the engineer, of the type of pole, contractor's insignia, and casting date (month and year). Type of pole and contractor's insignia shall have letters at least 1 inch tall. The casting date shall have digits not less than 1/2 inch tall. All markings shall be located in line with the cable entrance in the butt of the pole and shall be placed 15inches to 20 inches above the ground line.

B.11 Color Pigments

Poles with a colored finish shall be furnished where specified. The coloring is to be done by mixing a pigment into the concrete before casting. The color of the pole shall be uniform throughout the body of the pole, shall not fade and shall be maintenance free. The type of coloring pigment shall be indicated with the bid and a sample which represents the finished colored pole shall be furnished for approval of the City of Milwaukee Purchasing Division - DOA, if requested.

B.12 Anti-Graffiti Shield

All poles shall include a non-sacrificial anti-graffiti shield coating on the entire above ground length in the bid price. Test results from the latest ASTM G53, D2247, B117 tests and test method should be included with the bid documents.

C Construction

The poles are to be set as illustrated in the plans. The holes are to be 14 inches in diameter and to a depth of 4 or 5 feet depending on manufacturers' pole butt length. The holes can be bored, hydrovaced, or hand dug but all shall be cylindrical. If any part of the hole is within three feet of a buried utility, the holes must be hand dug or hydrovaced. No other method of setting poles is acceptable. Any work involving hand digging and/or hydrovacing will be paid as item SPV.0060.020, Utility Line Opening (ULO).

The pea gravel backfill around the pole is to be tamped every 12 inches and filled to within 3 inches of finished grade. The H15 poles are to be set parallel and perpendicular to the horizon. The pea gravel used to backfill after the pole is set must consist of particles from natural gravel deposits and shall be composed of clean, hard, tough, durable pebbles free from adherent coatings, soft, flat, or elongated

particles, and organic or other deteriorative matter. The following limits apply to deteriorative substances in the pea gravel.

- Chert not over 4% by weight.
- Coal not over ½% by weight.
- Clay lump and friable particles not over ½% by weight.
- Soft fragments not over 1% by weight.
- Any combination of the above not over 4% by weight.
- Flat, elongated or laminated pcs. Not over 10% by weight
- (Flat and elongated particles are those having a length more than five times the average thickness).

Grading requirements of the pea gravel are as follows:

- Passing 3/8 inch sieve 95% to 100%
- Passing No.4 sieve 25% to 50%
- Passing No.8 sieve 0% to 5%

Each unit will require approximately 0.25 cubic yard of pea gravel.

Parkway areas that were disturbed during construction shall be filled with 3 inches of topsoil and sodded to match the adjacent finished grade. Addresses are to be stenciled to the pole as shown on the plan.

Poles are to be wired as shown on the plans. Riser cables in pole shall be 20 feet in length and cut from 2#12 UF copper with ground. The wires are to be color coded as one black, one white and the ground are to be either green or bare. The cable shall conform to NEC Article 339. The riser cable shall be continuous without splices.

The Milwaukee Harp fixture is set on the pipe tenon that is attached to the top of the pole and is secured to the pole using standard 1-1/2" stainless steel hex head nut. Perform all splices and connections for the operation of fixture.

D Measurement

The department will measure Poles Type 5 Concrete H17 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.0060.800	Poles Type 5 Concrete H17	EACH

Payment is full compensation for the pole, luminaire, lamp, riser cable, pea gravel, ground rod (where required), and all connections.

89. Luminaire Arm Single Member 6-Ft. – City Furnished, Item SPV.0060.838.

A Description

The work under this item is for installation of the following material as shown in plans and according to the following.

B Materials

Fabricated by the City of Milwaukee per City Specification and drawing C-8-76. The bracket arm is 2" schedule 80 aluminum pipe curved to city specifications. The mounting plate is either cast aluminum ½" AA#713 or extruded 6063-T6 bar stock.

Manufacturer: City of Milwaukee Street Lighting Shop

Provider: City of Milwaukee.

Contact person is Jill Cramer at (414) 286-5953 for material pickup.

C Construction

The Luminaire arm shall be attached to the pole with two ½" x 13 NC x 1" long stainless steel bolts to be supplied by the contractor.

D Measurement

The department will measure Luminaire Arm Single Member 6-Ft. – City Furnished 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.0060.838	Luminaire Arm Single Member 6-Ft. – City Furnished	EACH

Payment is full compensation for the Luminaire arm installation with all needed connections. This bid price also includes for furnishing labor, equipment, coordination, transportation, materials and incidentals necessary to complete the work.

90. Luminaire Arm Single Member 8-Ft. – City Furnished, Item SPV.0060.839.

A Description

The work under this item is for installation of the following material as shown in plans and according to the following.

B Materials

Fabricated by the City of Milwaukee per City Specification and drawing C-8-77. The bracket arm is 2" schedule 80 aluminum pipe curved to city specifications. The mounting plate is either cast aluminum ½" AA#713 or extruded 6063-T6 bar stock.

Manufacturer: City of Milwaukee Street Lighting Shop
Provider: City of Milwaukee.
Contact person: Jill Cramer at (414) 286-5953 for material pickup.

C Construction

The luminaire arm shall be attached to the pole with two ½" x 13 NC x 1" long stainless steel bolts to be supplied by the contractor.

D Measurement

The department will measure Luminaire Arm Single Member 8-Ft. – City Furnished, 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.0060.839	Luminaire Arm Single Member 8-Ft. – City Furnished	EACH

Payment is full compensation for the Luminaire arm installation with all needed connections. This bid price also includes for furnishing labor, equipment, coordination, transportation, materials and incidentals necessary to complete the work.

91. Luminaire Historic Milwaukee Harp LED 0, Item SPV.0060.864.

A Description

The work under this item is for furnishing and installation of the following material as shown in plans and according to the following.

B Materials

TECHNICAL REQUIREMENTS: All features listed below shall be incorporated in the design of the Milwaukee Harp. All listed items shall be furnished and installed into a complete unit ready for installation and operation and satisfying all electrical codes and industrial standards for outdoor luminaires. All parts shall be interchangeable between luminaires of different manufactures.

1. GENERAL APPEARANCE: The Harp shall conform to the shape and size as shown on plans.
2. HOUSING: The Milwaukee Harp's housing and components shall be cast from ASTM #356T6 or 319 aluminum. All castings shall be free from pits, blowholes, or other irregularities. All surfaces shall be smooth with edges free of flashing burrs and imperfections. Manufacturer's identification or logo will not be permitted on the exterior of the housing.
3. REFLECTOR: The reflector shall be aluminum not less than 0.046" in thickness, and of such uniform thickness and strength to protect against dents or deformations. The entire surface of the reflector shall have a minimum of an Alzak finish to provide a permanent and efficient reflecting surface, which may be easily cleaned and maintained. The reflector is to be mounted in such a manner to allow its removal without removal of mounting hardware. The reflector shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly.
4. REFRACTOR: The refractor is to be manufactured from thermal resistant borosilicate glass in a teardrop shape and size which is similar to original Milwaukee Harp refractors. It shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly.
5. LIGHTING DISTRIBUTION: The reflector/refractor combination shall be available in A.S.A.-IES Type IV distribution patterns. Light patterns shall be with the street side optics perpendicular to the harp frame. Manufacturer shall provide the city with a printed photometric report based on IES Testing Procedures showing footcandles, lumens, coefficient of utilization and isocandela from an independent test facility. Manufacturer shall also provide the city the photometric report in I.E.S. recommended standard file format for electronic transfer of photometric data (IES Publication LM-63-1986 or later). The following facilities are independent testing labs:

   INDEPENDENT TESTING LABORATORIES, INC.
   3386 Longhorn Rd.
   Boulder, Colorado 80302
   (303) 442-1255 Fax (303) 449-5274

   LIGHTING SERVICES/SCIENCES, INC.
   7830 E. Evans Road
   Scottsdale, Arizona 85260-3412
   (602) 991-9260 Fax (602) 998-9498

   LUMINAIRE TESTING LABORATORY
   905 Harrison Street
   Allentown, Philadelphia 18103
   (215) 770-1044 Fax (215) 770-8912

6. MOUNTING: The Harp Luminaire shall accommodate a tenon with 1½" standard pipe thread with a hex locking nut for mounting to pole. The hex nut and washer are to be supplied for each unit as part of the bid price.
7. GASKETING: A durable gasket, made from non-deteriorating, sunlight resistant 1/8 inch thick rubber or neoprene, shall be installed where the lantern housing and the harp arms mate.
8. BALLAST: The ballast shall be of the specified size and type and be of the constant wattage, high power factor design for operation at 240 volts, 60 hertz. The ballast, starting aid and capacitor are to be mounted on an easily removable plate as part of the top cap of the junction box. The entire assembly is to be mounted and be connected via a plug and socket. The connection from the plug and socket is to be terminated in an appropriate terminal block capable of accepting up to a number 10 AWG cable.

As an alternative the ballast may be mounted above the reflector. The power leads are to be routed through one of the arms into the bottom center junction box of the harp luminaire and be connected to an appropriate terminal block capable of accepting up to a number 10 AWG cable.

The electrical components are to be listed by Underwriters Laboratory or other nationally recognized testing organization and be designed to withstand all environmental conditions that could be reasonably encountered in the typical use of the Harp.

9. HARDWARE: All clips, springs, blots, etc. which are required to assemble the Harp luminaire shall be made of stainless steel, brass or aluminum. This requirement includes the hinge pin. There shall be no ferrous materials used.

10. SOCKET: The Mogul socket shall be constructed from rugged, high grade porcelain, rated at not less than 600 volts and be able to withstand the voltage stresses generated by the starting device. It shall have lamp grips to hold the lamp securely. The center contact shall be spring loaded for positive electrical contact. The socket shall be located so the lamp's light center is at the focal point of the reflector/refractor combination.

11. HINGE AND LATCH ASSEMBLY: The hinge assembly shall not be an integral part of the main housing casting. It shall be a replaceable part attached to the main housing casting with hardware. The hinge assembly shall be consistent from unit to unit. The latch assembly must allow release without tools. All materials shall be aluminum.

12. FINISH: The finish shall consist of one primer coat (2 to 3 mils) X-I-M Flash Bond 400 White or equal and two prime finish coats, applied electrostatically with the color specified on the order and as follows:

    Black enamel: Gloss, oil, quick dry enamel, RAL 9005, Jet Black.

    (2 coats applied electrostatically 2 to 2.5 mils dry film)

    Accent panels: Gloss, oil, quick dry enamel, RAL 1000 Green Beige

    (2 coats applied electrostatically 2 to 2.5 mils dry film).

    The accent panels may also be highlighted with tape colored to the RAL 1000, (Green Beige) specification. The tape must be able to withstand all environmental conditions that could be reasonably be encountered in the typical use of the Harp. The tape must be fade resistant

13. LAMP: The Luminaires shall be equivalent of 70W high pressure sodium lamp.

C Construction

The Milwaukee Harp fixture is set on the pipe tenon that is attached to the top of the pole and is secured to the pole using standard 1-1/2" stainless steel hex head nut. Perform all splices and connections for the operation of fixture.

D Measurement

The department will measure Luminaire Historic Milwaukee Harp LED 0 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.0060.864	Luminaire Historic Milwaukee Harp LED 0 (38W/240V Type IV Black Milwaukee LED Harp)	EACH

Payment is full compensation for the pole, luminaire, lamp, riser cable, pea gravel, ground rod (where required), and all connections. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

92. Luminaire Historic Milwaukee Lantern LED 2, Item SPV.0060.866.

A Description

The work under this item is for furnishing and installation of the following material as shown in plans and according to the following.

B Materials

1. GENERAL APPEARANCE: The Large Milwaukee Lantern shall replicate and conform to the shape and size as shown on plan set.
2. HOUSING: The Lantern Housing shall be cast from ASTM #319 or #356T6 aluminum alloy. The casting shall be free from pits, blowholes, or other irregularities and shall have smooth surfaces. Manufacturer's Logo or identification shall not be visible on the exterior of the casting.
3. REFLECTOR: The reflector shall be aluminum not less than 0.046" in thickness, and of such uniform thickness and strength to protect against dents or deformations. The entire surface of the reflector shall have a minimum of an Alzak finish to provide a permanent and efficient reflecting surface, which may be easily cleaned and maintained. The reflector is to be mounted in such a manner to allow its removal without removal of mounting hardware. The reflector shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly.
4. REFRACTOR: The refractor is to be manufactured from borosilicate glass to provide the most efficient distribution of lighting. The shape and size of the refractor is to be similar to original Milwaukee Lantern refractors. It shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly. Refractor gasket(s) are not to be installed.
5. LIGHTING DISTRIBUTION: The reflector/refractor combination shall be A.S.A.-IES Type IV distribution pattern. Manufacturer shall provide the city with a printed photometric report based on IES Testing Procedures showing footcandles, lumens, coefficient of utilization and isocandela from an independent test facility. Manufacturer shall also provide the city, on diskette, the photometric report in I.E.S. recommended standard file format for electronic transfer of photometric data (IES Publication LM-63-1986 or later).

   The following facilities are independent testing labs:

   INDEPENDENT TESTING LABORATORIES, INC.
   3386 Longhorn Rd.
   Boulder, Colorado 80302
   (303) 442-1255 Fax (303) 449-5274

   LIGHTING SERVICES/SCIENCES, INC.
   7830 E. Evans Road
   Scottsdale, Arizona 85260-3412
   (602) 991-9260 Fax (602) 998-9498

   LUMINAIRE TESTING LABORATORY
   905 Harrison Street
   Allentown, Philadelphia 18103
   (215) 770-1044 Fax (215) 770-8912

6. MOUNTING: The Large Milwaukee Lantern is to be pendant mounted using the ball coupling and canopy lock nut. The lock nut used to secure the lantern to the arm is to be provided with the lantern. It is to be made from stainless steel.
7. ELECTRICAL CONNECTIONS: All electrical connections shall be accessible by removing the reflector only. Electrical components are to be listed by Underwriters Laboratory or other nationally recognized testing organizations.

8. LEADS: The power leads are to be routed through the top of the luminaire, (through the ball socket) and have a pigtail length of 12 inches minimum. They are to be #16 AWG stranded copper wire with insulation able to withstand the pulses from the starters and all environmental conditions that could be reasonably encountered in the typical use of the Lantern. They will consist of a black wire (line) white wire (neutral) and green wire (ground, connected to the casting). All paths of the leads are to be protected by insulating bushings or other suitable protection per standard or code.
9. HARDWARE: All clips, springs, bolts, etc. which are required to assemble the luminaire shall be made of stainless steel, brass or aluminum. This requirement includes the hinge pin. There shall be no ferrous materials used.
10. SOCKET: The Mogul socket shall be constructed from rugged, high grade porcelain, rated at not less than 600 volts and be able to withstand the voltage stresses generated by the starting device. It shall have lamp grips to hold the lamp securely. The center contact shall be spring loaded for positive electrical contact. The socket shall be located so the lamp's light center is at the focal point of the reflector/refractor combination.
11. HINGE AND LATCH ASSEMBLY: The hinge assembly shall not be an integral part of the main housing casting. It shall be a replaceable part attached to the main housing casting with hardware. The hinge assembly shall be consistent from unit to unit. The latch assembly must allow release without tools. All materials shall be aluminum.
12. FINISH: The finish shall consist of one primer coat (2 to 3 mils) X-I-M Flash Bond 400 White or equal and two prime finish coats, applied electrostatically with the color specified on the order and as follows:

    Black enamel: Gloss, oil, quick dry enamel, RAL 9005, Jet Black.
    (2 coats applied electrostatically 2 to 2.5 mils dry film)

    Accent panels: Gloss, oil, quick dry enamel, RAL 1000 Green Beige
    (2 coats applied electrostatically 2 to 2.5 mils dry film).

    The accent panels may also be highlighted with tape colored to the RAL 1000, (Green Beige) specification. The tape must be able to withstand all environmental conditions that could be reasonably be encountered in the typical use of the Harp. The tape must be fade resistant

    Note: Supplier to submit color sample and specification data for approval and supply one gallon of finish paint and one quart of accent panel paint per 25 luminaires.
13. LAMP: The Luminaires shall be equivalent of 250W high pressure sodium lamp.

C Construction

The Lantern 1-1/4" tenon is to be threaded into the bracket and 1-1/4" stainless steel hex head nut installed on pipe tenon, lock nutting the fixture to the bracket. Perform all splices and connections needed for the operation of fixture.

D Measurement

The department will measure Luminaire Historic Milwaukee Lantern LED 2 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.0060.866	Luminaire Historic Milwaukee Lantern LED 2 (115W/240V Type IV Black LED Lantern and Arm)	EACH

Payment is full compensation for the pole, luminaire, lamp, riser cable, pea gravel, ground rod (where required), and all connections. This bid price also includes for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work.

93. Construction Staking Concrete Sidewalk, Item SPV.0090.001.

A Description

This special provision describes furnishing and setting construction stakes or control points, including all calculations required, necessary to establish the horizontal and vertical position of the concrete sidewalk as shown on the plans.

B (Vacant)

C Construction

C.1 General

Obtain or calculate benchmark data, grades, and alignment from data in the plan and verify with the engineer prior to beginning the work. The engineer will furnish horizontal alignment, horizontal alignment ties and control point data. This work includes reestablishing the plan horizontal roadway alignment, alignment ties, and control points.

Obtain approval from the engineer for methods of survey and prior to beginning the work. The degree of accuracy used in the survey work must be consistent with third order, Class II. Establish additional benchmarks and control points as necessary or as directed by the engineer. Check plan dimensions, alignment, and elevations for accuracy with existing field conditions. Notify the engineer immediately of any errors and apparent discrepancies for correction or interpretation prior to proceeding with the work.

Maintain neat, orderly and complete survey notes and computations used in establishing the lines and grades. Make the survey notes and computations available to the engineer within 24 hours upon request as the work progresses.

C.2 Concrete Sidewalk

Place construction stakes for concrete sidewalk at intervals of 25 feet. A minimum of three stakes per cross section is required. Set and maintain additional stakes per cross section as necessary to achieve the required accuracy and to satisfy the contractors' method of operations. Set additional stakes as necessary to establish location and grade along intersecting road radii; and for auxiliary lanes, vertical curves, horizontal curves, and curve transitions. Locate all concrete sidewalk construction stakes to within 0.25 feet of the true horizontal position and establish the grade elevation to within 0.01 feet of the true vertical position.

D Measurement

The department will measure Construction Staking Concrete Sidewalk along each roadway centerline or reference line by the linear foot, acceptably completed. When sidewalk occurs on both sides of the roadway, the quantity of construction staking, concrete sidewalk, will be measured by the linear foot along the centerline or reference line of each side of the roadway.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.001	Construction Staking Concrete Sidewalk	LF

Payment is full compensation for furnishing all survey work necessary to locate and set all concrete sidewalk construction stakes including additional stakes per cross section set to achieve the required accuracy and to satisfy the contractors' method of operations including intersecting road radii, auxiliary lanes, vertical curves, horizontal curves, and curve transitions; for resetting damaged or missing concrete sidewalk construction stakes; and for furnishing all labor, tools, stakes, lath, flags, equipment and incidentals necessary to complete the work.

94. Marking Line Epoxy 6-Inch, Item SPV.0090.002.

A Description

This special provision describes providing Epoxy Pavement Marking lines 6 inches wide.

B Materials

Furnish materials according to standard spec 646.

C Construction

Construct marking lines according to standard spec 646.

D Measurement

The department will measure Marking Line Epoxy 6-Inch by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.002	Marking Line Epoxy 6-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface, furnishing and installing the material.

95. Concrete Curb & Gutter Integral 19-Inch, Item SPV.0090.003.

A Description

Construct Concrete Curb & Gutter Integral 19-Inch according to the requirements in standard spec 415, 601, 716 and standard spec 415.3.15 and 501.3.1 and as shown in the plans.

B (Vacant)

C Construction

Concrete Curb & Gutter Integral 19-Inch according to the requirements in standard spec 601.3, and as shown on the plans.

All curb and gutter shall have a flange thickness of 8.5 inches.

D Measurement

The department will measure Concrete Curb & Gutter Integral 19-Inch, in length by the linear foot of curb and gutter, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.003	Concrete Curb & Gutter Integral 19-Inch	LF

Payment is full compensation for providing Concrete Curb & Gutter Integral 19-Inch.

96. Marking Crosswalk Grooved Preformed Plastic 12-Inch, Item SPV.0090.052; Marking Stop Line Grooved Preformed Plastic 24-Inch, Item SPV.0090.053.

A Description

This special provision describes furnishing and installing grooved preformed plastic pavement marking as shown on the plans, according to the standard spec 646, and as hereinafter provided.

B Materials

Furnish preformed pavement marking and sealant material, if required, from the department's approved products list. Furnish preformed plastic pavement marking tape conforming to ITE standards. Deliver

preformed marking materials to the project in manufacturer's containers legibly marked with the contents, color batch number, and manufacturer's name and address.

C Construction

Construct according to standard spec 646 and the manufacturer's requirements. For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of preformed pavement marking items.

C.1 General

Plane the grooved lines according to the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Position

Position the groove edge according to the plan details.

C.3 Groove Depth

Cut the groove to a depth of 120 mils ±10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.4 Groove Width

Cut the groove 1-inch wider than the width of the preformed plastic.

C.5 Linear Marking

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.6 Groove Cleaning

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the adhesive, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

D Measurement

The department will measure Marking Crosswalk Grooved Preformed Plastic 12-Inch and Marking Stop Line Grooved Preformed Plastic 24-Inch by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.052	Marking Crosswalk Grooved Preformed Plastic 12-Inch	LF
SPV.0090.053	Marking Stop Line Grooved Preformed Plastic 24-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface, including grooving, furnishing and installing the material; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

97. Marking Crosswalk Grooved Preformed Plastic Ladder Pattern 24-Inch, Item SPV.0090.054.

A Description

This special provision describes furnishing and installing grooved preformed plastic pavement marking as shown on the plans, according to the standard spec 646, and as hereinafter provided.

B Materials

Furnish preformed pavement marking and sealant material, if required, from the department's 2017 approved products list. Furnish Preformed plastic pavement marking tape conforming to ITE standards. Deliver preformed marking materials to the project in manufacturer's containers legibly marked with the contents, color batch number, and manufacturer's name and address.

C Construction

Construct according to standard spec 646 and the manufacturer's requirements. For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of preformed pavement marking items.

C.1 General

Plane the grooved lines according to the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Position

Position the groove edge according to the plan details.

C.3 Groove Depth

Cut the groove to a depth of 120 mils ±10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.4 Groove Width

Cut the groove 1-inch wider than the width of the preformed plastic.

C.5 Linear Marking

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.6 Groove Cleaning

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the adhesive, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

D Measurement

The department will measure Marking Crosswalk Grooved Preformed Plastic Ladder Pattern 24-Inch 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.0090.054	Marking Crosswalk Grooved Preformed Plastic Ladder Pattern 24-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface, including grooving, furnishing and installing the material; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

98. Marking Stop Line Epoxy 24-Inch, Item SPV.0090.055.

A Description

This special provision describes providing Epoxy Pavement Marking Stop Lines 24 inches wide.

B Materials

Furnish materials according to standard spec 646.

C Construction

Construct marking lines according to standard spec 646.

D Measurement

The department will measure Marking Stop Line Epoxy 24-Inch 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.0090.055	Marking Stop Line Epoxy 24-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface, furnishing and installing the material.

99. Install Fiber Optic Cable Outdoor Plant 72-CT Contractor Supplied, Item SPV.0090.201.

A Description

This special provision describes furnishing and installing fiber optic cable.

B Materials

Furnish Prysmian Group Ultra Low Loss Fiber Cable, product number F-ETH1JKT-12-ES-072-ED, Berk-Tek, product Number OPDD12B072AB0403, or approved equal. Furnish a pull rope for use during installation of the fiber cable. The pull rope shall be rated for 1,800 lbs or greater of pull strength.

C Construction

Install and perform testing of the fiber optic cable according to standard spec 678.3.

D Measurement

The department will measure Install Fiber Optic Cable Outdoor Plant 72-Ct Contractor Supplied 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.0090.201	Install Fiber Optic Cable Outdoor Plant 72-CT Contractor Supplied	LF

Payment is full compensation for furnishing, installing, and testing the cable; and for furnishing all other incidentals necessary to complete the work.

100. Cable Type 3#8/1#8 LTP, Item SPV.0090.305; Cable Type 3#6/1#8 LTP, Item SPV.0090.306; Cable Type 3#4/1#8 LTP, Item SPV.0090.307; Cable Type 3#2/1#8 LTP, Item SPV.0090.308.

A Description

This special provision describes furnishing and installing service cable according to current City of Milwaukee Electrical methods and National Electrical Code standards. All work shall be according to standard spec 651.

B Materials

B.1.1

Unless otherwise specified, the cable to be furnished shall comply with the manufacture and test requirements of the Insulated Cable Engineers Association (ICEA) Specification No. S-61-402, NEMA WC5, latest revision.

B.1.2 Conductors

The conductors shall be of soft annealed copper wire according to ASTMB-3. Conductors No. 6 A.W.G. or larger shall be stranded. Conductors smaller than No. 6 A.W.G. shall be solid unless otherwise specified.

B.2 Insulation

B.2.1 600V

The insulation for cable rated 600V shall be thermo plastic according to applicable Paragraphs 3.7, 3.8 or 3.9 of ICEA Pub. No. S-61-402, latest revision, and shall be a nominal 60 mils. thickness. Insulation shall meet the ANSI/ASTM D2220-74 (latest revision) accelerated water absorption requirements and -30°C (-22°F) cold bend test.

B.2.2 Nominal Thickness

The nominal insulation thickness around each individual conductor shall be not less than 90% of the thickness specified in the schedule.

B.2.3 Color Code

The insulation compound which covers each conductor making up a cable shall be color coded in conformance with the N.E.M.A. Color Code Standard, unless otherwise specified; however, printed color designations as in I.3.2 or I.3.3. will not be acceptable under this specification (see schedule)

B.3 Jackets

B.3.1

The jacket for all cables shall be moisture-resisting thermoplastic complying with the requirements for Paragraph 4.3.1. of ICEA Pub. No. S-61-402. The jacket shall have a gravimetric method maximum 30 mg./sq. in. water absorption.

B.3.2

The minimum average jacket thickness shall be not less than 80% of the thickness specified in the schedule.

B.3.3

The moisture-resisting thermo-plastic jacket shall provide a tough, durable covering of uniform thickness according to Paragraph 4.3. There shall be no fusing of insulation and jacket, so that the jacket may be easily separated from the core or insulation of individual conductors of multiple conductor cables.

B.4 Round Cable

B.4.1

All cables with conductor size #4 or larger, shall have non-hydroscopic fillers to provide a substantially round construction.

B.4.2 Inspection and Tests

Each length of the individual insulated conductor and completed cable shall comply with all requirements of I.C.E.A. Standards S-61-402. Sampling and Test Methods shall be according to Part 6. A certified report of the tests made on the cable to show compliance with this specification may be required prior to shipment. If requested, a sample of the cable covered by the report shall also be submitted.

POWER, CABLE SCHEDULE FOR SPECIFICATION

	3#2/1#8		3#4/1#8	
Size of Conductor	#2	#8	#4	#8
Number of Conductors	3	1	3	1
Number of Wires in Conductor	7 or 19	1	7 or 19	1
Type of Insulation	3 PolyV Chlor PolyE	None	3 PolyV Chlor PolyE	None
Insulation Thickness	60 mils	None	60 mils	None
Insulation Voltage Rating	600 volt	None	600 volt	None
Insulation Color Code	1-white 1-black 1-red	None	1-white 1-black 1-red	None
Non-Hydroscopic Fill	Required		Required	
Moisture Resisting Sheath				
Jacket Thickness	60 mils		60 mils	

	3#6/1#8		3#8/1#8		2#8/1#8	
Size of Conductor	#6	#8	#8	#8	#8	#8
Number of Conductors	3	1	3	1	2	1
Number of Wires in Conductor	7	1	1	1	1	1
Type of Insulation	3 PolyV Chlor PolyE	None	3 PolyV Chlor PolyE	None	3 PolyV Chlor PolyE	None
Insulation Thickness	60 mils	None	60 mils	None	60 mils	None
Insulation Voltage Rating	600 volt	None	600 volt	None	600 volt	None
Insulation Color Code	1-white 1-black 1-red	None	1-white 1-black 1-red	None	1-white 1-black	None
Non-hydroscopic Fill	None		None		None	
Moisture Resisting Sheath						
Jacket Thickness	60 mils		60 mils		60 mils	

All conductors shall be uncoated annealed soft copper.

C Construction

The cable shall be installed in P.V.C. conduit when indicated on plans. Any turf damage during installation of cable shall be restored (grass, asphalt or concrete) by the contractor. All splices in luminaires and transformer bases, must be completed by the contractor unless otherwise designated on plans.

D Measurement

The department will measure Cable Type 3#8/1#8 LTP, Cable Type 3#6/1#8 LTP, Cable Type 3#4/1#8 LTP, Cable Type 3#2/1#8 LTP by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.305	Cable Type 3#8/1#8 LTP	LF
SPV.0090.306	Cable Type 3#6/1#8 LTP	LF
SPV.0090.307	Cable Type 3#4/1#8 LTP	LF
SPV.0090.308	Cable Type 3#2/1#8 LTP	LF

Payment is full compensation for furnishing labor, equipment, coordination and all materials and incidentals necessary to complete the work. Also included is the labor, equipment and materials for removal of construction debris and site restoration.

101. Cable Type 3#10AWG With Ground, Item SPV.0090.310.

A Description

Furnish and install type UF cable according to current City of Milwaukee electrical methods and National Electrical Code standards.

B Materials

Furnish type UF cable with ground including the number and size of conductors as the plans show. Use cable conforming to ANSI/UL 493.

C Construction

Do not splice underground in pull boxes or conduit. Do not leave wire or cable ends uncovered or submerged in water. If the engineer observes this condition, the engineer may reject the entire length of cable or wire. Make all electrical connections and splices with approved pressure or compression type fittings.

Cover tape with a liberal coating of an electrical varnish or sealant providing flexible protection from oil, moisture, and corrosion. Obtain the engineer's approval of this electrical coating before using. Extend wire for termination 18 inches beyond the pole. Provide 60 inches of cable wire to be pulled into cabinets and left for terminations.

For all cables entering each pull box, provide an extra loop, approximately 6 feet in length, to remain in each pull box. This loop of cable is in addition to the amount needed to reach from the entrance conduit raceway end to the opening in the exiting conduit raceway.

Install conductors in continuous lengths without splices from termination to termination. The contractor may splice only at hand-holes in the bases of poles. At locations where no transformer bases exist, splice at the hand-holes in poles.

Under the Cable Type UF bid items, furnish and install the underground cable network for highway lighting at traffic signal installations.

Plan changes must be approved by the City of Milwaukee Electrical Services Supervisor or Street Lighting Engineer. The primary contacts are Mr. Dennis Miller, Electrical Services Supervisor (414) 286-5942-office, (414) 708-4251-cell; or Mr. Thomas Manzke, Street Lighting Engineer III (414) 286-3265.

Provide three sets of As-Built plan sets to the City of Milwaukee Electrical Services Supervisor or engineer upon completion of cable installation. The plan sets are incidental to Street Lighting Cables, and no extra payment will be made by the department.

D Measurement

The department will measure Cable Type 3#10AWG With Ground by the linear foot of measure, 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.0090.310.	Cable Type 3#10AWG With Ground	LF

Payment is full compensation for providing cable; for making all connections; for providing all connectors, including wire nuts, splices, tape, insulating varnish, or sealant; and for testing the circuits. Also included is the labor, equipment and materials for removal of construction debris and site restoration.

102. Liquidtight Flexible Nonmetallic Conduit 1 ½-Inch, Item SPV.0090.319.

A Description

This special provision describes providing and installing Lquidtight Flexible Nonmetallic Conduit 1 ½-Inch for traffic signals and street lighting according to standard spec 652. All work shall be according to standard spec 651.

B Materials

Furnish the Liquidtight Flexible Nonmetallic Conduit 1 ½-Inch shall be Type LFNC-B. The conduit shall be nonconductive, noncorrosive to oil, acid, ozone, and alkaline. The conduit shall have a smooth inner surface with integral reinforcement within the conduit wall.

The flexible nonmetallic conduit shall be UL listed for use as indicated in Article 356 of the latest NEC, and for outdoor use and sunlight resistant.

The fittings and adapters shall be of the same manufacturer as the conduit.

C Construction

Install the fittings, adapters, and conduit in conjunction with traffic signals and street lighting. Install per the manufacturer's instructions.

D Measurement

The department will measure Liquidtight Flexible Nonmetallic Conduit 1 ½-Inch, by the linear foot unit of measure, 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.0090.319	Liquidtight Flexible Nonmetallic Conduit 1-1/2-Inch	LF

Payment is full compensation for providing and installing the Liquidtight Flexible Nonmetallic Conduit 1 ½-Inch, including the connectors.

103. 1-Duct Conduit, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.401; 2-Duct Conduit, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.402; 3-Duct Conduit, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.403; 4-Duct Conduit, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.404; 6-Duct Conduit, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.406; 7-Duct Conduit, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.407; 8-Duct Conduit, Cement Encased, 4-inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.408.

A Description

This special provision describes furnishing and installing cement encased multiple duct conduit packages below grade as shown on the plans and as hereinafter described.

B Materials

B.1 Conduit

Furnish and install DB-60 polyvinyl chloride (PVC) conduit. Conduit will be accepted on the basis of a Manufacturer's Certificate of Compliance and WISDOT field inspection upon delivery to a project.

PVC conduit and fittings shall conform to the requirements of Standard Specifications for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation, ASTM Designation: F512 (latest edition).

B.2 Conduit Spacers

Furnish and install nonmetallic interlocking base spacers and intermediate spacers that provide a 1” vertical and 1” horizontal separation between PVC pipes. The base spacers shall provide a 3” vertical separation from the trench bed to the bottom of the PVC pipes.

B.3 Conduit Bed

Furnish and install a minimum 2” conduit bed of stone chips or crushed stone screenings conforming to the following:

3/8 Inch Crushed Stone Chips

Sieve Sizes	% Passing by Weight
½”	100
3/8”	90-100
No. 8	0-15
No. 30	0-3

Crushed Stone Screenings

Sieve Sizes	% Passing by Weight
½”	100
No. 4	75-100
No. 100	10-25

B.4 Concrete

The type of concrete mix to be used to encase the ducts will be:

Type I Cement	280 lbs
Fly Ash	100 lbs
Sharp Torpedo Sand	3100 lbs
Water	35 gals
Chryso Air 260 or approved equal	2.0 ozs
Chryso Plast 209 or approved equal	7.0 ozs
Air	5%

Mix the materials to provide an approximate 3-inch slump

B.5 Slurry Backfill

Aggregate slurry backfill consists of No. 1 concrete aggregate Class ‘C’ concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

Mix the materials with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. Deposit the mix in the trench directly from a concrete transit mix truck.

B.6 Pull Rope

Pull rope specifications will be:

- Flat construction (7/16” to 5/8” wide)
- 100% woven aramid fiber (may include tracer wire)
- 1500 lbs. Minimum pull strength prelubricated
- Sequential footage markings for location

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

C.1 Excavation

The excavation shall have the minimum or maximum dimensions shown on the plans and as follows:

Number of Ducts Wide	Minimum (Inches)	Maximum (Inches)
1	8 1/2	11
2	14 1/8	16 5/8
3	19 ¾	22 1/4
4	25 3/8	27 7/8
5	31	33 1/2
6	36 5/8	39 1/8
7	42 ¼	44 3/4
8	47 7/8	50 3/8

These minimum and maximum trench widths apply to standard 4 inch PVC electrical duct only. When required, the excavation may be widened for the handling and placing of materials.

Sheath and brace open-cut trenches as required by code and as necessary to maintain safety. The cost of furnishing, placing and removing of sheathing and bracing shall be included in the unit bid for the work.

The dimensions of the excavation will be governed by the number, configuration and the grade (cover) to which the conduit is to be installed as shown on the plan. The walls of the excavation shall be clean and true.

Prior to excavating trenches, expose the existing manhole and conduit lines. The object of this is to permit adjustments in line and grade to avoid special construction methods. Protect the exposed manhole and conduit from damage.

Lay the conduit at a depth so that sufficient protection from damage is provided. Allowable covers shall be as follows:

The standard cover for mainline conduit is 39 inches and the minimum cover acceptable is 28 inches.

Maintain the standard cover wherever possible and any deviation less than the minimum cover requires the approval of the engineer.

Grade the trench to have a minimum pitch of three inches per 100 feet. When an obstruction is encountered in the trench and it is necessary to excavate a deeper trench than would otherwise be required, in order to obtain drainage, refer the matter to the engineer to determine whether the extra excavation should be made.

In grading a trench for mainline conduit, there are three general practices for direction of pitch.

(a) When grading a trench in a street with a level grade, the high point of the trench bottom should ordinarily be centered between manholes and pitched downward equally toward each manhole.

(b) Where the street slopes in one direction, locate the high point of the trench bottom approximately 30 feet from the end wall of the higher manhole and grade toward both manholes.

(c) Where a steep grade is encountered, grade the trench at the minimum pitch from the end wall of the higher manhole to a point 20 feet plus or minus toward the lower manhole. From this point, follow the street grade at the standard cover to a point 20 feet plus or minimum away from the end wall of the lower manhole. From this point, the remainder of the section shall be laid at the normal pitch.

After the rough excavation is completed, prepare the bottom of the trench to receive the conduit. Bring the duct bed to the final grade by grading uniformly from the high point to the low or drainage points. Use stone chips or crushed stone screenings to grade the trench. The duct bed shall be a minimum of 2” in depth.

C.2 Placing of Duct

Proceed with placing the ducts as soon as the duct bed has been completed. Inspect all ducts before placing to see that the bores are clean and free from mud, sand, etc. Use only ducts with a smooth bore, free from burrs, rough projections etc. Smooth off burrs or other rough areas likely to damage cable are found in the duct by rasping or scraping.

Place the duct on base spacers with the ends staggered so no two couplings are adjacent. This may be accomplished by the use of the short lengths in stock or cutting back full length sections to the desired lengths. If cut pieces are used, place the cut end at the manhole. Locate the base spacers within 2 feet of the end of each duct and one base spacer located in the middle of the duct.

Use full length pieces for the balance of the conduit line.

Formations of two ducts or more in height are to be carried forward in full formation, that is, as each tier of twenty foot lengths is laid, the next higher tier of ducts shall then be placed on the intermediate spacers. Place these intermediate spacers on top of the base spacers located within two feet from each duct end and one in the middle of each duct. Place the intermediate spacers and ducts for the remaining tiers. Glue each length into the adjoining coupling. A twist and push on the duct being placed will suffice for a water tight joint. Exercise caution in the driving operation, so that neither the coupling nor the duct will be split or damaged in any way. After the full formation has been completed, place wood trench and duct bracing on the ducts to prevent shifting or floating while the concrete envelope is being placed and during driving operation.

This procedure shall be followed with succeeding lengths, providing spacers at the proper intervals, until sufficient trench footage of completed formation has been placed and is ready to receive concrete encasement.

The terminating point for mainline conduit will be the inside manhole wall. Install a standard end bell fitting flush with the wall on all duct access points.

Install a #10 copper tracer wire along and above the centerline of the duct for encasement in the concrete. The wire shall be 4 feet longer than the run of conduit and be at least 2 feet long at each access point.

Install a pull rope in each run of conduit, as laid. The rope shall be 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point. Anchor the pull rope at each access point in a manner acceptable to the engineer.

C.3 Concreting

Begin concreting after sufficient conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts is 3 inches on the top, 2 inches on the sides, and 3 inches on the bottom. After placing, puddle the concrete with a splicing bar or similar tool so that complete duct encasement is accomplished. Remove wood braces used to keep the conduit from floating before the concrete sets completely and the resultant encasement voids filled with concrete.

Allow the concrete encasement to set for a minimum of 6 hours before backfilling is commenced.

C.4 Slurry Backfill

Commence backfilling of the conduit immediately after the duct has been inspected, approved and has set to withstand the load.

An aggregate slurry as specified shall be used to backfill the concrete encased conduit. The trench shall be backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

D Measurement

The department will measure 8-Duct, 7-Duct, 6-Duct, 4-Duct, 3-Duct, 2-Duct and 1-Duct Cement Encased, 4-Inch Rigid Non-Metallic Conduit DB-60, furnished and installed at the locations on the plans, will be measured by the linear foot, acceptably installed. The measured quantity will equal the linear feet of encased duct, based on the distance along the centerline of duct between ends of conduit. City of Milwaukee shall have final acceptance by the LF 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.0090.401	1-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.402	2-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.403	3-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.404	4-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.406	6-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.407	7-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF
SPV.0090.408	8-Duct Conduit Cement Encased 4-Inch Rigid Nonmetallic Conduit DB-60	LF

Payment is full compensation for furnishing the conduit, conduit bodies, conduit fittings, conduit spacers, end caps and trace wire; for excavating, bedding, encasement and backfilling including any concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for making inspections, for installing the conduit, and for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work.

104. Test Rolling, Item SPV.0170.001.

A Description

This special provision describes the testing of 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

Furnish a fully load tri-axle dump truck to within 3 tons of the vehicle legal load limit and provide a minimum gross vehicle weight of 30 tons. Uniformly inflate all tires to the pressure recommended by the manufacturer for the applicable wheel load.

C Construction

Completely compact and shape the subgrade to approximate grade and cross section. Do not stake subgrade for areas to be tested.

Test roll at normal walking speed under the direction of the engineer or his representative. Roll the earth subgrade at a width equal to the finished base course width. Make multiple passes 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.

Excavate and replace any unstable material from the roadbed with selected materials.

Correct any yielding subgrade areas discovered during the test rolling operations prior to staking the subgrade and finish grading operations.

Perform corrective work according to the standard specifications.

D Measurement

The department will measure Test Rolling by the station along the roadway centerline or reference line, acceptably completed. The department will measure two or more separate roadways 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.0170.001	Test Rolling	STA

Payment is full compensation for performing the Test Rolling; for providing any equipment; 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.

105. Joint Sealing, Item SPV.0180.001.

A Description

This special provision describes the minimum requirements for preparing the pavement joint or crack, and furnishing and installing the sealant. Seal all expansion, hand-formed, and sawed joints in the pavement. Also, seal all bond or construction joints.

B Materials

Joint sealer must comply with the requirements of ASTM Designation D3405. Joint sealer shall be composed of a mixture of materials that will form a resilient and adhesive compound capable of effectively sealing joints in concrete against the infiltration of moisture and foreign material throughout repeated cycles of expansion and contraction with temperature changes, and of a mixture that will not flow from the joints or be picked up by vehicle tires at summer temperatures. The material must be capable of being brought to a uniform pouring consistency suitable for completely filling the joints without inclusion of large air holes or discontinuities.

The joint sealer shall be elastic type but poured; melt by using indirect heat in suitable equipment provided with positive temperature control and mechanical agitation. Do not damage the material when heating it to the temperature required for satisfactory pouring.

When applying the joint sealer, the atmospheric and concrete temperature will be above 40° F.

C Construction

C.1 Preparation of Pavement Joint or Crack

Clean the pavement joint or crack of all foreign material prior to the installation of the joint sealer. Completely remove the slurry resulting from the sawing operations from the joint by blowing it clean with compressed air (minimum air pressure – 80 pounds per square inch).

D Measurement

The department will measure Joint Sealing by the area of square yards of sealed pavement, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.001	Joint Sealing	SY

Payment in full compensation for the cost of and placement of the sealant.

106. Management of Solid Waste, Item SPV.0195.001.

A General

A.1 Description

This work will conform with the requirements of standard spec 205; to pertinent parts of the Wisconsin Administrative Code, Chapters NR 700-736 Environmental Investigation and Remediation of Environmental Contamination; Wisconsin Administration Code, Chapters NR 500-538, Solid Waste; and as shown on the plans and as supplemented herein.

Soil considered to be solid waste due to chlorinated VOCs will be encountered within the construction limits. The solid waste may contain NR 500 non-exempt industrial wastes including soil mixed with foundry sand. Impacted waste material excavated during construction which cannot in the opinion of the environmental consultant be managed as common excavation or as petroleum-contaminated soil will be managed as solid waste.

This work consists of excavating, segregating, temporary stockpiling, loading, hauling, and disposing of solid waste material at a WDNR-approved disposal facility. The nearest WDNR-approved disposal facilities are:

Advanced Disposal Emerald Park Landfill
W124S10629 South 124th Street
Muskego, WI 53150
(414) 529-1360

Waste Management Orchard Ridge Landfill
W124 N9355 Boundary Rd.
Menomonee Falls, WI 53051
(866) 909-4458

Provide information to the environmental consultant and engineer that indicates the WDNR-approved disposal facility that the contractor will use.

A.2 Notice to the Contractor–Solid Waste and Contaminated Groundwater Location

The department and others completed hazardous materials assessment for locations within this project where excavation is required. Investigation for soil contamination was conducted at select locations. Results indicate that solid waste (soil contaminated with chlorinated solvents and petroleum) and contaminated groundwater are present at the following locations as shown on the plans:

Construction ID 1360-00-76

- W. Center St. at W. Fond du Lac Ave. Station 7+75 to 8+25, from reference line to 65 feet left of reference line, from approximately 1 to 14 feet bgs. Approximately 6.5 cubic yards (approximately 11 tons at an estimated 1.7 tons per cubic yard) of solid waste soil will be excavated from this area.
- W. Center St. at W. Fond du Lac Ave. Station 8+25 to 8+75, from reference line to 85 feet right of reference line, from approximately 1 to 13 feet bgs. Approximately 6.5 cubic yards (approximately 11 tons at an estimated 1.7 tons per cubic yard) of solid waste soil will be excavated from this area.
- N. 27th St. at W. Fond du Lac Ave. Station 97+30 to 97+90, from reference line to 35 feet left of reference line, from approximately 3 to 16 feet bgs. Approximately 6.5 cubic yards (approximately 11 tons at an estimated 1.7 tons per cubic yard) of solid waste soil will be excavated from this area.

Construction ID 2984-00-73

Station 16VL+50 to 18VL+00, from 5 feet left of reference line to project limits right, from approximately 1 to 12+ feet bgs. Approximately 409 cubic yards (approximately 695 tons at an estimated 1.7 tons per cubic yard) of solid waste soil will be excavated from this area. Groundwater at this location has a petroleum sheen and according to MMSD requirements, cannot be discharged to the sanitary sewer.

Directly load solid waste soil excavated by the project at the above locations into trucks that will transport the material to a WDNR-licensed landfill facility for landfill disposal.

If obviously contaminated soils or signs of NR 500 non-exempt solid waste and hazardous materials are unexpectedly encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. Examples of these unexpected conditions may include, but are not limited to, buried containers or tanks, noxious odors and fumes, stained soils, sheen on ground water, other industrial wastes, and significant volumes of municipal or domestic garbage.

Active groundwater monitoring wells were observed within the construction limits at approximately Station 17VL+48, 30 feet right of reference line. The contractor shall protect the wells during construction to maintain their integrity. If active groundwater monitoring wells are encountered elsewhere during construction, notify the engineer and protect the wells to maintain their integrity. The environmental consultant will determine if monitoring wells need to be maintained. For monitoring wells that do need to be maintained, adjust the wells that do not conflict with structures or curb and gutter to be flush with the final grade. For wells that conflict with the previously mentioned items or if monitoring wells are not required to be maintained, they will be abandoned by others.

If dewatering is required at the above location, conduct the dewatering according to Section C below.

A.3 Excavation Management Plan Approval

The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated waste. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding previous investigation and remediation activities in these areas contact:

Name:	Andrew Malsom
Address:	141 NW Barstow Street, Waukesha, WI 53187-0798
Phone:	(262) 548-6705
Fax:	(262) 548-6891
E-mail:	andrew.malsom@dot.state.wi.us

A.4 Coordination

Coordinate work under this contract with the environment consultant:

Consultant:	TRC Environmental Corporation
Address:	150 N. Patrick Blvd. Ste. 180, Brookfield, WI 53045
Contact:	Bryan Bergmann
Phone:	(262) 901-2126
Fax:	(262) 879-1220
E-mail:	bbergmann@trcsolutions.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of solid waste to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Identifying soils to be hauled to the landfill facility;
3. Documenting that activities associated with management of solid waste are in conformance with the solid waste management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of solid waste from the landfill facility.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the area of solid waste fill described in A.2 to the environmental consultant. Identify the WDNR licensed landfill facility that will be used for disposal of solid waste, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation in the impacted area or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals from the landfill facility for disposal of the solid waste.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation in the impacted area. Notify the environmental consultant at least three calendar days prior to commencement of excavation in the impacted area. Perform excavation in the impacted area on a continuous basis until excavation work is completed. Do not transport soil containing solid waste offsite without prior approval from the environmental consultant.

A.5 Health and Safety Requirements

Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter historic fill contaminated with industrial waste (foundry sand) and associated regulated metals and organic compounds. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each impacted area as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction

Supplement standard spec 205.3 with the following:

Control operations in the impacted area to minimize the quantity of soil excavated.

The environmental consultant will periodically monitor soil excavated from the area identified in A.2 above. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

Directly load and haul solid waste soil designated by the environmental consultant for offsite disposal to the WDNR approved landfill facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of the material. Prior to transport, sufficiently dewater soils designated for off-site disposal so as not to contain free liquids.

Verify that the vehicles used to transport material are licensed for such activity according to applicable state and federal regulations. Obtain the necessary disposal facility approvals and WDNR approvals for disposal. Do not transport regulated solid waste off-site without obtaining the approval of the environmental consultant and engineer and notifying the disposal facility.

During excavations in the areas of known contamination, larger chunks of clean concrete (~2 cubic feet), asphalt and bricks shall be segregated from the fill, to the extent practical and managed as common excavation. Under NR 500.08 this material is exempt from licensing and requirements of Wisconsin Administrative Code NR 500-538 of the solid waste regulations, and will be reused as designated by the engineer as fill on the project, or it will be disposed of off-site at the contractor's disposal site(s).

If dewatering is required in areas of known contamination, water generated from dewatering activities may contain chlorinated solvents, petroleum compounds and/or metals. Such water may require analytical testing, and with approval from the City of Milwaukee and the Milwaukee Metropolitan Sewerage District (MMSD) be discharged to the sanitary sewer as follows:

1. Meet all applicable requirements of the MMSD including the control of suspended solids. Perform all necessary monitoring to document compliance with the MMSD requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with the MMSD requirements.
2. Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.

Groundwater with a petroleum sheen cannot be discharge to the sanitary sewer per MMSD guidelines. If dewatering is necessary where the groundwater has a sheen on the surface, the water shall be pumped into a holding tank or tanker truck for off-site testing and disposal.

Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

Costs associated with excavation dewatering in contaminated areas are considered incidental to this pay item. The Wisconsin Department of Transportation will be the generator of regulated solid waste from this construction project.

D Measurement

The department will measure Management of Solid Waste by the ton of waste, accepted by the disposal facility and as documented by weight tickets.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.001	Management of Solid Waste	TON

Payment is full compensation for excavating, segregating, loading, hauling, and landfill disposal of solid waste; obtaining solid waste collection and transportation service operating licenses; assisting in the collection of soil samples for field evaluation; dewatering of soils prior to transport, if necessary; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __6__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 3 *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3

DISADVANTAGED BUSINESS ENTERPRISE [DBE] PROGRAM IMPLEMENTATION

1. Description

a. The federal DBE program requirements outlined in the Code of Federal Regulations at 49 CFR Part 26 apply to this Wisconsin Department of Transportation contract. WisDOT is a recipient of federal funds and this contract includes federal funds. United States Department of Transportation Federal DBE Program requires the following provisions:

(1) Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE regulations will be considered a material breach of contract. This is non-negotiable. If a contractor fails to carry out the DBE program and Title VI nondiscrimination requirements of its contracts, the following sanctions will be assessed depending upon the facts, reasoning, severity and remedial efforts of the contractor: termination of contract, withholding payment, assessment of monetary sanctions, assessment of liquidated damages and/or suspension/debarment proceedings that may result in the disqualification of the contractor from bidding for a designated period of time.

(2) The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains the federal fund recipient's [DOT] written consent. Unless [WisDOT] consent is provided, the contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

b. The Wisconsin Department of Transportation [WisDOT] is committed to the compliant administration of the DBE Program. Each WisDOT Secretary affirms this commitment with his/her signed assurance. https://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/policy-statement.pdf

(1) The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:
   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

(2) Wisconsin DOT identifies the assigned DBE goal in its contract advertisements and posts the contract DBE goal on the cover of the bidding proposal. The contractor can meet the assigned, specified contract DBE goal by subcontracting work to a DBE or by procuring services or materials from a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

(3) For more comprehensive information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at: https://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

2. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

a. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.

b. **DBE:** A small business certified as disadvantaged business enterprise (DBE) under the federal DBE program and included on the Wisconsin UCP DBE Directory deemed ready, willing and able.

c. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.

d. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.

e. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.

f. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. The bid percentage should demonstrate the efforts of the prime contractor prior to bid. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. WisDOT Interpretation of Federal DBE Program Provision

Prime contractors must utilize the specific DBEs listed to perform the work and/or supply the materials for which each is listed on the Commitment to Subcontract to DBE Form [DT1506] and approved by WisDOT's DBE office to execute its contract. The approved Commitment to Subcontract to DBE Form [DT1506] becomes a contract document/record.

a. **Department's DBE Evaluation Process**
WisDOT evaluates DBE using the Commitment to Subcontract to DBE, payments to subcontractors and contract documentation. The prime contractor shall list the specific DBE certified firms and items of work s/he intends to use toward the fulfillment of the assigned DBE contract goal. The prime contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved Form DT1506.

b. **Documentation Submittal**
The contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506]. Effective January 1, 2017, the contractor will be required to submit the documentation within 5 business days after bid opening. All necessary supporting documentation including Attachment 'A' forms and/or Good Faith Efforts Form

[DT1202] must be submitted no later than 2 business days from contractor's initial submission of the DT 1506. The contractor must provide a signed Attachment 'A' form to the DBE office within the time limit in order to receive authorization for contract execution; the DBE office reserves the right accept alternate documentation in lieu of the signed form in extenuating circumstances. Documentation must be submitted to the DBE Office by email at DBE_Alert@dot.wi.gov (DBE_Alert@dot.wi.gov) or by postal mail ATTN: DBE Office, PO Box 7965, Madison, WI 53707-7965.

(1) **Bidder Meets DBE Goal**
If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage calculation. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

(2) **Bidder Does Not Meet DBE Goal**

i. If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Efforts Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith efforts submission.

ii. The department will evaluate the bidder's good faith effort request and notify the bidder of one of the following:

(a) If the department grants a good faith efforts, the bid is eligible for contract execution with respect to DBE commitment.

(b) If the department rejects the good faith efforts request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith efforts request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

c. **Bidder Fails to Submit Documentation**
If the contractor fails to furnish the Commitment to Subcontract to DBE Form [DT1506] within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

5. Department's Criteria for Good Faith Effort

Appendix A of 49 CFR Part 26, is the guiding regulation concerning good faith efforts. However, the federal regulations do not explicitly define "good faith" but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own practices to create a process for making a determination of adequate good faith. WisDOT evaluates good faith on a contract basis just as each contract award is evaluated individually.

The department will only approve a contractor's good faith efforts if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith efforts will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

a. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

b. Prime Contractors should:
   (1) Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT- approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.
   (2) Prime contractors may request assistance with DBE outreach and follow-up by contacting the department's DBE Support Services Office by phone or email request at least 14 days prior to the bid letting date. Requesting assistance with outreach is not a decisive factor in the review Good faith effort evaluation. Phone numbers are 414-438-4584 and/or 414-659-0487; Fax: 414-438-5392; E-mail: DOTDBESupportServices@dot.wi.gov.
   (3) Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, as required by federal rules. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.
      i. Solicit quotes from certified DBE firms who match 'possible items to subcontract' using all reasonable and available means. Additionally, forward copies of solicitations highlighting the work areas for which you are seeking quotes to DOTDBESupportServices@dot.wi.gov.
      ii. SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.
         (a) Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.
         (b) Solicit quotes at least 10 calendar days prior to the letting date, at least two Fridays before the letting, to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking if they need help organizing their quote, assistance confirming equipment needs, or other assistance supporting their submission of a competitive quote for their services.
         (c) Second solicitation should take place within 5 calendar days. Email and SBN are the preferred delivery of the follow-up solicitation.
      iii. Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.
      iv. When potential exists, the contractor should advise interested DBE firms on how to obtain bonding, line of credit or insurance if requested.
      v. Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:
         (a) Email to all prospective DBE firms in relevant work areas.
         (b) Phone call log to DBE firms who express interest via written response or call.
         (c) Fax/letter confirmation
         (d) Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

c. Evaluate DBE quotes Documentation is critical if a prime does not utilize the DBE firm's quote for any reason.
   (1) Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE by phone and email regarding their ability to perform the work indicated in the UCP directory listed as their work area by NAICS code. Only the work area and/or NAICS code listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.
   (2) In striving to meet an assigned DBE contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

(3) **Special Circumstance** - Evaluation of DBE quotes with tied bid items. “Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as ‘all or none’ quote to the prime.” When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms’ quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

i. Compare bid items common to both quotes, noting the reasonableness in the price comparison.
ii. Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

d. Immediately after notification of contract award, the prime submits all **'Commitment to Subcontract'** forms to the DBE Office. Prime contractor has 5 days to submit the completed form for the DBE firms it intends to use on the contract for DBE credit. If the goal is not met in full, the prime contractor must provide the following information along with WisDOT form DT1202: Certificate of Good Faith Efforts.

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact.
(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.
(3) Photocopies or electronic copies of all written solicitations to DBE's. A printed copy of SBN solicitation is acceptable.
(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.
(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

The prime contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved Commitment to Subcontract to DBE Form [DT1506]. If the prime contractor utilizes another contractor, including the use of its own workforce, to perform the work assigned to a DBE on the approved DT1506, the prime contractor will not be entitled to payment for that work. Any changes to DBE after the approval of the DT1506 must be reviewed and approved by the DBE office prior to the change.

6. Use of Joint Checks

The *use of joint checks is allowable if it is a commonly recognized business practice in* the material industry. A joint check is defined as a two-party check between a DBE, a prime contractor and the regular dealer of materials supplier who is neither the prime nor an affiliate of the prime. Typically, the prime contractor issues one check as payor to the DBE subcontractor and to the supplier jointly (to guarantee payment to the supplier) as payment for the material/supplies used by the DBE in cases where the prime has submitted the DBE and material for DBE credit. The DBE subcontractor gains the opportunity to establish a direct contracting relationship with the supplier to potentially facilitate a business rapport that results in a line of credit or increased partnering opportunities.

The cost of material and supplies purchased by the DBE is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE must be responsible for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and "paying for the material itself." See 49 CFR 26.55(c)(1).

The approval to use joint checks constitutes a commitment to provide further information to WisDOT, upon request by staff. WisDOT will allow the use of joint checks when the following conditions are met:

a. The Prime must request permission to use joint checks from the DBE Office by submitting the Application to Use Joint Checks.
   (1) Request should be made when the DBE Commitment form or Request to Sublet is submitted; the request will not be considered if submitted after the DBE Subcontractor starts its work.
   (2) Approval/Permission must be granted prior to the issuance of any joint checks.
   (3) The payment schedule for the supplier must be presented to the DBE office before the first check is issued.
   (4) The joint check for supplies must be strictly for the cost of supplies.

b. DBE subcontractor is responsible to furnish and/or install the material/work item. The DBE subcontractor shall not be an 'extra participant' in the transaction; the DBE's role in the transaction cannot be limited solely to signing the check(s) to release payment to the material supplier. At a minimum, the DBE subcontractor's tasks should include the following.
   (1) The DBE subcontractor (not the prime/payor) negotiates the quantities, price and delivery of materials;
   (2) The DBE subcontractor consents to sign/release the check to the supplier by signing the Application to Use Joint Checks after establishing the conditions and documentation of payment within the subcontract terms or in a separate written document.

c. The Prime contractor/payor acts solely as a guarantor,
   (1) The prime agrees to furnish the check used for the payment of materials/supplies under the contract.
   (2) The prime contractor/payor cannot require the subcontractor to use a specific supplier or the prime contractors negotiated unit price.

7. Bidder's Appeal Process

a. A bidder can appeal the department's decision to deny the bidder's good faith effort submission. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so requested. Failure to appeal within 7 calendar days after receiving the department's written denial notice of a good faith effort evaluation constitutes a forfeiture of the bidder's right of appeal. A contract cannot be executed without documentation that the DBE provisions have been fulfilled.

b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 5 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

8. Department's Criteria for DBE Participation

Directory of DBE firms

a. The only resource for DBE certified firms certified in the state of Wisconsin is the Wisconsin Unified Certification Program [UCP] DBE List. Wisconsin Department of Transportation maintains a current list of certified DBE firms titled Wisconsin UCP DBE Directory on the website at:
   https://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx

b. The DBE office is also available to assist at 414-438-4583 or 608-267-3849.

9. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine whether the work that is committed and/or contracted to a DBE certified firm can be counted for DBE credit by referencing the work type and NAICS code listed for the DBE firm on the Wisconsin UCP DBE Directory.

g. It is the prime contractor’s responsibility to assess the DBE firm’s ability to perform the work for which s/he is committing/contracting the DBE to do. Note that the department encourages the prime contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

10. Commercially Useful Function

a. Commercially useful function is evaluated after the contract has been executed, while the DBE certified firm is performing its work items. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved.

b. The department uses Form DT1011: DBE Commercially Useful Function Review and Certification to evaluate whether the DBE is performing a commercially useful function. WisDOT counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

c. A DBE is performing a commercially useful function if the following conditions are met:
   (1) For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
   (2) For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

11. Credit Evaluation for Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at https://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

12. Credit Evaluation for Manufacturers, Suppliers, Brokers

The department will calculate the amount of DBE credit awarded to a prime using a DBE firm for the provisions of materials and supplies on a contract-by-contract basis. The department will count the material and supplies that a DBE provides under the contract for DBE credit based on whether the DBE is a manufacturer, supplier or broker. Generally, DBE crediting measures and evaluates the DBE owner's role, responsibility and contribution to the transaction: maximum DBE credit when the DBE manufactures materials or supplies; DBE credit decreases when the DBE solely supplies material and minimal credit is allotted when the DBE's role is administrative or transactional.

It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

a. Manufacturers
   (1) A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.
   (2) If the materials or supplies are obtained from a DBE manufacturer, count **100%** percent of the cost of the materials or supplies toward DBE goals.

b. Regular Dealers of Material and/or Supplies
   (1) A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.
   (2) If the materials or supplies are purchased from a DBE regular dealer, count **60%** percent of the cost of the materials or supplies toward DBE goals.
   (3) At a minimum, a regular dealer must meet the following criteria to be counted for DBE credit:
      i. The DBE firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.
      ii. The DBE firm must both own and operate distribution equipment for the product--bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt. If some of the distribution equipment is leased, the lease agreement must accompany the DBE Commitment form for evaluation of the dealer's control before the DBE office approves the DBE credit.

c. Brokers, Transaction Expediters, Packagers, Manufacturers Representatives
   (1) No portion of the cost of the materials, supplies, services themselves will count for DBE credit; however, WisDOT will evaluate the fees or commissions charged when a prime purchases materials, supplies or services from a DBE certified firm which is neither a manufacturer nor a regular dealer, namely: brokers, packagers, manufacturers' representatives or other persons who arrange or expedite transactions.
   (2) Brokerage fees have historically been calculated as **10%** of the purchase amount.
   (3) WisDOT may count the amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site.
   (4) The evaluation will review the contract need for the item/service, review the sub-contract or invoice for the item/service, compare the fees customarily allowed for similar services to determine whether they are reasonable.

When DBE suppliers are contracted, additional documentation must accompany the DT1506 and Attachment 'A' forms. An invoice or bill-of-sale that includes the company names of the bidder and the DBE supplier and documentation of the calculations used as the basis for the purchase agreement, subcontract or invoice. *WisDOT recognizes that the amount on the Attachment 'A' form may be more or less than the amount on the invoice*. Please respond to the following questions and submit with your DBE Commitment Form.

1. What is the product or material?
2. Is this item in the prime's inventory or was the item purchased when contract was awarded?
3. Which contract line items were referenced to develop this quote?
4. What is the amount of material or product used on the project?

13. Credit Evaluation for DBE Primes

Wisconsin DOT calculates DBE credit based on the amount and type of work performed by DBE certified firms. If the prime contractor is a DBE certified firm, the department will only count the work that DBE prime contractor performs with its own forces for DBE credit. We will also calculate DBE credit for the work performed by any other DBE certified subcontractor, DBE certified supplier, DBE certified manufacturer on that contract in that DBE's approved work areas/NAICS code. Crediting for manufacturers and suppliers is calculated consistent with paragraph 12 of this document and 49 CFR Part 26.

14. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces for DBE credit.

15. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will count for credit the portion of the work performed by the DBE protégé firm.

b. DBE credit will be evaluated and confirmed by the DBE Office for any contracts on which the mentor protégé team identifies itself to the DBE Office as a current participant of the Mentor Protégé Program.

c. Refer to WisDOT's Mentor Protégé guidelines for guidance on the number of contracts and amount of DBE credit that can be counted on any WisDOT project.

16. DBE Replacement or Termination

Contractual Requirement

The contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent from the Department's DBE Office. If the Department does not provide consent to replace or terminate a DBE firm, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

Contractor Considerations

a. A prime contractor cannot terminate and/or replace a DBE subcontractor listed on the approved Commitment to Subcontract to DBE Form [DT1506] without prior written consent from the DBE Office. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

b. If a prime contractor feels it is necessary to replace or terminate a DBE firm that has been approved for DBE credit toward its contract, s/he will be required to provide reasons and documentation to support why the prime cannot fulfill the contractual commitment that it made to the Department regarding the DBE utilization.

c. Prime contractor is required to make affirmative efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE that was terminated, to the extent needed to meet the assigned DBE contract goal.

d. In circumstances when a DBE subcontractor fails to complete its work on the contract for any reason or is terminated from a contract, the prime contractor is expected to make affirmative efforts to maintain its commitment to the assigned DBE goal.

e. The DBE firm should communicate with the prime contractor regarding its schedule and capacity in the context of the contract. If the DBE anticipates that it cannot fulfill its subcontract, s/he shall advise the prime contractor and suggest a DBE that may replace their services or provide written consent to be released from its subcontract.

(1) Before the prime contractor can request to terminate or substitute a DBE firm; s/he must:
   i. Make every effort to fulfill the DBE commitment by working with the listed DBE to ensure that they are fully knowledgeable of your expectations for successful performance on the contract. Document these efforts in writing.
   ii. If those efforts fail, provide written notice to the DBE subcontractor of your *intent to* request to terminate and/or replace the firm including the reason(s) you want to pursue this action.
   iii. Copy the DBE Office on all correspondence related to changing a DBE firm who has been approved for DBE credit on a contract including the preparation and coordination efforts with the DBE on the contract.
   iv. Clearly state the amount of time the DBE firm has to remedy and/or respond to your notice of intent to replace/terminate their firm from the contract. The DBE shall be allowed five days to respond, in writing. **EXCEPTION:** The prime contractor must provide a verifiable reason for a response period shorter than five days. For example a WisDOT project manager must verify that waiting 5 days for a DBE performing traffic control work to respond would affect the public safety.
   v. The DBE subcontractor must forward a written response to the prime contractor and copy the DBE Office. The written response must outline why it objects to the proposed termination of its subcontract and list the reasons that WisDOT should not approve the request for their firm to be replaced or removed from the contract.

The Request to Replace or Terminate a DBE

The prime contractor must provide a written request to replace or terminate a DBE firm that has been approved for DBE credit on a WisDOT contract. The written request can be an email or printed document delivered by email or fax; at minimum, the request must contain the following:

1. Contract ID number.
2. Wisconsin DOT Contract Project Manager name and contact information.
3. DBE name and work type and/or NAICS code.
4. Contract's progress schedule.
5. Reason(s) for requesting that the DBE be replaced or terminated.
6. Attach/include all communication with the DBE to deploy/address/resolve work completion,

WisDOT will review your request and any supporting documentation that you submit to evaluate whether the circumstance and the reasons constitute a good cause for replacing or terminating the DBE that was approved for DBE credit on that contract.

Examples of Good Causes to Replace a DBE according to the federal DBE program guidelines {49 CFR part 26.53}

- The listed DBE subcontractor fails or refuses to execute a written contract.
- The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor.
- The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements.
- The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness.
- The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
- You have determined that the listed DBE subcontractor is not a responsible contractor.
- The listed DBE subcontractor voluntarily withdraws from the project and provides to you written notice of its withdrawal.
- The listed DBE is ineligible to receive DBE credit for the type of work required.
- A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract.

Evaluation and Response to the Request

If WisDOT determines that your reasons comply with the good cause standards; the DBE office will send the prime contractor and the WisDOT project manager an email stating that we concur with the reasons and approve the replacement or termination.

If WisDOT determines that your reasons do not comply with the good cause standards of the federal DBE program, the DBE Office will send the prime contractor an email that includes *the requirement* to utilize the committed DBE, *remedial actions* to support the completion of the contractual commitment, a list of available WisDOT support services *and administrative remedies that may be invoked* for failure to comply with federal DBE guidelines for DBE replacement.

The Wisconsin Department of transportation contact for all actions related to replacing a DBE is the DBE Program Chief and/or the DBE Program Engineer which can be reached at DBE_Alert@dot.wi.gov or by calling 608-267-3849.

17. DBE Utilization beyond the approved DBE Commitment Form DT1506

If the Prime/subcontractor increases the scope of work for a participating DBE or adds a DBE subcontractor that was not on the approved Form DT1506 at any time after contract award, s/he should follow these steps so that the participation can be accurately credited toward the DBE goal.

a. Send an email to the DBE Engineer at DBE_Alert@dot.wi.gov describing the work to be performed by the new DBE including the proposed schedule or duration, DBE name and contact information. You may also call the DBE Engineer at 414-659-0487 to notify him of the change verbally.
   If the scope change added work for a participating DBE; list the date and reason for the scope change.

b. Forward a complete, signed Attachment 'A' form to the DBE Office at DBE_Alert@dot.wi.gov. A complete Attachment A includes DBE contact information, signature, subcontract value and proper description of the work areas to be performed by the DBE.
   The DBE office will confirm the DBE participation and revise the DT1506 based on the email/discussion and attach the new/revised Attachment A to the Contract record/documentation.

18. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors that were committed to equal work items, in the original contract.

19. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO:	DBE FIRMS
FROM:	POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR
SUBJECT:	REQUEST FOR DBE QUOTES LET DATE & TIME
DATE:	MONTH DAY YEAR
CC:	DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/default.aspx

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternatives are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/default.aspx

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2
This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____
Letting Date: _____
Project ID: _____

Please check all that apply

- ¨ Yes, we will be quoting on the projects and items listed below
- ¨ No, we are not interested in quoting on the letting or its items referenced below
- ¨ Please take our name off your monthly DBE contact list
- ¨ We have questions about quoting this letting. Please have someone contact me at this number

Prime Contractor 's Contact Person	DBE Contractor Contact Person
Phone:	Phone
Fax:	Fax
Email:	Email

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternatives are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Ø Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance.
- Ø Participate in speed networking and mosaic exercises as arranged by DBE office.
- Ø Host information sessions not directly associated with a bid letting.
- Ø Participate in a formal mentor protégé or joint venture with a DBE firm.
- Ø Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings.
- Ø Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods.
- Ø Encourage subcontractors to solicit and highlight DBE participation in their quotes to you.
- Ø 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

- Ø DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Ø Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Ø Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Ø 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.
- Ø Participate in DBE office assessment programs.
- Ø Participate on advisory and mega-project committees.
- Ø Sign up to receive the DBE Contracting Update.
- Ø Consider membership in relevant industry or contractor organizations.
- Ø Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities.
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively.
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal.
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract.
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities.
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a

contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription.
Within the Small Business Network, Prime Contractors can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.

2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request.
    d. Add attachments to sub-quotes.

3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing.

4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a “Good Faith” effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses.
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively.
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency).

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.

2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes.
    c. Add attachments to a sub-quote.

3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.

4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on a per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder.
    c. Add attachments to a sub-quote.
    d. Add unsolicited work items to sub-quotes that you are responding to.

5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime.
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses.

6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to www.bidx.com and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588.

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

107.14 Contractor's Responsibility for Work

Replace the entire text with the following effective with the June 2019 letting:

(1) Within 107.14, the term "work" is redefined to mean "the work product that is completed in its final position and is incorporated in the project."

(2) The contractor shall maintain charge and care of the work until the engineer accepts the work as specified in 105.11. Protect the work against injury or damage caused by public traffic, the action of the elements, or from other causes, whether arising from the execution or non-execution of the work. Rebuild, repair, restore, and make good injuries or damages to work caused by the above at no additional cost to the department.

(3) The department will assume responsibility for the work as follows:

1. Costs the department assumes under 104.6.
2. Costs to repair bridge damage attributed to public traffic, if the engineer determines that damage was beyond the control of and without the fault of the contractor.

(4) The contractor shall not bear the expense for damage to the work caused by abnormal and unforeseeable occurrences beyond the control of, and without the fault or negligence of, the contractor. These abnormal and unforeseeable occurrences include but are not limited to the following:

1. Cataclysmic phenomena of nature.
2. Acts of the public enemy.
3. Acts of government authorities.

(5) Before suspending the work, take the necessary precautions to prevent damage to the project, prevent traffic accidents, and provide for normal drainage. Erect necessary temporary barrier, barricades, signs, or other facilities at no expense to the department except as specified in 104.6.

(6) The contractor is responsible for all damages to equipment and supplies regardless of the circumstances.

107.17.1 General

Replace paragraph seven with the following effective with the December 2018 letting:

(7) Have a professional engineer registered in the state of Wisconsin sign and seal the shop drawings. At least 30 calendar days before starting falsework, form, or shoring construction; submit a PDF file of shop drawings to the railroad's chief engineering officer and to the engineer. The engineer and the railroad may review the shop drawings. If the engineer or the railroad finds the shop drawings unsatisfactory, the contractor shall make the required changes. A satisfactory shop drawing review does not relieve the contractor of responsibility and liability for the structural integrity and proper functioning of the falsework, forms, or shoring.

109.1.1 General

Replace the entire text with the following effective with the January 2019 letting:

(1) The engineer will use the US standard system to measure all work completed under the contract. The engineer will determine quantities of materials the contractor furnishes and work the contractor performs using measurement methods and computations conforming to standard engineering practice, modified to meet department requirements. The engineer will document these measurements using department procedures.

(2) The engineer will measure the work as the contract measurement subsection for individual items specifies. The department will measure the actual quantities of work the contractor acceptably completes and make final payment based on those actual measured quantities except as follows:

1. If the measurement subsection for a bid item specifically restricts the quantity measured for payment or allows for use of conversion factors.

2. If the engineer executes a contract change order modifying the method of measurement for specific bid items, the engineer will measure the quantities of applicable bid items for payment using the change order methods.
3. If the engineer, under 105.3.1(2), approves a contractor-requested plan dimension change between US standard and SI metric dimensions, the engineer will measure whichever of the following is less:
   - Actual quantities constructed.
   - Quantities derived from the original plan dimensions.
4. For substitutions made under 106.2.3 between US standard and SI metric products, the engineer will measure the actual quantities of the substitute products using the original contract measuring system.

205.5.2 Excavation

Replace the entire text with the following effective with the April 2019 letting:

205.5.2.1 General

(1) Payment for the Excavation bid items under this section is full compensation for work specified for those excavation classes under 205 with no separate contract bid items; for hauling; and for constructing and removing temporary drainage installations as specified under 205.3.3.

(2) Payment also includes removing walls, foundations, etc. with no separate contract bid items; for disposal of resulting material; and for backfilling basements or openings resulting from removing walls, foundations, etc.

205.5.2.2 Associated Work

(1) The department will pay separately for removing concrete structures under the 203 and 204 bid items.

(2) The department will pay separately for granular backfill the contract or engineer requires under the Backfill Granular bid items.

(3) The department will pay separately for erosion control, fertilizing, and seeding of material disposal sites as specified for material disposal sites in 628.5.1.

(4) If the contract does not include the Excavation Rock bid item, the department will pay 5 times the contract bid price of the Excavation Common bid item to remove boulders having volumes of one cubic yard or more. The department will pay for these boulder removals under the Removing Large Boulders administrative item.

205.5.2.3 Excavation Below Subgrade

205.5.2.3.1 General

(1) The department will only pay for engineer-approved EBS to correct problems beyond the contractor's control.

205.5.2.3.2 Quantity Overruns

(1) The department will provide additional compensation for EBS quantity overruns if the following conditions are met:
   - The quantity of engineer-approved EBS, calculated exclusive of work covered under 205.5.2.3.3 or 301.5, exceeds the total contract EBS quantity the earthwork summary sheet shows by more than 25 percent.
   - The material exceeding that 25 percent threshold cannot be disposed of within the project right-of-way.

(2) The department will pay 2 times the contract unit price, up to $25,000, for the quantity of EBS meeting the above conditions. After exceeding $25,000 per contract, the department will pay for additional EBS as determined under 109.4.

205.5.2.3.3 Subgrade Correction

(1) Work performed under 105.3 to correct unacceptable work is the contractor's responsibility. For EBS work performed where the engineer did not approve the subgrade for subsequent operations, the department will pay for EBS at the contract price under the pertinent excavation and backfill bid items, or absent those bid items as extra work. For EBS work performed where the engineer approved the underlying layers for subsequent operations, the department will pay for EBS as follows:

1. Up to a maximum of $25,000 per contract, the department will pay as follows:

   1.1 For excavation: 3 times the contract unit price for the Excavation Common bid item under the EBS Post Grading administrative item.

1.2 For backfill with the materials the engineer directs: at the contract unit price for the bid items of each material used to fill the excavation.

1.3 For excavation or backfill without contract bid items: as extra work.

2. After exceeding $25,000 per contract, the department will pay for additional EBS in engineer-approved areas as determined under 109.4.

305.2.1 General

Replace paragraph two with the following effective with the December 2018 letting:

(2) Where the contract specifies or allows 1 1/4-inch base, do not place reclaimed asphalt, reprocessed material, or blended materials below virgin aggregate materials unless the contract specifies or the engineer allows in writing. The department will allow virgin aggregate above reclaimed asphalt, reprocessed material, or blended materials in shoulder areas adjacent to concrete pavement.

420.3.2.1 General

Replace paragraph one with the following effective with the December 2018 letting:

(1) Use self-propelled grinding machines with depth, grade, and slope controls designed for grinding and texturing concrete. Equip grinding machines with diamond blades and a vacuuming system capable of removing liquid and solid residue from the ground surface. Shroud the machine to prevent discharging loosened material into adjacent work areas or live traffic lanes. Provide the specified effective wheelbase, defined as the center of the front to center of the rear main support wheels.

420.3.2.2 Continuous Grinding

Replace paragraph one with the following effective with the December 2018 letting:

(1) Under the Continuous Diamond Grinding Concrete Pavement bid item, ensure that the grinding machine, including the grinding head, weighs 35,000 pounds or more, will grind a strip at least 4 feet wide, and has an effective wheel base of 25 feet or more. For pavements with a design speed less than 40 miles per hour and areas difficult to access, the contractor may use equipment with an effective wheel base of 12 feet or more.

450.3.2.8 Jointing

Replace paragraphs three through five with the following effective with the December 2018 letting:

(3) Construct notched wedge longitudinal joints for mainline paving if the pavement thickness conforms to the minimums specified in 460.3.2, unless the engineer directs or allows an alternate joint. Construct the wedge using a slope no steeper than 3:1. Extend the wedge 12 inches beyond the normal lane width, or as the engineer directs. Ensure that the wedge for all layers directly overlaps and slopes in the same direction.

(4) Locate the joint at the pavement centerline for 2-lane roadways, or at lane lines if the roadway has more than 2 lanes. Construct a vertical notch 1/2-inch to 3/4-inch high on the centerline or lane line at the top of each wedge. Place a 1/2-inch to 3/4-inch notch at the outside bottom edge of the wedge after compacting each layer. Align the finished longitudinal joint line of the upper layer with the centerline or lane line.

(5) Construct the wedge for each layer using an engineer-approved strike-off device that will provide a uniform slope and will not restrict the main screed. Shape and compact the wedge with a weighted steel side roller wheel the same width as the wedge. Apply a tack coat to the wedge surface and both notches before placing the adjacent lane.

455.2.4.3 Emulsified Asphalts

Replace paragraph two with the following effective with the December 2018 letting:

(2) The bill of lading for emulsified asphalts shall indicate the asphalt content of the original emulsion and dilution rate of the additional water added to the original emulsion. If undiluted samples are not available, test the diluted material and modify AASHTO M140, M208, or M316 to reflect properties resulting from dilution of the asphalt.

460.2.8.3.1.4 Department Verification Testing Requirements

Replace paragraph three with the following effective with the December 2018 letting:

(3) The department will perform testing conforming to the following standards:

Bulk specific gravity (G_{mb}) of the compacted mixture according to AASHTO T166.

Maximum specific gravity (G_{mm}) according to AASHTO T209.

Air voids (V_a) by calculation according to AASHTO T269.

VMA by calculation according to AASHTO R35.

Asphalt content by ignition oven according to AASHTO T308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T-164, or Asphalt Analyzer™ according to manufacturer recommendations.

460.2.8.3.1.6 Acceptable Verification Parameters

Replace paragraph one with the following effective with the December 2018 letting:

(1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:

- Va is within a range of 2.0 to 4.3 percent. For SMA, Va is within a range of 2.7 to 5.3 percent.
- VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.
- Asphalt content is within minus 0.3 percent of the JMF.

460.2.8.3.1.7 Dispute Resolution

Replace paragraph one with the following effective with the December 2018 letting:

(1) When QV test results do not meet the specified limits for 100 percent pay, the bureau's AASHTO accredited laboratory and certified personnel will referee test the retained portion of the QV sample and the retained portion of the required forward and backward QC retained samples according to CMM 8-36.

460.5.2.1 General

Replace paragraphs five and six with the following effective with the December 2018 letting:

(5) The department will reduce pay for nonconforming QMP HMA mixtures as specified in 460.2.8.2.1.7, starting from the stop point to the point when the running average of 4 is back inside the warning limits. The engineer will determine the quantity of material subject to pay reduction based on the testing data and an inspection of the completed pavement. The department will reduce pay as follows:

PAYMENT FOR MIXTURE*[1] [2] [3]*

ITEM	PRODUCED WITHIN WARNING BANDS	PRODUCED OUTSIDE JMF LIMITS
Gradation	90%	75%
Asphalt Content*[4]*	___	___
Air Voids	70%	50%
VMA	90%	75%

[1] For projects or plants where the total production of each mixture design requires less than 4 tests refer to CMM 8-36.

[2] Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. If the quantity of material subject to pay adjustment based on the running average of 4 is also subject to pay adjustment resulting from dispute resolution in accordance with 460.2.8.3.1.7, the department will apply the single pay adjustment resulting in the lowest percent pay.

[3] In addition to any pay adjustment listed in the table above, the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item. The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

[4] The department will not adjust pay based on a running average of 4 asphalt content tests; however, corrective action will be applied to nonconforming material according to 460.2.8.2.1.7.

(6) If during a QV dispute resolution investigation the department discovers unacceptable mixture defined by one or more of the following:

- Va greater than 5.0 or less than 1.5.
- VMA more than 1.0 below the minimum allowed in table 460-1.
- AC more than 0.5 % below the JMF target.

Remove and replace the material, or if the engineer allows the mixture to remain in place, the department will pay for the quantity of affected material at 50 percent of the contract price.

501.3.8.2.1 General

Replace paragraph two with the following effective with the April 2019 letting:

(2) If the concrete temperature at the point of placement exceeds 90 F, do not place concrete under the following structure and concrete barrier bid items:

Concrete Masonry Bridges	Concrete Masonry Retaining Walls
Concrete Masonry Bridges HES	Concrete Masonry Retaining Walls HES
Concrete Masonry Culverts	Concrete Masonry Endwalls
Concrete Masonry Culverts HES	Concrete Masonry Overlay Decks
Concrete Barrier Single-Faced 32-Inch	Concrete Barrier (type)
Concrete Barrier Double-Faced 32-Inch	Concrete Barrier Fixed Object Protection (type)
Concrete Barrier Transition Section 32-Inch	Concrete Barrier Transition (type)

506.3.2 Shop Drawings

Replace paragraph four with the following effective with the December 2018 letting:

(4) Ensure that the fabricator submits a PDF file of shop drawings for railroad structures to the railroad company's chief engineering officer upon contract completion.

603.3.1.1 General

Replace paragraph three with the following effective with the April 2019 letting:

(3) Cast permanent barrier and transitions in place. Use construction methods conforming to 502 and conform to the hot weather placement requirements of 501.3.8.2. Use forms or engineer-approved slip form methods for barrier. Use forms for transitions. Construct barrier on horizontal curves as a series of 12-foot or shorter chords.

646.3.1.2 Liquid Marking

Replace paragraph five with the following effective with the June 2019 letting:

(5) Apply liquid marking and glass beads across the line at or exceeding the following:

LIQUID MARKING	PAVEMENT TYPE	THICKNESS (mils)	BEAD APPLICATION (pounds per gallon)
Paint	all	16	8
Epoxy	SMA, seal coats, and polymer overlays	25	25
Epoxy	all other	20	22.5
Wet Reflective Epoxy	all	20	[1]

[1] Use the product specific bead application rate for wet reflective epoxy specified on the department's APL.

646.3.2.3.2 Wet Reflective Epoxy

Replace paragraph one with the following effective with the June 2019 letting:

(1) Apply wet reflective epoxy binder in a grooved slot. and provide a double drop bead system as follows:

1. Wet reflective/recoverable elements at the application rate specified in the department's APL.
2. Glass beads conforming to 646.2.2 at the application rate specified in the department’s APL.

650.3.1 General

Replace the entire text with the following effective with the December 2018 letting:

(1) Department and contractor responsibilities for construction staking are specified in 105.6. Conform to 105.6 and the additional requirements specified here in 650.3 for the individual contractor-staking bid items the contract includes.

(2) Protect and preserve known property and survey marks and land monuments as specified in 107.11.3. The contract may require related work under the 621 bid items.

(3) Obtain or calculate benchmark data, grades, and alignment from plan information. The engineer will furnish data for the horizontal and vertical control points, control point ties, horizontal alignments, profiles, and elevations. Reestablish, set additional, and maintain the horizontal and vertical control points and control point ties, as needed for bid items.

(4) Check horizontal and vertical information including but not limited to alignments, locations, elevations, and dimensions, that either the plans show or the engineer provides, for compatibility with existing field conditions. Conduct similar compatibility checks and accuracy checks of horizontal and vertical positions either the department or the contractor establishes in the field.

(5) Perform survey work using conventional methods, or AMG methods capable of achieving the lines and grades the plans show for the work in question. Establish additional benchmarks and control points as necessary to support the method of operation.

650.3.1.1 Staking

(1) Furnish, set, reference, and maintain stakes and markings necessary to establish the alignment, location, benchmarks, elevations, and continuous profile-grades for road and structure work as needed for bid items. Supervise and coordinate construction staking.

(2) Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. Make the survey notes and computations available to the engineer within 24 hours, upon request, as the work progresses.

(3) Furnish surveying equipment, stakes, flags, pins, lath, whiskers, and other materials necessary to perform this work, subject to the engineer’s approval.

650.3.1.2 Automated Machine Guidance

650.3.1.2.1 General

(1) The contractor may substitute AMG for conventional staking on all or part of the work under the individual staking bid items. Coordinate with the engineer throughout the course of construction to ensure that work performed using AMG conforms to the contract tolerances and that the methods employed conform to the contractor's AMG work plan and accepted industry standards. Revert to conventional staking methods for all or part of the work at any point during construction if AMG is producing unacceptable results.

650.3.1.2.2 AMG Work Plan

(1) Submit a comprehensive written AMG work plan for department review at least 5 business days before the preconstruction conference. In that plan discuss how AMG technology will be integrated into other technologies employed on the project. List the staking bid items that will have work performed using AMG and, for each bid item listed, include the following:

1. Designate which portions of the contract will be done using AMG and which portions will be done using conventional staking.
2. Designate a single staff person as the primary contact for AMG technology issues.
3. List and map the primary and secondary control points required under 105.6.2 enveloping the site.
4. Describe the contractor's quality control procedures. Include the frequency and type of checks performed to ensure that the work conforms to the contract plans.

(2) The engineer will review the plan to determine if it conforms to the contract. Do not perform AMG work until the engineer approves the governing portion of the AMG workplan. Perform the work as the contractor's AMG work plan provides. Update the plan as necessary.

650.3.1.2.3 Geometric and Surface Information

650.3.1.2.3.1 Department Responsibilities

(1) At any time after the contract is awarded the contractor may request the contractor data packet. The department will provide the packet within 5 business days of receiving the contractor's request.

650.3.1.2.3.2 Contractor Responsibilities

(1) Develop and maintain a contractor construction model for areas of the project employing AMG. Confirm that the resulting model agrees with the contract plans.

(2) If the engineer requests, provide the construction model to the department in LandXML or other engineer-approved format.

650.3.1.2.4 Managing and Updating Information

(1) Notify the department of any errors or discrepancies in department-provided information. The department will determine what revisions may be required. The department will revise the contract plans, if necessary, to address errors or discrepancies that the contractor identifies. The department will provide the best available information related to those contract plan revisions.

(2) Revise the construction model as required to support construction operations and to reflect any contract plan revisions the department makes. Perform checks to confirm that the revised construction model agrees with the contract plan revisions. If the engineer requests, provide construction model updates to the engineer. The department will pay for costs incurred to incorporate contract plan revisions as extra work.

650.3.1.2.5 Construction Checks

(1) Check the work against the plan elevation at randomly selected points on cross-sections located at stations evenly divisible by 100 at the frequency the engineer approved as a part of the AMG work plan. Submit the results of these random checks to the engineer daily. Notify the engineer immediately if a check exceeds the tolerances specified in 650.3.1.2.6 below.

(2) Check the work at additional points as the engineer directs. The department may conduct periodic independent checks.

650.3.1.2.6 Construction Tolerances

(1) Ensure that the finished work vertically matches existing or other completed features. Ensure that the work conforms to revised plan elevations as follows:

- Subgrade : +/- 0.10 feet.
- Base : within the tolerance specified in 301.3.4.1(2).

650.3.3 Subgrade

Retitle and replace the entire text with the following effective with the December 2018 letting:

650.3.3 Subgrade Staking

(1) Set construction stakes or marks at intervals of 100 feet, or more frequently, for rural sections and at intervals of 50 feet, or more frequently, for urban sections. Include additional stakes at each cross-section as necessary to match the plan cross-section, achieve the required accuracy, and to support construction operations. Also set and maintain stakes as necessary to establish the horizontal and vertical positions of intersecting road radii, auxiliary lanes, horizontal and vertical curves, and curve transitions. Locate stakes to within 0.25 feet horizontally and establish the grade elevation to within 0.03 feet vertically.

Errata

520.3.3 Laying Pipe

Correct errata by replacing "sections" with "joints" to clarify the intent that the last 3 joints need ties.

(5) Provide joint ties on the upstream and downstream ends of circular and horizontal elliptical concrete culvert and concrete cattle pass installations. Tie the next 3 pipe joints or, if using apron endwalls, the endwall joint and the last 2 pipe joints. Ties are not required on culverts with masonry endwalls unless the plans show otherwise.

608.3.3 Laying Pipe

Correct errata by replacing "sections" with "joints" to clarify the intent that the last 3 joints need ties.

(5) Provide joint ties on concrete storm sewer system infall and outfall pipes. Tie the last 3 pipe joints or, if using apron endwalls, the endwall joint and the next 2 pipe joints. Ties are not required on installations with masonry endwalls unless the plans show otherwise.

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.

NOTE: CRCS Prime Contractor payment is currently not automated and will need to be manually loaded into the Civil Rights Compliance System. Copies of prime contractor payments received (check or ACH) will have to be forwarded to paul.ndon@dot.wi.gov within 5 days of payment receipt to be logged manually.

***Additionally, for information on Subcontractor Sublet assignments, Subcontractor Payments and Payment Tracking, please refer to the CRCS Payment and Sublets manual at:

https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payments-sublets-manual.pdf

Effective January 2019 Letting ASP 9

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll or Labor Data Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to electronically submit certified payroll reports for contracts with federal funds and labor data for contracts with state funds only. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, including all trucking firms, either submit their weekly certified payroll reports (contracts with federal funds) or labor data (contracts with state funds only) electronically through CRCS. These payrolls or labor data 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 their submittals. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Paul Ndon at (414) 438-4584 to schedule the training.

(4) The department will reject all paper submittals 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/labor data from their computer system into CRCS should have their payroll coordinator contact Paul Ndon at paul.ndon@dot.wi.gov. Not every contractor's payroll system is capable of producing export files. For details, see Section 4.8 CPR Auto Submit (Data Mapping) on pages 49-50; 66-71 of the CRCS Payroll Manual at:

https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.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.

Non-discrimination Provisions

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the contractor under the contract until the contractor complies; and/or
b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Effective August 2015 letting

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

https://wisconsindot.gov/rdwy/cmm/cm-02-28.pdf

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

https://wisconsindot.gov/hcciDocs/contracting-info/ws4567.doc

Effective February 2016 letting

Cargo Preference Act Requirement

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) *Agreement Clauses.* "Use of United States-flag vessels:"

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees—"

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Effective with December 2017 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS
FOR PROJECTS WITH FEDERAL AID

I. PREVAILING WAGE RATES

The attached U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) furnishes the minimum prevailing wage rates pursuant to the Davis-Bacon and Related Acts. The wage rates shown are the minimum rates required by the contract to be paid during its life, however this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price will be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

II. COVERAGE OF TRUCK DRIVERS

Truck drivers are covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Drivers of a contractor or subcontractor for time spent working on the site of the work.
- Drivers of a contractor or subcontractor for time spent loading and/or unloading materials and supplies on the site of the work, if such time is not de minimis. https://www.dol.gov/whd/FOH/FOH_Ch15.pdf
- Truck drivers transporting materials or supplies between a facility that is deemed part of the site of the work and the actual construction site.
- Truck drivers transporting portions of the building or work between a site established specifically for the performance of the contract where a significant portion of such building or work is constructed and the physical place where the building or work called for in the contract will remain.

Truck drivers are not covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Material delivery truck drivers while off the site of the work.
- Drivers of a contractor or subcontractor traveling between a Davis-Bacon job and a commercial supply facility while they are off the site of the work."
- Truck drivers whose time spent on the site of the work is de minimis, such as only a few minutes at a time merely to pick up or drop off materials or supplies.

Details are available online at:
https://www.dol.gov/whd/recovery/pwrb/Tab9.pdf
https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/trckng.aspx

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the department, the contractor shall post the following in at least one conspicuous and accessible place at the site of work:

a. A copy of the contractor's Equal Employment Opportunity Policy.

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. RESOURCES

Required information regarding compliance with federal provisions is found in the following resources:

- FHWA-1273 included in this contract
- U.S. Department of Labor Prevailing Wage Resource Book
- U.S. Department of Labor Field Operations Handbook
- U.S. Code of Federal Regulations
- Any applicable law, Act, or Executive Order enacted by the federal government at the time of the letting of this contract

General Decision Number: WI190010 02/22/2019 WI10

Superseded General Decision Number: WI20180010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/22/2019

BRWI0001-002 06/01/2018

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.06	22.65

BRWI0002-002 06/01/2018

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 38.87	21.26

BRWI0002-005 06/01/2018

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC,

FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE,
LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE,
OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK,
SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA,
WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 35.39	21.46

BRWI0003-002 06/01/2018

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.44	22.27

BRWI0004-002 06/01/2018

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.66	23.35

BRWI0006-002 06/01/2018

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE,
ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 34.30	21.41

BRWI0007-002 06/01/2018

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 34.82	22.59

BRWI0008-002 06/01/2018

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 38.03	22.55

* BRWI0011-002 06/01/2018

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 33.44	22.27

BRWI0019-002 06/01/2018

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN,
PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.97	22.74

BRWI0034-002 06/01/2018

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 34.80	22.61

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 33.56	18.00
MILLWRIGHT	$ 35.08	18.35
PILEDRIVER	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 33.56	18.00
Millwright	$ 35.08	18.35
Pile Driver	$ 34.12	18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0361-004 05/01/2018

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 36.15	20.43

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

ELEC0014-002 06/04/2018

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 34.21	20.46

ELEC0014-007 06/05/2018

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician	$ 26.25	13.92

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2017

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 38.50	30%+10.57

ELEC0158-002 06/04/2018

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and

Hutchins) COUNTIES

	Rates	Fringes
Electricians:	$ 32.50	19.68

ELEC0159-003 06/01/2018

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
Electricians:	$ 39.04	21.56

ELEC0219-004 06/01/2016

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 32.38	18.63
Electrical contracts under $180,000	$ 30.18	18.42

ELEC0242-005 05/16/2018

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 36.85	26.17

ELEC0388-002 06/03/2018

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 32.55	19.02

* ELEC0430-002 01/01/2019

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 38.78	21.59

ELEC0494-005 06/01/2018

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 39.31	24.69

ELEC0494-006 06/01/2018

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 33.40	22.08

ELEC0494-013 06/01/2018

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 19.56	15.78
Technician	$ 28.99	16.25

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

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ELEC0577-003 06/01/2018

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 32.18	18.59

ELEC0890-003 06/01/2018

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 34.15	19.63

ELEC0953-001 07/01/2015

	Rates	Fringes
Line Construction:		
(1) Lineman	$ 42.14	32% + 5.00
(2) Heavy Equipment Operator	$ 40.03	32% + 5.00
(3) Equipment Operator	$ 33.71	32% + 5.00
(4) Heavy Groundman Driver	$ 26.78	14.11
(5) Light Groundman Driver	$ 24.86	13.45
(6) Groundsman	$ 23.18	32% + 5.00

ENGI0139-005 06/04/2018

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 40.72	22.10
Group 2	$ 40.22	22.10
Group 3	$ 39.72	22.10
Group 4	$ 39.46	22.10
Group 5	$ 39.17	22.10
Group 6	$ 33.27	22.10

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, tower cranes, and derricks with or without attachments with a lifting capacity of over 100 tons; or cranes, tower cranes, and derricks with boom, leads and/or jib lengths measuring 176 feet or longer.

GROUP 2: Cranes, tower cranes and derricks with or without attachments with a lifting capacity of 100 tons or less; or cranes, tower cranes, and derricks with boom, leads, and/or jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminious paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin

engine); endloader; hydraulic backhoe (tractor type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller over 5 tons; percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self- propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning plants; generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; Oiler, pump (over 3 inches); Drilling Machine Tender.

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2017

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 31.24	26.97

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2017

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 33.19	26.97

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2017

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 34.50	23.82

IRON0498-005 06/01/2016

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 36.29	30.77

IRON0512-008 05/01/2017

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 36.50	26.45

IRON0512-021 05/01/2017

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 32.04	26.45

LABO0113-002 06/04/2018

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 27.88	21.76
Group 2	$ 28.03	21.76
Group 3	$ 28.23	21.76
Group 4	$ 28.38	21.76
Group 5	$ 28.53	21.76
Group 6	$ 24.37	21.76

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/04/2018

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 27.13	21.76
Group 2	$ 27.23	21.76
Group 3	$ 27.28	21.76
Group 4	$ 27.48	21.76
Group 5	$ 27.33	21.76
Group 6	$ 24.22	21.76

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/04/2018

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.94	21.76
Group 2	$ 27.09	21.76
Group 3	$ 27.29	21.76
Group 4	$ 27.26	21.76
Group 5	$ 27.59	21.76
Group 6	$ 24.08	21.76

LABORERS CLASSIFICATIONS:

GROUP 1: General laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler;

Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/04/2018

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 31.80	17.20
Group 2	$ 31.90	17.20
Group 3	$ 31.95	17.20
Group 4	$ 32.15	17.20
Group 5	$ 32.00	17.20
Group 6	$ 28.43	17.20

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/04/2018

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 32.08	17..20
Group 2	$ 32.18	17..20
Group 3	$ 32.23	17..20
Group 4	$ 32.43	17..20
Group 5	$ 32.28	17..20
Group 6	$ 28.43	17..20

LABORERS CLASSIFICATIONS:

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

PAIN0106-008 05/01/2017

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 30.33	17.27
Spray, Sandblast, Steel	$ 30.93	17.27
Repaint:		
Brush, Roller	$ 28.83	17.27
Spray, Sandblast, Steel	$ 29.43	17.27

PAIN0108-002 06/01/2017

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 33.74	18.95
Spray & Sandblast	$ 34.74	18.95

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2018

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 31.60	23.51
Brush	$ 31.55	23.51
Spray & Sandblast	$ 32.30	23.51

PAIN0802-002 06/01/2017

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND, ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 28.25	17.72

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2017

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 24.89	12.05

PAIN0934-001 06/01/2017

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 33.74	18.95
Spray	$ 34.74	18.95
Structural Steel	$ 33.89	18.95

PAIN1011-002 06/01/2017

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 24.86	12.23

PLAS0599-010 06/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2018

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 28.12	21.20
3 or more Axles; Euclids Dumptor & Articulated, Truck Mechanic	$ 28.27	21.20
WELL DRILLER	$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the

Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007

in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

August 2018

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Department of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Department 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 omission 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.

If a project includes multiple types of construction (highway, bridge over navigable water, sanitary sewer and water main, building) and there is not a separate wage determination for this type of work included in the proposal, use the wage determination that is in the proposal.

If a project includes multiple types of construction, different wage rate determinations may be inserted into the contract (WI10/Highway = in all WisDOT highway contracts, WI15/Heavy = bridge over navigable water per USDOL and US Coast Guard designation, WI8/Heavy (Sewer & Water Line & Tunnel) = sanitary sewer and water main if the cost is more than 20% of the contract and/or at least $1,000,000, and Building). If multiple wage rate determinations are inserted into the contract, use the classification in the wage determination for the work being done. Use WI15 wage rates when working on the bridge and/or structure from bank to bank. Use WI8 wage rates when working on any sanitary sewer or water main work. Use Building wage rates for all work done within the footprint of the building. Use WI10 wage rates for all other highway work in the contract and approaches to structures. For example, if a laborer is working within the footprint of a building, use the Laborer rate in the Building wage determination inserted in the contract. If a laborer is working on a bridge/structure within the banks, use the Laborer rate in the WI15/Heavy wage determination if inserted in the contract. If the laborer is working on the highway, use the Laborer rate in the WI10/Highway wage determination.

Proposal ID: 20190611008 **Project(s):** 1360-00-76, 2984-00-73

Federal ID(s): N/A, WISC 2019194

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	204.0100 Removing Pavement	34,311.000 SY	_____.____	_____.____
0004	204.0115 Removing Asphaltic Surface Butt Joints	976.000 SY	_____.____	_____.____
0006	204.0150 Removing Curb & Gutter	1,271.000 LF	_____.____	_____.____
0008	204.0155 Removing Concrete Sidewalk	8,934.000 SY	_____.____	_____.____
0010	204.0195 Removing Concrete Bases	58.000 EACH	_____.____	_____.____
0012	204.0200 Removing Railroad Track	2,292.000 LF	_____.____	_____.____
0014	204.0210 Removing Manholes	3.000 EACH	_____.____	_____.____
0016	204.0215 Removing Catch Basins	80.000 EACH	_____.____	_____.____
0018	204.0245 Removing Storm Sewer (size) 001. 6-Inch to 18-Inch	1,556.000 LF	_____.____	_____.____
0020	204.0250 Abandoning Manholes	12.000 EACH	_____.____	_____.____
0022	204.0280 Sealing Pipes	6.000 EACH	_____.____	_____.____
0024	204.0291.S Abandoning Sewer	4.000 CY	_____.____	_____.____
0026	205.0100 Excavation Common	26,090.000 CY	_____.____	_____.____
0028	205.0501.S Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	736.000 TON	_____.____	_____.____
0030	213.0100 Finishing Roadway (project) 001. 1360-00-76	1.000 EACH	_____.____	_____.____
0032	213.0100 Finishing Roadway (project) 002. 2984-00-73	1.000 EACH	_____.____	_____.____

Proposal ID: 20190611008 **Project(s):** 1360-00-76, 2984-00-73

Federal ID(s): N/A, WISC 2019194

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0034	305.0120 Base Aggregate Dense 1 1/4-Inch	38,296.000 TON	_____.____	_____.____
0036	320.0125 Concrete Base 6-Inch	157.000 SY	_____.____	_____.____
0038	371.1000.S QMP Base Aggregate Dense 1 1/4-Inch Compaction	37,291.000 TON	_____.____	_____.____
0040	415.0080 Concrete Pavement 8-Inch	27,914.000 SY	_____.____	_____.____
0042	415.0210 Concrete Pavement Gaps	5.000 EACH	_____.____	_____.____
0044	415.1080 Concrete Pavement HES 8-Inch	250.000 SY	_____.____	_____.____
0046	415.5110.S Concrete Pavement Joint Layout	1.000 LS	_____.____	_____.____
0048	416.0170 Concrete Driveway 7-Inch	200.000 SY	_____.____	_____.____
0050	416.0610 Drilled Tie Bars	1,145.000 EACH	_____.____	_____.____
0052	416.0620 Drilled Dowel Bars	307.000 EACH	_____.____	_____.____
0054	465.0105 Asphaltic Surface	209.000 TON	_____.____	_____.____
0056	465.0125 Asphaltic Surface Temporary	889.000 TON	_____.____	_____.____
0058	465.0310 Asphaltic Curb	50.000 LF	_____.____	_____.____
0060	520.8000 Concrete Collars for Pipe	31.000 EACH	_____.____	_____.____
0062	601.0331 Concrete Curb & Gutter 31-Inch	12,337.000 LF	_____.____	_____.____
0064	601.0600 Concrete Curb Pedestrian	581.000 LF	_____.____	_____.____

Proposal ID: 20190611008 **Project(s):** 1360-00-76, 2984-00-73

Federal ID(s): N/A, WISC 2019194

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0066	602.0410 Concrete Sidewalk 5-Inch	72,748.000 SF	_____.____	_____.____
0068	602.0515 Curb Ramp Detectable Warning Field Natural Patina	1,230.000 SF	_____.____	_____.____
0070	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	2,618.000 LF	_____.____	_____.____
0072	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	62.000 LF	_____.____	_____.____
0074	608.0512 Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	139.000 LF	_____.____	_____.____
0076	611.2004 Manholes 4-FT Diameter	9.000 EACH	_____.____	_____.____
0078	611.2005 Manholes 5-FT Diameter	1.000 EACH	_____.____	_____.____
0080	611.8110 Adjusting Manhole Covers	68.000 EACH	_____.____	_____.____
0082	616.0700.S Fence Safety	1,500.000 LF	_____.____	_____.____
0084	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0086	620.0300 Concrete Median Sloped Nose	1,156.000 SF	_____.____	_____.____
0088	623.0200 Dust Control Surface Treatment	41,303.000 SY	_____.____	_____.____
0090	625.0100 Topsoil	6,093.000 SY	_____.____	_____.____
0092	628.1905 Mobilizations Erosion Control	11.000 EACH	_____.____	_____.____
0094	628.1910 Mobilizations Emergency Erosion Control	6.000 EACH	_____.____	_____.____
0096	628.7005 Inlet Protection Type A	120.000 EACH	_____.____	_____.____

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0098	628.7010 Inlet Protection Type B	50.000 EACH	_____.____	_____.____
0100	628.7015 Inlet Protection Type C	204.000 EACH	_____.____	_____.____
0102	631.1000 Sod Lawn	6,093.000 SY	_____.____	_____.____
0104	632.0101 Trees (species) (size) (root) 001. SHAGBARK HICKORY, 3", B&B	3.000 EACH	_____.____	_____.____
0106	632.0101 Trees (species) (size) (root) 002. COMMON BALDCYPRESS, 3", B&B	3.000 EACH	_____.____	_____.____
0108	632.0101 Trees (species) (size) (root) 003. SHADEMASTER HONEYLOCUST, 3", B&B	5.000 EACH	_____.____	_____.____
0110	632.0101 Trees (species) (size) (root) 004. AMERICAN HORNBEAM, 3", B&B	6.000 EACH	_____.____	_____.____
0112	632.0101 Trees (species) (size) (root) 005. CALLERY PEAR, 3", B&B	5.000 EACH	_____.____	_____.____
0114	632.0101 Trees (species) (size) (root) 006. AUTUMN BLAZE MAPLE, 3.5", B&B	6.000 EACH	_____.____	_____.____
0116	632.0101 Trees (species) (size) (root) 007. SUNBURT HONEYLOCUST, 3", B&B	3.000 EACH	_____.____	_____.____
0118	632.0101 Trees (species) (size) (root) 008. ACCOLADE ELM, 3", B&B	4.000 EACH	_____.____	_____.____
0120	632.0101 Trees (species) (size) (root) 009. AMERICAN SWEETGUM CHEROKEE, 3", B&B	3.000 EACH	_____.____	_____.____
0122	632.0101 Trees (species) (size) (root) 010. AMERICAN SWEETGUM MORAINE, 3", B&B	3.000 EACH	_____.____	_____.____

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0124	632.0101 Trees (species) (size) (root) 011. TULIP TREE, 3", B&B	6.000 EACH	_____.____	_____.____
0126	632.0101 Trees (species) (size) (root) 012. NORTHERN RED OAK, 3", B&B	3.000 EACH	_____.____	_____.____
0128	632.0101 Trees (species) (size) (root) 013. CUMULUS SERVICEBERRY, 3", B&B	3.000 EACH	_____.____	_____.____
0130	632.0101 Trees (species) (size) (root) 014. KENTUCKY COFFEETREE, 3", B&B	3.000 EACH	_____.____	_____.____
0132	632.0101 Trees (species) (size) (root) 015. BUTTERNUT, 3", B&B	2.000 EACH	_____.____	_____.____
0134	632.0101 Trees (species) (size) (root) 016. IRONWOOD, 3", B&B	3.000 EACH	_____.____	_____.____
0136	632.9101 Landscape Planting Surveillance and Care Cycles	10.000 EACH	_____.____	_____.____
0138	634.0618 Posts Wood 4x6-Inch X 18-FT	10.000 EACH	_____.____	_____.____
0140	637.2210 Signs Type II Reflective H	283.500 SF	_____.____	_____.____
0142	638.2602 Removing Signs Type II	11.000 EACH	_____.____	_____.____
0144	638.3000 Removing Small Sign Supports	10.000 EACH	_____.____	_____.____
0146	642.5201 Field Office Type C	1.000 EACH	_____.____	_____.____
0148	643.0300 Traffic Control Drums	76,180.000 DAY	_____.____	_____.____
0150	643.0410 Traffic Control Barricades Type II	35,940.000 DAY	_____.____	_____.____
0152	643.0420 Traffic Control Barricades Type III	42,360.000 DAY	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0154	643.0705 Traffic Control Warning Lights Type A	61,080.000 DAY	_____.____	_____.____
0156	643.0715 Traffic Control Warning Lights Type C	25,760.000 DAY	_____.____	_____.____
0158	643.0800 Traffic Control Arrow Boards	571.000 DAY	_____.____	_____.____
0160	643.0900 Traffic Control Signs	56,640.000 DAY	_____.____	_____.____
0162	643.0920 Traffic Control Covering Signs Type II	29.000 EACH	_____.____	_____.____
0164	643.1050 Traffic Control Signs PCMS	60.000 DAY	_____.____	_____.____
0166	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0168	644.1410.S Temporary Pedestrian Surface Asphalt	5,750.000 SF	_____.____	_____.____
0170	644.1420.S Temporary Pedestrian Surface Plywood	694.000 SF	_____.____	_____.____
0172	644.1601.S Temporary Curb Ramp	25.000 EACH	_____.____	_____.____
0174	644.1616.S Temporary Pedestrian Safety Fence	2,070.000 LF	_____.____	_____.____
0176	646.1020 Marking Line Epoxy 4-Inch	7,024.000 LF	_____.____	_____.____
0178	646.6020 Marking Stop Line Epoxy 12-Inch	1,448.000 LF	_____.____	_____.____
0180	646.9000 Marking Removal Line 4-Inch	1,046.000 LF	_____.____	_____.____
0182	646.9100 Marking Removal Line 8-Inch	340.000 LF	_____.____	_____.____
0184	646.9200 Marking Removal Line Wide	1,736.000 LF	_____.____	_____.____
0186	649.0105 Temporary Marking Line Paint 4-Inch	11,659.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0188	649.0150 Temporary Marking Line Removable Tape 4-Inch	18,445.000 LF	_____.____	_____.____
0190	649.0805 Temporary Marking Stop Line Paint 18-Inch	33.000 LF	_____.____	_____.____
0192	649.0850 Temporary Marking Stop Line Removable Tape 18-Inch	77.000 LF	_____.____	_____.____
0194	650.4000 Construction Staking Storm Sewer	119.000 EACH	_____.____	_____.____
0196	650.4500 Construction Staking Subgrade	6,322.000 LF	_____.____	_____.____
0198	650.5500 Construction Staking Curb Gutter and Curb & Gutter	879.000 LF	_____.____	_____.____
0200	650.7000 Construction Staking Concrete Pavement	6,322.000 LF	_____.____	_____.____
0202	650.8500 Construction Staking Electrical Installations (project) 001. 1360-00-76	LS	LUMP SUM	_____.____
0204	650.8500 Construction Staking Electrical Installations (project) 002. 2984-00-73	LS	LUMP SUM	_____.____
0206	650.9000 Construction Staking Curb Ramps	122.000 EACH	_____.____	_____.____
0208	650.9910 Construction Staking Supplemental Control (project) 001. 1360-00-76	LS	LUMP SUM	_____.____
0210	650.9910 Construction Staking Supplemental Control (project) 002. 2984-00-73	LS	LUMP SUM	_____.____
0212	652.0220 Conduit Rigid Nonmetallic Schedule 40 1 1/2-Inch	916.000 LF	_____.____	_____.____
0214	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	600.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0216	652.0230 Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	12,833.000 LF	_____.____	_____.____
0218	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	1,258.000 LF	_____.____	_____.____
0220	652.0330 Conduit Rigid Nonmetallic Schedule 80 2 1/2-Inch	2,505.000 LF	_____.____	_____.____
0222	652.0335 Conduit Rigid Nonmetallic Schedule 80 3-Inch	2,274.000 LF	_____.____	_____.____
0224	652.0610 Conduit Special 2 1/2-Inch	216.000 LF	_____.____	_____.____
0226	652.0615 Conduit Special 3-Inch	2,785.000 LF	_____.____	_____.____
0228	654.0101 Concrete Bases Type 1	46.000 EACH	_____.____	_____.____
0230	654.0105 Concrete Bases Type 5	3.000 EACH	_____.____	_____.____
0232	654.0110 Concrete Bases Type 10	30.000 EACH	_____.____	_____.____
0234	654.0113 Concrete Bases Type 13	1.000 EACH	_____.____	_____.____
0236	655.0250 Cable Traffic Signal 9-14 AWG	3,100.000 LF	_____.____	_____.____
0238	655.0260 Cable Traffic Signal 12-14 AWG	3,836.000 LF	_____.____	_____.____
0240	655.0270 Cable Traffic Signal 15-14 AWG	2,322.000 LF	_____.____	_____.____
0242	655.0280 Cable Traffic Signal 19-14 AWG	5,535.000 LF	_____.____	_____.____
0244	655.0305 Cable Type UF 2-12 AWG Grounded	4,565.000 LF	_____.____	_____.____
0246	655.0320 Cable Type UF 2-10 AWG Grounded	230.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0248	655.0510 Electrical Wire Traffic Signals 12 AWG	1,890.000 LF	_____.____	_____.____
0250	655.0515 Electrical Wire Traffic Signals 10 AWG	5,885.000 LF	_____.____	_____.____
0252	655.0900 Traffic Signal EVP Detector Cable	4,553.000 LF	_____.____	_____.____
0254	657.0100 Pedestal Bases	46.000 EACH	_____.____	_____.____
0256	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	6.000 EACH	_____.____	_____.____
0258	657.0345 Poles Type 9	7.000 EACH	_____.____	_____.____
0260	657.0350 Poles Type 10	13.000 EACH	_____.____	_____.____
0262	657.0360 Poles Type 13	1.000 EACH	_____.____	_____.____
0264	657.0405 Traffic Signal Standards Aluminum 3.5-FT	5.000 EACH	_____.____	_____.____
0266	657.0420 Traffic Signal Standards Aluminum 13-FT	30.000 EACH	_____.____	_____.____
0268	657.0425 Traffic Signal Standards Aluminum 15-FT	4.000 EACH	_____.____	_____.____
0270	657.0430 Traffic Signal Standards Aluminum 10-FT	7.000 EACH	_____.____	_____.____
0272	657.0520 Monotube Arms 20-FT	6.000 EACH	_____.____	_____.____
0274	657.0525 Monotube Arms 25-FT	22.000 EACH	_____.____	_____.____
0276	657.0530 Monotube Arms 30-FT	2.000 EACH	_____.____	_____.____
0278	657.0535 Monotube Arms 35-FT	3.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0280	657.0540 Monotube Arms 40-FT	4.000 EACH	_____.____	_____.____
0282	657.0555 Monotube Arms 55-FT	1.000 EACH	_____.____	_____.____
0284	657.0806 Luminaire Arms Steel 6-FT	7.000 EACH	_____.____	_____.____
0286	657.0808 Luminaire Arms Steel 8-FT	6.000 EACH	_____.____	_____.____
0288	658.0173 Traffic Signal Face 3S 12-Inch	138.000 EACH	_____.____	_____.____
0290	658.0174 Traffic Signal Face 4S 12-Inch	4.000 EACH	_____.____	_____.____
0292	658.0412 Pedestrian Signal Face 12-Inch	82.000 EACH	_____.____	_____.____
0294	658.0500 Pedestrian Push Buttons	30.000 EACH	_____.____	_____.____
0296	658.1133 Programmable Traffic Signal Face 3S 12-Inch	10.000 EACH	_____.____	_____.____
0298	658.5069 Signal Mounting Hardware (location) 001. Vliet & 24th	LS	LUMP SUM	_____.____
0300	658.5069 Signal Mounting Hardware (location) 002. Vliet & 20th	LS	LUMP SUM	_____.____
0302	658.5069 Signal Mounting Hardware (location) 003. Vliet & 17th	LS	LUMP SUM	_____.____
0304	658.5069 Signal Mounting Hardware (location) 004. Vliet & 13th	LS	LUMP SUM	_____.____
0306	658.5069 Signal Mounting Hardware (location) 005. STH 145 & Roosevelt	LS	LUMP SUM	_____.____
0308	658.5069 Signal Mounting Hardware (location) 006. STH 145 & Townsend	LS	LUMP SUM	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0310	658.5069 Signal Mounting Hardware (location) 007. STH 145 & Burleigh	LS	LUMP SUM	_____.____
0312	658.5069 Signal Mounting Hardware (location) 008. STH 145 & Center	LS	LUMP SUM	_____.____
0314	658.5069 Signal Mounting Hardware (location) 009. STH 145 & 27th	LS	LUMP SUM	_____.____
0316	658.5069 Signal Mounting Hardware (location) 010. STH 145 & Walnut	LS	LUMP SUM	_____.____
0318	674.0200 Cable Microwave Detector	224.000 LF	_____.____	_____.____
0320	690.0150 Sawing Asphalt	329.000 LF	_____.____	_____.____
0322	690.0250 Sawing Concrete	10,579.000 LF	_____.____	_____.____
0324	715.0415 Incentive Strength Concrete Pavement	8,074.000 DOL	1.00000	8,074.00
0326	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	2,400.000 HRS	5.00000	12,000.00
0328	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	4,800.000 HRS	5.00000	24,000.00
0330	SPV.0060 Special 001. Internal Sanitary Manhole Seals	8.000 EACH	_____.____	_____.____
0332	SPV.0060 Special 002. Adjusting Water Box	3.000 EACH	_____.____	_____.____
0334	SPV.0060 Special 005. Temporary Bus Loading Zone	4.000 EACH	_____.____	_____.____
0336	SPV.0060 Special 006. Installing City-Furnished Bike Rack	10.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0338	SPV.0060 Special 007. Utility Line Opening (ULO)	42.000 EACH	_____.____	_____.____
0340	SPV.0060 Special 008. Water Main Protection	1.000 EACH	_____.____	_____.____
0342	SPV.0060 Special 050. Marking Symbol Grooved Preformed Plastic	28.000 EACH	_____.____	_____.____
0344	SPV.0060 Special 051. Marking Arrow Grooved Preformed Plastic	28.000 EACH	_____.____	_____.____
0346	SPV.0060 Special 052. Marking Word Grooved Preformed Plastic	1.000 EACH	_____.____	_____.____
0348	SPV.0060 Special 102. Inlet Cover Type MS 57	111.000 EACH	_____.____	_____.____
0350	SPV.0060 Special 103. Manhole Cover Type MS 58-A	79.000 EACH	_____.____	_____.____
0352	SPV.0060 Special 110. Catch Basin Type 44A	92.000 EACH	_____.____	_____.____
0354	SPV.0060 Special 112. Storm Inlet Type 45A	18.000 EACH	_____.____	_____.____
0356	SPV.0060 Special 201. Install Precast Control Cabinet Base	10.000 EACH	_____.____	_____.____
0358	SPV.0060 Special 203. Concrete Base Type 10 Special	7.000 EACH	_____.____	_____.____
0360	SPV.0060 Special 204. Remove Controller Cabinet	6.000 EACH	_____.____	_____.____
0362	SPV.0060 Special 205. ATC Controller and Cabinet Installed	10.000 EACH	_____.____	_____.____
0364	SPV.0060 Special 212. Fiber Optic Patch Panel	4.000 EACH	_____.____	_____.____
0366	SPV.0060 Special 213. Ethernet Switch	4.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0368	SPV.0060 Special 218. EVP 1 Channel 1 Direction Infrared Detector	24.000 EACH	_____.____	_____.____
0370	SPV.0060 Special 219. EVP 1 Channel 2 Direction Infrared Detector	3.000 EACH	_____.____	_____.____
0372	SPV.0060 Special 221. EVP Phase Selector Card 4 Channel	8.000 EACH	_____.____	_____.____
0374	SPV.0060 Special 223. EVP Confirmation Light Assembly	30.000 EACH	_____.____	_____.____
0376	SPV.0060 Special 224. Vehicular Video Detection System	3.000 EACH	_____.____	_____.____
0378	SPV.0060 Special 226. Vehicular Microwave Detection System	2.000 EACH	_____.____	_____.____
0380	SPV.0060 Special 247. Poles Type 12 Special	5.000 EACH	_____.____	_____.____
0382	SPV.0060 Special 249. Poles Type 13 Special	2.000 EACH	_____.____	_____.____
0384	SPV.0060 Special 267. Pedestrian Countdown Signal Face 12-Inch	82.000 EACH	_____.____	_____.____
0386	SPV.0060 Special 274. Poles Type 10 Special 26 FT	10.000 EACH	_____.____	_____.____
0388	SPV.0060 Special 277. Signal Housing Relocated	2.000 EACH	_____.____	_____.____
0390	SPV.0060 Special 280. Tunnel Visor	6.000 EACH	_____.____	_____.____
0392	SPV.0060 Special 291. 24"x24" Blankout Sign No Turn	4.000 EACH	_____.____	_____.____
0394	SPV.0060 Special 302. Fiberglass/Polymer Concrete Pull Box 13-Inch x 24-Inch x 24-Inch	151.000 EACH	_____.____	_____.____

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0396	SPV.0060 Special 303. Fiberglass/Polymer Concrete Pull Box 17-Inch x 30-Inch x 24-Inch	80.000 EACH	_____.____	_____.____
0398	SPV.0060 Special 312. Poles Type 2	35.000 EACH	_____.____	_____.____
0400	SPV.0060 Special 313. Pole Type 3 Direct Bury	7.000 EACH	_____.____	_____.____
0402	SPV.0060 Special 316. Poles Type 8	5.000 EACH	_____.____	_____.____
0404	SPV.0060 Special 321. Pole 30-FT Aluminum Bolt Down	3.000 EACH	_____.____	_____.____
0406	SPV.0060 Special 332. Metal Pedestal Cabinet (4-Inch x 4-Inch x 36-Inch)	34.000 EACH	_____.____	_____.____
0408	SPV.0060 Special 342. Water Tight Junction Box Splicing	56.000 EACH	_____.____	_____.____
0410	SPV.0060 Special 355. Luminaire Arms Mounting Clamps Pole Type 1 & 2 Single Bracket	35.000 EACH	_____.____	_____.____
0412	SPV.0060 Special 375. Luminaire Utility LED 2	3.000 EACH	_____.____	_____.____
0414	SPV.0060 Special 376. Luminaire Utility LED 3	104.000 EACH	_____.____	_____.____
0416	SPV.0060 Special 387. Remove Luminaire	35.000 EACH	_____.____	_____.____
0418	SPV.0060 Special 400. Adjusting CUC Manhole Covers	18.000 EACH	_____.____	_____.____
0420	SPV.0060 Special 401. 4' Diameter Manhole Type CUC	15.000 EACH	_____.____	_____.____
0422	SPV.0060 Special 425. Installing Conduit Into Existing Manhole	4.000 EACH	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0424	SPV.0060 Special 426. Sawing Concrete Encased Duct Package	6.000 EACH	_____.____	_____.____
0426	SPV.0060 Special 800. Pole Type 5 Concrete H17	2.000 EACH	_____.____	_____.____
0428	SPV.0060 Special 838. Luminaire Arm Single Member 6-Ft City Furnished	53.000 EACH	_____.____	_____.____
0430	SPV.0060 Special 839. Luminaire Arm Single Member 8-Ft City Furnished	4.000 EACH	_____.____	_____.____
0432	SPV.0060 Special 864. Luminaire Historic Milwaukee Harp LED 0	4.000 EACH	_____.____	_____.____
0434	SPV.0060 Special 866. Luminaire Historic Milwaukee Lantern LED 2	21.000 EACH	_____.____	_____.____
0436	SPV.0090 Special 001. Construction Staking Concrete Sidewalk	12,644.000 LF	_____.____	_____.____
0438	SPV.0090 Special 002. Marking Line Epoxy 6-Inch	7,780.000 LF	_____.____	_____.____
0440	SPV.0090 Special 003. Concrete Curb & Gutter Integral 19-Inch	298.000 LF	_____.____	_____.____
0442	SPV.0090 Special 052. Marking Crosswalk Grooved Preformed Plastic 12-Inch	2,596.000 LF	_____.____	_____.____
0444	SPV.0090 Special 053. Marking Stop Line Grooved Preformed Plastic 24-Inch	375.000 LF	_____.____	_____.____
0446	SPV.0090 Special 054. Marking Crosswalk Grooved Preformed Plastic Ladder Pattern 24-Inch	182.000 LF	_____.____	_____.____
0448	SPV.0090 Special 055. Marking Line Epoxy 24-Inch	732.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0450	SPV.0090 Special 201. Install Fiber Optic Cable Outdoor Plant 72-Ct Contractor Supplied	12,130.000 LF	_____.____	_____.____
0452	SPV.0090 Special 305. Electrical Cable Type 3#3/1#8 LTP	4,904.000 LF	_____.____	_____.____
0454	SPV.0090 Special 306. Cable Type 3#6/1#8 LTP	3,690.000 LF	_____.____	_____.____
0456	SPV.0090 Special 307. Cable Type 3#4/1#8 LTP	5,817.000 LF	_____.____	_____.____
0458	SPV.0090 Special 308. Cable Type 3#2/1#8 LTP	4,810.000 LF	_____.____	_____.____
0460	SPV.0090 Special 310. Cable Type 3#10AWG With Ground	150.000 LF	_____.____	_____.____
0462	SPV.0090 Special 319. Liquid Tight Flexible Nonmetallic Conduit 1.5 Inch	290.000 LF	_____.____	_____.____
0464	SPV.0090 Special 401. 1-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	35.000 LF	_____.____	_____.____
0466	SPV.0090 Special 402. 2-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	656.000 LF	_____.____	_____.____
0468	SPV.0090 Special 403. 3-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	2.000 LF	_____.____	_____.____
0470	SPV.0090 Special 404. 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	198.000 LF	_____.____	_____.____
0472	SPV.0090 Special 406. 6-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	5,208.000 LF	_____.____	_____.____

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SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0474	SPV.0090 Special 407. 7-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	134.000 LF	_____._____	_____._____
0476	SPV.0090 Special 408. 8-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	88.000 LF	_____._____	_____._____
0478	SPV.0170 Special 001. Test Rolling	54.000 STA	_____._____	_____._____
0480	SPV.0180 Special 001. Joint Sealing	26,915.000 SY	_____._____	_____._____
0482	SPV.0195 Special 001. Management of Solid Waste	840.000 TON	_____._____	_____._____

Section: 0001 **Total:** _____._____

Total Bid: _____._____

PLEASE ATTACH SCHEDULE OF ITEMS HERE