

HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
DT1502 01/2020 s.66.0901(7) Wis. Stats

Proposal Number: **006**

<u>STATE ID</u>	<u>FEDERAL ID</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>	<u>COUNTY</u>
1060-27-71	WISC 2025596	I-94 East West, West Leg, 70th Street to Zablocki Drive	IH 094	Milwaukee

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: \$1,000,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: September 9, 2025 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time June 30, 2029	SAMPLE NOT FOR BIDDING PURPOSES
Assigned Disadvantaged Business Enterprise Goal 9%	This contract is subject to federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(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: Removals, Milling, Grading, Aggregate, Concrete Pavement, Asphalt Pavement, Structure Replacement, Structure Rehabilitation, Curb and Gutter, Concrete Sidewalk, Storm Sewer, Beam Guard, Erosion Control, Permanent Signing, Traffic Control, Pavement Marking, Lighting, Traffic Signals, ITS, Water, Retaining Wall, Restoration.	For Department Use Only
Notice of Award Dated	Date Guaranty Returned

**PLEASE ATTACH
PROPOSAL GUARANTY HERE**

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.

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://wisconsin.gov/Pages/doing-business/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://wisconsin.gov/Pages/doing-business/contractors/hcci/bid-let.aspx>

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the department's 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:
 4. Have a properly executed annual bid bond on file with the department.
 5. 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 ExpediteTM generated schedule of items is not the same on each page.
 2. The check code printed on the printout of the ExpediteTM 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.

B 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

DT1303 1/2006

Wisconsin Department of Transportation

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)

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

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

(Signature of Attorney-in-Fact)

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

DT1305 8/2003

Wisconsin Department of Transportation

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)

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.

[illegible]

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

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.
4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.
7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR- 1273 - "Required Contract Provisions Federal Aid Construction Contracts," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

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

1. The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
2. Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

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STSP'S Revised January 8, 2025

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1060-27-71, I-94 East West Freeway, West Leg, 70th Street to Zablocki Drive, in Milwaukee County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2025 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 (20250108)

2. Scope of Work.

The work under this contract shall consist of removals, grading, dense graded base, concrete pavement, concrete curb and gutter, concrete sidewalk, concrete barrier, HMA pavement, storm sewer, watermain, erosion control, permanent signing, traffic signals, traffic control, pavement marking, street lighting, structures, bridges, retaining walls, noise barriers, overhead sign structures, restoration and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

Structures

Bridges

B-40-1034	B-40-1036	B-40-1038	B-40-1040
B-40-1035	B-40-1037	B-40-1039	B-40-1041

Noise Barriers

N-40-110	N-40-113	N-40-115	N-40-117
N-40-111	N-40-114	N-40-116	N-40-118
N-40-112			

Miscellaneous Structures

M-40-019	M-40-020

Retaining Walls

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R-40-735	R-40-739	R-40-743	
R-40-736	R-40-740	R-40-744	
R-40-737	R-40-741	R-40-762	

Sign Structures

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S-40-467	S-40-3114	S-40-3119	S-40-3176
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S-40-3111	S-40-3116	S-40-3121	
S-40-3112	S-40-3117	S-40-3122	

3. **Mandatory Pre-Bid Meeting.**

Add the following to standard spec 102.3.1:

Prospective bidders are required to attend a mandatory pre-bid information session at 9:00 AM, Tuesday August 26, 2025 at the Tommy G. Thompson Center, 640 South 84th Street, West Allis, WI 53214-1438.

No meeting minutes will be prepared. Issues discovered at the meeting will be handled by addendum.

The meeting agenda will include the following:

- Project Overview
- Construction Schedule and Interim Completion Dates
- Major Utilities
- Construction Staging

4. **Prosecution and Progress.**

Begin work within 10 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.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment. Included in this Prosecution and Progress article are interim and final completion dates. These dates indicate that work efforts will possibly require multiple or concurrent controlling operations to occur at the same time. This information is included to assist the contractor and its subcontractors and shall not be interpreted as a demonstration of specified means and methods or work periods other than intermediate and completion dates.

Construction on this project is anticipated to occur over the years 2025, 2026, 2027, 2028 and 2029. This project is considered a year-round contract and will not include a winter suspension. The number of adverse weather days per 108.10.2.2(1) will not be modified.

Replace standard spec 108.10.2.2(2) with the following:

- (2) Include requests for severe weather delays in the Monthly CPM Progress Schedule Updates. Indicate the number of adverse weather days that occurred during that month. Provide CPM progress schedule documentation as required under Section 108.4.7 of the Baseline CPM Progress Schedule/Monthly CPM Progress Schedule Updates special provision to show that the controlling item of work was delayed. Show that the delay was beyond the control of the contractor. The engineer will assess the contractor's submittal and indicate how many adverse weather days are confirmed.

Replace standard spec 108.10.2.2(3) with the following:

- (3) For each calendar month, the engineer will grant a severe weather day for each confirmed adverse weather day that exceeds the number of anticipated adverse weather days 108.10.2.2(1) shows. When the contractor requests severe weather days, the engineer will give the contractor a monthly written statement showing the number of days credited for severe weather. The engineer will only extend time for interim and contract completion dates for severe weather days that have been validated through an accepted CPM Progress Schedule Update.

Add the following to 108.10.2.2 Extension of Contract Time for Severe Weather as paragraph (4)

- (4) For calendar day or completion date contracts, including interim completion dates, where the closure period does not include the entire calendar month, the number of anticipated adverse weather days tabulated in 108.10.2.2(1) will be prorated by the ratio of contract days to the total calendar days for the

given month. Where the prorated days results in a partial day, that day will be rounded up to the next whole calendar day.

Be advised that there may be multiple mobilizations and/or remobilizations to complete construction operations, for example such items as: grading, concrete pavement, HMA paving, structures, traffic control, signing, temporary and permanent pavement marking, finishing items and other incidental items. No additional payment will be made, by the department, for additional mobilizations.

ATC Outage Restrictions

ATC has multiple 138 kV overhead power circuits along the north side of I-94 throughout the project area that will be in service through the project duration. Maintain OSHA Safe Working Clearance from the ATC 138 kV facilities based on the latest OSHA requirements. It is the contractor's responsibility to determine the distance that needs to be maintained for the type of equipment being used.

Notify ATC a minimum of 150 calendar days in advance of any operations that require an outage of ATC facilities. When possible, provide earlier advanced notice beyond 150 days in advance to help ATC plan ahead and avoid conflicts with the outage request. These outages will require coordination with ATC and can be restricted by temperature, operating conditions, and customer-related restrictions. As such, no requested outage start date or end date can be guaranteed. The contractor should be prepared to alter work plans as necessary.

Request a full ATC all circuit outage between December 1, 2027, and January 12, 2028 to perform construction activities underneath the ATC facilities. Coordinate with ATC to request any full all-circuit outages, See Utilities article, ATC Management, Inc. (ATC) and the "Notice to Contractor, Coordination of Electric Outages with American Transmission Company (ATC)" article for additional information and requirements. An ATC full all-circuit outage is anticipated to be needed for multiple work items in the late fall/early winter of 2027 depending upon contractor means and methods. Requests for an all-circuit outage during peak usage summer periods may not be approved by ATC. A full all-circuit outage in the late fall/early winter of 2027 anticipated for but not limited to, the following:

- Noise Wall N-40-0117 from STA. 312HWD+70 to the east
- Retaining Walls R-40-743, R-40-738
- Lighting units at STA 314EW+68 - 121' LT, 315EW+67 – 121' LT and 315EW+67 – 87'LT
- Storm Sewer along the Ramp HWD and Hawley Road necessary to make the storm sewer system operable

Request a partial ATC outage for construction activities from May 2028 through August 2028. Coordinate with ATC to request a four-month outage of the southern circuit during this time period. An outage request for a longer duration of four months may not be approved. See Utilities article, ATC Management, Inc. (ATC), and the "Notice to Contractor, Coordination of Electric Outages with American Transmission Company (ATC)" article for additional information and requirements. ATC south circuit outages are anticipated to be needed for multiple work items depending upon contractor means and methods. Work requiring ATC south circuit outages is anticipated for but not limited to, the following:

- The 64th Street Bridge B-40-1038, R-40-739 and R-40-740
- Sign Structures S-40-3119 and S-40-3117
- Retaining Walls R-40-742 and R-40-739
- Noise Walls N-40-115, N-40-117
- Other work as needed to maintain minimum equipment clearance

During any ATC outage the contractor shall, within 2 hours from notification of ATC or the engineer, clear all equipment, project materials and personnel outside the OSHA minimum clearance of all ATC facilities for emergency re-energization. The contractor is also responsible to clear all equipment and personnel outside the OSHA minimum clearance of all ATC facilities during overnight hours when work is not taking place or at any time when work is not taking place during a full or partial outage. Payment for moving equipment or materials due to emergency re-energization when work is taking place shall be paid by item SPV.0060.0600 Emergency Response to Incident Involving Utility.

Staging Restrictions

Perform pavement marking work on Wisconsin Avenue at Bluemound Rd as shown in the TMP Improvement plan sheets prior to any overnight I-94 Westbound full freeway closures, or as directed by the engineer.

Perform pavement marking work at Hawley Road/Vliet Street as shown in the TMP Improvement plan sheets prior to long-term I-94 lane closures in Stage 1A, or as directed by the engineer.

Perform traffic signal work at Hawley Road/Wisconsin Avenue as shown in the temporary signal plan sheets prior to long-term I-94 lane closures in Stage 1A, or as directed by the engineer.

Perform traffic signal work at Hawley Road/Bluemound Road as shown in the temporary signal plan prior to long-term I-94 lane closures in Stage 1A, or as directed by the engineer.

Install Regional Alternate Route signs prior to beginning long-term I-94 lane closures in Stage 1A.

Do not begin Stage 1A, or impact freeway lanes or shoulders prior to October 15, 2025, or as approved by the engineer.

In Stage 2A, complete FTMS work with nighttime closures and new system must be active prior to construction of the temporary widening shown on the plans.

Maintain a minimum of one lane of traffic per direction on 68th Street, 70th Street, and Hawley Road during temporary bridge widening, as approved by the engineer. Flagging is allowed on 68th Street and 70th Street.

Maintain pedestrian access along 64th Street through the project limits until June 19, 2026, end of school year, or as approved by the engineer.

Do not shift traffic into the Stage 2B configuration (2 lanes I-94 Eastbound) prior to August 15, 2026, or as approved by the engineer. Maintain three lanes of I-94 Eastbound traffic during the State Fair during every year of construction as shown in Stages 2A, 4 and 6, or as approved by the engineer.

Maintain pedestrian access through the project limits from Stage 2B to Stage 7 on at least one of the closed local streets (68th Street, 64th Street, or Hawley Road).

Do not shift traffic into Stage 2C prior to September 28, 2026, or as approved by the engineer.

Do not shift traffic into the Stage 3B configuration prior to March 15, 2027, or as approved by the engineer.

Perform crosswalk pavement marking work along 70th Street prior to closing 68th Street long-term in Stage 4.

Do not shift traffic into the Stage 6 configuration prior to March 13, 2028, or as approved by the engineer.

Do not shift traffic into the Stage 7 configuration (close 70th Street) until after 68th Street and Hawley Road are open to traffic.

Interim Completion and Liquidated Damages – Fredrick Miller Way WIS 175 Southbound Exit Ramp closure: 30 Calendar Days

During Stage 1A, close the Frederick Miller Way WIS 175 Southbound exit ramp to through traffic for a maximum of 30 calendar days. Do not reopen until completing the following work: HMA pavement, storm sewer, curb and gutter, and temporary pavement marking.

If the contractor fails to complete the work necessary to reopen the Frederick Miller Way WIS 175 Southbound Exit Ramp to traffic within 30 calendar days, the department will assess the contractor \$5,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 30 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Interim Completion and Liquidated Damages – Stage 1A and 1B Completion; and General Mitchell Boulevard I-94 Ramps Opening: March 25, 2026.

Complete construction operations in Stage 1A & 1B (including the reopening of the General Mitchell Boulevard I-94 Eastbound Exit Ramp and General Mitchell Boulevard I-94 Westbound Entrance Ramp

and opening I-94 Eastbound to three lanes of traffic as shown in Stage 2A traffic configuration) by March 25, 2026. Do not reopen until completing the following work: Stage 1A & 1B work is complete.

If the contractor fails to complete the work necessary to complete Stage 1A & 1B, open I-94 Eastbound to 3 lanes as shown in Stage 2A traffic configuration, and reopen the General Mitchell Boulevard I-94 Eastbound Exit Ramp and General Mitchell Boulevard I-94 Westbound Entrance Ramp to through traffic by March 25, 2026, the department will assess the contractor \$50,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on March 26, 2026. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Interim Completion and Liquidated Damages – Stage 2C Completion, I-94 Eastbound Opening Three Lanes: November 25, 2026.

Complete construction operations work in Stage 2C necessary to reopen to three lanes of traffic on I-94 Eastbound as shown in Stage 3A traffic configuration by November 25, 2026. Do not reopen until completing the following work: Stage 2C work is complete.

If the contractor fails to complete Stage 2C work necessary to reopen I-94 Eastbound to three lanes of traffic by **November 25, 2026**, the department will assess the contractor \$30,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on **November 26, 2026**. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Interim Completion and Liquidated Damages – Stage 3A Completion and General Mitchell Boulevard I-94 Ramps Opening: March 24, 2027.

Complete construction operations in Stage 3A necessary to reopen the General Mitchell Boulevard I-94 Eastbound Exit Ramp and General Mitchell Boulevard I-94 Westbound Entrance Ramp by March 25, 2027. Do not reopen until completing the following work: Stage 3A is complete.

If the contractor fails to complete Stage 3A and the work necessary to reopen the General Mitchell Boulevard I-94 Eastbound Exit Ramp and General Mitchell Boulevard I-94 Westbound Entrance Ramp to through traffic by March 24, 2027, the department will assess the contractor \$50,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on March 25, 2027. An entire calendar day will be charged for any period of time within a calendar day that the ramp remains closed beyond 12:01 AM.

Interim Completion and Liquidated Damages – Stage 3B Completion, I-94 Eastbound Opening Three Lanes: July 19, 2027.

Complete construction operations in Stage 3B necessary to reopen I-94 Eastbound to three lanes as shown in Stage 4 traffic configuration by July 19, 2027. Do not reopen until completing the following work: Stage 3B work is complete.

If the contractor fails to complete Stage 3B and the work necessary to open I-94 Eastbound to three lanes of traffic prior by July 19, 2027, the department will assess the contractor \$30,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on July 20, 2027. An entire calendar day will be charged for any period of time within a calendar day that the ramp remains closed beyond 12:01 AM.

Interim Completion and Liquidated Damages – Stage 4 Completion, I-94 Westbound Opening Three Lanes: October 31, 2027.

Complete construction operations in Stage 4 necessary to reopen to three lanes of traffic on I-94 Eastbound and three lanes of traffic on I-94 Westbound as shown in Stage 5 traffic configuration and reopen the WIS 175 Southbound System Ramp to I-94 Westbound by October 31, 2027. Do not reopen until completing the following work: Stage 4 work is complete.

If the contractor fails to complete the work necessary to reopen three lanes of I-94 Eastbound & I-94 Westbound, and the WIS 175 Southbound System Ramp to through traffic by **October 31, 2027**, the

department will assess the contractor \$50,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on **November 1, 2027**. An entire calendar day will be charged for any period of time within a calendar day that the lanes remain closed beyond 12:01 AM.

Interim Completion and Liquidated Damages – Stage 7 Completion, Open to final configuration except restoration and permanent pavement marking: December 17, 2028.

Complete construction operations to the stage necessary to open I-94 traffic to final configuration including to reopen 70th Street I-94 Eastbound Exit Ramp, reopen 70th Street I-94 Westbound Entrance Ramp, reopen 70th Street to 2 lanes in each direction, reopen Kearney Street and reopen O'Connor Street to through traffic by **December 17, 2028**. Do not reopen until completing the following work: Stage 7 work is complete.

If the contractor fails to complete the work necessary to open I-94 traffic to final configuration including to reopen 70th Street I-94 Eastbound Exit Ramp, reopen 70th Street I-94 Westbound Entrance Ramp, reopen 70th Street to two lanes in each direction, reopen Kearney Street and reopen O'Connor Street through Stage 7 to through traffic by **December 17, 2028**, the department will assess the contractor \$15,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on **December 18, 2028**. An entire calendar day will be charged for any period of time within a calendar day that the lanes or ramps remain closed beyond 12:01 AM.

Enhanced Final Liquidated Damages

Replace standard spec 108.11 paragraph (3) as follows:

The department will assess \$15,000.00 in daily liquidated damages. These liquidated damages reflect the cost of engineering, supervision, and a portion of road user costs.

Critical Path Method Progress Schedule

Refer to the CPM Progress Schedule items elsewhere in these special provisions.

Anticipated Schedule Project 1060-27-71

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

Conform to the construction staging as shown in the construction staging plans and as described herein unless the engineer approves modifications to the schedule in writing. Do not move to the next stage until all work in the current stage is completed or as approved by the engineer.

Stage 1A Construction:

I-94 and Ramp Construction

- Temporary widen I-94 EB and WB pavement at Hawley Road
- 2.5 Inch mill and overlay of I-94 WB
- Construct improvements at WIS 175 SB Frederick Miller Way exit ramp

Local Roads

- None

Stage 1B Construction:

I-94 and Ramp Construction

- Construct trunk sewer in I-94 median from Hawley Road to east project limit

- Construct temporary crossover I-94 median at west limit
- Construct temporary pavement for crossover in I-94 median from Hawley Road to east project limit
- Construct improvements at WIS 175 SB Frederick Miller Way exit ramp

Local Roads

- None

Stage 2A Construction:

I-94 and Ramp Construction

- Construct retaining wall R-40-801
- Construct temporary I-94 WB pavement from 70th Street to Hawley Road Interchange
- Construct temporary bridge widening of I-94 WB bridges at 70th Street, 68th Street, and 64th Street
- Construct I-94 EB portion of outside shoulder and lanes 2, 3, and 4 in the cemetery section
- Construct FTMS system and activate it prior to construction of temporary widening.

Local Roads

- None

Stage 2B Construction:

I-94 and Ramp Construction

- Continue construction of retaining wall R-40-801
- Continue construction of temporary I-94 WB pavement from 70th Street to Hawley Road Interchange
- Construct I-94 EB portion of outside shoulder and lanes 1, 2, 3, and 4 in the cemetery section
- Continue construction of temporary bridge widening of I-94 WB bridges at 70th Street, 68th Street, and 64th Street

Local Roads

- None

Stage 2C Construction:

I-94 and Ramp Construction

- Construct I-94 EB and WB inside shoulders and portion of Lane 1 westbound in the cemetery section
- Construct temporary I-94 pavement transition at east limit of Stage 2C construction and east of the existing I-94 WB Hawley Road bridge
- Continue construction of I-94 WB temporary pavement from 70th Street to Hawley Road Interchange
- Continue construction of temporary bridge widening of I-94 WB bridges at 70th Street, 68th Street, and 64th Street

Local Roads

- None

Stage 3A Construction (Winter Traffic Configuration):

I-94 and Ramp Construction

- Construct retaining wall R-40-762
- Construct ramp portion of Hawley Rd I-94 WB entrance ramp
- Construct I-94 median storm sewer from the west limit to Hawley Road.

Local Roads

- Construct Hawley Road and S. Dana Court and S. Hawley Court.
- Construct Hawley Road watermain and Pond HW

Stage 3B Construction:

I-94 and Ramp Construction

- Construct I-94 WB Lanes 2, 3 and 4, outside shoulder, and portion of Lane 1 in the cemetery section
- Continue construction of retaining wall R-40-762
- Construct ramp portion of Hawley Rd I-94 WB entrance ramp
- Construct I-94 EB mainline section from west limit to east of Hawley Road.
- Construct bridges B-40-1035, B-40-1037 (Partial width), B-40-1039 (Partial width), and B-40-041 (Partial width)
- Construct noise barriers N-40-110, N-40-112, N-40-114, N-40-116, and N-40-118
- Construct a portion of retaining walls R-40-734, R-40-735, R-40-736, R-40-737, R-40-739, R-40-740, R-40-741, R-40-742, R-40-743, R-40-744 and R-40-762
- Construct Hawley Road I-94 WB entrance ramp and Hawley Road I-94 EB exit ramp
- Construct the 68th Street I-94 EB entrance ramp

Local Roads

- Continue construction of Hawley Road, S. Dana Court and S. Hawley Court

Stage 4 Construction:

I-94 and Ramp Construction

- Construct I-94 EB mainline section from west limit to east of Hawley Road.
- Construct bridges B-40-1035, B-40-1037 (Partial width), B-40-1039 (Partial width), and B-40-041 (Partial width)
- Construct noise barriers N-40-110, N-40-112, N-40-114, N-40-116, portion of N-40-117, and N-40-118
- Construct a portion of retaining walls R-40-734, R-40-735, R-40-736, R-40-737, R-40-738, R-40-739, R-40-740, R-40-741, R-40-742, R-40-743, R-40-744 and R-40-762
- Construct Hawley Road I-94 WB entrance ramp and Hawley Road I-94 EB exit ramp
- Construct the 68th Street I-94 EB entrance ramp

Local Roads

- Construct local roads 69th Street, 68th Street, 64th Street, Kearney Street and Hawley Road
- Continue construction of Hawley Road, S. Dana Court and S. Hawley Court

Stage 5 Construction (Winter Traffic Configuration):

I-94 and Ramp Construction

- Construct I-94 EB median, inside shoulder and portion of Lane 1 east of 70th Street
- Continue construction of retaining walls R-40-743
- Construct bridges B-40-1037 (Partial width), B-40-1039 (Partial width), and B-40-041 (Partial width)
- Construct sign structure foundation shafts in median S-40-0466, S-40-0467, S-40-0468, S-40-3113, S-40-3116 and S-40-3122

Local Roads

- Continue construction of Hawley Road (north of I-94) and S. Dana Court

Stage 6 Construction:

I-94 and Ramp Construction

- Construct I-94 WB from west limit to east of Hawley Road
- Construct bridges B-40-1034, B-40-1036, B-40-1038 and B-40-1040
- Construct noise barriers N-40-111, N-40-113, N-40-115 and portion of N-40-117
- Construct a portion of retaining walls R-40-734, R-40-735, R-40-736, R-40-737, R-40-739, R-40-740, R-40-741, R-40-742, R-40-743 and R-40-744.
- Construct ramp portion of Hawley Road I-94 WB entrance ramp
- Construct the 68th Street I-94 WB exit ramp

Local Roads

- Construct local roads 69th Street, 68th Street, 64th Street and O'Connor Street
- Continue construction of Hawley Road (north of I-94)

Stage 7 Construction:

I-94 and Ramp Construction

- Construct the 70th Street I-94 WB entrance ramp
- Construct the 70th Street I-94 EB exit ramp
- Construct I-94 median barrier east of Hawley Road
- Continue construction of noise barriers N-40-111, N-40-113, N-40-115 and N-40-117

Local Roads

- Construct local road 70th Street
- Construct local road O'Connor Street 70th Street to the west

Final Completion:

I-94 and Ramp Construction

- Spring pavement marking and restoration items

Local Roads

- Spring pavement marking and restoration items

Contractor Coordination

Provide an individual to serve as the contractor's sole point of contact for field utility coordination and communication for the duration of the project.

Migratory Birds

No evidence of swallow or other migratory bird nests have been observed on or under the following structures(s) during the preconstruction inspection. However, if nesting is later observed prior to or during construction, the contractor shall implement avoidance/deterrent measures or obtain a depredation permit. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act. The nesting season for swallows and other birds is from April 15 to August 31.

- B-40-81
- B-40-82
- B-40-83
- B-40-84
- B-40-85
- B-40-86
- B-40-87

Protection of Endangered Bats (Tree Clearing)

Federally protected bats have the potential to inhabit the project limits because they roost in trees, bridges and culverts. 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).

Ensure all operators, employees, and subcontractors working in areas of known or presumed bat habitat are aware of environmental commitments and avoidance and minimization measures (AMMs) to protect both bats and their habitat.

Direct temporary lighting, if used, away from wooded areas during the bat active season April 15 to October 31, both dates inclusive.

To avoid adverse impacts upon protected bats, no tree clearing is allowed between April 15 and October 31, both dates inclusive. If the required tree clearing is not completed by April 14, the department will suspend all tree clearing and associated work directly impacted by clearing.

Tree clearing is limited to that which is specified in the plans. Contractor means and methods to remove additional trees will not be allowed. If it is determined that additional trees with a 3-inch or greater diameter at breast height (dbh) need to be removed beyond contractor means and methods, notify the engineer to coordinate with the WisDOT REC to determine if consultation with United States Fish and Wildlife Service (USFWS) is required. The contractor must be aware that the WisDOT REC and/or USFWS may not permit modifications.

Due to potential for erosion, do not perform grubbing operations at the time of tree clearing unless grading activities will commence in those areas immediately following the tree clearing, or as otherwise approved by the engineer. Provide information for the grubbing and grading activities, including the schedule of operations, in the Erosion Control Implementation Plan (ECIP).

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.

Threatened and Endangered Species – Rusty Patched Bumble Bee

The federally protected Rusty Patched Bumble Bee (*Bombus affinis*) may be present within the project limits. The project includes disturbing low-quality Rusty Patched Bumble Bee feeding habitat and woodlands potentially suitable for Rusty Patched Bumble Bee nesting or overwintering habitat.

Trees will be cleared and removed between November 1 and April 14. Grubbing may not take place until the Rusty Patched Bumble Bee active season (April 15 to October 10) to avoid disturbing the overwintering habitat of the Rusty Patched Bumble Bee.

Maintenance

Provide the Wisconsin State Patrol, Milwaukee County Highway Maintenance, the Village of West Milwaukee Police Department, City of Milwaukee Police Department, the City of Wauwatosa Police Department, the City of West Allis Police Department, and Milwaukee County Sheriff's Department with a 24-hour emergency contact number for when maintenance is required.

Place topsoil in all graded areas as designated by the engineer immediately after grading has been completed. Fertilize, seed and mulch or fertilize and sod all areas within five calendar days after placement of topsoil.

Winter Maintenance

Milwaukee County will perform snow removal operations for freeway and ramp lanes and shoulders that are open to traffic. The City of Milwaukee will perform snow removal operations for local streets that are open to traffic. Provide for snow removal in those areas closed to traffic as required to facilitate safe construction operations and stage changes and as required to eliminate snow melt run-off from crossing active roadways. Winter maintenance is incidental and there will be no additional payment to the contractor for such. Provide Milwaukee County Highway Maintenance and Milwaukee County Sheriff's Department with a 24-hour emergency contact number for when maintenance is required.

General Prosecution

Existing trees, street light poles, hydrants and other utility poles are to remain in place during construction unless otherwise noted in the plan. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between the trees, hydrants and poles and the paving equipment. No additional compensation will be made.

For base patching operations, where the existing concrete pavement has an asphalt overlay, the base patch shall be constructed from top of asphalt surface to bottom of existing concrete pavement.

5. Lane Rental Fee Assessment.

A General

The contract designates some lane closures to perform the work. The contractor will not incur a Lane Rental Fee Assessment for closing lanes during the allowable lane closure times. The contractor will incur a Lane Rental Fee Assessment for each lane closure outside of the allowable lane closure times. If a lane is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to enforce compliance of lane restrictions and discourage unnecessary closures.

The contractor will not incur Lane Rental Fee Assessment for closing lanes, system ramps or service ramps necessary for full freeway closures while the I-94 Full Freeway Closure Fee application is in effect.

All Lane Rental Fee Assessments may be applied when one or more freeway lanes are open to traffic.

The allowable lane closure times are shown in the Traffic article.

Submit the dates of the proposed lane, ramp, and roadway restrictions to the engineer as part of the progress schedule.

Coordinate lane, ramp, and roadway closures with any concurrent operations on adjacent roadways within 3 miles of the project. If other projects are in the vicinity of this project, coordinate lane closures to

run concurrent with lane closures on adjacent projects when possible. When lane closures on adjacent projects extend into the limits of this project, Lane Rental Fee Assessments will only occur if the closure facilitates work under this contract.

B Lane Rental Fee Assessment

The Lane Rental Fee Assessment incurred for each lane closure, each ramp closure, and each full closure of a roadway, per direction of travel, is as follows:

I-94 Night time Lane Closure Extending into Weekday Peak Hours

- 3 lanes to 2 lanes - \$10,000 per lane, per direction of travel, per hour broken into 15-minute increments
- 2 lanes to 1 lane - \$16,000 per lane, per direction of travel, per hour broken into 15-minute increments

I-94 Night Time Lane Closure Extending into Weekend Peak Hours

- \$8,000 per lane, per direction of travel, per hour broken into 15-minute increments

WIS175 Night Time Lane Closure Extending into Peak Hours

- \$3,000 per lane, per direction of travel, per hour broken into 15-minute increments

Local Road Night Time Lane/Full Closure Extending into Peak Hours

- \$1,000 per lane, per direction of travel, per hour broken into 15-minute increments

I-94/WIS 175 System Ramp (Stadium Interchange) (not applicable during I-94 Full Freeway Closures)

- \$4,000 per ramp, per hour broken into 15-minute increments

I-94/I-41 System Ramp (Zoo Interchange) (not applicable during I-94 Full Freeway Closures)

- \$4,000 per ramp, per hour broken into 15-minute increments

I-94 Service Ramp Full Closure (not applicable during I-94 Full Freeway Closures)

- \$3,000 per ramp, per hour broken into 15-minute increments

I-94 Full Freeway Closure Extending into Weekday Peak Hours

- 4:30 AM to 5:30 AM: \$4,000 per lane, per direction of travel, per hour broken into 15 minute increments
- After 5:30 AM: \$10,000 per lane, per direction of travel, per hour broken into 15 minute increments

I-94 Full Freeway Closure Extending into Weekend Peak Hours

- 6:00 AM to 8:00 AM: \$4,000 per lane, per direction of travel, per hour broken into 15 minute increments
- After 8:00 AM: \$8,000 per lane, per direction of travel, per hour broken into 15 minute increments

The Lane Rental Fee Assessment represents a portion of the cost of the interference and inconvenience to the road users for each closure. All lane, roadway, or ramp closure event increments 15 minutes and less will be assessed as a 15-minute increment.

The engineer, or designated representative, will be the sole authority in determining time period length for the Lane Rental Fee Assessment.

Lane Rental Fee Assessments will not be assessed for closures due to crashes, accidents or emergencies not initiated by the contractor.

The department will assess Lane Rental Fee Assessment by the dollar under the administrative item Failing to Open Road to Traffic. The total dollar amount of Lane Rental Fee Assessment will be computed by multiplying the Lane Rental Assessment Rate by the number of 15-minute increments of each lane closure event as described above.

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance. If interim completion time or contract time expires before the completion of

specified work in the contract, additional liquidated damages will be assessed as specified in standard spec 108.11 or as specified within this contract.

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6. Traffic.

Keep I-94, I-41, WIS 175, all system ramps and all service ramps open to through traffic at all times for the duration of this project except as noted below and in the Prosecution and Progress article in these special provisions.

The construction sequence, including the associated traffic control, shall be substantially accomplished as detailed in the Traffic Control Plans, and as described herein.

Unless detailed in the plans, do not begin or continue any work that closes traffic lanes outside the allowed time periods specified in this article.

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

Maintain emergency vehicle access at all times.

Prior to any traffic control being placed, provide the engineer, Wisconsin State Patrol and Milwaukee County Highway Maintenance with the name and telephone number of a local person responsible for the emergency maintenance of traffic control.

Coordinate all traffic handling with the engineer. Place roadway signing as detailed on the plans and in conformance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition.

Employ such flag persons, signs, barricades, and drums as may be necessary to safeguard or protect hazards in the work zone, such as exposed manholes or drop-offs for vehicles and direct traffic at locations where construction operations may interfere or restrict the smooth flow of traffic. Make arrangements and be responsible for the prompt replacement of damaged or dislocated traffic control or guidance signs, day or night.

Traffic requirements under this contract shall be coordinated with other adjacent and concurrent Department of Transportation or local municipality projects. The contractor shall be responsible for implementing and coordinating with other contractors all traffic control as shown on the plans. Modifications to the traffic control plan may be required by the engineer to be safe and consistent with adjacent work by others.

Yield to all through traffic at all locations. Equip all vehicles or equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light) that is visible from 360 degrees. Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on the shoulders, except when parked behind barrier wall. Do not park personal vehicles within the access control limits of the freeway. Do not cross live traffic lanes of I-94 or WIS 175 (including service and system ramps) with equipment or vehicles.

Railroad

Except where STSP 107-026 applies for DOT 386511C, do not place any items within 50-feet of the railroad right-of-way, including items that could foul the same area. Including but not limited to signing, equipment, or material. This includes at-grade crossings and structures with RR under or over. If this is not adhered to Railroad Protective Liability Insurance will be required of the contractor and incidental to the project.

Residential and Business Property Access

Maintain access to properties along Hawley Road, General Mitchell Boulevard, 70th Street, 68th Street, and 64th Street, O'Connor Street, Kearney Street and all adjacent side streets, and any other local road affected by construction for local residents, businesses, and emergency vehicles. Maintain and keep open the access to all driveways and parking lots where alternative access is not available at all times by closing one driveway at a time, building half the driveway at a time and/or plating concrete work. Plating

of concrete work, as directed by the engineer, is included in the item that is being plated. In parking lots that are being reconstructed, stage operations so that parking and access is maintained on existing or proposed base aggregate or pavement.

Inform engineer, property owners and tenants at least 48 hours prior to removing a driveway approach that serves that property. Schedule sidewalk and driveway approach removal and replacement so that the time lapse between removal and replacement is minimal.

Do not close residential approaches or remove from service without giving sufficient notice to the occupants of the premises to remove their vehicles prior to driveway removal or closing of the driveway approach access. If necessary, make other access arrangements, agreed to in writing and signed by the contractor and the property owner serviced by the driveway. Obtain approval from the engineer prior to alternating construction sequencing.

Notify the engineer, businesses and residents that live along 70th Street, 68th Street, 64th Street, O'Connor Street, Kearney Street, Hawley Road, Hawley Court, and Dana Court five business days in advance of restricting access to their houses or business.

Pedestrian Access

Keep pedestrian facilities open unless otherwise shown on the plans, or to facilitate the removal of structures and erection of girders or as approved by the engineer. Maintain pedestrian access to adjacent properties, businesses, schools, and at bus stops or provide where necessary, as directed by the engineer. Protect pedestrians from falling debris at all times when pedestrian facilities are open.

Provide adequate temporary pedestrian facilities as required under Section 444 of the standard specifications and bridging between the curb and right-of-way line over freshly paved concrete or other obstructions in the sidewalk area, as directed by the engineer.

Construct the temporary surface to meet Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements. Gravel or base course material is not acceptable. The Temporary Pedestrian Surface bid items are payment for maintaining crosswalks and sidewalks through the construction zone.

Maintain pedestrian movements crossing the construction zone at all intersections at all times, unless otherwise directed by the engineer. At all times, ADAAG accessible pedestrian walkways shall be maintained free from mud, sand, construction debris, and construction equipment. Closures of sidewalk must be approved by the engineer and conform to signing shown on the traffic control plan. At locations where crosswalks exist on both sides of the intersection, closure of one of the two crosswalks is permitted as long as all other crossings are completely open. At intersections where only one crosswalk exists, stage work to maintain a crosswalk at all times.

Traffic Staging

Stage 1A Traffic

Freeway and Ramp Traffic

- Reduce I-94 EB to 2 lanes.
- Reduce I-94 WB to 2 lanes
- Close the WIS 175 SB to I-94 WB system ramp.
- Permanently close Hawley Road I-94 EB entrance ramp
- Permanently close Hawley Road I-94 WB exit ramp
- Close Hawley Road I-94 EB exit ramp
- Close Hawley Road I-94 WB entrance ramp.
- Close 68th Street I-94 EB entrance ramp
- Close the Frederick Miller Way WIS 175 SB exit ramp for 30 calendar days.

The following ramps remain open

- General Mitchell Boulevard I-94 EB exit ramp

- General Mitchell Boulevard I-94 WB entrance ramp
- 68th Street I-94 WB exit ramp
- 70th Street I-94 EB exit ramp
- 70th Street I-94 WB entrance ramp

Local Road Traffic

- Close Fredrick Miller Way inside WB left turn lane and the inside EB right turn to the WIS 175 SB ramps
- Overnight closures of local roads at overpasses
- Local roads at overpasses open during daytime peak and off peak

Stage 1B Traffic

Freeway and Ramp Traffic

- I-94 EB 2 lanes
- I-94 WB 2 lanes
- I-94 EB single lane closure for storm sewer construction
- 18 Inch RCCP at STA 326EW+62
- 18 Inch RCCP at STA 329EW+05
- 18 Inch RCCP at STA 331EW+73
- I-94 WB full closure for 24 Inch RCCP storm sewer at STA 334EW+00
- WIS 175 SB to I-94 WB system ramp closed
- Hawley Road I-94 EB exit ramp closed
- Hawley Road I-94 WB entrance ramp closed
- Close General Mitchell Boulevard I-94 WB entrance ramp
- Close General Mitchell Boulevard I-94 EB exit ramp
- 68th Street I-94 EB entrance ramp closed
- Open the Frederick Miller Way WIS175 SB exit ramp

The following ramps remain open

- 68th Street I-94 WB exit ramp
- 70th Street I-94 EB exit ramp
- 70th Street I-94 WB entrance ramp

Local Road Traffic

- Overnight closures of local roads at overpasses
- Local roads at overpasses open during daytime peak and off peak

Stage 2A Traffic

Freeway and Ramp Traffic

- Open I-94 EB to 3 lanes
- I-94 WB 2 lanes
- WIS 175 SB to I-94 WB system ramp closed

- Hawley Road I-94 EB exit ramp closed
- Hawley Road I-94 WB entrance ramp closed
- Open General Mitchell Boulevard I-94 EB exit ramp
- Open General Mitchell Boulevard I-94 WB entrance ramp
- 68th Street I-94 EB entrance ramp closed
- Close 68th Street I-94 WB exit ramp

The following ramps remain open

- 70th Street I-94 EB exit ramp
- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS 175 SB exit ramp

Local Road Traffic

- Overnight closures of local roads at overpasses
- Local roads at overpasses open during daytime peak and off peak

Stage 2B Traffic

Freeway and Ramp Traffic

- Reduce I-94 EB to 2 lanes
- I-94 WB 2 lanes
- WIS 175 SB to I-94 WB system ramp closed
- Hawley Road I-94 EB exit ramp closed
- Hawley Road I-94 WB entrance ramp closed
- 68th Street I-94 EB entrance ramp closed
- 68th Street I-94 WB exit ramp closed

The following ramps remain open

- General Mitchell Boulevard I-94 EB exit ramp
- General Mitchell Boulevard I-94 WB entrance ramp
- 70th Street I-94 EB exit ramp
- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS 175 SB exit ramp

Local Road Traffic

- Overnight closures of local roads at overpasses
- Local roads at overpasses open during daytime peak and off peak

Stage 2C Traffic

Freeway and Ramp Traffic

- I-94 EB 2 lanes
- I-94 WB 2 lanes
- I-94 WB full closure for 12 Inch RCCP storm sewer at STA 300EW+75
- WIS 175 SB to I-94 WB system ramp closed

- Hawley Road I-94 EB exit ramp closed
- Hawley Road I-94 WB entrance ramp closed
- 68th Street I-94 EB entrance ramp closed
- 68th Street I-94 WB exit ramp closed
- Close General Mitchell Boulevard I-94 EB exit ramp
- Close General Mitchell Boulevard I-94 WB entrance ramp

The following ramps remain open

- 70th Street I-94 EB exit ramp
- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS175 SB exit ramp

Local Road Traffic

- Overnight closures of local roads at overpasses
- Local roads at overpasses open during daytime peak and off peak

Stage 3A Traffic (Winter Configuration)

Freeway and Ramp Traffic

- Open I-94 EB to 3 lanes
- I-94 WB 2 lanes
- WIS 175 SB to I-94 WB system ramp closed
- Hawley Road I-94 EB exit ramp closed
- Hawley Road I-94 WB entrance ramp closed
- Open 68th Street I-94 EB entrance ramp
- 68th Street I-94 WB exit ramp closed
- General Mitchell Boulevard I-94 EB exit ramp closed
- General Mitchell Boulevard I-94 WB entrance ramp closed

The following ramps remain open

- 70th Street I-94 EB exit ramp
- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS 175 SB exit ramp

Local Road Traffic

- Close Hawley Road
- Overnight closures of local roads at overpasses
- Local roads at overpasses open during daytime peak and off peak
- Install temporary traffic signal at 70th Street I-94 EB exit ramp /Kearney Street

Stage 3B Traffic

Freeway and Ramp Traffic

- Reduce I-94 EB to 2 lanes
- I-94 WB 2 lanes

- WIS 175 SB to I-94 WB system ramp closed
- Hawley Road I-94 EB exit ramp closed
- Hawley Road I-94 WB entrance ramp closed
- Close 68th Street I-94 EB entrance ramp
- 68th Street I-94 WB exit ramp closed
- Close 70th Street I-94 EB exit ramp
- Open General Mitchell Boulevard I-94 EB exit ramp
- Open General Mitchell Boulevard I-94 WB entrance ramp

The following ramps remain open

- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS 175 SB exit ramp

Local Road Traffic

- Hawley Road closed
- Overnight closures of local roads at overpasses
- Close 64th Street
- Close 68th Street
- Close Kearney Street 70th Street to 68th Street
- Temporary traffic signal at 70th Street I-94 EB exit ramp/Kearney Street

Stage 4 Traffic

Freeway and Ramp Traffic

- Open I-94 EB to 3 lanes
- I-94 WB 2 lanes
- WIS 175 SB to I-94 WB system ramp closed
- Hawley Road I-94 EB exit ramp closed
- Hawley Road I-94 WB entrance ramp closed
- 68th Street I-94 EB entrance ramp closed
- 68th Street I-94 WB exit ramp closed
- 70th Street I-94 EB exit ramp closed

The following ramps remain open

- General Mitchell Boulevard I-94 EB exit ramp
- General Mitchell Boulevard I-94 WB entrance ramp
- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS175 SB exit ramp

Local Road Traffic

- Hawley Road closed
- 64th Street closed
- 68th Street closed
- Kearney Street from 70th Street to 68th Street closed

- 70th Street open
- O'Connor Street open
- Kearney Street from 73rd Street to 70th Street open

Stage 5 Traffic (Winter Configuration)

Freeway and Ramp Traffic

- I-94 EB 3 lanes
- Open I-94 WB to 3 lanes
- Open WIS 175 SB to I-94 WB system ramp
- Open Hawley Road I-94 EB exit ramp with access to the south only
- Hawley Road I-94 WB entrance ramp closed
- 68th Street I-94 EB entrance ramp closed
- 68th Street I-94 WB exit ramp closed
- 70th Street I-94 EB exit ramp closed

The following ramps remain open

- General Mitchell Boulevard I-94 EB exit ramp
- General Mitchell Boulevard I-94 WB entrance ramp
- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS 175 SB exit ramp

Local Road Traffic

- Open Hawley Road from I-94 EB exit ramp to south limits
- Hawley Road from I-94 EB exit ramp to north limits closed
- 64th Street closed
- 68th Street closed
- Open Kearney from 70th Street to 68th Street
- 70th Street open
- O'Connor Street open
- Permanent traffic signal at 68th Street and I-94 EB entrance ramp /Kearney Street is operational, here forward

Stage 6 Traffic

Freeway and Ramp Traffic

- I-94 EB at 3 lanes through the project limits
- I-94 WB at 3 lanes through the project limits
- Hawley Road I-94 WB entrance ramp closed
- 68th Street I-94 WB exit ramp closed
- 70th Street I-94 EB exit ramp closed
- Open 68th Street I-94 EB entrance ramp

The following ramps remain open

- WIS 175 SB to I-94 WB system ramp
- Hawley Road I-94 EB exit ramp with access to the south only
- General Mitchell Boulevard I-94 EB exit ramp
- General Mitchell Boulevard I-94 WB entrance ramp
- 70th Street I-94 WB entrance ramp
- Frederick Miller Way WIS 175 SB exit ramp

Local Road Traffic

- Hawley Road from I-94 EB exit ramp to south limits open
- Hawley Road from I-94 EB exit ramp to north limits closed
- 64th Street closed
- 68th Street closed
- Close O'Connor Street
- Kearney Street open
- 70th Street open

Stage 7 Traffic

Freeway and Ramp Traffic

- I-94 WB at 3 lanes through the project limits
- I-94 EB at 3 lanes through the project limits
- Close General Mitchell Boulevard I-94 EB exit ramp
- Close General Mitchell Boulevard I-94 WB entrance ramp
- 70th Street I-94 EB exit ramp closed
- Close 70th Street I-94 WB entrance ramp
- Open 68th Street I-94 WB exit ramp
- Open Hawley Road I-94 WB entrance ramp

The following ramps remain open

- WIS 175 SB to I-94 WB system ramp
- Hawley Road I-94 EB exit ramp
- 68th Street I-94 EB entrance ramp
- Frederick Miller Way WIS 175 SB exit ramp

Local Road Traffic

- Close 70th Street
- O'Connor Street closed
- Close Kearney Street
- Open Hawley Road
- Open 64th Street
- Open 68th Street
- Permanent traffic signal at Hawley Road and I-94 EB exit ramp is operational
- Permanent traffic signal at Hawley Road and I-94 WB entrance ramp is operational

- Permanent traffic signal at 68th Street and I-94 WB exit ramp /O'Connor Street is operational

Final Completion Marking and Restoration Traffic

Freeway and Ramp Traffic

- I-94 WB off peak closures through the project limits
- I-94 EB off peak closures through the project limits
- Open I-94 EB exit ramp to 70th Street
- Open I-94 WB entrance ramp from 70th Street
- Open General Mitchell Boulevard I-94 EB exit ramp
- Open General Mitchell Boulevard I-94 WB entrance ramp

Local Road Traffic

- Open 70th Street
- Open O'Connor Street
- Open Kearney Street
- Local Street off peak closures
- Permanent traffic signal at 70th Street and I-94 EB exit ramp/Kearney Street is operational
- Permanent traffic signal at 70th Street and I-94 WB entrance ramp /O'Connor Street is operational

Wisconsin Lane Closure System Advance Notification

Notify the engineer and SEF Construction Program Work Zone and Traffic Engineer, Stephanie Leraneth, (414) 750-1397, if there are any changes in the schedule, early completions, or cancellations of scheduled work. Coordinate the locations of messages of portable changeable message sign with engineer and WisDOT Traffic Management Center (TMC) (414) 227-2142 (tmc@dot.wi.gov). Notify WisDOT Signal Operations, (414) 750-2605, and WisDOT electrical Field Unit, (414) 266-1170, regarding changes for alternate routes and detours.

Notify the engineer of proposed changes for alternate routes and detours and provide a revised signing plan for the review by and approval of the engineer.

Provide the engineer with a schedule of lane and ramp closures by 8:00 AM on Wednesday for the next ten calendar days. In addition, provide the following minimum advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16 feet)	MINIMUM NOTIFICATION
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥ 16 feet)	MINIMUM NOTIFICATION
Shoulder Closures	3 calendar days
Lane closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Portable Changeable Message Signs

Obtain acceptance from the engineer regarding the wording of all messages on portable changeable message signs prior to placing the message.

Portable Changeable Message Signs with Cellular Communications

Portable changeable message signs with cellular communications provided under this contract will be used for incident management or as required by the engineer and are to be operated by the Wisconsin State Patrol and the Traffic Management Center (TMC). Place the required portable changeable message signs at the specified locations in the plan at least one week prior to construction. Contact the TMC at (414) 227-2142 (tmc@dot.wi.gov) for communications system integration and testing.

Freeway and Ramp Work Restrictions

Definitions

The following definitions apply to this contract for freeway work restrictions:

System Ramps	Freeway to freeway ramps
Service Ramps	Freeway to/from local road ramps
Weekday Peak Hours	
5:30 AM – 7:00 PM	Monday, Tuesday, Wednesday, Thursday
5:30 AM – 11:00 PM	Friday
Weekend Peak Hours	
8:00 AM – 7:00 PM	Saturday
8:00 AM – 7:00 PM	Sunday
Weekday Off-Peak Hours	
7:00 PM – 9:30 PM	Monday, Tuesday, Wednesday, Thursday
Weekend Off-Peak Hours	
7:00 PM – 11:00 PM	Saturday
7:00 PM – 9:30 PM	Sunday
Nighttime Hours	
9:30 PM – 5:30 AM	(Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
11:00 PM – 8:00 AM	(Friday PM to Saturday AM, Saturday PM to Sunday AM) (All Segments)
Full Freeway and System Ramp Closure Hours	
11:00 PM – 4:30 AM	(Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
11:00 PM – 6:00 AM	(Friday PM to Saturday AM, Saturday PM to Sunday AM)
Service Ramp Closure Hours	
9:00 PM – 6:00 AM	(Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
10:30 PM – 8:30 AM	(Friday PM to Saturday AM, Saturday PM to Sunday AM)

Enhanced coordination is anticipated with adjacent projects for lane closures and full freeway closures. See article Other Contracts for adjacent projects.

During Weekday Peak Hours and Weekend Peak Hours, do not close freeway lanes or shoulders (including auxiliary lanes, system ramps, service ramps, and CD roadway system), except as shown in the traffic control plans. The freeway must remain entirely clear for traffic during these periods.

During Weekday Off-Peak Hours and Weekend Off-Peak Hours, only one lane may be closed on the freeway in each direction, provided that at least two lanes remain open to traffic, except as shown in the traffic control plans. Additional lane closures are not permitted unless approved by the engineer or as allowed during full freeway closures.

During Nighttime Hours, multiple lanes on the freeway may be closed in each direction, provided at least one lane remains open to traffic in the same direction as the closure, except as allowed during full freeway closures.

Close System Ramps only during designated System Ramp Closure Hours, unless otherwise specified in the plans or approved by the Engineer for safety or operational reasons related to adjacent closures.

Close Service Ramps only during designated Service Ramp Closure Hours, unless otherwise specified in the plans or approved by the Engineer for safety or operational reasons related to adjacent closures.

Follow plan details for closures. Lane restrictions of the freeway beyond that shown on the traffic control plans are subject to lane rental assessments and must be approved by the engineer. If plan details are not provided in the traffic control plan, furnish plans for review by the engineer. Once approved, allow at least three business days prior to the closure of roadway, lane, and ramp as identified in other articles in these special provisions.

Do not, at any time, conduct construction operations in the median area and adjacent outside shoulder area of the freeway at the same time without obtaining prior permission of the engineer, beyond that shown on the traffic control plans.

Rolling Closure

Short term freeway mainline rolling closures may be allowed for a maximum of 15 minutes for the removal and erection of sign structures, equipment moves across the road, or other required work as determined by the engineer. The department will allow short-term rolling closures only between 2 AM and 4 AM, and they may only be performed by freeway law enforcement.

Obtain approval from the engineer before coordinating these closures with freeway law enforcement. Coordinate 14 calendar days before closure. Present the scheduled time for the short-term rolling closure at the weekly traffic meeting a minimum of one week before the closure.

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Full Freeway Closure Restrictions

Full closure and detouring of freeway roads will be restricted to Full Freeway and System Ramp Closure/Hours unless otherwise specified. The freeway may be closed to facilitate the removal of structures and erection of girders, erection of sign structures, storm sewer trunk line crossings, bridge deck polymer overlays, to perform work related to major traffic shifts and other work approved by the engineer. Provide signed detour routes, as shown in the plans, fully open and free of construction during all full roadway and system ramp closures.

A full freeway closure is defined as one direction of the freeway. Closing both directions of the freeway constitutes using two full freeway closures. Bridge superstructure demolition activities will require a full freeway closure in one or both directions, as directed by the engineer. Full Freeway and System Ramp Closures may not coincide with dates specified in the Holiday and Special Event Restrictions.

Full Freeway and System Ramp Closures must be coordinated with project 1060-27-74 and 1060-48-70 to ensure no conflicts with planned construction activities, lane reductions or freeway closures. Where feasible, Full Freeway and System Ramp Closures may align with like closures taken in the same direction by project 1060-27-74 and/or 1060-48-70. In the event of a scheduling conflict, the Contractor will work with the Project Engineer and representatives of Project 1060-27-74 and/or 1060-48-70 to resolve the conflict in a manner that minimizes impact on both projects and traveling public. To minimize the total number of full freeway closures, the contractor is allowed extended full freeway closures only for bridge demolition, girder erection, traffic stage changes and temporary storm sewer construction for the following locations:

- I-94 demolition and girder erection over Hawley Road
- I-94 demolition and girder erection over 64th Street
- I-94 demolition and girder erection over 68th Street
- I-94 demolition and girder erection over 70th Street
- Traffic stage changes as approved by the engineer.
- Installation of 24" RCCP storm sewer crossing at Station 334EW+00
- Installation of 12" RCCP storm sewer crossing at Station 300EW+75

Extended Full Freeway and System Ramp Closure Hours (Weekday):

10:00 PM – 5:00 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)

11:00 PM – 7:00 AM (Friday PM to Saturday AM, Saturday PM to Sunday AM)

Extended Full Freeway and System Ramp Closure Hours (Weekend):

11:00 PM – 7:00 AM (Friday PM to Sunday AM)

Submit requests for extended hour full freeway and system ramp closures 14 calendar days prior to the planned closure events. Obtain prior approval from the engineer and the SEF Construction Program Work Zone and Traffic Engineer, Stephanie Leranthy, (414) 750-1397, for said closures.

Freeway Lane Restrictions

Submit requests for long-term lane closures on I-94, 30 calendar days prior to lane closure. Obtain prior approval from the engineer and the SEF Construction Program Work Zone and Traffic Engineer, Stephanie Leranthy, (414) 750-1397, for said closures.

System Ramp Closure Restrictions

Submit requests for long-term system ramp closures of WIS 175 Southbound to I-94 Westbound, 30 calendar days prior to ramp closure. Obtain prior approval from the engineer and the SEF Construction Program Work Zone and Traffic Engineer, Stephanie Leranthy, (414) 750-1397, for said closures.

Service Ramp Closure Restrictions

All entrance and exit ramps shall be posted three business days in advance of their closure with dates and time of closure.

No two consecutive entrance ramps or consecutive exit ramps may be closed unless it is shown in the traffic control plans or approved by the engineer.

The Frederick Miller Way WIS 175 SB exit ramp may be closed for up to 30 calendar days in Stage 1A.

Do not close the General Mitchell Boulevard I-94 EB exit ramp until work has been completed to widen the Frederick Miller Way WIS175 exit ramp.

The General Mitchell Boulevard I-94 EB exit ramp must be closed whenever the General Mitchell Boulevard I-94 WB entrance ramp is closed.

Do not close the General Mitchell Boulevard I-94 WB entrance ramp or the General Mitchell Boulevard I-94 EB exit ramp during the Milwaukee Brewers season. Nighttime closures of the ramps are permitted provided the requirements of the Holiday and Special Events Restrictions article are met.

The Hawley Road I-94 EB exit ramp shall be opened to allow a right turn to Hawley Road SB at the end of Stage 4.

Do not close the 70th Street I-94 WB entrance ramp until the Hawley Road I-94 WB entrance ramp is open.

Do not close the 70th Street I-94 WB entrance ramp until Hawley Road is completely open between Dana Court and Adler Street.

Local Street Closure Restrictions

The following definitions apply to this contract for WIS175/Brewers Boulevard

Weekday Peak Hours

6:00 AM – 9:00 AM	(Monday, Tuesday, Wednesday, Thursday, Friday)
3:00 PM – 6:00 PM	(Monday, Tuesday, Wednesday, Thursday, Friday)

Weekday Off-Peak Hours (Single Lane Closure)

9:00 AM – 3:00 PM	(Monday, Tuesday, Wednesday, Thursday, Friday)
6:00 PM – 8:00 PM	(Monday, Tuesday, Wednesday, Thursday, Friday)

Nighttime Hours (Double Lane Closure and Frederick Miller Way exit ramp closure)

8:00 PM – 6:00 AM	(Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM, Friday PM to Saturday AM, Saturday PM to Sunday AM, Sunday PM – Monday AM)

The following definitions apply to this contract for local street closure restrictions except WIS175/Brewers Boulevard

Peak Hours

6:00 AM – 9:00 AM	(Monday, Tuesday, Wednesday, Thursday, Friday)
3:00 PM – 7:00 PM	(Monday, Tuesday, Wednesday, Thursday, Friday)
11:00 AM – 8:00 PM	Saturday
1:00 PM – 5:00 PM	Sunday

Off-Peak Hours

9:00 AM – 3:00 PM	(Monday, Tuesday, Wednesday, Thursday, Friday)
7:00 PM – 6:00 AM	(Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
9:00 PM – 11:00 AM	(Friday PM to Saturday AM)
8:00 PM – 1:00 PM	(Saturday PM to Sunday PM)
5:00 PM – 6:00 AM	(Sunday PM to Monday AM)

Full Closure

9:00 PM – 5:00 AM	(Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
10:00 PM – 8:00 AM	(Friday PM to Saturday AM, Saturday PM to Sunday AM)
10:00 PM – 5:00 AM	(Sunday PM to Monday AM)

Local street full closures will be allowed during Full Closure timeframes for bridge demolition, girder erection, superstructure construction, and deck form removal for the temporary structures at 64th St, 68th St, and 70th St.

Local street full closures will be allowed during Full Closure timeframes for the bridge demolition, girder erection, superstructure construction, and deck form removal for the construction of the permanent I-94 structures over 70th St.

Closure Restrictions

Notify engineer at least 14 calendar days prior to any long-term (greater than 3 days) closure of service ramps, system ramps, or local streets.

Do not close local street traffic lanes or intersections and ensure that the local street traffic lanes are entirely clear for traffic during Peak Hours, except as shown in the traffic control plans. Maintain at least one local street lane open to traffic, during Off-Peak Hours. Close intersections only during Full Closure hours, unless otherwise specified in the plan, or unless otherwise approved by the engineer for safety or operational reasons associated with other adjacent local street closures.

Lane closures may be allowed, as approved by the engineer, for construction of the permanent I-94 structures over 70th St.

Follow plan details for closures. Lane restrictions beyond that shown on the traffic control plans must be approved by the engineer. If plan details are not provided in the traffic control plan, furnish plans for review by the engineer for approval. Once approved, allow at least five business days prior to the closure of local roadway and/or intersection as identified in Contractor Coordination.

Do not, at any time, conduct construction operations in the median area and adjacent outside shoulder area of the local street at the same time without obtaining prior permission of the engineer, beyond that shown on the traffic control plans.

Do not begin or continue any work that closes local street traffic lanes or intersection outside the allowed time periods specified in this contract. If the contractor fails to open local roadway lanes of traffic and/or intersections to traffic by the specified times, assessments shown in the article Lane Rental Assessment will be placed upon the contractor based on the hourly rental rate that the non-compliant closure occurs. The total assessment to the contractor will be the summation of the separate assessments for each local street traffic lane and local street intersection closure violation.

Permitting the contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the department of any of its rights under the contract.

70th Street

Do not close 70th Street under I-94 long-term until 68th Street under I-94 is opened to full capacity. Maintain access to the Girl Scouts of America and apartment complex on the north side of I-94.

68th Street

Maintain access to Valvoline Instant Oil Change and Maxie's Parking Lot on the north side of I-94

Hawley Road

Maintain access to Dana Court on the north side of I-94.

Maintain access to Hawley Court and Anshai Lebowitz Cemetery on the south side of I-94.

Work Zone Ingress/Egress

All locations of work zone egress or ingress for construction vehicles are subject to approval from the engineer. Submit to the engineer locations for freeway access into and out of the work zone for each stage and plans, for approval, that include signage and parallel deceleration and acceleration lanes for each freeway access into and out of the work zones. Submit the locations and plans 14 calendar days prior to each stage for approval by the engineer. This will be an official submittal as defined in standard spec 103.10.2.4 Submittals of the Contract Award and Execution article located elsewhere in these special provisions.

At the weekly traffic meetings, provide updated information to the Work Zone Access Plan, as approved by the engineer, to direct emergency responders accessing a mainline median barrier restricted work zone. Access for emergency responders shall be maintained at all times and not restricted by vehicles, equipment or the storage of equipment, vehicles or materials.

Access into the work zones are not allowed directly from the freeway during peak hours except where appropriate acceleration and deceleration lanes and traffic control provided, as approved by the engineer. Access into the work zones from the freeway will be allowed at other times, subject to approval by the engineer, if operations can be safely accomplished and do not result in non-construction traffic entering the work zones. Exiting work zones directly onto the freeway are only allowed when operations do not obstruct or slow traffic on the freeway. All construction vehicles shall yield to all through traffic at all locations.

Traffic Control Winter Maintenance

Re-install or adjust any traffic control devices that may be damaged, removed, or shifted as part of normal winter maintenance operations. Clean and maintain traffic control devices as necessary or as a result of winter maintenance operations.

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

Traffic Meetings and Traffic Control Scheduling

Every Wednesday by 8:00 AM, submit a detailed proposed 2-week look-ahead traffic closure schedule to the engineer. Type the detailed proposed 2-week look-ahead closure schedule into an excel spreadsheet provided by the engineer. Enter information such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general 2-month look-ahead closure information into the excel spreadsheet. Any closure schedules submitted after 8:00 AM Wednesday morning is subject to being denied by the engineer.

Attend, in person, the 10:00am contractor/utility traffic coordination meeting every Wednesday at the project field office to discuss and answer questions on the proposed schedule. The prime contractor, traffic control subcontractor, and any other subcontractors that have work that requires shoulder, lane, ramp, or full closures on the 2-week schedule are required to attend the 10:00 AM meeting. Edit, delete and add closures to the detailed proposed 2-week look-ahead schedule, as directed by the engineer, so that proposed closures meet contract requirements. Other edits, deletions or additions unrelated to meeting contract requirements may also be agreed upon with the engineer during the 10:00 AM meeting.

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

For any mid-week changes, submit requests for additions or modifications in writing to the engineer for review and approval. Any cancellations also need to be communicated in writing including a reason for the cancellation. Any cancellations, additions, or modifications should be submitted by 4:00 PM to allow for review, approval, and schedule updates. Any additions to the schedule need to adhere to advance notice requirements. The contractor is required to attend traffic stage change meetings as required by the engineer.

7. Holiday and Special Event Restrictions.

The following Holiday Restrictions and Special Event Restrictions apply to the contract.

Holiday Restrictions

Do not perform work nor haul materials of any kind, and entirely clear the traveled way and shoulders 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, August 29, 2025 to 6:00 AM Tuesday, September 2, 2025 for Labor Day;
- From noon Wednesday, November 26, 2025 to 6:00 AM Monday, December 1, 2025 for Thanksgiving;
- From noon Tuesday, December 23, 2025 to 6:00 AM Friday, December 26, 2025 for Christmas;
- From noon Tuesday, December 30, 2025 to 6:00 AM Friday, January 2, 2026 for New Years Day;
- From noon Friday, May 22, 2026 to 6:00 AM Tuesday, May 26, 2026 for Memorial Day;
- From noon Friday, July 3, 2026 to 6:00 AM Monday, July 6, 2026 for Independence Day;
- From noon Friday, September 4, 2026 to 6:00 AM Tuesday, September 8, 2026 for Labor Day;
- From noon Wednesday, November 25, 2026 to 6:00 AM Monday, November 30, 2026 for Thanksgiving;
- From noon Wednesday, December 23, 2026 to 6:00 AM Monday, December 28, 2026 for Christmas;
- From noon Wednesday, December 30, 2026 to 6:00 AM Monday, January 4, 2027 for New Years Day;
- From noon Friday, May 28, 2027 to 6:00 AM Tuesday, June 1, 2027 for Memorial Day;
- From noon Friday, July 2, 2027 to 6:00 AM Tuesday, July 6, 2027 for Independence Day;
- From noon Friday, September 3, 2027 to 6:00 AM Tuesday, September 7, 2027 for Labor Day;

- From noon Wednesday, November 24, 2027 to 6:00 AM Monday, November 29, 2027 for Thanksgiving;
- From noon Thursday, December 23, 2027 to 6:00 AM Monday, December 27, 2027 for Christmas;
- From noon Thursday, December 30, 2027 to 6:00 AM Monday, January 3, 2028 for New Year's Day;
- From noon Friday, May 26, 2028 to 6:00 AM Tuesday, May 30, 2028 for Memorial Day;
- From noon Monday, July 3, 2028 to 6:00 AM Wednesday, July 5, 2028 for Independence Day;
- From noon Friday, September 1, 2028 to 6:00 AM Tuesday, September 5, 2028 for Labor Day;
- From noon Wednesday, November 22, 2028 to 6:00 AM Monday, November 27, 2028 for Thanksgiving;
- From noon Friday, December 22, 2028 to 6:00 AM Tuesday, December 26, 2028 for Christmas;
- From noon Friday, December 29, 2028 to 6:00 AM Tuesday, January 2, 2029 for New Years Day;
- From noon Friday, May 25, 2029 to 6:00 AM Tuesday, May 29, 2029 for Memorial Day;
- From noon Tuesday, July 3, 2029 to 6:00 AM Wednesday, July 5, 2029 for Independence Day;

Freeway Special Event Restrictions

During Summerfest keep open the following roadways until one hour after the event closes each night:

- Two open lanes on I-94 EB and two open lanes on I-94 WB
- System and service interchange ramps (unless shown as closed in the staging plans)

During Wisconsin State Fair keep open the following roadways until one hour after the event closes each night:

- Three open lanes on I-94 EB and two open lanes on I-94 WB
- System and service interchange ramps (unless shown as closed in the staging plans)

On days with a Milwaukee Brewer home game at American Family Field, keep open the following roadways until four hours after the event begins:

- Two open lanes on I-94 EB and two open lanes on I-94 WB
- System and service interchange ramps (unless shown as closed in the staging plans)

On days during other special events, as determined by the engineer, at American Family Field, I-94 restrictions follow the same restrictions as Milwaukee Brewer home games.

During Harley-Davidson Homecoming Celebration July 13-16, 2028, keep open the following roadways until one hour after the end of event:

- Three open lanes on I-94 EB and three open lanes on I-94 WB
- System and service interchange ramps (unless shown as closed in the staging plans)

Cemetery Event Restrictions

The following restrictions apply to special events held at Calvary Cemetery, Wood National Cemetery, Beth Hamedrosh Hagodel Cemetery, Spring Hill Cemetery and Anshai Leibowitz Cemetery.

Do not perform work on Hawley Road and Mitchell Boulevard and on the I-94 Mainline between Hawley Road and General Mitchell Boulevard nor haul materials of any kind, and entirely clear the traveled way and shoulders of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From 6 p.m. Friday, December 12, 2025 to 6:00 a.m. Monday, December 15, 2025 for Cemetery Event
- From 6 p.m. Thursday, September 10, 2026 to 6:00 a.m. Monday, September 14, 2026 for Cemetery Events
- From 6 p.m. Friday, December 11, 2026 to 6:00 a.m. Monday, December 14, 2026 for Cemetery Event
- From 6 p.m. Thursday, September 30, 2027 to 6:00 a.m. Monday, October 4, 2027 for Cemetery Events
- From 6 p.m. Friday, December 10, 2027 to 6:00 a.m. Monday, December 13, 2027 for Cemetery Event
- From 6 p.m. Tuesday, September 19, 2028 to 6:00 a.m. Thursday, September 21, 2028 for Cemetery Events

Special event work restrictions do not apply to roadways or ramps already closed long term during construction as shown on the plans. New long-term closures of ramps and roadways must be coordinated with the special event work restrictions.

8. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.

The utility work plan includes additional detailed information regarding the location of known discontinued, relocated, or removed utility facilities. These can be requested from the department during the bid preparation process, or from the project engineer after the contract has been awarded and executed.

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

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Any utility facility locations (stations, offsets, elevations, depths) listed in this article are approximate.

AT&T Legacy has facilities within the project limits.

During construction, AT&T Legacy will relocate its fiber facility on the north side of I-94. The relocation will begin at an existing handhole on N. 60th Street near Station 319HWD+82, 188' LT, proceed south to the terrace along W. Fairview Avenue, then continue southwest and west along W. Fairview Avenue to N. 68th Street. From there, it will run north in the east terrace of N. 68th Street to the southeast quadrant of W. Stevenson Street, then west along the south terrace of W. Stevenson Street to S. 70th Street, and finally south in the east terrace of S. 70th Street to a new handhole near Station 20A+22 RT, where it will intercept the existing fiber. Existing cables will be removed after splicing and activation of the new facility.

A second relocation is planned on the south side of I-94.

AT&T Local Network has facilities within the project limits, located within We Energies Electric conduit packages. AT&T Local Network will be removing their facilities without replacement.

The existing conduit package between We Energies electric manholes at Station 18A+58, 38' RT, and Station 70KE+56, 19' LT, conflicts with the proposed east abutments of the I-94 bridges over N. 70th Street. During construction and in coordination with We Energies' electric relocation work, AT&T Local Network will remove its cables from the affected conduit section.

AT&T Wisconsin has underground and overhead facilities within the project limits.

Prior to construction, AT&T Wisconsin will perform the following work:

- Noise Barrier Relocations (Approx. Station 298EW+52 to 300EW+45):
 - o Relocate PFP cabinet F 165 S 66 St from Station 298EW+52, 114' RT to Station 298EW+52, 122' RT to avoid conflict with proposed noise barrier N-40-116.
 - o Relocate handhole and associated cable from Station 298EW+67, 118' RT to Station 298EW+67, 122' RT for the same conflict.
 - o Directionally bore two (2) 1½-inch conduits from Station 298EW+67, 122' RT to Station 300EW+45, 122' RT and install fiber optic cables rising on the pole at Station 300EW+45, 134' RT.
 - o Anticipated Durations: approx. 10 working days (dependent on power disconnection).
- Cabinet and Equipment Removal (After July 25, 2025):
 - o Disconnect We Energies power service to the VRAD cabinet at Station 298EW+60, 113' RT. Remove VRAD cabinet, concrete slab, and associated cables.
 - o Remove distribution cabinet and Cross Box at Station 298EW+68, 112' RT, including the slab and cables.
 - o Anticipated Durations: approx. 10 working days (dependent on power disconnection).

- 68th Street Storm Sewer Conflicts: from Station 33C+17, 7' RT to 38C+03, 8' RT bore three (3) new 4-inch plastic conduits between MH2009 (Station 33C+17, 7' RT) and MH2010 (Station 38C+03, 8' RT). Discontinue the existing conduit package in place after cables are pulled. Anticipated Duration: approx. 30 working days.
- Discontinued Cable Removal: Remove existing discontinued fiber cable in innerduct from WisDOT cabinet at Station 322EW+45, 106' RT to We Energies pole at Station 325EW+14, 94' RT.

During construction, AT&T WI will adjust at 68th Street MH2009 and MH2010 frames and covers to final grade based on information provided by the paving contractor. Manhole adjustments: approx. 1 working day per location. Contractor to provide advance notice when the site will be available to AT&T Wisconsin.

AT&T Wisconsin has an MTD facility crossing I-9494 near S. 72nd Street, which will be undermined by storm sewer construction between structures 1181-S4 and 1138-S3A, approximately at Station 278EW+55. During construction, AT&T Wisconsin will box and support the facility in place. The contractor must notify AT&T Wisconsin before beginning excavation in this area. AT&T WI requires one working day to complete the boxing and support of their facility. After storm sewer installation is complete and before backfilling, AT&T Wisconsin will require one working day to reset the facility.

ATC Management, Inc. (ATC) has facilities within the project limits. Overhead lines connect to the We Energies O'Connor Substation located on the north side of O'Connor Street between N. 68th Street and N. 69th Street and are to remain in place. Temporary partial and full circuit outages of overhead lines along the north side of I-94 will be required during construction. Refer to the "Notice to Contractor – Coordination of Electric Outages with American Transmission Company (ATC)" for outage procedures and requirements.

ATC also has a discontinued 138 kV underground transmission line along N. 70th Street, consisting of a 6-5/8" O.D. steel pipe with thermal sand backfill. ATC plans to remove and cap segments in direct conflict with construction. Provide ATC advance notice when the work is scheduled to begin at the following locations where potential conflict points are anticipated:

- Station 15A+15, 10' RT (between SS structures 1044-S4 and 1033-S4)
- Station 13A+19, 10' RT (between SS structures 51-S7 and 53-S7)

Contact Jeff Vanderwerff, (262) 206-4966 to coordinate this work.

City of Milwaukee – Communications has facilities within the project limits.

Prior to construction City of Milwaukee – Communications will remove or cut and discontinue existing fiber optic cable in S. 68th Street from the project limits south of W. Dixon Street near Station 32C+50, 15' RT, to the project limits east of S. 68th Street at Fairview Avenue near Station 39C+85, 38' RT.

Prior to construction City of Milwaukee – Communications will remove or cut and discontinue existing copper cable in underground conduit under I-94 from S. Hawley Road near Station 53HWS+99, 37' RT, along Hawley Ct, crossing under I-94 near Station 325EW+60, and along Dana Ct to the project limits at S. Hawley Road north of Dana Ct near Station 72HWS+60, 20' RT.

There is a discontinued copper cable approximately 22' RT of the 64th Street reference line throughout the project limits along 64th Street. The cable was direct-buried and placed in 2-inch iron pipes where it passed under driveways and roadways. The contractor can remove the cable and pipes if encountered during construction.

Removal work is anticipated to start August 18, 2025, and the City of Milwaukee – Communications will require 10 working days to complete the work.

New fiber optic cables will be installed as part of the project under the City Underground Conduit plans. City of Milwaukee – Communications will perform splicing to restore service once the project is complete.

City of Milwaukee – Conduit has facilities within the project limits. During construction and in conjunction with grading, paving, and structures operations, install, remove, and discontinue, conduit facilities as shown in the plans and bid items.

City of Milwaukee – Sewer has underground sanitary sewer facilities within the project limits.

Prior to construction, City of Milwaukee – Sewer will reroute the existing sanitary sewer crossing Hawley Road at approximately Station 67HWS+55 to flow to S. 60th Street. The existing sewer will be bulkheaded and discontinued between the sanitary manhole in W. Fairview Avenue at approximately Station 67HWS+56, 77' LT, and the sanitary manhole at approximately Station 67HWS+52, 92' RT.

During construction, adjust sanitary manholes and install internal sanitary manhole seals as shown in the plans and bid items.

City of Milwaukee – Water (Milwaukee Water Works (MWW)) has facilities within the project limits.

During construction, install, remove, discontinue, and adjust water facilities as shown in the plans and bid items.

Level 3 Communications LLC (a.k.a. Lumen) has underground conduit facilities in conflict with proposed storm sewer work near Station 189+64, 24' RT.

During construction, contractor to coordinate directly with Lumen to complete the necessary adjustments. Once the contractor has exposed the area around the existing storm sewer pipe, Lumen will raise the conduit with the cable in place and provide temporary protection and support during the storm sewer installation. Lumen requires 1 working day to complete this work. Contractor to notify Lumen when the site is ready.

Following the contractor's completion of the new storm sewer installation and prior to backfilling, Lumen will reset the conduit to its final position. Lumen requires 1 working day to complete this work. Contractor to notify Lumen when the site is ready.

Midwest Fiber Networks LLC (MWFN) has facilities in ducts owned by the Wisconsin Department of Transportation (WisDOT) within the project limits. Permanent relocation is required and will be a coordinated venture between the WisDOT Communications (a.k.a. FTMS) and MWFN. The existing MWFN facilities must remain active until the new facilities are installed, spliced, tested and fully functional.

During construction, MWFN will relocate their facilities beginning at existing FTMS vault EXCV282EW on the south side of I-94, continuing in FTMS conduit to CV383AC on the south side of Ramp AC, continuing easterly in FTMS conduit along the south side of I-94 to TRM335EW, then crossing I-94 to CV335EW. MWFN will install two 1.25-inch HDPE conduits from CV335EW to a new handhole at approximately Station 335EW+20 LT then to existing FTMS manhole EXMH336EW to tie into the existing MWFN system.

MWFN will install two (2) 1.25-inch conduits from CV383AC westerly to a proposed handhole in the terrace at approximately Station 383AC+00 RT and continuing westerly approximately 40', then turning southerly down S. 71st Street to W. Adler Street, then turning easterly on W. Adler Street to existing aerial facility.

MWFN will discontinue the existing underground facility along the west side of S. 70th Street from an existing manhole at approximately Station 284EW+58, 58' RT, southerly to W. Adler Street.

Upon completion of FTMS work, contractor to notify MWFN when the site is available. Allow MWFN a minimum of 30 working days to complete their relocation into the new FTMS system following completion of the FTMS system. The new FTMS system and the relocated MWFN system must be fully operational prior to any construction activities that would impact the existing systems, including construction of the temporary widening shown on the plans.

Spectrum has facilities within the project limits.

TDS Metrocom LLC has underground fiber optic facilities in conflict with proposed improvements along S. 68th Street. During construction, TDS will install approximately 460 feet of new 1.25-inch conduit via

directional bore to reroute their facilities outside the proposed storm sewer and MSE wall conflicts. The new route will begin at the existing handhole located at Station 37+60.3C, 50.1' LT and extend southerly along the east side of S. 68th Street. The conduit will cross a 12-inch storm sewer near Station 36+93.0C, 97.2' LT and gradually bend toward the proposed back of curb (BOC) around Station 36+65.3C, with further elevation and offset adjustments made to accommodate proposed storm sewer and MSE wall crossings. The route continues across W. Kearney Street, where the elevation is increased to meet the final BOC at Station 33+65.0C. A new handhole will be installed in the grassy area of the right-of-way at approximately Station 33+54.9C, 66.7' LT, before continuing with a short bend and tying into the existing handhole at Station 33+17.3C, 29.0' LT. New fiber will be pulled through the installed conduit and spliced at existing handhole locations to restore service. This relocation work is anticipated to begin in April 2026 and will take approximately 14 working days to complete.

Both existing handholes will remain in place, and handhole adjustments will be performed by Northwest Construction. Notify TDS when the sites are expected to be ready for them to carry out the adjustments.

Verizon Business has facilities within the project limits.

We Energies – Electricity has facilities within the project limits. We Energies has a substation known as the O'Connor Substation on the north side of O'Connor Street between N. 68th Street and N. 69th Street. This facility will remain in place without adjustment.

We Energies will relocate or adjust electric facilities throughout the project corridor, including conduit and manhole replacements, new conduit installations, riser pole work, and the removal of overhead crossings. Work includes adjustments to accommodate conflicts with proposed storm sewer, sanitary sewer, and other utilities. In several areas, existing conduit will be discontinued and replaced with new concrete-encased conduit packages along revised alignments. Overhead facilities will be removed and replaced with underground installations, and manhole frames and covers will be adjusted during road construction.

Construction Timeline for relocations:

- Conduit and Manhole Construction: 140 working days, starting no later than November 30, 2025
- Cable Construction: 110 working days, starting no later than February 1, 2026
- Overhead/Direct Bury Construction: 10 working days, starting no later than June 1, 2026
- Estimated Total Duration: 260 working days
- Target Completion: August 1, 2026

During construction, We Energies will adjust an estimated 7 manholes within grading or paving limits to final grades provided by the contractor. Each manhole is expected to require approximately one working day. Contractor to notify We Energies when the site will be ready.

Detailed facility locations and activities are provided in the relocation table below.

70th Street Relocation (Existing Conduit to be Discontinued):		
Station No.	Facility	
From Station 15A+09 49' RT	Existing conduit package at MH9508	
Through Station 15A+31 46' RT	Existing conduit package – bend	
To Station 18A+50 40' RT	Existing conduit package at MH9510	
Relocated to:		
Station No.	Approx. Elevation (crossings only)	Facility
From Station 15A+09 49' RT		New conduit package at MH9508
Through Station 15A+15 48' RT	Top: 709.75' (24"depth) btm: 708.25'	New conduit package – SS main crossing
Through Station 15A+18 48' RT		New conduit package – bend
Through Station 15A+58 16' RT		New conduit package – bend

Through Station 17A+38 14' RT	Top: 701.5' (72" depth) btm: 700'	New conduit package – SS crossing
Through Station 17A+53 14' RT		New conduit package – bend
Through Station 17A+93 16' RT	Top: 704' (39"depth) btm: 702.5'	New conduit package – SS crossing
Through Station 18A+05 17' RT		New conduit package – bend
To Station 18A+50 36' RT		New conduit package and shelf at MH9510
68 th Street Relocation (Existing Conduit and Manhole to be Discontinued):		
Station No.	Facility	
From Station 32C+99 107' RT	Existing conduit package at MH80-535	
Through Station 32C+98 6' LT	Existing conduit package – bend	
Through Station 33C+11 18' LT	Existing conduit package – bend	
Through Station 34C+46 18' LT	Existing MH 80-536 to be discontinued with conduit (knock in roof and walls. Backfill with slurry)	
To Station 36C+74 18' LT	Existing conduit package at MH80-537	
Relocated to (no new Manhole):		
Station No.	Approx. Elevation (crossings only)	Facility
From Station 32C+99 107' RT		New conduit package at MH80-535
Through Station 33C+01 97' RT		New conduit package – bend
Through Station 33C+00 14' RT	Top: 708' (42" depth) btm: 706.5'	New conduit package – CUC crossing
Through Station 33C+00 1' LT		New conduit package – bend
Through Station 33C+01 6' RT	Top: 708' (42" depth) btm: 706.5'	New conduit package – SS crossing
Through Station 33C+13 13' LT		New conduit package – bend
Through Station 33C+42 13' LT	Top: 706' (60" depth) btm: 704.5'	New conduit package – SS crossing
Through Station 34C+51 13' LT	Top: 702.25'(84" depth) btm: 700.75'	New conduit package – SS main crossing
Through Station 34C+61 13' LT	Top: 703' (78" depth) btm: 701.5'	New conduit package – SS crossing
11Through Station 36C+24 13' LT	Top: 701' (72" depth) btm: 695.5'	New conduit package – SS crossing
Through Station 36C+52 13' LT	Top: 702' (54" depth) btm: 701.5'	New conduit package – CUC crossing
Through Station 36C+57 13' LT		New conduit package – bend
To Station 36C+74 18' LT		New conduit package at MH80-537
64 th Street Relocation (Existing Conduit to be Discontinued):		
Station No.	Facility	
From Station 41D+39 12' LT	Existing conduit package at MH9560	
To Station 44D+35 12' LT	Existing conduit package at MH9559	
Relocated to:		
Station No.	Approx. Elevation (crossings only)	Facility

From Station 41D+39 12' LT		New conduit package at MH9560
Through Station 42D+22 10' LT		New conduit package – bend
Through Station 42D+60 3.5' RT		New conduit package – bend
Through Station 42D+62 3.5' RT	Top: 691.5' (42" depth) btm: 690'	New conduit package – SS crossing
Through Station 43D+40 4' RT	Top: 691.5' (42" depth) btm: 690'	New conduit package – SS crossing
Through Station 43D+92 4' RT		New conduit package – bend
To Station 44D+35 12' LT		New conduit package at MH9559
64 th Street pole relocation:		
Station No.	Facility	
Station 41D+35 17' RT	Remove pole 67-0726	
Station 41D+34 30' RT	Install new pole and overhead transformer	
64 th Street New Work (Proposed Conduit Package and Riser Pole):		
Station No.	Facility	
From Station 44D+47 17' LT	New conduit package at MH9559	
Through Station 44D+47 74' LT	New conduit package – bend	
To Station 44D+59 88' LT	New conduit package to new riser pole	
Hawley Road and Adler Street New Work (Proposed Conduit Package and Riser Pole):		
Station No.	Approx. Elevation (crossings only)	Facility
From Station 51HWS+67 13' LT		New conduit package and shelf at MH69-624
Through Station 52HWS+91 1' LT		New conduit package – bend
Through Station 53HWS+40 17' RT		New conduit package – bend
Through Station 53HWS+95 9' RT		New conduit package – bend
Through Station 00+31HC 7' LT	Top: 695' (36" depth) bottom: 694'	New conduit package – CUC crossing
Through Station 01+10HC 2' LT		New conduit package – bend
To Station 01+56HC 18' LT		New conduit package and new riser pole
Hawley Rd Freeway Ramp Relocation (Existing Conduit to be Discontinued):		
Station No.	Facility	
From Station 315+26HWD 63' LT	Existing conduit at MH73-504	
To Station 317+56HWD 44' RT	Existing conduit at MH73-505	
From Station 317+69HWD 50' RT	Existing conduit at MH73-505	
To Station 164+37HWN 102' RT	Existing conduit at MH73-506	
Relocated to:		
Station No.	Approx. Elevation (crossings only)	Facility
From Station 315+26HWD 63' LT		New conduit package at MH73-504
Through Station 315+31HWD 61' LT		New conduit package – bend
Through Station 315+71HWD 16' LT	Top: 699.5' (49" depth) bottom: 698'	New conduit package – Noise Wall crossing

Through Station 315+58HWD 12' LT		New conduit package – bend
Through Station 316+53HWD 30' RT		New conduit package – bend
Through Station 317+44HWD 37' RT		New conduit package – bend
To Station 317+56HWD 44' RT		New conduit package at MH73-505
From Station 317+69HWD 50' RT		New conduit package at MH73-505
Through Station 163+99HWN 108' LT		New conduit package – bend
Through Station 163+96HWN 88' LT		New conduit package – bend
Through Station 163+98HWN 69' LT	Top:686.75'(125" depth) btm:685.75'	New conduit package – SS crossing
Through Station 164+03HWN 30' LT	Top: 688' (109" depth) btm: 686.5'	New conduit package – Water main crossing
Through Station 164+05HWN 10' LT	Top: 684' (153" depth) btm: 682.5'	New conduit package – SS crossing
To Station 164+32HWN 114' RT		New conduit package at new manhole
Dana Ct and Hawley Ct Overhead Freeway Crossing (Existing pole and overhead freeway crossing removal):		
Station No.	Facility	
Station 325EW+20 64' LT	Remove existing pole 69-1892	
Station 325EW+20 93' RT	Remove existing pole 69-1891	
Pole Relocations on Hawley Ct:		
Station No.	Facility	
Station 324EW+98 124' RT	Remove existing pole 94-02961	
Station 325EW+15 151' RT	Install new pole	
Station 325EW+75 124' RT	Remove existing pole 61-7183	
Station 325EW+72 124' RT	Install new pole	
Station 325EW+64 124' RT	Install new guy	
Station 325EW+31 203' RT	Remove existing pole 69-1898	
Station 325EW+30 203' RT	Install new pole	
Hawley Road New Work Final positioning is pending, as we are currently coordinating with the City of Milwaukee to . Proposed Conduit Package and Manholes:		
Station No.	Facility	
Station 164+72HWN 56' RT	New Manhole (center)	
From Station 164+72HWN 48' RT	New conduit package at new manhole	
Through Station 164+74HWN 33' RT	New conduit package – bend	
Through Station 164+88HWN 21'RT	New conduit package – bend	
New conduit follows curve of the road roughly 5' off the back of existing curb between the above and below station.		
Through Station 169+24HWN 33' RT	New conduit package – bend	

Through Station 169+59HWN 29' RT	New Manhole (center)
New conduit follows curve of the road roughly 5' off the back of existing curb between the above and below station.	
Through Station 170+60HWN 25' RT	New conduit package
To Station 74+01HWS 5' RT	New Manhole (center)
Manhole Adjustments During Construction:	
Station No.	Facility
Station 18A+58 39' RT	MH9510
Station 70KE+56 19' LT	MH9508
Station 71KE+42 14' LT	MH9509
Station 63CR+35 45' LT	MH9524
Station 37C+85 45' LT	MH9499
Station 36C+82 18' LT	MH80-537
Station 41D+28 11' LT	MH9560

We Energies – Gas has facilities within the project limits. We Energies-Gas plans to perform the following relocations prior to construction.

70th Street – Replace gas service to 307 and 308 S. 70th Street from existing gas main.

68th Street

- Cut and cap existing gas main crossing I-94 on south side at Station 32C+92, 31.5' LT, and on the north side at Station 37C+62, 13' LT. Discontinue existing gas main between these locations.
- Replace existing gas main in 68th Street from W. O'Connor Street to W. Fairview Avenue. Install new gas main as follows:
 - o Station 37C+41, 59' LT – South tie-in to existing gas main.
 - o Station 37C+56, 52' LT
 - o Station 37C+53, 40' LT
 - o Station 37C+84, 34' LT
 - o Station 37C+93, 34' LT
 - o Station 37C+98, 40' LT
 - o Station 38C+64, 36' LT
 - o Station 39C+41, 32' LT – Start of road crossing of 68th Street.
 - o Station 39C+41, 47' RT – North tie-in to existing gas main.

64th Street – Replace existing gas main crossing I-94 from Station 41D+20, 21' LT, to Station 43D+97, 21' LT.

61st Street – Existing gas main crossing I-94 near Station 315EW+77 will be discontinued and replaced from Station 315EW+68, 189' RT, to Station 315EW+68, 191' LT.

N. Hawley Road – Existing gas main will be discontinued from Station 69HWS+87, 54' RT, to Station 74HWS+14, 25' LT and replaced as follows:

- Station 69HWS+81, 54' RT – South tie-in to existing gas main going southwest.
- Station 69HWS+93, 53' RT – Start of angled road crossing of N. Hawley Road.
- Station 70HWS+88, 0' LT – Crossing HWS reference line.

- Station 72HWS+04, 21' LT
- Station 72HWS+57, 15' LT
- Station 74HWS+00, 15' LT
- Station 74HWS+10, 25' LT – North tie-in to existing as main going north and west.

Work is expected to begin in July 2025 and require approximately 105 working days.

During construction, We Energies will adjust gas valves and other appurtenances within grading or paving limits to final grades as provided by contractor. Contractor to notify We Energy when the site is ready for valve adjustments.

Contact We Energies Gas Dispatch at 1-800-261-5325 for gas emergencies, to identify if gas facilities are live, and for gas valve box adjustments.

Windstream KDL, LLC has underground fiber optic facilities in conflict with proposed improvements at S. Hawley Road (Station 164HWN) and S. 68th Street (Station 38C). To avoid these conflicts, during construction, Windstream will install new fiber optic cable along an alternate route beginning at the intersection of W. Bluemound Road and Zablocki Drive. The new route runs west on W. Bluemound Road, south on N. 68th Street, then west on W. Stevenson Street, terminating at an existing handhole at W. Stevenson Street and N. 70th Street. This new alignment replaces the existing fiber within the construction area. Windstream will remove fiber cable from any abandoned conduit. Work is anticipated to begin in November 2025. The estimated construction duration is 45 working days.

The following utilities have facilities within the construction limits; however, no adjustments are anticipated:

Milwaukee Metropolitan Sewerage District – Sewer

9. Other Contracts.

Coordinate work according to standard spec 105.5.

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

The following projects may be under construction concurrently with the work under this contract. Coordinate activities, detours, work zone traffic control, roadway and lane closures, and other work items as required with other contracts.

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

2410-47-70, I-94 East West, National Ave, 70th St to Miller Park Way, WisDOT Project Manager Chris Zacharias, Christopher.Zacharias@dot.wi.gov (262) 548-6716.

1060-27-74, I-94 East West, Early East Leg, 35th St to 25th St, WisDOT Project Manager Chris Zacharias, Christopher.Zacharias@dot.wi.gov (262) 548-6716.

1060-27-72, I-94 East West, East Leg, 35th St to 16th St, WisDOT Project Manager Chris Zacharias, Christopher.Zacharias@dot.wi.gov (262) 548-6716.

1060-27-73, I-94 East West, Stadium Interchange, Zablocki Dr to 35th St, WisDOT Project Manager Chris Zacharias, Christopher.Zacharias@dot.wi.gov (262) 548-6716.

229-27-70, W. Allis-Chalmers Dr, Washington S to 60th St, WisDOT Project Manager Chris Zacharias, Christopher.Zacharias@dot.wi.gov (262) 548-6716.

City of Milwaukee Projects

1100-16-72 O'Connor St, Honey Creek Dr to 72nd St (2028)

1100-16-71 Kearney St, 76th St to 72nd St (2027)

2884-24-76 Hawley Rd, Bridge over State St P-40-0873 (2028)

City of Wauwatosa Projects, Boris Veleusic City Engineer bveleusic@wauwatosa.net, (414) 479-8929

2190-10-70/71 W Wisconsin Avenue, Bridge over Honey Creek P-40-0776 (2025)

W Wisconsin Ave 68th St to 72nd St (2025)

W Wisconsin Ave 9th St to 106th St (2026)

10. Work By Others

City of Milwaukee – Street Lighting has local street lighting facilities within the project limits. Some work locations have traffic signals attached to street lighting facilities that will be impacted by the proposed work.

During construction and in conjunction with grading, paving, and structures operations, install, remove, discontinue, adjust, and reconstruct street lighting facilities as shown in the plans and bid items.

The City of Milwaukee will utilize existing street lighting distribution power cabinets for local street temporary and permanent street lighting. Contact Neal Karweik at 414-286-5943 (office) or 414-708-4245 (cell) at least 45 working days prior to start of construction to coordinate street lighting work.

The City of Milwaukee will make final terminations into existing lighting circuitry for both the temporary and permanent contractor installed lighting configurations, along with inspecting the contractor installed temporary and permanent street lighting facilities.

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

The City of Milwaukee anticipates approximately 7 working days of work prior to construction, approximately 7 working days during construction for traffic control changes for N. and S. 70th Street, N. and S. 68th Street, and W. Hawley Road, and approximately 12 working days after construction to perform their work.

Temporary lighting for S. Dana Court will be fed from mainline temporary lighting unit T-BHY-14 to the City of Milwaukee pole #125 at S. Dana Court. The contractor shall leave an approximately 3-ft coiled loop secured to the top of the pole. The City of Milwaukee will make the connection and continue the circuit for the remaining lighting along S. Dana Court.

City of Milwaukee – Wisconsin Signals maintains existing traffic signal facilities within the project limits at the following locations:

- W. Kearney Street & S. 70th Street
- W. O'Connor Street & S. 70th Street
- W. Kearney Street & S. 68th Street
- W. O'Connor Street & S. 68th Street
- S. Hawley Road & I-94 Ramps
- N. Hawley Road & W. Bluemound Road
- N. Hawley Road & W. Wisconsin Avenue

Some work locations have traffic signals attached to street lighting facilities that will be impacted by the proposed work. Locations where street lighting and traffic signal facilities coincide are shown on the plans. City of Milwaukee street lighting and traffic signals staff will coordinate with each other as needed during construction.

Construct, reconstruct, relocate, remove, discontinue, and leave in place portions of traffic signal facilities as shown in the plans and bid items.

City of Milwaukee will provide electrical service for the traffic signals. Contact signals field contact Rudy Gutierrez at (414) 286-5941 (office) or 414-708-5148 (cell) at least 20 working days in advance of work start. The City of Milwaukee will salvage the existing signal cabinets and controllers after temporary traffic signals are installed and active.

11. Railroad Insurance and Coordination - Soo Line Railroad Company (CP)

A. Description

Comply with standard spec 107.17 for all work affecting Soo Line Railroad Company (CP) property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3 Insurance is filed in the name of Soo Line Railroad Company d/b/a Canadian Pacific.

Notify evidence of the required coverage, and duration to Brian Osborne, Manager Public Works; Canadian Pacific Plaza, 120 South 6th Street, Suite 700, Minneapolis, MN 55402; Telephone (612) 760-2945; E-mail: Brian.Osborne@cpkcr.com

Also send a copy to the following: Jason Kazmierski, SE Region Railroad Coordinator, 141 N. Barstow Street, Waukesha, WI 53188; Telephone (262)548-6700; E-mail jason.kazmierski@dot.wi.gov

Include the following information on the insurance document:

- Project ID: 1060-27-71
- Project Location: Milwaukee, Wisconsin
- Route Name: I-94 Milwaukee County
- Crossing ID: 386511C
- Railroad Subdivision: Watertown Sub
- Railroad Milepost: 87.83
- Work Performed on or within 50' of RR ROW: Traffic control.

A.2 Train Operation

Approximately 4 passenger trains and 21 through freight trains operate daily through the construction site. Passenger trains operate at up to 40 mph. Through freight trains operate at up to 40 mph. There are no switching movements at this location.

A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination

Construction Contact

Brian Osborne, Manager Public Works; Canadian Pacific Plaza, 120 South 6th Street, Suite 700, Minneapolis, MN 55402; Telephone (612) 760-2945; E-mail brian_osborne@cpkcr.com for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

Flagging Contact

Greda Lynn, Grade Crossing Coordinator; Canadian Pacific Plaza, 120 South 6th Street, Suite 700, Minneapolis, MN 55402; Telephone (612) 258-6619; E-mail greda_lynn@cpkcr.com a minimum of 40 working days in advance to arrange for a railroad flagger. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

* Contact SOO Line (CPKC) prior to letting for flagman work hour availability.

Cable Locate Contact

In addition to contacting Diggers Hotline, contact CPKC Call Before You Dig line at (866) 291-0741, five working days before the locate is needed. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

SOO Line (CPKC) will only locate railroad owned facilities located in the railroad right-of-way. The railroad does not locate any other utilities.

A.4 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions, and will be accomplished without cost to the contractor. None.

A.5 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

stp-107-026 (20250108)

12. Hauling Restrictions.

Replace standard spec 107.2 with the following:

- (1) Approved local street haul routes are shown on the Local Road Haul Routes Overview Plan.
- (2) Present to the department, five business days before proposed hauling, a proposed haul route plan detailing additional haul routes if additional haul routes are needed that are not shown on the Local Road Haul Routes Overview Plan or part of the state trunk highway system. Include the months, days of the week, time of day, number of trucks, types of trucks and maximum loads of trucks anticipated to accomplish the project work in the additional haul route submittal.
- (3) The department will review the submittal and either approve or provide a letter with comments and proposed revisions to the contractor within five business days of its receipt. If approved, the department will subsequently survey the existing condition of that haul route to establish a baseline for assessing damage that the contractor's hauling operations might cause.
- (4) At all times, conduct operations in a manner that will cause a minimum of disruption to traffic on existing roadways.

sef-107-015 (20170310)

13. Information to Bidders, WPDES Transportation Construction General Permit (TCGP) for Storm Water Discharges.

The calculated land disturbance for the project site is 50 acres.

The department has obtained permit coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities under this contract. Conform to all permit requirements for the project.

This permit is the Wisconsin Pollutant Discharge Elimination System, Transportation Construction General Permit, (WPDES Permit No. WI-S066796-2). The permit can be found at:

<https://widnr.widen.net/s/s5mwp2gd7s/finalsignedwisdotcsgp>

A "Certificate of Permit Coverage" is available from the regional office by contacting Evan Limberatos at (262) 548-8797. Post the "Certificate of Permit Coverage" in a conspicuous place at the construction site.

Permit coverage for additional land disturbing construction activities related to contractor means and methods will be considered as part of the ECIP review and approval process. Coverage under the TCGP for additional land disturbance areas will be considered if the areas meet all of the following:

- Must meet the permit's applicability criteria.
- Must be for the exclusive use of a WisDOT project.

- Land disturbance first commences after the ECIP approval, and the areas are fully restored to meet the final stabilization criteria of the permit upon completion of the work.

The contractor is responsible for obtaining any permits for areas that are not approved by the department for coverage under the TCGP.

stp-107-056 (20250108)

14. Erosion Control.

Add the following to standard spec 107.20 as paragraphs nine through fifteen:

- (9) Erosion control best management practices (BMP's) the plans show are at suggested locations. The actual locations shall be determined by the contractor's ECIP and by the engineer. Include each dewatering (mechanical pumping) operation in the ECIP submittal. The ECIP shall supplement information the plans show and not reproduce it. The ECIP shall identify how to implement the project's erosion control plan. ECIP shall demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-application of topsoil to minimize the exposure to possible erosion.
- (10) Provide the ECIP 14 days before the pre-construction conference. A 'staged' ECIP may be required for this project, as new areas are disturbed. Each new 'stage' of the ECIP needs to be submitted to the project staff and WDNR liaison for review as an amendment to the ECIP with a standard 14-day review period. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison Ryan Pappas Ryan.pappas@wisconsin.gov. Do not implement the ECIP until department approval and perform all work conforming to the approved ECIP.
- (11) Maintain Erosion Control BMPs until permanent vegetation is established or until the engineer determines that the BMP is no longer required.
- (12) Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Install perimeter silt fence protection around stockpiles within a timeframe acceptable to the engineer. If stockpiled materials will be left for more than 14 days, install temporary seed and mulch or other temporary erosion control measures the engineer orders.
- (13) Re-apply topsoil on graded areas, as designated by the engineer, within a timeframe acceptable to the engineer after grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as designated by the engineer, within 5 days after placement of topsoil. If graded areas are left not completed and exposed for more than 14 days, seed those areas with temporary seed and mulch.
- (14) Do not allow excavation for; structures, utilities, grading, maintaining drainage that requires dewatering (mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. The water must be pumped into a properly selected and sized dewatering basin before the clean/filtered water is allowed to enter any waterway or wetland. The basin must remove suspended solids and contaminants to the maximum extent practicable. A properly designed and constructed dewatering basin must take into consideration maximum pumping volume (gpm or cfs) and the sedimentation rate for soils to be encountered. The project team identify 'sensitive' areas in the field that require additional temporary stabilization to protect resources from being contaminated by sediment laden water discharging from the work site. Any 'release' of sediment-laden water from the work site that enters a wetland or waterway should be reported to the WDNR liaison within 24 hours. Before each dewatering operation, submit to the department a separate ECIP amendment describing in words and pictorial format an appropriate BMP for sediment removal, conforming to WisDNR Storm Water Construction Technical Standard, Code 1061, Dewatering. Include reasoning, location, and schedule duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide additional inlet protection for back-up protection.
- (15) Dewatering is paid separately.

~~set-107-010 (20180104)~~

The contractor should restrict the removal of vegetative cover and exposure of bare ground to the minimum amounts necessary to complete construction. Restoration of disturbed soils should take place

as soon as conditions permit. If sufficient vegetative cover will not be achieved because of late season construction, the site must be properly winterized. A plan for 'over-wintering' the project or a specific project area should be compiled and submitted to the project staff and WDNR for review in an amendment to the ECIP.

The DOT Select Site process must be adhered to for clean fill or any other material that leaves the work site. The project staff and the WDNR liaison will review all proposed select sites and a site visit may be required. Filling of wetlands, waterways or floodplain is not allowed under the select site process, unless the site owner has proof of required local/state/federal permits. No new impermeable surfaces can be left at a select site (including gravel roads or pads), unless the site owner attains required permits.

Contaminated materials leaving the site need to adhere to the Hazardous Material Management Plan.

Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the construction area in a manner that would allow them to enter a wetland or waterbody as a result of spillage, natural runoff, or flooding. If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the State Duty Officer at 1-800-943-0003.

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

15. Environmental Protection – Waste.

Conduct construction activities in an environmentally sound manner, including the proper disposal of all demolition material that cannot be recycled.

The excavation management plan for this project has been designed to minimize the off-site disposal of impacted material. Follow the requirements for the off-site management of petroleum-and metals-contaminated soil (bioremediation at a landfill) and reuse of foundry sand and low-level petroleum-contaminated soil as indicated in these special provisions. If subsurface contamination or other signs of non-exempt (NR 500.08) solid waste including buried containers, industrial fill, stained soils, noxious odors, etc., are unexpectedly encountered elsewhere on the project during excavation, terminate excavation in the area and notify the engineer immediately. Work with the department's environmental consultant to properly manage the waste following the WisDOT-WDNR materials management options as indicated in the table below. Contact Andrew Malsom, WisDOT, at (262) 548-6705 or Andrew.Malsom@dot.wi.gov to arrange for environmental consultant coordination. The environmental consultant will perform waste characterization and coordinate with the WDNR for an appropriate handling and disposal.

Management of Material Excavated During Highway Construction		
Classification	Characterization of Material	Material Management
1. Common Excavation (NR 500.08(2) Unregulated or Exempt Material)	- Native soil - Fill soils that have no obvious visual or olfactory contamination and may not have been analyzed for contaminants. - Clean unpainted or untreated wood, brick, concrete, cured asphalt, and trace amounts of glass.	Contractor-selected sites approved through Erosion Control Implementation Plan (ECIP) review process, or on-site reuse

2. Special Excavation (NR 500.08(4) Solid Waste Low Hazard Exemption)	- Soil with low levels of petroleum contamination or contaminant metals within the site fill plan criteria. - Trace amounts (<25% volume of the excavation equipment's bucket load) of foundry sand, cinders, and fly ash.	WisDOT selected site or on-site reuse with WDNR concurrence. Sites must meet the location criteria of 504.04 (3) (c) and http://folio.legis.state.wi.us/cgi-bin/om_isapi.dll?clientID=48040580&nfobase=code.nfo&jump=NR504.04(4)(a)&softpage=Document(4)(a) to http://folio.legis.state.wi.us/cgi-bin/om_isapi.dll?clientID=48040580&nfobase=code.nfo&jump=NR504.04(4)(f)&softpage=Document(f). Fill plans are also approved through ECIP review process.
3. Contaminated Soil and Fill Material	- Lead painted or treated wood - Petroleum contaminated soil - Significant amounts (>25% volume of the excavation equipment's bucket load) of foundry sand, cinders, or fly ash.	Contaminated material disposed at a WDNR-licensed solid waste disposal facility. Petroleum contaminated material shall be treated at a bioremediation facility (biopile) prior to disposal at the landfill. Direct disposal of contaminated material at landfills without such pre-treatment must be pre-authorized by the WisDOT.
4. Asbestos-containing Waste	Asbestos-containing material	Landfill at a WDNR-licensed solid waste landfill with approval to accept asbestos-containing material.
5. Hazardous Waste	RCRA Subtitle C (NR 600) contaminated media (hazardous waste)	Disposed or treatment under State's hazardous waste disposal contract with Veolia. Significant quantities should be evaluated for potential treatment to render non-hazardous to reduce disposal costs.
6. Potentially contaminated material	Potentially contaminated material with unusual visual, olfactory, or other characteristics	Temporary stockpile with appropriate environmental controls constructed per NR 718.05. Temporary stockpiling at solid waste landfill may be alternative with WDNR & Landfill's approvals.

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

B-40-81

John Roelke, License Number All-119523, inspected Structure B-40-81 for asbestos on March 28, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797.

B-40-82

John Roelke, License Number All-119523, inspected Structure B-40-82 for asbestos on March 28, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

B-40-83

John Roelke, License Number All-119523, inspected Structure B-40-83 for asbestos on March 28, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

B-40-84

John Roelke, License Number All-119523, inspected Structure B-40-84 for asbestos on March 28, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

B-40-85

John Roelke, License Number All-119523, inspected Structure B-40-85 for asbestos on March 28, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

B-40-86

John Roelke, License Number All-119523, inspected Structure B-40-86 for asbestos on March 28, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

B-40-87

John Roelke, License Number All-119523, inspected Structure B-40-87 for asbestos on March 28, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

R-40-26

John Roelke, License Number All-119523, inspected Structure R-40-26 for asbestos on April 30, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

R-40-88

John Roelke, License Number All-119523, inspected Structure R-40-88 for asbestos on April 30, 2024. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Evan Limberatos Evan.Limberatos@dot.wi.gov at (262) 548-8797

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 03/20), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days before beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Andrew Malsom, WisDOT, at (262) 548-6705 or Andrew.Malsom@dot.wi.gov and via e-mail to dothazmatunit@dot.wi.gov or via U.S. mail to DOT BTS-ESS attn: Hazardous Materials Specialist, 5 South S.513.12, PO Box 7965, Madison, WI 53707-7965. In addition, comply with all local or municipal asbestos requirements.

Use the following information to complete WisDNR form 4500-113:

B-40-81

- Site Name: Structure B-40-81, I-94 over Hawley Rd.
- Site Address: 1.6 miles east junction WIS181
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 65 years old. This structure was constructed in 1960.
- Area: 17,206 SF of deck

B-40-82

- Site Name: Structure B-40-82, I-94 EB over S. 64th St.
- Site Address: 1.3 miles east junction WIS181 to north

- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 65 years old. This structure was constructed in 1960.
- Area: 8,718 SF of deck

B-40-83

- Site Name: Structure B-40-83, I-94 WB over S. 64th St.
- Site Address: 1.1 miles west junction WIS175
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 65 years old. This structure was constructed in 1960.
- Area: 8,525 SF of deck

B-40-84

- Site Name: Structure B-40-84, I-94 EB over S. 68th St.
- Site Address: 1.1 miles east junction WIS181
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 64 years old. This structure was constructed in 1961.
- Area: 10,394 SF of deck

B-40-85

- Site Name: Structure B-40-85, I-94 WB over S. 68th St.
- Site Address: 1.4 miles west junction WIS175
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 64 years old. This structure was constructed in 1961.
- Area: 10,410 SF of deck

B-40-86

- Site Name: Structure B-40-86, I-94 EB over S. 70th St.
- Site Address: 1.0 mile east junction WIS181
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 62 years old. This structure was constructed in 1963.
- Area: 11,571 SF of deck

B-40-87

- Site Name: Structure B-40-87, I-94 WB over S. 70th St.
- Site Address: 1.5 miles west WIS175
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 62 years old. This structure was constructed in 1963.
- Area: 11,254 SF of deck

R-40-26

- Site Name: Structure B-40-26, retaining wall along I-94 EB
- Site Address: 0.2 miles east junction Hawley Rd., south side of VA cemetery
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 63 years old. This structure was constructed in 1962.
- Area: NA SF of deck

R-40-88

- Site Name: Structure B-40-88, retaining wall along I-94 EB, at Spring Hill Cemetery
- Site Address: 725 feet east junction Hawley Rd.
- Ownership Information: WisDOT Transportation SE Region, 141 NW Barstow St., PO Box 798, Waukesha, WI 53187-0798
- Contact: Eric Hanson, PE ericd.hanson@dot.wi.gov
- Phone: 414 840-9341
- Age: 56 years old. This structure was constructed in 1969.
- Area: NA SF of deck

Insert the following paragraph in Section 6.g.:

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

stp-107-125 (20220628)

17. Notice to Contractor – Personnel Identification Program.

All contractor personnel will be required to register in the program prior to performing work. To register, contractor personnel must present a valid photo ID and signature at the time of registration confirming adherence to the safety requirements of the contract and their Company Safety Plan. Valid photo identification includes unexpired driver's license, government issued identification cards, military identification, passport, or other identification approved by the department. All personnel registered will be issued a hard hat sticker with an identification number by the department. Stickers shall be placed in a visible location on the hard hat.

Noncompliance with this contract provision may result in removal of contractor personnel from the project or suspension of work according to Wisconsin Department of Transportation Standard Specification 108.6 applicable under the contract.

18. Notice to Contractor – Safety.

All workers shall wear OSHA and ANSI compliant safety head protection, safety glasses, safety-toe protective footwear, and an ANSI 107-2015 Type R, Class 2 safety vest and at all times while within the project footprint. Ensure workers wear a high visibility Class 3 top and pants ensemble that meets or exceeds ANSI/ISEA 107-2015 Type R during hours of darkness, including 1/2 hour before sunset through 1/2 hour after sunrise, and during times of low visibility while in the project footprint.

The contractor and respective subcontractors shall provide a copy of their current Company Safety Plans to the department at the preconstruction meeting. All workers shall comply with the Safety Plans of their employer. The department will not issue a notice to proceed until all safety plans have been submitted.

Noncompliance with this contract provision may result in removal of contractor personnel from the project or suspension of work according to Wisconsin Department of Transportation standard spec 108.6

applicable under the contract. The department may request amendments to safety plans or follow up action reports for any safety incidents occurring on the project.

19. Notice to Contractor – Media Relations.

- (1) The contractor shall not disseminate or publicize this Agreement, information relating to this Agreement, their work responsibilities, or generally comment about the entire project without prior written consent from one of the department's designated Project Communications Leaders listed under Section 4.
- (2) The contractor shall refer all information requests or interview requests made by external parties, including media sources, to all of the department's designated Project Communications Leaders listed under Section 4.
- (3) The contractor agrees to coordinate with the department as to the form, content and timing of any public announcement of this Agreement.
- (4) The Project Communications Leaders for the department shall be:

 1. The department's Project Manager
Eric Hanson, PE
141 NW Barstow St.
PO Box 798
Waukesha, WI 53187-0798
Phone: (414) 840-9341
Email: Ericd.Hanson@dot.wi.gov
 2. Steven Theisen
4802 Sheboygan Avenue
Madison, WI 53705
Phone: (608) 267-9284
Email: Steven.Theisen@dot.wi.gov
 3. Dan Sellers
141 NW Barstow Street
P.O. Box 798
Waukesha, WI 53188
Phone: (262) 548-6702
Email: Daniel.Sellers@dot.wi.gov
- (5) Noncompliance with this contract provision may result in removal of contractor personnel from the project or suspension of work according to Wisconsin Department of Transportation standard spec 108.6 applicable under the contract.
- (6) Notwithstanding anything to the contrary contained herein, no provision of this Agreement shall be interpreted to impede the contractor, or any individual, from reporting possible violations of state or federal law to any governmental agency or entity, or from making other disclosures under the whistleblower provisions of state or federal law. The contractor does not need the prior authorization of the department to make any such reports or disclosures and the contractor shall not be required to notify the department that such reports or disclosures have been made.

20. Notice to Contractor – Milwaukee County Transit System.

The Milwaukee County Transit System (MCTS) operates the following bus routes within and/or directly adjacent to the construction limits: Route 76 (76th Street), Route 60 (60th Street), Route 33 (84th St/Glenview Ave), Route 18 (WIS 59), and Route 1 (Bluemound Rd and Wisconsin Ave).

Impacts to MCTS Routing

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. Notify MCTS at least ten (10) business days prior to beginning project work to provide advance notice of potential service impacts.

Impacts to MCTS Signs and Posts

Notify MCTS of work impacting MCTS signs and posts in advance five (5) or more business days. MCTS signs include "Bus Stop" and turn disc signs. MCTS signs are mounted on MCTS posts; and on assets owned by others including streetlights, traffic regulators, crosswalk and street signposts. MCTS shall be responsible for MCTS sign and post removal and installation, with the contractor granting access to MCTS personnel to perform such work. Signs stating "No Parking Bus Stop" are the under the ownership and responsibility of City of Milwaukee.

Impacts to Bus Shelters

Contractor work may require bus shelter(s) to be temporarily removed. MCTS will be responsible for the removal and reinstallation of bus shelters, with the contractor granting access to MCTS personnel for the purposes of reinstallation before new pavement opens to vehicular traffic. Notify MCTS in advance ten (10) business days for each site-specific bus shelter location.

Non-detour Service Suspension at MCTS Bus Stops and Temporary Bus Stops

Occasions may arise when work requires neither a detour nor the physical alteration of MCTS bus stop assets, but (for passenger safety) those occasions involved require MCTS to temporarily suspend service at a bus stop location. Notify MCTS in advance five (5) business days of the site-specific occasion, and MCTS will sign appropriately to instruct passengers to board at a temporary bus stop. Notify MCTS upon completion of work. MCTS will resume service to any suspended bus stop locations when it is safe to do so.

Temporary Bus Stops

MCTS will designate temporary bus stop boarding locations using MCTS temporary signs. Temporary bus stops will be in existing right-of-way at ADA-accessible locations outside the project's construction zone. MCTS is not requesting this project to provide temporary boarding pads.

MCTS contacts:

Dan Adams (primarily construction planning & design)
Milwaukee County Transit System
1942 N. 17th St.
Phone: (414) 937-3273
dadams@mcts.org

Armond Sensabaugh (primarily staging & detours)
Milwaukee County Transit System
1942 N. 17th St.
Milwaukee, WI 53205
Phone: (414) 343-1728
asensabaugh@mcts.org

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

SER-107-004 (20180413)

21. Notice to Contractor – Damage Claims.

Supplement standard spec 107 with the following:

Provide documentation for all damage claims received on the project. Provide written updates to the engineer at each Weekly Progress Meeting until damage claims are resolved.

Documentation shall include:

1. Written communication with property owner and/or owner's insurance.
2. Settlement amounts, if applicable.
3. Basis for rejection of damage claim, if applicable.

Contractor shall provide written documentation of conclusions for all claims, actions, or suits.

The department will retain payments due to the contractor in amounts the engineer deems sufficient until documentation is provided. Provide documentation for all damage claims received on the project. Provide written updates to the engineer upon request until damage claims are resolved.

22. Notice to Contractor - Electronic Load Tickets.

Replace standard spec 109.1.4.3 (1) with the following:

(1) Submit an electronic ticket for each load of material for the following bid items:

- 415.0070 Concrete Pavement 7-Inch
- 415.0410 Concrete Pavement Approach Slab
- 416.1715 Concrete Pavement Repair SHES
- 502.0100 Concrete Masonry Bridges
- SPV.0035.4000 HPC Masonry Structures
- SPV.0180.0421 HPC Pavement 9-Inch
- SPV.0180.0422 HPC Pavement 9-Inch HES
- SPV.0180.0423 HPC Pavement 12-Inch

Include the information as specified in 109.1.4.2 on each electronic ticket. If there is a failure in the electronic ticket system, provide a printed ticket for each load of material as a substitute for electronic tickets.

stp-107-230 (20250108)

23. Notice to Contractor – Archaeological Sites.

If human remains are inadvertently/accidentally discovered during implementation of the project, all ground disturbing activities in the immediate area of the discovery shall halt until the following actions have been carried out, in accordance with Wisconsin Statute 157.70 and the Native American Graves Protection and Repatriation Act, as required. WisDOT Cultural Resource Team will be contacted immediately if human remains are discovered. Contact Katherine (Katie) Kaliszewski with the Cultural Resource Team (katherinen.kaliszewski@dot.wi.gov; (608) 267-6693).

WisDOT shall immediately implement measures to protect the human remains from inclement weather and vandalism and notify appropriate law enforcement officials to determine whether or not the remains are subject to a criminal investigation by local or federal authorities. The VA's National Cemetery Administration will be notified and consulted if human remains are discovered within or adjacent to Wood National Cemetery.

WisDOT shall provide sufficient information to allow law enforcement to determine if the remains are or are not subject to a criminal investigation by local or federal authorities.

1. If it is determined the human remains are not subject to a criminal investigation by local or federal authorities, FHWA/WisDOT shall obtain the services of qualified cultural resource

professionals to comply with all applicable federal (Native American Graves Protection and Repatriation Act when relevant), state (Wisconsin Statute 157.70), and local laws governing the discovery and disposition of human remains.

2. If it is determined Native American human remains or funerary objects have been discovered in a parcel/land owned by the federal government, FHWA/WisDOT shall immediately notify the appropriate federal land manager, affected Indian tribes, and consulting parties of this PA (within 24 to 48 hours; not including a holiday).
3. If it is determined human remains have been discovered on state, state sub-division, or private lands FHWA/WisDOT shall immediately notify the SHPO, and the consulting parties of this PA (within 24 to 48 hours; not including a holiday).

Before making any final decision regarding the treatment of human remains, FHWA/WisDOT shall within five (5) business days (not including a federal holiday) after discovery of such remains initiate consultation with the Council, SHPO, Indian tribes (if applicable), and Consulting Parties to prepare and implement treatment measures and treatment plans in accordance with applicable federal, state (Wisconsin Statute 157.70) and local laws.

A request to disturb a burial site permit is required for ground disturbing activity within historical cemetery boundaries and will be requested by WisDOT. Any person who intends to cause or permit any activity on a cataloged burial site or on cataloged land contiguous to a cataloged burial site which in any way might disturb the burial site or the land shall apply to the director of the Wisconsin Historical Society for a permit to disturb the burial site or the land. These permits must be requested prior to construction activities and updated annually throughout the duration of construction.

Additionally, as Wood National Cemetery is operated by a federal agency, a Permit for Archeological Investigations, also known as ARPA Permit, would be required for the archaeological work (i.e. monitoring, survey, testing, etc.) taking place within the cemetery property and will be requested by WisDOT.

24. Notice to Contractor - Containment System.

Provide a rigid containment system throughout bridge construction over live traffic lanes and pedestrian facilities capable of protecting underlying facilities and vehicles from falling construction debris. Design the containment system to catch construction debris between exterior girders without extending below the bottom of the girders at its maximum deflection. The containment system is not intended to be a secondary falsework/formwork system. Put the containment system in place before beginning construction operations that may generate debris over live traffic or active pedestrian facilities. Operations may include, but are not limited to: full or partial deck removals, falsework installation, deck repairs, and deck pours. This containment system is not required if construction operations are performed when the facilities below are under full closure. This containment system does not replace any requirements under standard specifications section 203. Include details of the proposed containment system in the falsework submittal per standard specifications section 502.3.2. The containment system is incidental to the bridge construction items.

25. Notice to Contractor – Saw Cut Slurry.

Saw cut slurry that may be generated as part of this contract shall be collected and actively managed. Take appropriate measures to prevent saw cut slurry from entering inlets, wetlands, waterways, and other natural areas.

26. Notice to Contractor - Concrete Washout Containment.

All concrete trucks shall washout into a containment system located sufficiently away from the work area to prevent runoff into wetlands, waterways, inlets, and drainage courses. The contractor shall provide a construction detail and location of the containment system with the ECIP and reviewed by the engineer prior to use.

27. Notice to Contractor - Variable Concrete Pavement Lane Widths.

The concrete pavement jointing plan shall adhere to the lane line alignments shown in the plan details, alignment layouts, and curve data. This includes variable lane-width sections east of Hawley Road through the cemeteries and variable median shoulder widths between the western project limits and 68th Street. Any work required to accommodate variable lane and shoulder width construction is considered incidental to the contract.

28. Notice to Contractor - Coordination of Electric Outages with American Transmission Company (ATC).

American Transmission Company (ATC) has 138 kV overhead transmission lines located along the south side of I-94 within the project limits, which will remain energized throughout the duration of construction. The contractor is required to maintain OSHA-specified Minimum Approach Distances (MADs) from these energized lines at all times. It is the contractor's responsibility to determine the appropriate clearance for the equipment being used and to ensure that these minimum distances are strictly adhered to during all operations near ATC facilities.

Contractors are not permitted to enter any ATC switchyard without prior coordination and approval. Any work planned inside an ATC switchyard must first be coordinated with and approved by ATC. All work in the vicinity of ATC transmission facilities must be conducted with extreme caution. Transmission structures may include multiple ground rods that could extend significant distances from the base of the structure. These rods are connected via ground wires and may be buried up to 18 inches or deeper. If ground rods or any other ATC facilities are disturbed during construction, their locations must be documented and promptly reported to ATC.

No temporary or permanent stockpiling or staging of equipment, materials, or earthwork is allowed within the ATC wire zone or easements at any time. Unobstructed access to ATC facilities must be maintained throughout the project, including access points such as the ATC driveway at Hawley Road. Blocking or restricting access is not permitted unless coordinated and approved by ATC in advance. If thermal sand around an ATC underground cable is disturbed during construction, it must be replaced in accordance with ATC's specifications.

For construction activities expected to cause excessive vibration—such as blasting, pile driving, vibratory hammers, hydraulic breakers, or drop hammers—the contractor must notify ATC at least ten (10) working days in advance. A vibration mitigation plan must be provided for ATC's review, including the anticipated peak particle velocity (PPV) and frequencies at ATC structures, substations, and underground facilities.

Outage requests must be submitted to ATC with at least 150 calendar days' notice and must include sufficient justification. ATC retains the right to deny any outage request based on real-time system conditions, operational constraints, or load demands. The availability of any outage is not guaranteed. Single- or double-circuit outages may be requested year-round, but full triple-circuit outages are only permitted from October 1 through December 31 unless specifically approved in writing by ATC. No full circuit outages are allowed between January 1 and September 30 unless prior written approval is granted by ATC. While ATC is working to reserve outage windows from May 1, 2028, through August 31, 2028, for partial circuit outages, and from December 1, 2027, through January 12, 2028, for full circuit outages, no formal outage requests have been submitted by WisDOT at this time. The contractor is expected to formally submit an outage request and coordinate with ATC in accordance with project requirements. It is the contractor's responsibility to review their construction schedule and determine whether the periods ATC is tentatively reserving are suitable for their operations, or if alternate outage windows should be requested.

All outages and coordination for the temporary removal and reinstallation of overhead lines into the Greves Substation must be coordinated jointly with WisDOT, We Energies, and ATC. The contractor must contact Tony Marciniak (262) 506-6814 to initiate the outage agreement process. An executed outage agreement is required for any planned outages. All costs associated with ATC outages requested for WisDOT project work will be the responsibility of WisDOT.

Electric fields under transmission lines can cause induced voltages on ungrounded equipment and vehicles working near transmission lines. It is the contractor's responsibility to ensure that all equipment used in proximity to ATC lines is properly grounded to mitigate the risks associated with induced voltages.

29. Notice to Contractor – Crack and Damage Survey.

The department will perform pre and post construction crack and damage surveys for properties identified in this article. Completion of surveys is limited to property owner participation and may not include all properties identified. The department may also survey additional properties if determined necessary through the course of the construction project. The results of the surveys that were able to be completed will be available to the contractor upon request.

The completion of the crack and damage surveys by the department does not relieve the contractor of responsibilities required under Section 107 of the Standard Specifications.

The completion of these surveys does not preclude the contractor from performing independent surveys. The cost of additional surveys performed by the contractor is incidental to the contract

Address	Building Type
316 S. 72 nd St. Milwaukee, WI 53214	Residential
306 S. 71 st St. Milwaukee, WI 53214	Residential
307 S. 70 th St. Milwaukee, WI 53214	Double Unit Residential
309 S. 70 th St. Milwaukee, WI 53214	Double Unit Residential
7008 W. Adler St. Milwaukee, WI 53214	Residential
7014 W. Adler St. Milwaukee, WI 53214	Residential
400 S. 70 th St. Milwaukee, WI 53214	Double Unit Residential
402 S. 70 th St. Milwaukee, WI 53214	Double Unit Residential
308 S. 70 th St. Apt #1 Milwaukee, WI 53214	Multi-Unit Residential
308 S. 70 th St. Apt #2 Milwaukee, WI 53214	Multi-Unit Residential
308 S. 70 th St. Apt #3 Milwaukee, WI 53214	Multi-Unit Residential
308 S. 70 th St. Apt #4 Milwaukee, WI 53214	Multi-Unit Residential
314 S. 70 th St. Apt #1 Milwaukee, WI 53214	Multi-Unit Residential
314 S. 70 th St. Apt #2 Milwaukee, WI 53214	Multi-Unit Residential
314 S. 70 th St. Apt #3 Milwaukee, WI 53214	Multi-Unit Residential
314 S. 70 th St. Apt #4 Milwaukee, WI 53214	Multi-Unit Residential
320 S. 70 th St. Apt #1 Milwaukee, WI 53214	Multi-Unit Residential
320 S. 70 th St. Apt #2 Milwaukee, WI 53214	Multi-Unit Residential
320 S. 70 th St. Apt #3 Milwaukee, WI 53214	Multi-Unit Residential
320 S. 70 th St. Apt #4 Milwaukee, WI 53214	Multi-Unit Residential
328 S. 70 th St. Apt #1 Milwaukee, WI 53214	Multi-Unit Residential
328 S. 70 th St. Apt #2 Milwaukee, WI 53214	Multi-Unit Residential
328 S. 70 th St. Apt #3 Milwaukee, WI 53214	Multi-Unit Residential
328 S. 70 th St. Apt #4 Milwaukee, WI 53214	Multi-Unit Residential
235 S. 69 th St. Milwaukee, WI 53214	Residential
239 S. 69 th St. Milwaukee, WI 53214	Residential
301 S. 69 th St. Milwaukee, WI 53214	Residential
228 S. 69 th St. Milwaukee, WI 53214	Residential
234 S. 69 th St. Milwaukee, WI 53214	Residential
240 S. 69 th St. Milwaukee, WI 53214	Residential
229 S. 68 th St. Milwaukee, WI 53214	Residential
233 S. 68 th St. Milwaukee, WI 53214	Residential

Address	Building Type
239 S. 68 th St. Milwaukee, WI 53214	Residential
220 S. 68 th St. Milwaukee, WI 53214	Multi-Unit Residential
222 S. 68 th St. Milwaukee, WI 53214	Multi-Unit Residential
232 S. 68 th St. Milwaukee, WI 53214	Residential
236 S. 68 th St. Milwaukee, WI 53214	Residential
173 S. 67 th St. Milwaukee, WI 53214	Residential
177 S. 67 th St. Milwaukee, WI 53214	Residential
172 S. 67 th St. Milwaukee, WI 53214	Residential
176 S. 67 th St. Milwaukee, WI 53214	Residential
169 S. 66 th St. Milwaukee, WI 53214	Residential
173 S. 66 th St. Milwaukee, WI 53214	Residential
164 S. 66 th St. Milwaukee, WI 53214	Residential
168 S. 66 th St. Milwaukee, WI 53214	Residential
163 S. 65 th St. Milwaukee, WI 53214	Residential
169 S. 65 th St. Milwaukee, WI 53214	Residential
164 S. 65 th St. Milwaukee, WI 53214	Residential
163 S. 64 th St. Milwaukee, WI 53214	Residential
169 S. 64 th St. Milwaukee, WI 53214	Residential
171 S. 64 th St. Milwaukee, WI 53214	Residential
177 S. 64 th St. Milwaukee, WI 53214	Residential
164 S. 64 th St. Milwaukee, WI 53214	Residential
168 S. 64 th St. Milwaukee, WI 53214	Residential
170 S. 64 th St. Milwaukee, WI 53214	Residential
176 S. 64 th St. Milwaukee, WI 53214	Residential
165 S. 63 rd St. Milwaukee, WI 53214	Residential
166 S. 63 rd St. Milwaukee, WI 53214	Residential
170 S. 62 nd St. Milwaukee, WI 53214	Residential
163 S. 61 st St. Milwaukee, WI 53214	Residential
169 S. 61 st St. Milwaukee, WI 53214	Residential
168 S. 61 st St. Milwaukee, WI 53214	Residential
172 S. 61 st St. Milwaukee, WI 53214	Residential
169 S. 60 th St. Milwaukee, WI 53214	Double Unit Residential
171 S. 60 th St. Milwaukee, WI 53214	Double Unit Residential
173 S. 60 th St. Milwaukee, WI 53214	Double Unit Residential
175 S. 60 th St. Milwaukee, WI 53214	Double Unit Residential
177 S. 60 th St. Milwaukee, WI 53214	Double Unit Residential
179 S. 60 th St. Milwaukee, WI 53214	Double Unit Residential
168 S. 60 th St. Milwaukee, WI 53214	Residential
172 S. 60 th St. Milwaukee, WI 53214	Residential
176 S. 60 th St. Milwaukee, WI 53214	Residential

Address	Building Type
5916 W. Dixon St. Milwaukee, WI 53214	Double Unit Residential
5918 W. Dixon St. Milwaukee, WI 53214	Double Unit Residential
5915 W. Dixon St. Milwaukee, WI 53214	Double Unit Residential
5917 W. Dixon St. Milwaukee, WI 53214	Double Unit Residential
237 S. 59 th St. Milwaukee, WI 53214	Double Unit Residential
229 S. 59 th St. Milwaukee, WI 53214	Double Unit Residential
306 S. 59 th St. Milwaukee, WI 53214	Residential
333 S. Hawley Rd. Milwaukee, WI 53214	Commercial – Parts USA
201 S. Hawley Ct. Milwaukee, WI 53214	Commercial – West Allis Heating & Cooling
308 S. Hawley Ct Milwaukee WI 53214	Commercial – Spring Hill Cemetery Mausoleums (2 buildings)
138 S. 71 th St. Milwaukee, WI 53214	Residential
144 S. 71 th St. Milwaukee, WI 53214	Residential
119 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
121 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
123 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
125 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
129 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
131 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
133 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
137 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
139 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
141 S. 70 th St. Milwaukee, WI 53214	Multi-Unit Residential
129 S. 69 th St. Milwaukee, WI 53213	Commercial - Girl Scouts of Wisconsin
131 S. 69 th St. Milwaukee, WI 53213	Commercial - Girl Scouts of Wisconsin
115 N. 68 th St. Apt #1 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #2 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #3 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #4 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #5 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #6 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #7 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #8 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #9 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #10 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #11 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #12 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #13 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #14 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #15 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #16 Milwaukee, WI 53213	Multi-Unit Residential

Address	Building Type
115 N. 68 th St. Apt #17 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #18 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #19 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #20 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #21 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #22 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #23 Milwaukee, WI 53213	Multi-Unit Residential
115 N. 68 th St. Apt #24 Milwaukee, WI 53213	Multi-Unit Residential
6732 W. Fairview Ave Milwaukee, WI 53213	Commercial – Maxie’s
6718 W. Fairview Ave Milwaukee, WI 53213	Commercial – Mid-Metro LLC
112 S. 68 th St. Milwaukee, WI 53213	Commercial - Valvoline
6101 W. Fairview Ave Milwaukee, WI 53213	Residential
6035 W. Fairview Ave Milwaukee, WI 53213	Double Unit Residential
6033 W. Fairview Ave Milwaukee, WI 53213	Double Unit Residential
6029 W. Fairview Ave Milwaukee, WI 53213	Residential
6016 W. Fairview Ave Milwaukee, WI 53213	Residential
114 N. 60 th St. Milwaukee, WI 53213	Residential
5908 W. Fairview Ave Milwaukee, WI 53213	Residential
125 N. 59 th St. Milwaukee, WI 53213	Double Unit Residential
127 N. 59 th St. Milwaukee, WI 53213	Double Unit Residential
128 N. 59 th St. Milwaukee, WI 53213	Residential
132 N. 59 th St. Milwaukee, WI 53213	Residential
137 N. Hawley Rd. Milwaukee, WI 53213	Multi-Unit Residential
139 N. Hawley Rd. Milwaukee, WI 53213	Multi-Unit Residential
135 N. Hawley Rd. Milwaukee, WI 53213	Multi-Unit Residential
145 N. Hawley Rd. Milwaukee, WI 53213	Multi-Unit Residential
147 N. Hawley Rd. Milwaukee, WI 53213	Multi-Unit Residential
151 N. Hawley Rd. Milwaukee, WI 53213	Double Unit Residential
153 N. Hawley Rd. Milwaukee, WI 53213	Double Unit Residential
157 N. Hawley Rd. Milwaukee, WI 53213	Residential
5815 W. Park Hill Ave. Milwaukee, WI 53213	Residential
5811 W. Park Hill Ave. Milwaukee, WI 53213	Residential
5807 W. Park Hill Ave. Milwaukee, WI 53213	Residential
123 S. Dana Ct. Milwaukee, WI 53213	Residential

30. Notice to Contractor – Cold Weather Pavement Marking Removals and Temporary Pavement Markings.

The anticipated project schedule includes work during winter seasons. Traffic control stage changes during late season dates shall follow Section 643.3.1.3 Cold Weather Marking. Pavement marking removals using water blasting requires a minimum ambient temperature. Other pavement marking removal methods may be required but shall not damage pavement and limit scaring.

Contractors shall anticipate adjusting project schedules during late season traffic control stages to ensure temporary pavement markings are installed under optimal conditions. Payment for Temporary Pavement Markings includes maintaining the marking. No additional compensation will be made for pavement marking installed during poor or cold weather conditions.

31. Notice to Contractor – Height Restrictions Contractor Access

Work zone access via the I-94 Ramps at General Mitchell Boulevard is planned in multiple stages. All construction activities must account for access limitations due to height restrictions and low clearance of 12 foot 2 inches at the General Mitchell Boulevard underpass beneath I-94.

32. Notice to Contractor – Nighttime Placement of HPC Masonry Structures.

For placement of HPC Masonry Structures for bridge construction during nighttime hours.

Place HPC Masonry Structures for bridge construction during nighttime hours. Begin work no earlier than two hours before sunset and end no later than 2 hours after sunrise; unless alternate begin and end times are approved before the concrete placement by the engineer. To determine acceptable hours, use the sunset and sunrise times published by the National Weather Service for the proposed date of the concrete placement or as mutually agreed to by the contractor and the engineer.

Provide lighting as necessary to safely perform the required work and facilitate inspection during nighttime hours. Ensure that lighting does not interfere with or impede traffic on open roadways and does not cause glare, shine or directly face the eyes of oncoming drivers. After initial setup, drive through and observe the lighted work area from each direction on the main roadway. Adjust lighting alignment if lighting causes glare, shine or directly faces the eyes of oncoming drivers.

Lighting for nighttime placement of HPC Masonry Structures for bridge construction is incidental to the HPC Masonry Structures bid item.

33. Public Involvement Meetings.

Participate in department-sponsored public involvement meetings as the engineer requests. Ensure that representatives of subcontractors also participate in those meetings if the engineer requests. Participation in public involvement meetings is considered incidental and no separate payment will be made for participating in public involvement meetings.

~~ref-999-040 (20160915)~~

34. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

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

stp-107-001 (20060512)

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

35. Contract Award and Execution.

Add the following to standard spec 103 as subsections 103.9 and 103.10 :

103.9 Bid Escrow Documentation

- (1) The department will require the lowest responsible bidder to submit documentation to be placed in escrow at a document storage facility. Bid Escrow Documentation (BED) consists of writings, working papers, computer printouts, charts, and data compilations that contain or reflect information, data, calculations, or assumptions used by the bidder to determine the proposal submitted. If the apparent low bid is withdrawn or rejected, the second low bidder will provide the required documents as specified in this special provision within 72 hours of written notification by the department.
- (2) The BED shall clearly itemize the contractor's estimated costs of performing the scope of work defined in the contract.
- (3) The BED shall include, but not be limited to, all quantity takeoffs, rate schedules for the direct costs of craft labor, construction (expendable materials), construction equipment ownership costs, construction equipment operating costs, permanent materials subcontractors and insurance. Also include development of rates of production including, where appropriate: estimate of crews, construction materials, construction equipment, and construction sequence and duration. Submit the BED for each subcontractor whose total subcontract costs exceed \$2,000,000.
- (4) Identify the allocation of construction plant and equipment, time and non-time related indirect costs (including if applicable joint venture fees), home office overhead, contingencies and margin applicable to each bid item. Further, documentation shall include consultant's reports, final estimate adjustment calculations, and all other information used by bidders to arrive at the estimate.
- (5) All manuals standard to the industry used by the bidder in determining the proposal are also considered part of the BED. These manuals may be included in the proposal documentation by reference and shall show the name and date of the publication and the publisher.
- (6) It is not necessary to include documents provided by the department for the bidder's use in the preparation of the proposal.
- (7) The low bidder shall present authentic copies of their BED at the department's office, located at WisDOT Southeast Region Office, 141 NW Barstow Street, Waukesha WI, 53188, by 3 days after Let, at 10:00 AM.
- (8) At the time of submittal, only designated representatives of the apparent low bidder and the department will jointly examine the apparent low bidder's bid documentation to determine if it is authentic, legible, and generally meets the requirements of this special provision. The department will not share the BED information with, or in any other way divulge the contents of, the apparent low bidder's BED to, their subcontractors or any other party.
- (9) The department, if requested by apparent low-bidder subcontractors, will also independently examine the BED submitted by the apparent low bidder's subcontractors in the same manner as the apparent low bidder's BED was examined. Only designated representatives of the individual subcontractor and the department will be present during this examination. The department will not share the BED information with, or in any other way divulge the contents of, a subcontractor's BED to, the apparent low bidder or any other party.
- (10) The department's examination of the BED will not include review of, nor will it constitute approval of, proposed construction methods, estimating assumptions, or interpretation of the contract. The examination will not alter any conditions or terms of the contract. The department will determine if the BED complies with this special provision. If the BED does not meet the requirements of this special provision, the department may reject the bid.
- (11) If the BED of the apparent low bidder meets the requirements of this special provision, the department and bidder will jointly deposit the BED at an agreed document storage facility. Place the BED in a sealed envelope or container clearly marked with the bidder's name and address, date of submittal, project name and identification number. Representatives of the department and the bidder will deliver all bid escrow documentation and the original affidavit directly to a document storage facility, to be placed in escrow.
- (12) If the apparent low bid is withdrawn or rejected, the designated representative of the second low bidder and the department will examine and inventory the bid documentation of the second low bidder and their subcontractors in the manner specified in this section, then seal and deposit in escrow. If a subcontractor

with a subcontract exceeding \$2,000,000 is replaced, the contractor shall submit new BED for examination and escrow before the engineer will authorize the substitution.

- (13) The department will pay for the costs of the escrow document storage facility and will provide escrow instructions to the document facility consistent with this special provision.
- (14) The department acknowledges that the bidder considers that the BED constitutes trade secrets or proprietary information. This acknowledgment is based upon department's understanding that the information contained in the BED is not known outside each bidder's business, is known only to a limited extent and by a limited number of employees of bidder, is safeguarded while in bidder's possession, and may be valuable to bidder's construction strategies, assumptions and intended means, methods and techniques of design and construction. Except as set forth in the contract or as required by applicable Law, the department acknowledges that the BED will always remain in the possession of the Escrow Agent and will at no time be received by, or become the property of, the department.
- (15) Submit a copy of the affidavit in this special provision, signed under oath before a Notary Public by a representative of the bidder authorized to execute proposals. Department representatives will sign the affidavit after reviewing the BED.
- (16) The BED will remain in escrow until one or more of the following occurs:
1. The bidder and the department mutually agree to release of the BED;
 2. A court orders the department to provide the BED;
 3. A claim is submitted under standard specification 105.13; or
 4. Either party seeks judicial review of a dispute.
- (17) If any of the events numbered 1-4 in this section occurs, the department will take possession of all relevant portions of the BED, as determined by the department, until complete resolution of the issue for which the request was made or the court order was issued. In absence of these actions, and provided the bidder signs an appropriate release, the unopened BED will be released to the bidder upon final acceptance and the expiration of all warranty periods provided by this contract.

BID ESCROW DOCUMENTATION CERTIFICATION

Using this BID ESCROW DOCUMENTATION CERTIFICATION, the bidder certifies that the material submitted in this special provision constitutes all the documentary information used in preparation of the bid and that said bidder has fully examined the contents of the container and that they are complete. The undersigned Wisconsin Department of Transportation representatives have reviewed the BED for compliance.

BIDDER

(Name of Bidder)

By: _____
(Signature*)

Title _____

Date _____

WITNESS

(Name of Witness)

By: _____
(Signature*)

Date: _____

WISCONSIN DOT

(Name of Department Representative)

By: _____
(Signature*)

Title _____

Date _____

WISCONSIN DOT

(Name of Department Representative)

By: _____
(Signature*)

Title: _____

Date: _____

(END OF BID ESCROW DOCUMENTS)

103.10 Mobilization Workshops

103.10.1 Workshop Schedule

- (1) After contract award, attend the following workshops. Each workshop is described within this special provision and will include the following topics:
 1. Project Kickoff and Initial Work Plan
 2. Cost Reduction Incentives
 3. Utility Coordination
 4. Submittals
 5. CPM Scheduling
 6. Leadership Partnering (Initial Session)
 7. Vacant
 8. Vacant
 9. Vacant
 10. Incident Crisis Communications Plan
 11. Notice to Proceed
 12. Safety Workshop
- (2) The workshop dates will be scheduled after contract award.
- (3) If necessary, the engineer may modify the workshop schedule to ensure attendance by the necessary department and contractor personnel; however, all workshops will be completed before issuing the Notice to Proceed.

103.10.2 Workshops

103.10.2.1 Project Kickoff and Initial Work Plan

103.10.2.1.1 General

- (1) The Project Kickoff and Initial Work Plan Workshop will provide a forum to discuss and answer questions relative to the proposal, bid schedule, and other questions in the Project Questionnaire described in section 103.10.2.1.2. The Initial Work Plan Workshop will include:
 1. Contractor responses to the attached Project Questionnaire.
 2. Department presentation of the use of CPM scheduling on the project and presentation of the department's Master Schedule to the contractor.
 3. Contractor presentation of its conceptual work plan for the project.
 4. Department and contractor discussion of the level of detail and features in the Initial Work Plan and the Baseline CPM Progress Schedule.

103.10.2.1.2 Project Questionnaire

- (1) Provide the following information in the order shown in this special provision. This information will constitute the "Project Questionnaire."

General Information

If a Joint Venture, provide information for each member of the Joint Venture.

Provide the following information about the company:

Firm Name

Address

Telephone and facsimile numbers; e-mail address

Contracting Specialties

Years performing work in contracting specialties

Geographic areas served

Total Management Employees and years of service

Project Managers

General Superintendents

Craft Superintendents

Engineers

Estimators

CPM Schedulers

Construction Engineering

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

Provide (if applicable) your third-party construction engineering firms.

Provide plan for Construction surveying

Subcontractors

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

Permanent Material Suppliers

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

Quality Control (where applicable)

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

Provide/attach a copy of your Construction Quality Control Manager's resume indicating the manager's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).

List the major elements and Table of Contents of your Construction Quality Management Program (QMP).

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

Organization Chart

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

Work Rules

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

Maintenance of Traffic

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

Include an outline of your approach to the maintenance of traffic and how you shall stage the construction to meet the substantial completion schedule including planned locations for local street and freeway access into and out of the work zones for each stage of construction.

Attach a copy of your Preliminary Schedule indicating your approach to achieving the substantial completion schedule.

Construction

Provide the approach (type of equipment, number of crews, and where required ground support systems) for the following activities.

1. Retaining wall construction by type of work
2. Bridge demolition
3. Roadway structural section
4. Roadway excavation
5. Office and yard facilities

103.10.2.2 Cost Reduction Incentives

- (1) The Cost Reduction workshop will identify value enhancing opportunities and consider modifications to the plans and specifications that will reduce either the total cost, time of construction, or traffic congestion. These modifications shall not impair the essential functions or characteristics of the project. These include:

- Service life
- Economy of operation
- Ease of maintenance
- Benefits to the traveling public
- Desired appearance
- Design and safety standards

- (2) Submit recommendations resulting from the workshop for approval by the engineer as cost reduction incentive proposals in conformance with standard spec 104.10 "Cost Reduction Incentive".
- (3) The department and the contractor may be able to complete the CRI Concept process, as specified in 104.10.2, during the CRI workshop.
- (4) Submit CRIs after the CRI workshop that were not introduced at the CRI workshop.

103.10.2.3 Utility Coordination

- (1) The Utility Coordination Workshop will define the scope and schedule of utility relocation work and the corresponding roles and responsibilities of the project team.
 - 1. At a minimum, the following key personnel will attend the Utility Coordination Meeting.
 - 1.1. Department's Utility Coordinator.
 - 1.2. Contractor's Utility Coordinator.
 - 1.3. Designer Team's Utility Coordinator.
 - 1.4. Key Utility Company Representative(s)
 - 2. At a minimum, the Utility Coordination Meeting will include a review of the following:
 - 2.1. Summary of all required utility relocations on the project.
 - 2.2. Special provisions addressing utility work.
 - 2.3. Sharing of contact information.
 - 2.4. Scheduling of work for utility relocation including critical milestones and staging for the work.

103.10.2.4 Submittals

- (1) The Submittal Workshop will identify the key required submittals for the project, categorize submittals into functional areas, and develop a schedule for submittals and submittal reviews. The Workshop participants will at a minimum:
 - 1. Review the project special provisions.
 - 2. Categorize submittals into functional areas including:
 - 2.1 MSE Retaining Walls
 - 2.2 Temporary Shoring
 - 2.3 Falsework and Formwork
 - 2.4 Girder Shop Drawings
 - 2.5 Steel Transportation, Delivery and Erection
 - 2.6 Structure Demolition Plans
 - 2.7 Pile Hammers and High Capacity Piling
 - 2.8 Concrete/ Asphalt
 - 2.9 Materials
 - 2.10 ITS / Lighting
 - 2.11 Traffic Signals
 - 2.12 Sanitary Sewer and Water
 - 2.13 Permits
 - 2.14 Emergency Work Zone Plan
 - 2.15 Signage
 - 3. Develop a schedule for submittals.

103.10.2.5 CPM Schedule

See specification Baseline CPM Progress Schedule.

103.10.2.6 Leadership Partnering Meetings Bi-Weekly

- (1) The department will implement mandatory bi-weekly leadership partnering meetings. Unless the department and contractor agree otherwise, the contractor management level personnel, project design engineers, project level supervisory personnel, and department management level personal shall meet bi-weekly from project start until the contractor accepts the tentative final estimate. The contractor and department may also invite the following as needed:

- FHWA

- Key project personnel of the contractor's principal subcontractors and suppliers
- Local government representatives
- Environmental regulators
- Emergency service personnel
- Utility companies
- Impacted business and property owners
- Other stakeholders

- (2) This meeting will facilitate a cooperative team environment that clearly defines roles and responsibilities, determines common goals and objectives, and provides a platform to build trust and accountability.

Meeting topics may include:

- Issue and risk management
- Dispute resolution procedures
- Safety
- Public outreach
- Traffic management
- Cost reducing incentives
- Claim resolution
- Scheduling issues
- Quality control

All mobilization workshop costs are incidental to the contract work.

103.10.2.7 Drilled Foundation Shaft Construction (Vacant)

103.10.2.8 Storm Sewer Tunneling (Vacant)

103.10.2.9 Work Force Opportunities (Vacant)

103.10.2.10 Incident Crisis Communications Plan

- (1) The Incident Crisis Communications Plan workshop will include a "dry run" of the Crisis Communication Plan to coordinate the response to an incident within the work zone or on the freeway by the Contractor, Police, Fire, EMS and other responders. Ensure that representatives of subcontractors also participate in this meeting if requested by the Project engineer.

103.10.2.11 Notice to Proceed

- (1) After all workshops are completed, the Notice to Proceed will be issued.

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103.10.2.12 Safety Workshop

- (1) The Safety Workshop will provide a forum to discuss, review, and answer questions regarding pertinent safety topics of the project.

1 At a minimum, the following key personnel will attend the Safety Workshop:

- 1.1 Contractor's project management
- 1.2 Contractor's foremen and safety representatives
- 1.3 Subcontractor's project management and foremen
- 1.4 Department's construction project management
- 1.5 Department's construction team project leaders

2 At a minimum, the Safety Workshop will include a review of the following:

- 2.1 Prime contractor's presentation of site safety plan

- 2.2 Subcontractor's presentations of site safety plans
 - 2.3 Contractor incident report process
 - 2.4 Review of safety special provisions
 - 2.5 Damage claims process
 - 2.6 Recurring safety meeting schedule
- (2) The department will implement mandatory Bi-annual Safety Workshops. Unless the department and contractor agree otherwise, the personnel listed in 103.10.12(1)1 will attend the Bi-annual Safety Workshops from project start until the project is sustainably complete. The contractor or department may also invite additional attendees, including the department's risk and safety personnel. The meeting will facilitate a cooperative team environment and open discussion regarding project safety.
- 1 Bi-annual Safety Workshop agenda topics may include:
 - 1.1 Review of previous and ongoing project activities and associated safety topics
 - 1.2 Review of upcoming project activity and safety strategies
 - 1.3 Incident and damage claim status updates
 - 2 The department reserves the right to adjust or increase the frequency of the recurring Safety Workshop meetings.

36. **BIM for Infrastructure Model.**

WisDOT SE Region (Department) defines terms within this special provision as follows:

BIM	Building Information Model
CAD	Computer-aided Design
GIS	Geographic Information Systems
PMM	Project Modeling Matrix
LOA	Level of Accuracy
LOD	Level of Development (2D/3D)
PS&E	Plans, Specifications, and Estimates
AMG	Automated Machine Guidance
PMM	Project Modeling Matrix
RD	Radio Detection
GPR	Ground Penetrating Radar
SPAR	Subsurface Signal Location Coupled with GNSS Survey
EMI	Electromagnetic Induction
ASC	ASCII Text File Format
CSV	Comma Separated Value File Format for Microsoft Excel Spreadsheet for Survey Layout
DWG	Autodesk Proprietary File Format for CAD Data
XML	Non-Proprietary File Format for Exchanging Geometry-centric 3D Data
IFC	Industry Foundation Class File Format
GNSS	Global Navigation Satellite System used to pinpoint geographic locations worldwide
ROW	Right of Way
DTM	Digital Terrain Model
DSM	Digital Surface Model
TIN	Triangulated Irregular Network
CD	Contract Documents
2D	2D Model X,Y
3D	3D Model X,Y,Z

General Content

By agreement with the Contractor, the Department will provide electronically stored BIM model deliverables. These are provided for informational purposes only, and not as an end product or as a record document, to augment project Plans, Specifications, and Estimates (PS&E). Reliance thereon is

deemed to be unreasonable and unenforceable. Engineer will maintain and update as needed BIM model project deliverables consisting of proposed comprehensive 2D/3D model data or portions of data which may include final states for the following when available:

- Roadways
- Grading
- Drainage
- Structures
- FTMS-Freeway Traffic Management System
- Signals
- Lighting

Deliverables and Format

Engineer will maintain and update the data or portions of the BIM model electronically consisting of electronic 2D/3D files containing the following:

- Features
- Points
- Reference lines
- Break lines
- Area extents lines
- Profiles

The Department will provide updated 2D/3D model information from design (including plans, specifications, and estimates, addendums, and all plan revisions).

Project deliverables include electronic digital BIM model data and CAD data provided in Autodesk Civil 3D/Autocad 2024 and LandXML 1.2 file format and additionally construction stakeout data in ACSII format and CSV format. The BIM model data will contain:

- Features
- Points
- Mass points
- Lines
- Reference lines
- Break lines
- Area extents lines
- Profiles
- 3D TIN DTM surfaces
- LandXML surfaces

All data will be georeferenced to horizontal datum - NAD-83 (2007), vertical datum - NAVD-1988 (2007), and coordinate projection - Wisconsin County Coordinate System in U.S. survey feet. Specific datum/adjustment will be maintained for each WisDOT project to maintain accuracy and consistency. Horizontal and vertical datums will be provided on the Title Sheet of the WisDOT plan sets.

If you have any questions as to Project Datum/Adjustment, confirm with:

Thomas Lipsky, RLS Wisconsin DOT
SE Region Survey
thomas.lipsky@dot.wi.gov
(262)548-6737

If you have any questions as to Model Content, confirm with:

Evan Limberatos, Project Manager Wisconsin DOT
SE Freeways/Region Design
Evan.limberatos@dot.wi.gov
(262)548-8797

Delivery Schedule

The BIM is for informational purposes only, and not a contract document.

The department will make the BIM model data available with the contractor data packet according to the following schedule dates:

- AMG Roadway elements (Roadways/Surfaces-Proposed) and Roadway features by the project advertisement date;
- Remaining LOD-CD elements at the project advertisement date.

BIM MODEL REQUIREMENTS: PROJECT I-94 70th Street to Zablocki Drive, 1060-27-71

Element / P-Proposed	Format	Data Type	LOA	LOD	Temp
RD-Roadways/Surfaces-Proposed					
Road Pavement-Top Surfaces-P	DWG/XML	DTM/DSM	0.02'+/-	3D	3D
Road Pavement-Base Course Surfs-P	DWG/XML	DTM/DSM	0.06'+/-	3D	3D
Road Pavement-Subgrade Surfs-P	DWG/XML	DTM/DSM	0.06'+/-	3D	3D
Road Curb & Gutter-P	DWG/XML	DSM/Line	0.02'+/-	2D/3D	N/A
Road Barriers-P	DWG/XML	DSM/Line	0.06'+/-	2D/3D	N/A
Road Alignments/Ref Lines/EOP-P	DWG/XML	Line	0.02'+/-	2D/3D	2D/3D
Road Stationing-P	DWG	Text	0.10'+/-	2D	N/A
Road Superelevation Transition Stations-P	CSV	Point	0.02'+/-	2D	N/A
ST-Storm Sewer/Drainage – Proposed					
Inlets/MHs/OFs/Pipes/Culverts-E	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
Inlets/MHs/OFs/Pipes/Culverts-P	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	2D/3D
Ponds-E	DWG	DSM/Line	0.06'+/-	2D/3D	N/A
Ponds-P	DWG	DSM/Line	0.06'+/-	2D/3D	N/A
BR-Bridges-Proposed					
Stone Base	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Piles	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Footings	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Abutments	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Piers	DWG/DGN/XML	Line/Solid	0.02'+/-	2D/3D	N/A
CI Beams	DWG/DGN/XML	Line/Solid	0.02'+/-	2D/3D	N/A
Seats	DWG/DGN/XML	Line/Solid	0.02'+/-	2D/3D	N/A
Deck Including Fillets	DWG/DGN/XML	Line/Solid	0.02'+/-	2D/3D	N/A
Light Blisters	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Parapet Walls	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
RW-Retaining Walls-Proposed					
MSE-Proposed					
Straps	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A

Footings	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Top	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Coping	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
CIP-Cast-in-Place-Proposed					
Stone	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Piles	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Top of Footings	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Face of Wall	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Coping	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
PAL-Pile & Lagging-Proposed					
CI Piles at Top & Bottom	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Face of Wall/Face of Piles	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Bottom of Wall	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Top of Wall/Coping	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Face of Piles	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Top and Toe of Sheets	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
SB-Sign Bridges-Proposed					
Footings	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Piles	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Structure	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Other Structures-Proposed					
NW-Noise Walls	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
TU-Tunnels-Utility	DWG/DGN/XML	Line/Solid	0.02'+/-	2D/3D	N/A
SF-Special Foundations-Proposed					
Drilled Shafts	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Driven Piles	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Bored Piles	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Caissons	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
SF-Special Foundation Walls-Proposed					
Foundation Anchors	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Underpinning	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Pile Caps	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Grade Beams	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A
Tiebacks	DWG/DGN/XML	Line/Solid	0.06'+/-	2D/3D	N/A

LI-Lighting-Proposed					
Poles/Masts/Bases	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
Conduit/Cabinets/Pull Boxes	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
IT-ITS/FTMS Proposed					
DMS/CMS	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
FTMS Fiber Optic lines	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
FTMS Huts/Cabinets	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
SG-Signals-Proposed					
Poles/Heads/Bases	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
Conduit/Pull Boxes	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
WM-Water Main Proposed					
Pipes	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
Hydrants/Valves/Fittings/ Standpipes	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
SS-Sanitary Sewer-Proposed					
Pipes	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A
Manholes	DWG/DGN	Line/Solid	0.06'+/-	2D/3D	N/A

37. Available Documents.

The department will make its information available to bidding contractors. The list of documents that are available for contractors' information includes:

- Design Study Report
- Exceptions to Standards Report
- Interstate Access Justification Report
- Pavement Type Selection Report
- Environmental Document
- As-Built Drawings
- Traffic Management Plan

These documents are available from Evan Limberatos Evan.Limberatos@dot.wi.gov at 141 NW Barstow Street, Waukesha, WI 53187 (262) 548-8797.

Reproduction costs will be applied to all copies requested.

sef 102-005 (20170310)

38. Geotechnical Investigation Information.

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

Available information relative to subsurface exploration, borings, soundings, water levels, elevations, or profiles are available for review at the department's Regions office. Contact Evan Limberatos, Evan.Limberatos@dot.wi.gov 141 NW Barstow Street, Waukesha, WI 53187 (262) 548-8797.

Geotechnical Report for Multiple Structures

Technical Memorandum for Pavement Subgrade Design Report

Additional geotechnical information is available from studies and analyses that have been performed by Jacobs Engineering Group, Inc. for the department for other aspects of this project. Review the available information to determine if it is of use. The use or not of the geotechnical information does not relieve performing the work conforming to the plans and specifications.

sef-102-010 (20170310)

39. Eliminated Work.

Replace standard spec 104.2.2.5 with the following:

104.2.2.5 Change Orders for Eliminated Work

- (1) The department has the right to partially eliminate or completely eliminate work the engineer finds to be unnecessary for the project. If the department eliminates work, the engineer will send a Work Authorization Form (WAF) directing the contractor to eliminate the work. If the engineer partially eliminates or completely eliminates work, the engineer will issue a contract change order for a fair and equitable amount as specified in 109.5..
- (2) If the department executes an equalizing change order for the purpose of matching the authorized quantity to the amount of units measured and paid for any bid item, this shall not be considered eliminated work.

40. Contractor Notification.

Replace standard spec 104.2.2.2(2) with the following:

- (2) If the contractor discovers the differing condition, provide a written notice, as specified in 104.3.2, of the specific differing condition before further disturbing the site and before further performing the affected work.

Replace standard spec 104.3.2 with the following:

104.3.2 Contractor Initial Written Notice

- (1) If required by 104.2, or if the contractor believes that the department's action, the department's lack of action, or some other situation results in or necessitates a contract revision, promptly provide a written notice to the engineer. At a minimum, provide the following:
 1. A written description of the nature of the issue.
 2. The time and date of discovering the problem or issue.
 3. If appropriate, the location of the issue.
- (2) Provide the additional information specified in 104.3.3 as early as possible to assist the engineer in the timely resolution of an identified issue. The engineer will not require, in subsequent submissions, duplication of information already provided.

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

Both the department and City of Milwaukee personnel will inspect construction of sanitary sewer and water main under this contract. However, testing, and acceptance of the sanitary sewer and water main items will be by the City of Milwaukee.

~~stp-105-001 (20140630).~~

42. Referenced Construction Specifications.

Construct the work enumerated below conforming to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments. 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:

SPV.0060.5001	Permanent Connection to Existing 36-inch Water Main
SPV.0060.5002	Permanent Connection to Existing 48-inch Water Main
SPV.0060.5003	Adjusting Water Valve Boxes
SPV.0060.5004	Adjusting Water Manholes
SPV.0060.5005	Installing Hydrant - Alteration
SPV.0060.5006	Blowoff Manhole
SPV.0060.5007	Inspection Manhole
SPV.0060.5100	Adjusting Sanitary Manhole
SPV.0060.5101	Internal Sanitary Manhole Seals
SPV.0090.5001	Steel Casing w/ Ductile Iron 36-Inch Carrier
SPV.0090.5002	Ductile Iron Water Main 36-Inch
SPV.0090.5003	Ductile Iron Water Main 48-Inch
SPV.0090.5004	Abandon Existing 36-Inch Water Main
SPV.0090.5005	Abandon Existing 48-Inch Water Main
SPV.0090.5006	Removing Water Main

stp-105-002 (20130615)

43. Contractor Document Submittals.

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

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

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

Submit electronic copies in PDF format to the engineer-designated folder within the department's Box.com site. Send alerts with a link to the document via email to accounts the engineer determines.

If possible, create PDFs from original documents in their native format (e.g. Word, Excel, AutoCAD, etc.). Scan other documents to PDF format with a minimum resolution of 600 dpi.

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

sef-105-010 (20150619)

44. Dust Control Implementation Plan.

A Description

This special provision describes developing, updating, and implementing a detailed Dust Control Implementation Plan (DCIP) for all land-disturbing construction activities and associated impacts both within the project site boundaries and outside the project site boundaries. Incorporate contract bid items that this article specifies into the DCIP.

B (Vacant)

C Construction

C.1 General

Control dust on the project as specified in standard spec 107.18. Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter (PM) or nuisance dust conditions. Control dust at all times during the contract.

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 land-disturbing activities without the department's approval of the DCIP.

C.2 DCIP Contents

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

Include 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. Provide:
 - Name, firm, address, and working-hours phone number.
 - Non-working-hours phone number.
 - Email address.
2. 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 adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where employing various dust control or prevention strategies.
3. A matrix, or plan, for each anticipated land disturbing, dust generating activity, showing the following:
 - Preventive measures that shall be employed.
 - The applicable contact person.
 - The contractor's timetable and surveillance measures used to determine when remediation is required.
 - The specific dust control and remediation measures that shall be employed. Identify the specific contract bid items that shall be used for payment. Indicate costs and practices that are incidental to the contract.
 - Both maintenance and cleanup schedules and procedures.
 - Excess and waste materials disposal strategy.
4. A description of monitoring and resolving off-site impacts.

C.3 Updating the DCIP

Update the DCIP during the contract or as the engineer directs. Obtain the engineer's approval for all DCIP alterations. Also obtain the engineer's approval for routine DCIP 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

Coordinate with engineer to determine deadlines for resolving dust control deficiencies. Deficiencies include actions or lack of actions resulting in excessive dust, non-compliance with the contractor's DCIP or associated special provisions, and not properly maintaining 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 specs 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 includes the contract bid items listed in this special provision:

- 623.0200 Dust Control Surface Treatment
- 624.0100 Water
- 628.7560 Tracking Pads
- SPV.0075.0200 Pavement Cleanup Project 1060-27-71

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

E Payment

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

sef-107-005 (20170323)

45. Project Site Air Quality.

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

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

Portable Concrete Crusher Plants

Portable concrete crusher plants may need a NR 440 Concrete Crusher Plant Air Permit for air emissions. Please contact Wisconsin Department of Natural Resources to request additional information and permit application materials. Complete permit applications may take 3 months to process.

46. Maintaining Drainage.

Maintain drainage at and through worksite during construction conforming to standard spec 107.20, 204, 205 and 520.

Use existing storm sewers, existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the project.

Dewatering (Mechanical Pumping) for Bypass Water (sediment-free) Operations

If dewatering bypass operations are required from one pipe structure to another downstream pipe structure or from the upstream to downstream end of a culvert and the bypass flow is not transporting sediments (sand, silt, and clay particles) from a tributary work site area, bypass pumping operations will be allowed provided that the department has been made aware of and approves operation. When pumping bypass flows, the discharge location will need to be stable and not produce erosion from the discharge velocity that would cause release of sediment downstream.

Dewatering (Mechanical Pumping) for treatment Water (sediment-laden) Operations

If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Refer to article Erosion Control in these special provisions for additional requirements.

sef-107-016 (20170310)

47. Subletting the Contract.

Replace standard spec 108.1.1 (3) with the following:

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

sef-108-035 (20171004)

48. Removing Old Bridges and Retaining Walls.

Add the following to standard spec 203.3.1:

203.3.1.1 Structure Removal Site Safety Plan

- (1) Prepare a Structure Removal Site Safety Plan covering all structure removal work included in the contract. Maintain posted copies of the Structure Removal Site Safety Plan at the site in the project field office. Provide two copies of the Structure Removal Site Safety Plan to the engineer at least four weeks before beginning removal work.

203.3.1.2 Structure Removal Plans

- (1) Prepare a structure specific removal plan for each of the following existing structures indicating the methods and sequence of demolition:

Existing Structure	Structure Type	Feature On	Feature Under
B-40-81	4-Span Haunched Slab Bridge	I-94	Hawley Rd.
B-40-82	3-Span PPC I-Girder Bridge	I-94 EB	64 th St.
B-40-83	3-Span PPC I-Girder Bridge	I-94 WB	64 th St.
B-40-84	3-Span PPC I-Girder Bridge	I-94 EB	68 th St.
B-40-85	3-Span PPC I-Girder Bridge	I-94 WB	68 th St.
B-40-86	3-span Continuous Steel Girder Bridge	I-94 EB	70 th St.
B-40-87	3-span Continuous Steel Girder Bridge	I-94 WB	70 th St.
R-40-26	458' Long Cast-in-place Concrete Retaining Wall	Retaining cemetery property	Along I-94 EB
R-40-88	214' Long Cast-in-place Concrete Retaining Wall	Retaining cemetery property	Along I-94 EB

This table does not include all the structure removals included in the contract. It is a list of existing structure removals included in the contract for which a structure specific detailed removal plan is required to be submitted.

Examine the existing structure plans and visit the site before preparing and submitting the structure removal plan(s). The contractor is responsible for the methods and sequence of demolition, including effects on the overall stability of each structure being removed.

At a minimum, each removal plan shall include:

1. The name of the professional engineer, registered in the state of Wisconsin who will be on site and monitoring the removal of existing structures as required in this specification.
2. The name of the contractor's on-site-employee designated in responsible charge of all removal operations.
3. The removal method and sequence of removal for each individual structure, including the staging of bridge removals.
4. Analysis of the stability of the structure based on the methods and sequence of demolition proposed, to ensure that the structure is demolished in a safe and controlled manner. The analysis computations shall be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.
5. Design and details of temporary supports, shoring or temporary bracing, if required to stabilize portions of partially remaining structures during the removal sequence or support partially remaining structures after staged removals. Include design computations and detail drawings for all temporary supports, shoring and bracing that indicate the exact placement of the temporary supports, shoring or bracing; verification of design loads; attachment details; and methods for the safe transfer of loads from existing structural elements to be removed to the temporary supports, shoring, or bracing. Temporary support, shoring, or bracing design computations and drawings details are to be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.
6. Design and details of temporary support foundations. Include in the foundation design the evaluation of expected foundation settlement and the effect that this will have on the structure being supported. Temporary support foundation design computations and drawing details are to be prepared, signed and sealed by a professional engineer registered in the State of Wisconsin.
7. Equipment type and locations of equipment on the structure(s) or adjacent roadways during the removal operations
8. Locations and type of work to be performed directly adjacent to traffic.
9. Details and locations of protective covers and other measures to ensure that people, property and improvements will not be endangered or damaged as a result of the removal operations. Include methods for protecting any pavement surfaces including shoulders, concrete barriers, and other highway features.
10. Methods of removal, hauling and disposal, including haul routes and disposal destination.
11. A schedule of anticipated roadway and lane closures to accommodate removal operations. Include the timing of individual lane or temporary roadway closures and the nature of removal operations that will be performed during the lane or roadway closures.
12. Acknowledgement that the contractor and removal design engineer responsible for preparing the removal plan have visited the site and reviewed the existing structure plans in preparing the removal plan.

Structure Pre-Removal Meetings

After submission of the Structure Removal Site Safety Plan and required Structure Removal Plan(s), schedule and conduct structure pre-removal meetings at a time agreed to by the engineer. Hold structure pre-removal meetings at least three working days before beginning structure removal activities. If the engineer agrees before, multiple structure removals can be combined and discussed at one structure pre-removal meeting. Otherwise, schedule and conduct a separate structure pre-removal meeting for each structure to be removed.

203.3.1.3 Salvaging Noise Barrier Panels

- (1) Salvage approximately 18 noise barrier panels total from existing N-40-80 and N-40-81 to be removed.
- (2) Fifteen foot (15') nominal panels to be salvaged. The engineer will designate specific panels to be salvaged.

- (3) Label existing panels to be salvaged per the original shop drawing notation prior to removal. Original shop drawings available from the Department's Highway Structures Information (HSI) System.
- (4) Eighteen (18) panels, consisting of six (6) sets of three (3) bottom panels, to be stockpiled for pick-up by others. Four (4) sets of panels are designated for the Milwaukee County Highway Maintenance Division, and two (2) sets are designated for the Department's Northwest Region.
- (5) Coordinate with the engineer for the removal, storage, and protection of the salvaged panels. Coordinate with Milwaukee County, the Department, or others as required for the retrieval of the panels.
- (6) Handle salvaged panels with care as to not damage them. Panels damaged during removal, storage, or handling to be replaced with alternate salvaged panels, designated by the engineer, at the contractor's expense.

Supplement standard spec 203.3.2.1 with the following:

- (4) Perform structure removals conforming to the submitted Structure Removal Site Safety Plan and applicable Structure Removal Plan(s).
- (5) Removal methods and equipment must avoid disturbance to locations, properties, facilities, and sensitive features identified in the plans. Vibratory hydraulic breakers will not be permitted at these locations.

Supplement standard spec 203.5.1(2) with the following:

Payment includes preparation and submittal of a Structure Removal Site Safety Plan; preparation and submittal of Structure Removal Plan(s) and performing all structure removal work conforming to the submitted plans.

Supplement standard spec 203.5.3 with the following:

- (4) Payment for removing existing noise barriers includes salvaging panels designated by the engineer, stockpiling and protecting panels, and coordination for salvaging activities.

49. Removing Concrete Barrier.

Add the following to standard spec 204.3.2.2.1 as paragraph fourteen:

- (14) Under the Removing Concrete Barrier bid item, remove barrier and footing, unless specified in the plans, at the locations the plans show. Removal includes all required sawing conforming to standard spec 690.

Add the following to standard spec 204.5.1(2) as paragraph two:

- (2) Payment for Removing Concrete Barrier is full compensation for all required sawing and removal of existing barrier and footing, and sludge removal.

sef-204-025 (20180104)

50. Excavation For Structures Retaining Walls.

Add the following to standard spec 206.2:

- (3) If the plan details call for Controlled Low Strength Material (CLSM), provide CLSM for backfill consisting of a designed cementitious mixture of natural or processed materials. Allowable materials include natural sand, natural gravel, produced sand, foundry sand, produced gravel, fly ash, Portland cement, and other broken or fragmented mineral materials. The designed mixture shall have a consistent texture and flow characteristics, be self-leveling and not exhibit shrinkage after hardening. Design the mixture to reach a state of hardening such that it can support foot traffic in no more than 24 hours. Provide a mixture that also meets the following requirements:

Test	Method	Value
Flow	ASTM D-6103	9-inches minimum
Compressive Strength	ASTM D-6024	20 - 40 psi @ 14 days 40 - 80 psi @ 28 days 80 - 120 psi @ 90 days

Chemical admixtures to control air content and setting time are allowable. Ten days prior to placement, furnish the engineer with a design mix detailing all components and their proportions in the mix.

- (4) If the plan details call for flowable backfill, provide backfill material consisting of aggregates that conform to standard spec 501 for Grade A Concrete and do not add any cementitious material; cement or fly ash, to the flowable fill mix. Weigh aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver to the project site using a truck mixer. Add enough water to enable the mixture to flow readily.

Add the following to standard spec 206.3.13.1:

- (13) For soldier pile retaining walls, when called for in the plans, backfill around soldier piles above the soldier pile foundations with CLSM as shown on the plans. If the official Weather Bureau forecast for the construction site predicts temperatures at or below freezing within the next 24 hours after placement of controlled low strength backfill, protect the placed materials from freezing during that time period. If the temperature is not forecast to rise above 40° F for 72 hours after placement, the engineer may require protection from freezing for up to 72 hours. No controlled low strength backfill shall be allowed to enter any stream, lake, or sewer system. The contractor shall be responsible for any clean up or remediation costs resulting from such occurrences.
- (14) For soldier pile retaining walls, when called for on the plans, fill all voids behind timber lagging and excavated soil with flowable backfill. Prior to placement of flowable backfill, provide for positive drainage of the area to be backfilled. Discharge from the truck in a manner to prevent segregation. Completely fill excavation in a single operation. Consolidation or compaction effort is not required.

Add the following to standard spec 206.5.2:

- (8) Payment for Structure Excavation Retaining Walls includes providing and placing CLSM as backfill when CLSM as backfill is called for on the plans.
- (9) Payment for Structure Excavation Retaining Walls includes providing and placing flowable backfill when flowable backfill is called for on the plans.

51. Pavement Breaking Equipment.

Do not use guillotine, drop hammer, falling weight, gravity impact breakers or equivalent equipment within 300 feet of any structure. A multi-head hydraulic hammer is allowed unless a structure is within 50 feet of the roadway.

SER-204-001 (20161123)

52. Backfill Slurry.

This special provision describes furnishing and placing backfill slurry for, but not limited to, removing and abandoning utility pipes and structures, installation of storm sewer, sanitary sewer and water pipes and structures, and exposing existing utility items as shown on the plans.

Use well graded fine and coarse aggregate conforming to the standard combined aggregate gradation specified in table 501-4. Weigh aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver to the project site using a truck mixer. Add enough water meeting the requirements of 501.2.6 of the standard specs to enable the mixture to flow readily.

Backfill Slurry is considered a class III concrete mix. Follow the procedure in 716.2.2 of the standard specification for mix design certification and submittal.

Prior to placement of backfill slurry provide for positive drainage of the area to be backfilled. Discharge from the truck in a manner to prevent segregation. Consolidation or compaction effort will not be required. Twelve hours shall elapse before paving over the backfill.

Include backfill slurry used for, but not limited to, removing and abandoning utility pipes and structures, installation of storm sewer, sanitary sewer and water pipes and structures, and exposing existing utility items under appropriate bid items. No separate payment will be made for providing positive drainage of the area to be backfilled; for providing mix design; for furnishing, mixing, transporting and placing backfill slurry, and for QMP certification.

53. QMP Subgrade.

A Description

- (1) This special provision describes requirements for subgrade materials within the roadway foundation as defined in standard spec 101.3 and as modified in the plan and special provisions. Follow standard spec 207 with the following additional requirements specified in this special provision for all work within the roadway foundation for permanent fill and mainline temporary pavement support at the locations the plans show.
- (2) Provide and maintain a quality control program. A quality control program is defined as all activities, including process control inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of subgrade 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 along with the Manual of Test Procedures (MOTP), describes sampling and testing procedures. The CMM and MOTP may be obtained at:

[Wisconsin Department of Transportation Quality management program \(wisconsindot.gov\)](http://wisconsindot.gov)

B Materials

B.1 Quality Control Plan

- (1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform grading work before the engineer reviews and approves the plan. Construct the project as the plan provides.
- (2) Do not change the quality control plan without the engineer's approval. 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. The quality control plan shall provide the following elements:
 1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC, QV, and IA 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. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
 4. Location of the QC laboratory, retained sample storage, and control charts and other documentation.
 5. A summary of the locations and calculated quantities to be tested under this provision.
 6. An explanation regarding the basis of acceptance for material that cannot be tested by nuclear methods due to a high percentage of oversized particles.

B.2 Personnel

Perform the quality control and quality verification sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Grading Technician I (GRADINGTEC-I); or Assistant Certified Technician, Grading (ACT-GRADING) present at each grading site during all subgrade fill placement, compaction and nuclear testing activities. Have a HTCP Nuclear Density Technician I

(NUCDENSITYTEC-I) or Assistant Certified Technician, Nuclear Density Gauge Operator (ACT-NUC) perform field density and field moisture content testing.

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

B.3 Laboratory

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

Materials Management Section
3502 Kinsman Blvd.
Madison, Wisconsin 53704
Telephone: 608-246-5388

<https://wisconsin.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/qual-lab-req.aspx>

B.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 Chapter 8 and MOTP and maintain a calibration record at the laboratory.
- (2) Furnish nuclear gauges from the department's approved product list at <http://www.atwoodsystems.com/materials>. Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge within 12 months before using it on the project. Retain a copy of the calibration certificate with the gauge.
- (3) Conform to CMM Chapter 8 for density testing and gauge monitoring methods. Perform nuclear gauge measurements according to Wisconsin Test Modified (WTM) T310.

B.5 Soil Source Study

- (1) Conduct and submit a soil source study before beginning of grading operations. Ensure that this study identifies each distinct soil type on the project within the top 15 feet of cut areas and all borrow material. Provide the in-bank natural moisture content for each soil. Develop moisture-density curves for each identified soil type by utilizing WTM T99 with a minimum of 5 individual points, and a zero air voids curve at a specific gravity of 2.65 (or as measured on sample material). Determine the maximum dry density and corresponding optimum moisture content for each soil type.
- (2) Perform characterization tests on each of the soil types selected for the soil source study. The tests include WTM T89, AASHTO T90, WTM T27, and WTM T11. Classify each soil type selected according to the AASHTO soil classification system (AASHTO M145) based on the characterization tests. Do not begin grading operations until the engineer accepts the soil source study.
- (3) Use the soil types identified in the soil source study with corresponding maximum dry densities and optimum moisture contents to determine the compaction compliance on the project. Continue the soil source study in those areas of cuts or borrow sites greater than 15 feet in depth that were not accessible during the initial study. Include data on additional soil types identified throughout the duration of subgrade fill placement. Ensure that tests of additional soil types are complete, and the engineer approves the results before incorporating the material into the roadway foundation.
- (4) Split each Proctor sample and identify to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department at:

Southeast Region Materials Lab
935 South 60th Street
West Allis, WI 53214
Jeff Bruesewitz Jeffrey.Bruesewitz@dot.wi.gov
Cell Phone (414) 750-2324

- (5) Retain and identify two representative samples of each Proctor. Submit one sample to the engineer. Retain one sample on site for use when performing textural identification.

B.6 Quality Control Documentation

B.6.1 Control Charts

- (1) Maintain separate control charts for the field density and field moisture content of each grading category. Designate grading categories within the project as follows:
 1. Embankment portions of the project, except within 200 feet of bridge abutments.
 2. Embankment within 200 feet of bridge abutments.
 3. Subgrade cut portions of the project.
 4. Embankment (backfill) in utility and culvert pipe installations and removal trenches.
 5. Structure and granular backfill placed at bridge abutments and box culverts.
 6. Enhanced Compaction Areas: These areas include embankments taller than 20 ft and taller retaining walls supported on new embankment identified in the geotechnical report and require higher compaction levels than general QMP Subgrade categories due to unique requirements.
- (2) Ensure that all tests are recorded and become part of the project records. Enter QC data into the applicable materials reporting system (MRS) software within five business days after results are available. Plot required test results on the control charts. Include random QV and engineer-requested testing, but only include the contractor's randomly selected QC test results in the 4-point running average. The contractor may plot other contractor-performed process control or informational tests on the control charts, but do not include them in 4-point running averages.
- (3) Post control charts in an engineer-approved location and update daily. Ensure that the control charts include the project number, test number, each test element, applicable control limits, contractor's individual test results, running average of the last four (4) QC data points, and engineer's quality verification test data points. Use the control charts as part of a process control system for identifying potential problems and assignable causes. Format control charts according to CMM Chapter 8, Section 832.
- (4) Submit control charts to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.6.2 Records

- (1) Document all observations, inspection records, adjustments to fill placement procedures, soil changes, and test results daily. Provide load count records to the engineer for each borrow source and common source, including tracking of unsuitable material. Note the results of the observations and inspection records as they occur in a permanent field record.
- (2) Provide copies of the field density and field moisture running average calculation sheets, Proctor tests, records of procedure adjustments, and soil changes to the engineer daily.
- (3) Submit original testing records to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.7 Contractor Testing

B.7.1 General

- (1) Personnel completing contractor quality control testing must meet the certification level requirements specified in B.2.
- (2) During subgrade construction, use sampling and testing methods identified in the CMM Chapter 8 and MOTP to perform the required tests at randomly selected locations at the indicated minimum frequency in B.7.4 for each grading category.
- (3) Determine the cubic yards for testing based on a total load count system as agreed upon by the engineer and contractor.
- (4) For each test, provide the cubic yards represented and the test location to within 2 feet horizontally and 0.5 feet vertically.

- (5) Test areas of suspect compaction or which appear to be nonconforming as determined by engineer.

B.7.2 Field Density and Field Moisture

- (1) Perform the field density and field moisture tests using the nuclear density method according to WTM T310. Ensure that each field density test material is related to one of the specific soil types identified in the soil source study in determining the percent compaction. Use textural identification as the primary method of establishing this relationship. Utilize the representative samples retained from the soil source study when performing the textural identification. Use a coarse particle correction according to WTM T99.
- (2) If field density and field moisture tests cannot be performed by the nuclear density method due to a high percentage of oversized particles as determined according to WTM T99, observe the placement of the embankment and document the basis of acceptance. Document daily quantities of untested embankment and locations where untested embankment is placed, and keep a cumulative quantity of untested embankment material for the duration of the project. Include the daily documentation and a summary of the cumulative quantity of untested embankment material with the project records.

B.7.3 Proctor Testing

- (1) When source material changes, obtain a representative sample of the fill material and test according to WTM T99 to determine the maximum dry density and optimum moisture content. Compare the sample results to the curves developed in the soils source study. Additional Proctor tests beyond the testing frequencies listed in B.7.4 may be required if source material changes between sampling intervals. Where apparent material changes occur at a field density/moisture test location, collect Proctor sample from below test location.
- (2) To satisfy minimum testing frequencies in B.7.4.1, obtain a representative sample of the fill material below field density/moisture test location and test according to AASHTO T272. Compare the sample to the curves developed in the soil source study to determine the maximum dry density and optimum moisture. Use the appendix in AASHTO T272 as a guide for this determination.

B.7.4 Testing Frequency

B.7.4.1 Subgrade Embankment:

Area 1: Subgrade Embankment – except within 200 feet of bridge abutments.

Area 2: Subgrade Embankment - within 200 Feet of bridge abutments.

- (1) Perform the required tests at the following frequencies:

Test		Minimum Frequency
Area 1	Field Density and Moisture (WTM T310)	One test per 2,000 cubic yards of fill, one test per 2 feet of vertical fill height, or one test per day, whichever yields the most tests.
Area 2	Field Density and Moisture (WTM T310)	One test per 1,000 cubic yards of fill, one test per 2 feet of vertical fill height, or one test per day, whichever yields the most tests.
Subgrade Embankment	Proctor (WTM T99) or One-Point Proctor (AASHTO T272)	One test per 20,000 cubic yards or portion thereof.

B.7.4.2 Subgrade Cut

- (1) Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (WTM T310)	One test per 1,000 linear feet or one test per cut area, whichever yields the most tests.

B.7.4.3 Subgrade Embankment (Backfill) in Utility and Culvert Pipe Installations and Removal Trenches

- (1) Perform the required tests at the following minimum frequencies per trench run between structures. Test trenches individually at the frequency listed in this section, including utility removal trenches. For example, lateral lines and trunk lines are to be considered individual trenches:

Test	Minimum Frequency
Field Density and Moisture ^(a) (WTM T310)	One test per 100 cubic yards of backfill placed, one test per 2 feet of vertical fill height, or one test per day, whichever yields the most tests.
Proctor (WTM T99) or One-Point Proctor (AASHTO T272)	One test per 3,000 cubic yards cumulative or portion thereof.

- (a) Density tests will be conducted in trenches shallower than 5 ft and in trenches with sloped or benched protective systems in accordance with OSHA guidance (29 CFR 1926, OSHA subpart P).

B.7.4.4 Structure and Granular Backfill at Bridge Abutments and Box Culverts

- (1) Perform the required tests at the following minimum frequencies:

Test	Minimum Frequency
Field Density and Moisture (WTM T310)	One test per 2 feet of vertical backfill height per abutment.
Proctor (WTM T99) or One-Point Proctor (AASHTO T272)	One test per 3,000 cubic yards cumulative or portion thereof.

B.7.4.5 Embankment Enhanced Compaction Area:

- (1) Perform the required tests at the following minimum frequencies but exclude MSE wall backfill:

Test	Minimum Frequency
Field Density and Moisture (WTM T310)	One test per 2,000 cubic yards of fill, one test per 2 feet of vertical fill height, or one test per day, whichever yields the most tests.
Proctor (WTM T99) or One-Point Proctor (AASHTO T272)	One test per 20,000 cubic yards or portion thereof.

B.7.5 Control Limits

B.7.5.1 Field Density

B.7.5.1.1 General Conditions

- (1) The lower control limit for field density measurements is a minimum of 95% of the maximum dry density as determined by WTM T99 for the 4-point running average and a minimum of 92% of the maximum dry density for any individual test.

B.7.5.1.2 Embankment Enhanced Compaction Area

- (1) The lower control limit for field density measurements is a minimum of 98% of the maximum dry density as determined by WTM T99 for the 4-point running average and a minimum of 95% of the maximum dry density for any individual test.

B.7.5.2 Field Moisture Content

- (1) The upper control limit for the field moisture content is 110% of the optimum moisture as determined by WTM T99 for the 4-point running average and a maximum of 115% of the optimum moisture content for any individual test.

- (2) The lower control limit for the field moisture content is 65% of the determined optimum moisture for the 4-point running average. There is no lower control limit for the field moisture of material having less than 5% passing the No. 200 sieve.

B.7.6 Corrective Action

- (1) Notify the engineer if an individual field density test or moisture content test falls outside the individual test control limit. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer, to improve the density of the subgrade material. After corrective action, perform a randomly located retest within the represented quantity to ensure that the material is acceptable.
- (2) Notify the engineer if the field density or field moisture running average point falls below the running average control limit for field density or outside the control limits for field moisture. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer, to improve the quality of the material represented by the running average point. Retest each corrected area at a new random location within its represented quantity and determine a new 4-point running average. If the new running average is not acceptable, perform further corrective actions and retest at new random locations.
 - (2) If the contractor's control data is proven incorrect resulting in a field density or field moisture point falling below the control limit for field density or outside the control limits for field moisture, the subgrade is unacceptable. Employ the methods described above for unacceptable material.

B.8 Department Testing

B.8.1 General

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all verification and independent assurance personnel for the project.
- (2) The department will provide field density and field moisture test results to the contractor on the day of testing. Test results from Proctor split samples will be provided to the contractor within seven business days after the sample has been received by the department.

B.8.2 Verification Testing

- (1) Department verification testing personnel must meet the certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will test field density and field moisture randomly at locations independent of the contractor's QC work. The department will use split samples for verification of Proctor testing. In all cases, the department will conduct the verification tests in a separate laboratory and with separate equipment from the contractor's QC tests.
- (3) The department will perform verification testing as follows:

1. The department will conduct verification tests on Proctor split samples taken by the contractor.

Soil Source Study

- One for each soil type identified in the Soil Source Study

Production/Construction Work

- One Proctor per 5 QC Proctor tests.
 - Other locations chosen by the engineer.
2. The department will conduct at least one verification test for field density and field moisture per 5 QC tests.
 3. The department will conduct at least one verification test for field density and field moisture in failing areas after corrective action is taken.
- (4) Plot verification tests on the contractor's quality control charts as specified in B.6.1. Do not include verification tests in the 4-point running average.

- (5) Compare Proctor QC and QV results. If Proctor QC and QV values are within 4.5 pcf of the maximum dry density, and the optimum moisture content is within 85% to 115% of the mean optimum moisture content, the test results will be deemed satisfactory, and no further action is necessary. Proctor QC and QV values differing by more than 4.5 pcf of the maximum density or outside the range of 85% to 115% of the mean optimum moisture content will be investigated and resolved. Document the findings of the investigation and resolution.
- (6) If verification tests are within specified control limits, no further action is required. If verification tests are not within specified control limits, the engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's sampling and testing procedures and equipment. Both parties will document all investigative work. If the investigation reveals that deficiencies exist, refer to (7).
- (7) Correct all deficiencies. If the contractor does not respond to an engineer request to correct a deficiency or resolve a testing discrepancy, the engineer may suspend grading work until action is taken. Resolve disputes as specified in B.9.

B.9 Dispute Resolution

- (1) Follow 106.3.4.3.5 of the standard specifications.

B.10 Acceptance

- (1) The department will accept the material tested under this provision based on the contractor QC tests unless it is shown through verification testing or the dispute resolution process that the contractor's test results are in error.

C (Vacant)

D (Vacant)

E Payment

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

54. Select Crushed Material.

Replace standard spec 312.2(6) with the following:

The department will assess Select Crushed Material acceptability based primarily on the engineer's visual inspection. The department may require the contractor to sample, test, and report gradation or the fracture results to show conformance of the material. One test per source, production process, or change of production process may be required.

Replace standard spec 312.5(2) with the following:

Payment for Select Crushed Material is full compensation for providing and compacting Select Crushed Material and all work necessary to provide gradation or fracture test results.

SER-321-001 (20160831)

55. QMP HMA Pavement Nuclear Density.

A Description

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

- (1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 except as modified in this special provision.
- (2) Provide and maintain a quality control program defined as all activities and documentation of the following:
 1. Selection of test sites.

2. Testing.
 3. Necessary adjustments in the process.
 4. Process control inspection.
- (3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures.

<https://wisconsindot.gov/rdwy/cmm/cm-08-00.pdf>

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

<http://www.atwoodsystems.com/>

B Materials

B.1 Personnel

- (1) Nuclear gauge owners and personnel using nuclear gauges shall comply with WisDOT requirements according to 460.3.3 and CMM 815.

B.2 Testing

- (1) Conform to WTM T355 and CMM 815 for density testing and gauge monitoring methods. Conform to CMM 815.10.4 for test duration and gauge placement.

B.3 Equipment

B.3.1 General

- (1) Furnish nuclear gauges according to CMM 815.2.
- (2) Furnish nuclear gauges from the department's approved product list at

<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/default.aspx>

B.3.2 Comparison of Nuclear Gauges

B.3.2.1 Comparison of QC and QV Nuclear Gauges

- (1) Compare QC and QV nuclear gauges according to WTM T355.

B.3.2.2 Reference Site Monitoring

- (1) Conduct reference site monitoring for both QC and QV gauges according to WTM T355.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

- (1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 815.10.2.
- (2) Determine required number of tests according to CMM 815.10.2.1.
- (3) Determine random testing locations according to CMM 815.10.3.

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

- (1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 815.10.2.
- (2) Determine required number of tests according to CMM 815.10.2.2.
- (3) Determine random testing locations according to CMM 815.10.3.

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

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

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

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

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

B.4.2.2.2 Width of 5 Feet or Less

- (1) If all subplot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.
- (2) If a subplot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

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

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

B.4.2.4 Documentation

- (1) Document QC density test data as specified in CMM 815. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

- (1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.
- (2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted subplot. Testing in a previously accepted subplot will not be used to recalculate a new lot density.
- (3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full subplot width within the traffic lanes or shoulders.
- (4) Retesting and acceptance of replaced pavement will be as specified in standard spec 105.3.
- (5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the subplot and lot densities.
- (6) If two consecutive subplot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such subplots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

- (1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the subplots and a minimum of one subplot per mix design. The subplots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.
- (2) The QV tester will test each selected subplot using the same testing requirements and frequencies as the QC tester.

- (3) If the verification subplot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.
- (4) If the verification subplot average is more than one percent below the specified target density, compare the QC and QV subplot averages. If the QV subplot average is within 1.0 lb/ft³ of the QC subplot average, use the QC tests for acceptance.
- (5) If the first QV/QC subplot average comparison shows a difference of more than 1.0 lb/ft³ each tester will perform an additional set of tests within that subplot. Combine the additional tests with the original set of tests to compute a new subplot average for each tester. If the new QV and QC subplot averages compare to within 1.0 lb/ft³, use the original QC tests for acceptance.
- (6) If the QV and QC subplot averages differ by more than 1.0 lb/ft³ after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

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

B.6 Dispute Resolution

- (1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge comparison according to B.3.2.1.
- (2) The testers may use comparison monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.
- (3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV subplot density test results or retesting of the subplot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.
- (4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

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

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

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

E.2 Disincentive for HMA Pavement Density

- (1) The department will administer density disincentives as specified in standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

- (1) The department will administer density incentives as specified in standard spec 460.5.2.3.
stp-460-020 (20230629)

56. Asphaltic Surface Temporary.

Provide temporary asphalt meeting layer requirements shown in the plans. A 12.5 mm aggregate is required for upper layers and 19 mm aggregate for lower layers of full depth widening. A 12.5 mm aggregate is required for 2.5-Inch mill and temporary resurface of I-94.

Replace standard spec 465.2 (1) with the following:

Under the Asphaltic Surface Temporary bid item; submit a mix design. Furnish asphaltic mixture meeting the requirements specified for HT under standard spec 460.2; except the engineer will not require the contractor to conform to the quality management program (QMP) specified under standard spec 460.2.8.

~~sef 465-005 (20170310)~~

57. Coloring Concrete Custom, Item 405.0200.

This special provision describes coloring concrete Milwaukee dark gray for incorporation full-depth in work constructed under other contract bid items. Conform to standard spec 405 as modified in this special provision.

Replace standard spec 405.2.1.1(1) with the following:

- (1) Integrally color concrete using non-fading pigments conforming to ASTM C979.
 - For Milwaukee dark gray: use synthetic mineral-oxide pigments or colored water-reducing admixtures, color stable, free of carbon black, non-fading, and resistant to lime and other alkalis pigments, at a loading by weight of total cementitious material in the mix in accordance to manufacturer recommendations. Match the concrete color in reasonably close conformance with Milwaukee dark gray color, which is similar to Federal Standard 595 - FS 26008.

Replace standard spec 405.2.1.1(3) with the following:

- (3) The department will accept the color based on comparison to color samples available for viewing along East Wells Street between North Broadway and North Van Buren Street in the City of Milwaukee.

stp-405-020 (20190618)

58. Concrete Pavement Approach Slab.

When adjacent to HPC Pavement 12-Inch, Concrete Pavement Approach Slabs on I-94 E-W will require high performance dowel bars conforming to the Special Provision HPC Pavement 12-Inch.

~~sef 415-010 (20170310)~~

59. Concrete Curing Materials.

Supplement standard spec 501.2.8 with the following:

- (5) The liquid curing compound shall have a color equal to or lighter than Gardner Color Standard No. 2 when tested according to ASTM C 1315 8.7.6 Yellowing Resistance.

60. Concrete Masonry Structures.

A Description

A.1 General

Work under this item applies to cast in place concrete for structures. Conform to standard specs 501, 502, 504, 701, 710 and 715 and as modified in this special provision. Apply this special provision to all cast in place concrete placed under the following bid items:

- 502.0100 Concrete Masonry Bridges
- 504.0500 Concrete Masonry Retaining Walls

A.2 Concrete Masonry Bridges

Work under the item Concrete Masonry Bridges applies to cast in place concrete for bridge substructures, which includes abutments and piers. Cast in place concrete for bridge superstructures, which includes bridge decks, raised medians, sidewalks, and parapets, is covered under the special provision item HPC Masonry Structures.

B (Vacant)

C Construction

Replace standard spec 501.3.8.2 with the following:

The contractor is responsible for the quality of the concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions taken to control concrete temperature if the concrete temperature at the point of placement exceeds 80 F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

If the concrete temperature at the point of placement exceeds 90 F, do not place concrete under the following bid items:

- Concrete Masonry Bridges
- Concrete Masonry Retaining Walls
- Concrete Masonry Soldier Pile Footings

Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80 F. If project information is not available, obtain information from similar mixes placed for other nearby work.

Any additive or action taken to control the temperature of the Concrete Masonry to within the limits of this special provision, excluding the addition of ice to the concrete mix, is considered incidental to the work and will not be measured or paid for separately.

Add the following to standard spec 501.3 as subsection ten:

501.3.10 Slip Forming

Do not place concrete by the slip-form method for any item covered by this special provision.

D (Vacant)

E (Vacant)

sef-504-005 (20180104)

61. Concrete Masonry Ancillary Structures.

Add the following to standard spec 531.3.3:

- (7) For drilled foundations, no more than 3 inches of standing water is allowed in the bottom of the drilled excavation within a timeframe acceptable to the engineer before placing concrete masonry in the excavation.

Replace standard spec 531.5(2) with the following:

- (2) Payment for Concrete Masonry Ancillary Structures Type NS is full compensation for providing, transporting, placing and curing the concrete for non-standard sign structure foundations; for anchor rod assemblies; for embedded conduit and electrical components if required; for placing post stubs or anchor bolts, for pumping of ground water seepage if applicable; for cleaning-up, repairing damage, and for disposing of excavation and surplus materials. The department will pay separately for excavating and backfilling drilled shafts under the Drilling Shafts bid items.

Replace standard spec 531.5(5) with the following:

- (5) Payment for the Foundation bid items is full compensation for providing, transporting, placing and curing the concrete for foundations; for anchor rod assemblies; for reinforcing steel; for embedded conduit and electrical components; for placing post stubs or anchor bolts, for pumping of ground water seepage if applicable; for cleaning-up, repairing damage, and for disposing of excavation and surplus materials. The department will pay separately for excavating and backfilling drilled shafts under the Drilling Shafts bid items.

62. Concrete Sidewalk and Tactile Directional Indicators.

Where Tactile Directional Indicators will be placed in the concrete sidewalk, review the tactile directional indicator layout with the planned joint spacing and locations with the engineer prior to constructing the sidewalk and placing the plates.

At each end of a run of tactile directional indicators, use a maximum spacing of 6-inches between the end of the plate and curbs, detectable warning fields, or other features.

Locate the transverse concrete sidewalk contraction joints so they are at the edge of the tactile directional indicators. Do not cut joints through the tactile directional indicators.

Do not apply curing compound to the tactile directional indicators.

63. Concrete Sidewalk for Bike Lanes.

For concrete sidewalk constructed for bike lanes, construct the work in accordance to standard spec 602, except saw the contraction joints in accordance to standard spec 602.3.2.5.1(3)3. Confirm the sawcut depth and spacing with the engineer prior to placing the concrete sidewalk.

64. Concrete Barrier.

Add the following to standard spec 603.5.2(3):

The department will pay separately for associated work as follows:

- 42-Inch and 56-Inch single slope concrete barrier end anchors, under Concrete Barrier Type S42 End Anchor, Item SPV.0060.0112, and Concrete Barrier Type S56 End Anchor, Item SPV.0060.0113.

65. Storm Sewer.

Supplement standard spec 204.5.2 with the following:

QMP sampling, testing and documentation if applicable is incidental to removing storm sewer bid item and no separate payment will be made.

Supplement standard spec 608.2 with the following:

Two weeks prior to start of storm sewer construction, provide a shoring design and installation sequence for each location where shoring is to be used. Have a professional engineer, currently registered in the State of Wisconsin and knowledgeable of the specific site conditions and requirements, verify the adequacy of the design. Submit one electronic copy in portable document format of each shoring design, signed and sealed by the same professional engineer verifying the design, to the engineer for incorporation into the permanent project record.

Supplement standard spec 608.3.1.1 with the following:

Incorporate excavated material in the work to the extent practicable. Use materials with suitable engineering properties for embankment, in conformance to QMP Subgrade.

Dispose of surplus or unsuitable material as specified in standard spec 205.3.12.

Supplement standard spec 608.3.3 with the following:

Place rubber gasket joints over the spigot end or tongue of the entering pipe for all round storm sewer pipes horizontal and elliptical pipes with a rise less than or equal to 40-inches. Clean the gasket and the ends of the pipe from sand and gravel. If the gasket provided is neither factory lubricated nor self-lubricating, lubricate the outside of the gasket and the inside of the bell or groove of the last pipe with an engineer - approved vegetable lubricant immediately before making the joint. Place the spigot or tongue of the pipe being laid with the gasket in place into the bell or groove end of the previously laid pipe. Set pipe carefully to line and grade and push or jack home. The engineer may order the use of a jack or "come-along" if deemed necessary to ensure that the joints are completely tight.

For horizontal elliptical pipe rise greater than 40-inches use mastic joint compound. Where factory lubricated rubber gasket joints are not available, clean the ends of the pipe from sand and gravel. Place engineer-approved mastic joint sealer on both the spigot and bell ends of the pipe being laid. Apply additional mastic around each joint exterior and wrap each joint with Geotextile Fabric Type DF, Schedule A, laid flat meeting requirements of standard spec 645. Wrap each joint so that the Geotextile Fabric overlaps each joint a distance of approximately $\frac{1}{2}$ of the pipe diameter.

Replace standard spec 608.5(2) with the following:

Payment for the Storm Sewer Pipe bid items is full compensation for providing all materials, including all special Y's, mitered sections, elbows and connections required; for all submittals; for excavating and wasting excess material, except rock excavation; for providing rubber gaskets; Lubrication of rubber gaskets; mastic joint sealer; for supporting utilities in storm sewer trench; for shoring design, providing a signed and sealed copy of the design; for installation, monitoring, and removal of shoring; for forming foundation; for laying pipe; for sealing joints and making connections to new or existing features, bedding material; for backfilling and granular backfill material; for QMP sampling, testing and documentation; for cleaning out; and absent the pertinent contract bid items, for restoring the work site.

66. Catch Basins, Manholes, and Inlets.

A Description

Provide Ductile Iron covers (lids) for Inlet Covers Type V and VV-B conforming to ASTM A536 Grade 80-55-06. If ductile iron frames are not available, provide cast iron frames conforming to AASHTO M105 Class 30.

Supplement standard spec 611.3.1 with the following:

Precast reinforced concrete sections shall be constructed in horizontal courses. The units shall be laid in mortar or sealed with preformed flexible joint sealant or mastic joint sealer. When mastic joint sealer is used, the material shall completely fill the joint after the units have been brought together.

Lifting holes may utilize an integral preformed metal insert. If the lifting hole is open to both the internal and external wall of the structure, plug the lifting hole with either a precast concrete plug mortared in place or with a combination of brick, mortar and/or mastic. The plug shall not project beyond the inside surface after installation. When integral preformed metal lifting inserts are used, their sockets shall be filled with mastic or mortar. Plugging lifting holes is incidental to the storm sewer structure items.

Provide and install manhole steps meeting the requirements of Section 3.5.4 (g) of the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition.

Inlet and outlet pipes shall extend through walls a sufficient distance to allow for connections on the outside and the collar concrete or mortar carefully placed around them to prevent leakage around their outlet surfaces. Unless otherwise shown, the inside ends shall be flush with the inside walls.

Provide and install either a pre-formed integral or poured-in place bench at the structure invert unless Plans identify a sump below the lowest pipe invert. The surface of the bench shall be free of loose material and smooth trowel finished to avoid surface projections impeding flow. Form the bench at the lowest pipe invert. Bench sides shall rise a minimum of half the diameter of the lowest pipe.

Use a mortar for final adjustment of manhole cover. Provide a butyl rubber gasket or butyl rubber rope for joints of precast reinforced concrete manhole sections. Butyl Rubber gasket joint used for manholes conforms to 8.41.6 of the Standard Specifications for Sewer and Water Construction in Wisconsin, latest Edition. Provide non-rocking covers for all drainage structures subject to traffic loading.

Submit shop drawings for all drainage structures. For structures where WisDOT standard detail drawings are not available, provide shop drawings prepared, verified and stamped by a professional engineer currently registered in the State of Wisconsin. Submit one electronic copy of shop drawings in portable document format for engineer's review two weeks before fabrication. Show clearly on shop drawings information for all pipe connections to the structure. The contractor is responsible for all errors of detailing and fabrication. The omission from the shop drawings of any pipe connection shall not relieve contractor of the responsibility of providing such materials, even though the shop drawings may have been reviewed and accepted by the engineer.

Fasten existing and proposed storm sewer structure covers subject to traffic loading according to Fastening Sewer Access Covers spec.

Supplement standard spec 611.3.2 with the following:

Conform to storm sewer concrete collar detail for storm sewer pipes to structure connections as the plans show.

Supplement standard spec 611.3.3 with the following:

Use monolithic concrete shimming as the plans show for final adjustment of drainage structures located within the freeway concrete pavement, concrete shoulders, concrete curb & gutter and concrete barrier wall. If the adjustment is less than 4-inches, the engineer may choose to direct the contractor to use grade rings for adjustments for storm sewer structures outside the freeway concrete pavement and at other non-freeway locations.

All associated masonry work, including but not limited to adjustment ring installation, false bottoms, pipe connections, and other structural appurtenances shall be tuckpointed and back plastered with mortar conforming to 518.2 upon completion and as directed by the Engineer. When tuckpointing and back plastering work is performed and completed at temperatures below 32-degrees F, keep the mortar moist at a temperature above 32-degrees F and provide protection from the elements to prevent freezing for a period of not less than 48 hours.

All catch basins, manholes, inlets, and similar structures newly constructed, adjusted or reconstructed under the contract, shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be free from such accumulations at the time of final acceptance.

Supplement standard spec 611.3.6.2 with the following:

Place a manufacturer recommended anti-seize compound on the bolt threads prior to installing. Remove bolts after proposed paving is finished, prior to opening roadway for final traffic configuration, or as directed by the engineer.

Supplement standard spec 611.3.7 with the following:

Construct height adjustments of 4-inches or more with concrete grade rings. Never use grade rings less than 2-inches thick. *HDPE or rubber rings are not permitted.*

Replace standard spec 611.5.2 (1) with the following:

Payment for Catch Basins, Manholes, and Inlets bid items is full compensation for providing all submittals; materials, including all masonry, for mortar adjustments and monolithic concrete shimming; adjusting rings; conduit and sewer connections, plugging lifting holes, steps, and other fittings; for providing and installing butyl rubber joints; for furnishing backfill, backfilling; all excavating, disposing of surplus material, and for cleaning out and restoring the work site; except that the department will pay for covers, including frames, grates and lids separately.

Cost of non-rocking covers for all drainage structures subject to traffic loading is incidental to new cover on proposed structure or reconstructing/adjusting manholes or inlets on existing structure.

Fastening sewer access covers and removing performed joint sealant as the engineer directs are paid under separate bid items.

Replace standard spec 611.5.4 with the following:

Payment for Inlet Covers VV-B also includes full compensation for providing required materials, including bolts; for installing the bolts; and for removing and disposing of the bolts when no longer required.

67. Adjusting Storm Sewer Structures.

Add the following text to standard spec 611.3.1:

Remove covers and frames prior to milling. Cover openings with a Cover Plates Temporary of sufficient thickness to carry traffic and at a depth to accommodate the milling operations. Backfill excavated areas with an asphalt surface mix to an elevation that will match the adjacent pavement. Cover Plates Temporary will paid as separate contract bid item.

Add the following text to standard spec 611.3.7:

The replacement of Grade A concrete when adjusting manhole covers in areas of bituminous resurfacing shall be to the top of the existing concrete base as shown on the detail for adjusting manhole covers. Use construction methods that conform to the requirements set forth in standard spec 611.3.3.

Add the following text to standard spec 611.5:

Removal and replacement of concrete pavement to accomplish the work shall be incidental to the cost of work. Removal and replacement of concrete curb and gutter will be paid for under items Removing Curb and Gutter and Concrete Curb and Gutter, 24-inch.

SER-611-001 (20161216)

68. Right-of-Way Fencing.

Remove existing right-of-way chain link fencing, as shown in the plans, to allow for construction operations. A quantity of the Removing Fence, Item 204.0170 has been included in the contract for this purpose. Install new chain link fence within 30 calendar days of the removal of the existing fence. Provide temporary connections between existing and proposed fencing as needed to maintain continuous right-of-way fencing at all times. A quantity of the Fence Safety item has been included in the contract for this purpose. Where buried facilities or subsurface conditions do not permit driving posts for the safety fence, support posts by other means that will provide stability comparable to driven posts.

At no time leave a site where the fencing is inadequate to protect the general public.

69. Topsoil.

Replace 625.2 (1) with the following:

- (1) Topsoil consists of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life, and ensure the topsoil consists of the following:

Topsoil Requirements	Minimum Range	Maximum Range
pH	6.0	8.0
Organic Matter*	5%	20%
Clay	5%	30%
Silt	10%	70%
Sand	10%	70%

*Organic matter determined by loss on ignition test of samples oven dried to constant weight at 212 F (100 C).

Add the following to standard spec 625.2:

- (3) Furnish material that is free from large roots, sticks, weeds, brush, stones, litter, and waste products.
- (4) Do not furnish surface soils from ditch bottoms, drained ponds, and eroded areas, or soils which are supporting growth of NR 40 listed plants and noxious weeds or other undesirable vegetation.

Replace 625.3.3 (3) with the following:

- (3) Ensure that for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.

~~SER-625-001 (20221007)~~

70. Soil Stabilizer Type B.

Replace standard spec 628.3.12.3(1) with the following:

- (1) Apply soil stabilizer with conventional hydraulic seeding equipment at the manufacturer's recommended rate unless the engineer directs otherwise.

71. Fertilizer Type B.

Replace 629.2.1.3 with the following:

- (1) Fertilizer Type B Special will conform to the following requirements:
 - Nitrogen, not less than 24% with 6% percent of the nitrogen being slow release.
 - Phosphorus, not less than 15%
 - Potash, not less than 9%

- (2) The total nitrogen, phosphorus, and potash shall equal at least 48 percent.

Replace 629.3.1.3 with the following:

- (1) Apply fertilizer containing at least 48 percent total nitrogen, phosphorus, and potash at 5 pounds per 1,000 square feet unless otherwise directed by the engineer. For Fertilizer Type B Special that contains a different percentage of components, determine the new application rate by multiplying the specified rate by a dimensionless conversion factor determined as follows:

$$\text{Conversion Factor} = 48 / \text{New Percentage of Components}$$

Replace 629.4(1):

- (1) The department will measure Fertilizer Type B, Special by the hundred pounds (CWT) acceptably completed, measured based on the application rate of 5 pounds per 1,000 square feet. The department will not measure fertilizer used for the bid items under 632. The measured quantity equals the number of hundred-weight (CWT) of material determined by multiplying the actual number of cwt. of material incorporated by the ratio of the actual percentage of fertilizer components used to 48 percent for Fertilizer Type B Special.

SER-629-001 (20230109)

72. Signs Type I and II.

Furnish and install aluminum vertical support beams for type I and II signs on overhead sign supports incidental to sign. For type I and II signs on sign bridges use aluminum vertical support beams noted above incidental to sign.

Supplement standard spec 637.2.4 with the following:

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

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

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

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

Replace standard spec 637.3.3.2(2) with the following:

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

Supplement standard spec 637.3.3.3(3) with the following:

Furnish and install new aluminum vertical sign support beams on each sign and new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss for Type I or Type II Signs and Type I and II signs on overhead sign supports incidental to sign. See SDD's A4-7a and A4-7b for installation requirements

Furnish and install mounting brackets per approved product list for type II signs (overhead street name signs) on signal monotube arms incidental to sign.

Add the following to standard spec 532.3.2.1:

Submit shop drawings for sign bridges and overhead sign supports to SE Region Traffic Operations Engineer, Karen Martens and Tom Heydel and Bureau of Structures, Fabrication Library. Along with Shop drawings, DT2326 is required to be filled out and submitted with the shop drawings. DT 2334 is also required for status report document for sign structures. Follow specification 105.2.2 for Fabrication Library requirements

DT 2321 (Anchor Rod installation form) and DT 2322 (ancillary Structures Pre-installation verification test of high strength bolts form) shall be filled out as part of installation and fabrication.

For type II signs to be mounted on local roads (posts designated as Round Aluminum Sign Post System in Soft Surface or Round Aluminum Sign Post System in Concrete Surface), furnish and install signs according to the plans and standard spec 637, except as follows:

Provide all necessary sign mounting hardware as shown in the detail drawings which includes but is not limited to 5/16" x 1 1/4" Stainless Steel Fender Washers, 5/16"-18 x 3/4" Stainless Steel Hex Head Bolt, 201 Stainless Steel Banding 3/4" x 0.20, Stainless Steel Flared Leg Sign Mount Bracket for 3/4" banding, 201 Stainless Steel Wing Seal (buckle) for 3/4" banding and one- or two-sided sign mounting Z-brackets that fit 2 3/8 inch post or approved equal.

Affix the installation date sticker on back of sign in lower right corner. Stickers will be provided at pre-construction meeting or by the Inspector.

Record the location, type, and installation date of the signage using the provided Sign Installation Log (L-101).

73. Covering Signs.

Replace standard spec 643.2.3.3(2) with the following:

- (2) Ensure that covers are flat black, blank, and opaque.

Add the following to standard spec 643.3.4.1 as paragraph four:

- (4) If multiple messages on a single sign are required to be covered, minimize the number of holes created by covering the sign with a single rectangular shaped covering. Multiple coverings on a single sign are only permissible where necessary to avoid covering necessary content or as directed by the engineer. Submit sign covering plans to the engineer for single signs requiring multiple coverings 3 days before performing work. Obtain engineer approval before covering signs. Remove sign coverings before placing fixed messages signs unless otherwise directed by the engineer.

sef-643-005 (20180104)

74. Nighttime Work Lighting-Stationary.

A Description

This special provision describes furnishing portable lighting as necessary to complete nighttime work. Nighttime operations consist of work specifically scheduled to occur after sunset and before sunrise.

B (Vacant)

C Construction

C.1 General

This provision shall apply when providing, maintaining, moving, and removing portable light towers and equipment-mounted lighting fixtures for nighttime stationary work operations, for the duration of nighttime work on the contract.

At least 14 days before the nighttime work, furnish a lighting plan to the engineer for review and acceptance. Address the following in the plan:

1. Layout, including location of portable lighting – lateral placement, height, and spacing. Clearly show on the layout the location of all lights necessary for every aspect of work to be done at night.
2. Specifications, brochures, and technical data of all lighting equipment to be used.
3. The details on how the luminaires will be attached.
4. Electrical power source information.
5. Details on the louvers, shields, or methods to be employed to reduce glare.
6. Lighting calculations. Provide illumination with average to minimum uniformity ratio of 5:1 or less throughout the work area.
7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

If portable generators are used as a power source, furnish adequate power to operate all required lighting equipment without any interruption during the nighttime work. Provide wiring that is weatherproof and installed according to local, state, federal (NECA and OSHA) requirements. Equip all power sources with a ground-fault circuit interrupter to prevent electrical shock.

C.3 Light Level and Uniformity

Position (spacing and mounting height) the luminaires to provide illumination with an average to minimum uniformity ratio of 5:1 or less throughout the work area.

Illuminate the area as necessary to incorporate construction vehicles, equipment, and personnel activities.

C.4 Glare Control

Design, install, and operate all lighting supplied under these specifications to minimize or avoid glare that interferes with all traffic on the roadway or that causes annoyance or discomfort for properties adjoining the roadway. Locate, aim, and adjust the luminaires to provide the adequate level of illumination and the specified uniformity in the work area without the creation of objectionable glare.

Provide louvers, shields, or visors, as needed, to reduce any objectionable levels of glare. As a minimum, ensure the following requirements are met to avoid objectionable glare on the roadways open to traffic in either direction or for adjoining properties:

1. Aim tower-mounted luminaires, either parallel or perpendicular to the roadway, so as to minimize light aimed toward approaching traffic.
2. Aim all luminaires such that the center of beam axis is no greater than 60 degrees above vertical (straight down).

If lighting does not meet above-mentioned criteria, adjust the lighting within 24 hours.

C.5 Continuous Operation

Provide and have available sufficient fuel, spare lamps, generators, and qualified personnel to ensure that the lights will operate continuously during nighttime operation. In the event of any failure of the lighting system, discontinue the operation until the adequate level of illumination is restored. Move and remove lighting as necessary.

D (Vacant)

E Payment

Costs for furnishing a lighting plan, and for providing, maintaining, moving, and removing portable lighting, tower mounted lighting, and equipment-mounted lighting required under this special provision are incidental to the contract.

stp-643-010 (20100709)

75. Removing Marking.

Add the following to standard spec 646.3.1.4:

- (5) On pavements not scheduled for removal under this project, remove markings using air blasting, water blasting, or a combination of thereof. Do not use grinding on these pavements.

76. Field Facilities.

Replace section 642 of the standard specifications with the following:

The department has procured its own Field Facilities located at 22 S 70th St, Milwaukee, Wisconsin 53214.

77. General Requirements for Electrical Work.

Notice to Contractor – Traffic Signal Equipment Lead Time. Lead time for traffic signal equipment specified for this project has been up to 30 months. Order equipment as soon as possible to assure the equipment is procured in a timely fashion and, therefore, installed, inspected, and ready for turn-on at the required date.

Notice to Contractor – Temporary Traffic Signal Electrical Service. A temporary electrical service will be needed for the temporary traffic signal at the intersection of W Kearney & S 70th St. WisDOT will request the electrical service. Coordinate with WisDOT as early as possible to begin process and avoid delays.

Notice to Contractor – Traffic Signal Ownership. The City of Milwaukee and WisDOT have ownership of traffic signal systems within this project.

City of Milwaukee owned/operated intersections include:

- W Kearney St & S 70th St (existing signal)
- W O'Connor St & S 70th St (existing signal)
- W Kearney St & S 68th St (existing signal)
- W O'Connor St & S 68th St (existing signal)
- I-94 Ramps & N Hawley Rd (existing signal)
- W Wisconsin Ave & N Hawley Rd (existing and proposed signal)
- W Bluemound Rd & N Hawley Rd (existing and proposed signal)

WisDOT owned/operated intersections include:

- W Kearney St & S 70th St (proposed signal)
- W O'Connor St & S 70th St (proposed signal)
- W Kearney St & S 68th St (proposed signal)
- W O'Connor St & S 68th St (proposed signal)
- I-94 EB Off Ramp & S Hawley Rd (proposed signal)
- I-94 WB On Ramp & N Hawley Rd (proposed signal)

The existing traffic signals at the 70th St, 68th St, and Hawley Rd interchanges are owned and operated by the City of Milwaukee. The proposed traffic signals at these locations will be owned and operated by the Department. The City of Milwaukee will maintain the existing traffic signals until they are deenergized and removed. WisDOT will assume ownership of the permanent traffic signals upon acceptance of the work. The temporary traffic signal will be contractor owned.

Add the following to standard specification sections 651, 652, 653, 654, 655, 656, 657 and 659.

All the work necessary to comply with revisions to standards specifications mentioned herewith shall be incidental to associated pay items or to the project including coordination, materials, and labor. No additional payment shall be made to the contractor.

Add the following to standard specification subsection 651.2:

Wisconsin Department of Transportation

Materials indicated to be returned to the department shall be hauled to one of the following two locations:

1. State Electrical Shop at 935 South 60th street, West Allis, as directed by Miss. Bree Johns-Konkol, tel. (414) 266-1170.
2. Milwaukee County Grounds, 10191 West Watertown Plank Road, Wauwatosa, as directed by Mr. Pat Stoetzel, tel. (414) 750-5306

Arrange pickups and deliveries 3 days in advance and during regular business hours (Monday – Thursday 7:00 AM to 3:45 PM).

City of Milwaukee

For material to be furnished by the City of Milwaukee or returned to the City of Milwaukee, schedule deliveries or pick-ups 5 working days in advance so that deliveries or pick-ups occur during normal business hours Monday through Thursday. Notify the City of Milwaukee, Street Lighting at (414) 286-3252

The City of Milwaukee Department of Public Works (DPW) is located at 1540 West Canal Street, Milwaukee.

Add the following to standard specification subsection 651.3.1:

Any circuit that the Contractor does not personally tag out at the disconnect shall be considered live and will be subject to being activated by another person with no notice to the Contractor. Make tagouts with manufactured tags and endorse them with the date and the name of the Contractor. Clear tagouts at the end of the workday. The Department does not employ a load dispatcher and has no intent to do so. Each electrical worker is responsible for their own protection from automatic switching and from switching by others.

The plans show required disconnections of existing lighting circuits, most in the form of abandoning existing underground conductors in place. The Contractor may need to mobilize several times per each existing lighting distribution center. The Contractor is expected to build these costs into the various paid items for removals and installations.

Replace section 651.3.3 (3) of the standard specifications with the following:

- (6) At City owned signals, request a signal inspection of the completed signal installation to the project engineer at least five working days prior to the time of the requested inspection. Notify the City of Milwaukee's Signal Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] to coordinate the inspection. City personnel will perform the inspection. In the event of deficiencies, request a re-inspection when the work is corrected. The engineer will not authorize turn-on until the contractor corrects all deficiencies.
- At WisDOT owned signals, request a signal inspection of the completed signal installation to the project engineer at least five working days prior to the time of the requested inspection. Notify the department's Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The department's Region Electrical personnel will perform the inspection. In the event of deficiencies, request a re-inspection when the work is corrected. The engineer will not authorize turn-on until the contractor corrects all deficiencies.

Append standard spec 651.3.3 with the following:

- (8) The engineer will not grant turn on approval until the contractor corrects all discrepancies. All permanent traffic signals shall be in flash for 3 working days (excluding Holidays, Saturday and Sunday) prior to the implementation of the first timing plan. The mainline (70th St, 68th St, and Hawley Rd) will be flashing

yellow and side streets or exit ramps will be flashing red. The Department shall determine the turn on and turn off date and time. The operation shall coincide with the permanent traffic signal plans. Coordinate with the department's Electrical Field Unit at (414) 266-1170 in scheduling a turn on date.

Add the following to standard specification subsection 651.5:

Work to disconnect and connect conductors will be incidental to the paid measurement of footage.

There will be no measurement for payment for abandoning conductors or removing conductors for scrap.

Work to disconnect and connect electrical system, splice through, or to connect conductors are incidental to the installation or removal of the lighting pay items included in this contract. The Department will not measure conductors or conduits that have been abandoned in place or removed for scrap. The Department will allow, at the Contractor's discretion, for the salvaging of conductors to be abandoned, if possible.

Add the following to standard specification subsection 652.3.1.4:

Support conductors at the top of the vertical raceway or as close as practical if the vertical rise exceeds 40-feet. Provide additional supports as shown; in no case shall the distance between supports exceed that shown in Table 300.19(A) of the Wisconsin State Electric Code.

Add the following to standard specification subsection 653.3(1):

This provision modifies the standard detail drawing for lighting pull boxes and thereby both the standard items and SPV pay item for pull boxes. Lighting pull box covers shall read "LIGHTING".

Add the following to standard specification subsection 655.3.1:

Wet location splices are not anticipated on this project and not shown in the plans. In the event that the Engineer allows wet location splices, make pull box splices with Engineer approved epoxy kit.

At each pull point or access point, indicate the line side bundle with a lap of blue tape. Mark conductors in poles and in pull boxes or other terminations with a 6-Inch long blue tape wrap to identify the set of conductors emanating from distribution center (feeder).

Add the following to standard specification subsection 655.3.7(4):

Where two or more wire networks pass through a pull point, tag each circuit network (i.e. A/B/N and C/D/N) with approved all-weather tags.

Add the following to standard specification subsection 657.2:

Non-breakaway poles (mounted on structures, concrete bases or behind noise wall barriers without transformer base), as well as at stems of sign bridges containing electrical wires are to be double nutted and Contractor shall install galvanized rat screen enclosing the bottom of pole area; extra nuts and screen incidental.

Add the following to standard specification subsections 657.3.1 and 657.3.5:

Corrosion protection measures described in subsections 657.3.1 and 657.3.5 of the standard specifications are invoked for breakaway transformer bases and aluminum light poles. The Contractor shall avoid contact of dissimilar metals in erecting the pole on its foundation and/or breakaway device. Any concern of trapped moisture or potential corrosion cell shall be resolved to the satisfaction of the Engineer.

Manufacturer's Warranty for LED luminaires: The manufacturer shall warrant to the Department that each complete luminaire (consisting of the housing, optical assembly, LED drivers, surge protection and wiring) will be free from defects in material and workmanship for ten (10) years from the date that the luminaire are put into service. Luminaires shall be installed within one year of manufacture.

If any luminaires fail to meet the above warranty, the Department shall provide the manufacturer with a written notice of any defect within thirty (30) days after discovery of the defect. The manufacturer shall provide all materials, luminaires, replacement component parts, labor and all incidentals necessary to restore the luminaire to a fully operational, installed condition.

Submittal Requirements for LED luminaires: Considering the rapid advancement in LED technology, the overall project construction and duration of construction, within 10 calendar days after contract execution, the Contractor is responsible to coordinate the lead time for LED luminaires purchase and installation schedule for LED luminaires with the Engineer and the Department's Lighting Engineer, Eric

Perea, at eric.perea@dot.wi.gov or at (414) 750-0935 prior to order LED luminaires. The LED luminaires purchasing may be done during later stage of construction as directed by the Department which shall not delay the construction.

The contractor shall also coordinate the lead time for LED luminaires purchase and installation schedule with City of Milwaukee Neal Karweik at (414) 286-5943 or at (414) 708-4245 prior to ordering LED luminaires. The LED luminaires purchasing may be done during later stages of construction as directed by the department but shall not delay the construction.

Add the following to standard specification subsection 659.3:

Provide and install / replace Plaques Light Pole on all poles located in the median at a mounting height of 6-inch above the highest adjacent safety barrier or obstruction.

Add the following to standard specification 659.3.1:

Contractor shall be responsible to provide adequate temporary roadway lighting during all the construction stages not shown on the temporary lighting plans, but which are necessitated by field conditions or by any construction phasing changes. Installation of temporary lighting not shown on temporary lighting plans shall be paid according to appropriate pay items included in this contract. Contractor shall be responsible to submit a redline markup plans for any additional temporary lighting to the Engineer for approval prior to installation.

78. Electrical Conduit.

Replace section 652. 5 (2) of the standard specifications with the following:

- (2) Payment for Conduit Rigid Metallic, Conduit Rigid Nonmetallic, Conduit Reinforced Thermosetting Resin, and Conduit Special bid items is full compensation for providing the conduit, conduit bodies, and fittings; for providing all conduit hangers, clips, attachments, and fittings used to support conduit on structures; for pull wires or ropes; for expansion fittings and caps; for making necessary connections into existing pull box, manhole, junction box or communication vault; for excavating, bedding, and backfilling, including any sand, concrete, or other required materials; for disposing of surplus materials; and for making inspections.

Replace section 652.5 (5) of the standard specifications with the following:

- (5) Payment for Conduit Loop Detector is full compensation for providing all materials, including conduit, compacted backfill, surface sealer if required, pull wire if required, condulets, conduit fittings, and for making necessary connections into existing pull box, manhole, junction box or communication vault.

79. Signal Housings.

Replace 658.2(4) of the standard specifications with the following:

- (4) For pedestrian signal faces: furnish polycarbonate resin housings, doors, and visors. Use yellow, Federal Standard 595 - FS13538, housings and dull black door faces and visors. For 16-inch heads, mount a z-crate visor and gasket to the door with stainless steel tabs. Drill the housing for top and bottom pipe mounting with the ability to rotate 270 degrees on the poly mounting brackets.

80. Traffic Signal Faces & Pedestrian Signal Face 16-Inch.

Append 658.3(5) of the standard specifications with the following:

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

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

Standard spec 106.2 – Supply Source and Quality

Add the following to standard spec 106.2:

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

Department-Furnished Items
6-Count Fiber Optic Cable
72-Count Fiber Optic Cable
Fiber Optic Splice Enclosures
Fiber Optic Termination Panels
Microwave Vehicle Detectors
Cellular Modems
50-Foot Camera Poles
CCTV Cameras
Overhead Dynamic Message Signs
Ethernet Switches
Fiber Optic SFPs
ITS Field Cabinets
Pole Mounted Cabinets
Solar Power Systems

Pick-up small department-furnished equipment, such as communications devices, cameras, and controllers, from the department's Traffic Management Center (TMC), 433 W. St. Paul Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal state office hours. Contact the Statewide ITS Engineer, Dean Beekman at (414) 227-2154 to coordinate pick-up of equipment.

Pick up cabinets and solar power systems, including batteries, at the department's TMC equipment storage facility at 633 W. Wisconsin Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal state office hours. Contact Dean Beekman to coordinate pick-up of equipment.

Large department-furnished equipment, such as camera poles and dynamic message signs will be delivered by the supplier to a contractor-controlled site identified by the contractor. Delivery will not necessarily be in a "just in time" manner. Store the equipment until field installation.

Within two weeks of Notice to Proceed, contact the engineer and Dean Beekman. Provide the address and contact information for the contractor-controlled location for delivery and the desired delivery schedule for the large state-furnished materials.

Transportation of the equipment between the electric shop and the field or interim locations are the responsibility of the contractor.

Standard spec 106.3 – Approval of Materials

Add the following to standard spec 106.3:

Design/Shop Drawings

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

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

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

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

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

stp-670-005 (20230629)

82. Intelligent Transportation Systems - General Requirements.

A Description

A.1 General

This special provision describes providing elements for an Intelligent Transportation System (ITS) in or along the existing roadway as the plans show.

Unusual aspects of this project include:

1. The project includes working on cables and equipment that are carrying data between roadside equipment and the department's Traffic Management Center (TMC). Interruption of this service is not expected to perform this work. If an interruption is determined necessary, it must be done on a weekend, and must be done in a way that minimizes communication outages for the existing equipment. Notify the department's TMC at least 48 hours in advance of the planned interruption.
2. The department will furnish some of the equipment to be installed. Make a reasonable effort to discover defects in that equipment before installing it.

A.2 Surge Protection

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

B Materials

B.1 General

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

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

B.2 Outdoor Equipment

All conductive connectors, pins (except pins connected by soldering), and socket contacts shall be gold plated. Acrylic conformal coating shall protect each circuit board side that has conductive traces. Except

for integrated circuits containing custom firmware, all components shall be soldered to the printed circuit board.

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

B.3 Custom Equipment

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

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

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

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

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

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

B.4 Environmental Conditions

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

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
 - 4.1. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.
 - 4.2. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.
 - 4.3. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.
5. **Temperature and Humidity:**
 - 5.1. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
 - 5.2. **Equipment in Controlled Environments:** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

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

B.6 Surge Protection

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

1. The protectors shall suppress a peak surge current of up to 10k amps.
2. The protectors shall have a response time less than one nanosecond.
3. The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage and clamp the voltage between each wire and ground at 50 volts.
4. The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
5. The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
6. There shall be no more than two pairs per protector.
7. It shall be possible to replace the protector without using tools.

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

C Construction

C.1 Thread Protection

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

C.2 Cable Installation

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

C.3 Wiring

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

Permanently label and key connectors to preclude improper connection. Obtain prior engineer approval for labeling methods before use.

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

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

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

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

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

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

C.4 System Operations

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

C.5 Surge Protection

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

D Measurement

The department will not measure the work performed under this special provision.

E Payment

The department will pay for the work performed under this special provision under the contract ITS bid items.

stp-670-010 (20230629)

83. Communication Systems.

Replace standard spec 678.2.1(1) with the following:

- (1) The department will furnish fiber optic cable, splice enclosures, Ethernet switches, wireless antennas, and cellular modems.

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

Replace standard spec 678.5(6) with the following:

- (6) Payment for Install Ethernet Switches and Install Wireless Antennas is full compensation for transporting and installing the devices; for cables and connectors; and connecting the devices.

84. Removing Ancillary Structure S-40-002, Item 204.0246.4001; Removing Ancillary Structure S-40-443, Item 204.0246.4002; Removing Ancillary Structure S-40-151, Item 204.0246.4003; Removing Ancillary Structure S-40-444, Item 204.0246.4004; Removing Ancillary Structure S-40-994, Item 204.0246.4005; Removing Ancillary Structure S-40-313, Item 204.0246.4006.

Replace standard spec 204.3.2.4(1) with the following:

Remove and disassemble overhead sign supports and all attached components and properly dispose of all material off the project site.

Concrete footing and reinforcement shall be removed to 2 feet below final grade or as required to avoid conflict with proposed work. Reinforcement shall be cut off flush. Backfill all holes as specified in Section 203.3.5, except that broken masonry will not be allowed, to the final grade lines or as directed by the engineer.

Removal methods and equipment must avoid disturbance to locations, properties, facilities, and sensitive features identified in the plans. Vibratory hydraulic breakers will not be permitted at these locations.

Replace standard spec 204.4(20) with the following:

The department will measure Removing Ancillary Structure bid items as each individual removal acceptably completed. The department will not deduct the volume of these removals from the volume of the associated roadway, drainage, or structure excavation item.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.0246.4001	Removing Ancillary Structure, S-40-002	EACH
204.0246.4002	Removing Ancillary Structure, S-40-443	EACH
204.0246.4003	Removing Ancillary Structure, S-40-151	EACH
204.0246.4004	Removing Ancillary Structure, S-40-444	EACH
204.0246.4005	Removing Ancillary Structure, S-40-994	EACH
204.0246.4006	Removing Ancillary Structure, S-40-313	EACH

Replace standard spec 204.5.1(3) with the following:

Payment for the Removing Ancillary Structure bid items includes removing the associated concrete footings to 2 feet below final grade, backfilling all holes as provided in 203.3.5, and restoring areas disturbed by construction activities.

85. Removing Advance Flasher Assemblies Type 1, Item 204.0291.S.

A Description

This special provision describes removing advance flasher assemblies from the locations the plans show. Rewire and disconnect wiring in the control cabinet as necessary and properly dispose of materials conforming to standard spec 204.3.1.3.

B Materials

Dispose of all materials resulting from removing the Advance Flasher Assemblies including but not limited to poles, break-a-way bases, signal assemblies, bulbs, and wire off the job site.

C Construction

Do not remove existing advance flasher assemblies until proper disconnects and wiring changes in the controller cabinet have been made.

Where an existing advance flasher assembly is mounted to a light pole, remove all signal hardware including wire, conduit, signal assemblies and mounts. Where existing conduit has been installed under concrete sidewalk or roadway, do not remove buried conduit unless directed otherwise by the engineer or unless it is not possible to install new wire through the existing conduit.

D Measurement

The department will measure Removing Advance Flasher Assemblies (Type) by the unit, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9001.S	Removing Advance Flasher Assemblies, Type 1	EACH

Payment is full compensation for removing advanced flasher assemblies; for rewiring, as necessary; for disconnecting wiring as necessary in the controller cabinet; and for properly disposing of all materials.

Removal of concrete bases and signs associated with this item will be measured and paid for separately.

~~std 204.060 (20170615)~~

86. Abandoning Sewer, Item 204.0291.S.

A Description

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

B Materials

B.1 Cement

Furnish cement meeting the requirements of standard spec 501.2.4.1 for Type I or II Portland Cement or Type IL Portland-Limestone Cement.

B.2 Fly Ash

Furnish Class C or F Fly Ash meeting the requirements of standard spec 501.2.4.2.2.

B.3 Sand

Furnish natural sand meeting the fine aggregate requirements of standard spec 501.2.7.2 and the size requirements of standard spec 501.2.7 except the percent passing the number 200 sieve shall be 0-5 percent by weight.

B.4 Water

Furnish water meeting the requirements of standard spec 501.2.6.

B.5 Mix Design

Use the basic proportions of dry materials per cubic yard of grout as follows:

- Cement 100 pounds
- Fly Ash 400 pounds
- Fine Aggregate 2600 pounds

or an engineer approved equal.

In addition the grout shall conform to the following:

Compressive Strength	ASTM C495	300 psi @ 28 day min
Density	ASTM C495 (no oven drying)	50 pcf min
Shrinkage	ASTM C157	1% by volume
Flow	ASTM C939	35 sec max

Air entraining and chemical admixtures to control fluidity of the grout are allowable. Ten days before placement, furnish to the engineer a design mix detailing all components and their proportions in the mix.

B.6 Cellular Grout

Alternatively, the contractor may use, or if the manufacturer recommends, an engineer-approved commercial cellular concrete grout conforming to the following:

Cement	ASTM C150/ ASTM C595	Type I or II/Type IL
Density	ASTM C495 (no oven drying)	50 pcf min
Compressive Strength	ASTM C495	300 psi @ 28 day min 100 psi in 24 hours
Shrinkage	ASTM C157	1% by volume
Flow	ASTM C939	35 sec max

C Construction

Fill the abandoned sewer pipe with flowable grout 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 (20250108)

87. Removing Advance Flasher Assemblies Type 1, Item 204.9001.S.

A Description

This special provision describes removing advance flasher assemblies from the locations the plans show. Rewire and disconnect wiring in the control cabinet as necessary and properly dispose of materials conforming to standard spec 204.3.1.3.

B Materials

Dispose of all materials resulting from removing the Advance Flasher Assemblies including but not limited to poles, break-a-way bases, signal assemblies, bulbs, and wire off the job site.

C Construction

Do not remove existing advance flasher assemblies until proper disconnects and wiring changes in the controller cabinet have been made.

Where an existing advance flasher assembly is mounted to a light pole, remove all signal hardware including wire, conduit, signal assemblies and mounts. Where existing conduit has been installed under concrete sidewalk or roadway, do not remove buried conduit unless directed otherwise by the engineer or unless it is not possible to install new wire through the existing conduit.

D Measurement

The department will measure Removing Advance Flasher Assemblies (Type) by the unit, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9001.S	Removing Advance Flasher Assemblies, Type 1	EACH

Payment is full compensation for removing advanced flasher assemblies; for rewiring, as necessary; for disconnecting wiring as necessary in the controller cabinet; and for properly disposing of all materials.

Removal of concrete bases and signs associated with this item will be measured and paid for separately.
stp-204-060 (20170615)

88. Removing Steps Railing, Item 204.9060.S.0001.

A Description

This special provision describes removing existing pedestrian railing adjacent to concrete steps conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Steps Railing as each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0001	Removing Steps Railing	EACH
stp-204-025 (20230113)		

89. Removing Sand Barrel Arrays, Item 204.9060.S.0002.

A Description

This special provision describes removing Sand Barrel Arrays conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Sand Barrel Arrays as each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.0002	Removing Sand Barrel Arrays	EACH
stp-204-025 (20230113)		

90. Removing Distribution Center, Item 204.9060.S.1001.

A Description

This special provision describes removing an existing highway lighting distribution center and electrical service pedestal as shown on the plans, in accordance to the pertinent provisions of standard spec 204, and as hereinafter provided.

B (Vacant)

C Construction

Remove the lighting distribution center and the electrical service pedestal and dispose off the project site.

The department will issue the demolition request to WE-Energies. Coordinate with the utility for disconnection of services. The department will pay any fees charged by the utility.

Removal of the concrete base will be paid under a separate bid item.

D Measurement

The department will measure Removing Distribution Center as each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.1001	Removing Distribution Center	EACH

Payment is full compensation for removal of the distribution center, electrical service pedestal, and for utility coordination for the services.

91. Removing Lighting Units, Item 204.9060.S.1002.

A Description

This special provision describes the removing lighting units as shown on the plans, in accordance to the pertinent provisions of standard spec 204, and hereinafter provided. Lamp disposal and concrete base removal shall be paid under separate bid items.

B (Vacant)

C Construction

Remove lighting units consisting of pole, arm, luminaire, lamp, wires, breakaway device, and associated hardware and appurtenances. All removed material shall become the property of the Contractor and be disposed off the project site.

No removal work will be permitted without approval from the Engineer. Removal shall start as soon as the temporary lighting or permanent lighting, as applicable, is placed in approved operation. An inspection and approval by the Engineer will take place before any associated proposed permanent or temporary lighting is approved for operation.

D Measurement

The Department will measure Removing Lighting Units as each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.1002	Removing Lighting Units	EACH

Payment for removing lighting units is full compensation for removing and disposing of pole, arm, luminaire, lamp, wires, breakaway device, and associated hardware and appurtenances.

92. Removing Poles Wood 60-FT, Item 204.9060.S.1003.

A Description

This special provision describes removing 60-FT wood poles as shown on the plans and in accordance with the pertinent provisions of standard spec 204 and hereinafter provided.

B (Vacant)

C Construction

Remove the 60-ft wood poles and all attached conduit and wiring. Backfill all holes as specified in Section 203.3.6, except that broken masonry will not be allowed, to the final grade lines or as directed by the engineer. Dispose of all materials off the project site.

Restore all areas disturbed by construction activities to the final grade lines with topsoil and seed and mulch that meet the requirements of 625, 630, and 627 of the standard specs respectively. Restoration is incidental to this bid item.

D Measurement

The department will measure Removing Poles Wood 60-FT as each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.1003	Removing Poles Wood 60-FT	EACH

Payment is full compensation for removing wood pole, removing all attached components, all excavation and backfill, removal and disposal of material, and restoration of disturbed areas.

93. Removing Poles Wood 60-FT and Floodlights, Item 204.9060.S.1004.

A Description

This special provision describes Removing Poles Wood 60-FT and Floodlights as shown on the plans, in accordance to the pertinent provisions of standard spec 204, and as hereinafter provided.

B (Vacant)

C Construction

Remove mast arm or bracket arm, luminaire, air terminal, conduit, wiring, and junction box. Backfill all holes as specified in Section 203.3.6, except that broken masonry will not be allowed, to the final grade lines or as directed by the engineer.

Dispose of all materials except lamps off the project site. Deliver the lamps to the department under a separate bid item, Lamp, Ballast, LED, Switch Disposal by Contractor.

The department will allow, at the contractor's discretion, to reuse removed wood pole lighting units at new locations. The bid price is to reflect the salvage value of the removed wood pole lighting unit.

Restore all areas disturbed by construction activities to the final grade lines with topsoil and seed and mulch that meet the requirements of 625, 630, and 627 of the standard specs respectively. Restoration is incidental to this bid item.

D Measurement

The department will measure Removing Poles Wood 60-FT and Floodlights as each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.1004	Removing Poles Wood 60-FT and Floodlights	EACH

Payment is full compensation for removing wood poles and floodlights, removing all attached components, all excavation and backfill, disposal of material and restoration of disturbed areas.

94. Removing Underdeck Lighting, Item 204.9060.S.1005.

A Description

This special provision describes removing underdeck lighting in accordance to the pertinent provisions of section 204 of the standard specifications, as shown on the plans, and hereinafter provided.

B (Vacant)

C Construction

No removal work will be permitted without approval from the Engineer. Removal shall start as soon as the temporary lighting or permanent lighting, as applicable, is placed in approved operation. An inspection and approval by the Engineer will take place before any associated proposed permanent or temporary lighting is approved for operation.

Remove underdeck lighting luminaires, attached conduits, wires, attached junction boxes, and associated hardware and appurtenances at locations shown in the plan and as directed by the Engineer. Removed materials shall become the property of the Contractor and shall be disposed off the project site in accordance with pertinent requirements of section 203.3.5 of the standard specs. Lamp disposal shall be paid under a separate bid item.

All embedded conduits, junction boxes and hardware are not included in this bid item.

D Measurement

The department will measure Removing Underdeck Lighting by each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.1005	Removing Underdeck Lighting	EACH

Payment is full compensation for removing and disposing of luminaires, attached conduits, attached junction boxes, and hardware.

- 95. Remove Traffic Signals W O'Connor St & S 70th St, Item 204.9060.S.3001;
Remove Traffic Signals W Kearney St & S 70th St, Item 204.9060.S.3002;
Remove Traffic Signals W O'Connor St & S 68th St, Item 204.9060.S.3003;
Remove Traffic Signals W Kearney St & S 68th St, Item 204.9060.S.3004;
Remove Traffic Signals IH 94 Ramps & N Hawley Rd, Item 204.9060.S.3005.**

A Description

This special provision describes removing existing traffic signals at the intersection of W O'Connor St & S 70th St, W Kearney St & S 70th St, W O'Connor St & S 68th St, W Kearney St & S 68th St, IH 94 Ramps & N Hawley Rd in accordance to the pertinent provisions of section 204 of the standard specifications and as hereinafter provided. Specific removal items are noted in the plans. Removing concrete bases and removing pull boxes are covered under separate removal items.

B (Vacant)

C Construction

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

Notify City of Milwaukee Signals Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] and City of Milwaukee Signals Engineering [(414) 286-3232; 841 N. Broadway Room 920, Milwaukee, WI 53202] at least three (3) working days prior to the removal of the traffic signals equipment. Complete the removal work as soon as possible following shut down of the equipment.

The City of Milwaukee assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the pedestal bases from each pole. Remove the signal heads, countdown timers, microwave detectors, risers, mast arms, luminaires, wiring/cablings, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand-hole doors and all associated hardware remain intact. Remove the traffic signal cabinet from the concrete footing. Dispose of the underground signal cable, and internal wires off the right of way. Store the remaining materials, except the traffic signal LED and switch, in an engineer approved location on the project. The City of Milwaukee will pick up the salvaged materials. Contact City of Milwaukee Signals Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] and City of Milwaukee Signals Engineering [(414) 286-3232; 841 N. Broadway Room 920, Milwaukee, WI 53202] to arrange pick up.

Traffic signal LED and switch disposal shall be paid for as a separate item.

D Measurement

The department will measure Remove Traffic Signals [Location] as each individual intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.3001	Remove Traffic Signals W O'Connor St & S 70th St	EACH
204.9060.S.3002	Remove Traffic Signals W Kearney St & S 70th St	EACH
204.9060.S.3003	Remove Traffic Signals W O'Connor St & S 68th St	EACH
204.9060.S.3004	Remove Traffic Signals W Kearney St & S 68th St	EACH
204.9060.S.3005	Remove Traffic Signals IH 94 Ramps & N Hawley Rd	EACH

Payment is full compensation for removing, disassembling traffic signals, scrapping of some materials, disposing of scrap material, for storing the requested materials for the City of Milwaukee.

**96. Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Onsite Fill, Item 205.0508.S.001;
Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Daily Cover, Item 205.0508.S.0002;
Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Direct Bury, Item 205.0508.S.0003.**

A Description

A.1 General

This special provision describes excavating, loading, hauling, and potentially creosote contaminated soil. Materials will be tested by others and classified as follows:

- Onsite Fill: Clean tested material for reuse as fill within the construction limits.
- Daily Cover: Low-level contaminated material for use as daily cover at a DNR licensed landfill facility.
- Direct Bury: Contaminated soil for off-site treatment and disposal at a DNR licensed landfill facility. Existing creosote treated timber piles shall be considered as direct bury.

Dispose of creosote contaminated soil at a DNR licensed landfill. The closest DNR licensed landfills are:

Landfill Name: Waste Management Metro RDF
Location/Address: 10712 S 124th Street
Franklin, WI 53132
Contact Information: (414)-529-6180

Landfill Name: Waste Management Orchard Ridge
Location/Address: W124 N9355 Boundary Rd
Menomonee Falls, WI 53051
Contact Information: 866-909-4458

Landfill Name: GFL Emerald Park
Location/Address: W124 S10629 South 124th St
Muskego, WI 53150
Contact Information: 414-529-1360

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.

Perform this work according to standard spec 205, with pertinent parts of Chapters NR 100-299 of the Wisconsin Administrative Code, and as supplemented herein. Perform all work necessary to control, handle, and dispose of groundwater and surface water, and all other water that may be encountered within contaminated areas, as required for performance of the work.

A.2 Coordination

Coordinate work under this contract with the environmental consultant retained by the department:

Consultant: TRC Environmental Corporation
Contact: Bryan Bergmann
Address: 6737 W. Washington St., Suite 3460
Phone: 262-901-2126 (office), 262-227-9210 (cell)
E-mail: bbergmann@trccompanies.com

The role of the environmental consultant will be limited to:

- Coordinating soil sample collection and laboratory testing for landfill acceptance.
- Determining the location and limits of contaminated soil to be excavated based on visual observations and field screening of soil that is excavated.
- Identifying clean soils for reuse onsite.
- Identifying low-level contaminated soils to dispose as landfill daily cover.
- Identifying contaminated soils to be hauled to the DNR licensed landfill.
- Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein.
- Obtaining the necessary approvals for disposal of contaminated soil from the DNR licensed landfill.
- Identifying contaminated groundwater to be pumped for treatment and disposal (if dewatering is necessary). Coordinating groundwater characterization and approval for disposal of contaminated water.

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

Identify the DNR licensed landfill that will be used for disposal of contaminated soils and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal of contaminated soils from the landfill.

Coordinate with the environmental consultant to ensure that the environmental consultant can be present during excavation activities in the contaminated areas. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed. Do not transport contaminated soil off-site without prior approval from the environmental consultant.

A.3 Health and Safety Requirements

Supplement standard spec 107.1 with the following:

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

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

Disposal of creosote-contaminated soil at the landfill facility is subject to the facility's safety policies.

B (Vacant)

C Construction

Supplement standard spec 205.3 with the following:

The environmental consultant will periodically examine excavated soil during excavations in the areas of soil contamination from creosote treated timbers within the construction limits.

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated and to ensure that excavations do not extend beyond the minimum required to construct utilities and highway improvements unless expressly directed to do so by the engineer.

Excavate the potentially contaminated soil within five feet of creosote-treated timbers. Stockpile the material within the project limits, pending laboratory results and landfill acceptance. Construct and maintain a temporary stockpile of the material according to NR 718.05(3), including, but not limited to, placement of the contaminated soil/fill material on an impervious surface and covering with impervious material to prevent infiltration of precipitation. Complete test pits near the creosote-treated timbers in lieu of stockpiling.

The environmental consultant will coordinate analytical testing of the contaminated soil for landfill acceptance. Allow up to 10 business days to conduct this testing and issue results. In the event the analytical test results do not indicate contamination is present, the stockpiled material may be considered common excavation and can be managed according to the erosion control implementation plan (ECIP).

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite disposal at a DNR licensed landfill or can be beneficially re-used on-site. The environmental consultant will evaluate excavated soil based on field screening results and visual observations. 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 2,000 cubic yards excavated.

On the basis of the results of such field-screening, the material will be designated for disposal as follows:

- Excavation Common consisting of clean soil and/or clean construction and demolition fill (such as clean soil, boulders, concrete, reinforced concrete, bituminous pavement, bricks, building stone, and unpainted or untreated wood), which under NR 500.08 are exempt materials, or
- Low-level contaminated material for disposal as daily cover at a DNR licensed landfill facility, or
- Contaminated soil for off-site treatment and disposal at the DNR licensed landfill facility, or
- Potentially contaminated for temporary stockpiling and additional characterization prior to disposal.

Some material may require additional characterization prior to disposal. Provide for the temporary stockpiling of up to 3,000 cubic yards of contaminated soil on-site that requires additional characterization. Construct and maintain a temporary stockpile of the material according to NR 718.05(3), including, but not limited to, placement of the contaminated soil/fill material on an impervious surface and covering the stockpile with impervious material to prevent infiltration of precipitation. The department's environmental consultant will collect representative samples of the stockpiled material, laboratory-analyze the samples, and advise the contractor, within 10 business days of the construction of the stockpile, of disposal requirements. The stockpiled material shall be disposed either at the DNR licensed disposal facility by the contractor or, if characterized as hazardous waste, by the department. As an alternative to temporarily stockpiling contaminated soil/fill material that requires additional characterization, the contractor has the option of suspending excavation in those areas where such soil is encountered until such time as characterization is completed.

Directly load and haul soils designated by the environmental consultant for off-site disposal to the DNR licensed landfill. Use loading and hauling practices that are appropriate to prevent any spills or releases of creosote contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site disposal so as not to contain free liquids. Verify that the vehicles used to transport contaminated material are licensed for such activity according to applicable state and federal regulations.

When material is encountered outside the above-identified limits of known contamination that appears to have been impacted with petroleum or chemical products, or when other obvious potentially contaminated materials are encountered or material exhibits characteristics of industrial-type wastes, such as fly ash, foundry sand, and cinders, or when underground storage tanks are encountered, suspend excavation in that area and notify the engineer and the environmental consultant.

Groundwater may be present within the construction limits. Water generated during dewatering operations (if necessary) is expected to be permitted to discharge to the surface except in the contaminated areas. If dewatering of perched groundwater or stormwater is required, allow stormwater to settle for 24 hours after a rain event, after which the water shall be managed as uncontaminated dewatering, unless the environmental consultant has evidence that the water will require treatment and/or off-site disposal.

Contaminated groundwater generated from dewatering activities within the contaminated areas may exceed the surface water discharge limits for petroleum compounds specified in the DNR's "General Permit to Discharge under the Wisconsin Pollutant Discharge Elimination System" for "Contaminated Groundwater from Remedial Action Operations" (WPDES Permit No. WI-0046566-5), Table 3.1.

Pump contaminated water that exceeds surface water discharge limits, as determined by the environmental consultant, into temporary holding tanks provided by others or an alternative discharge point as determined by the environmental consultant, as necessary to complete construction. Allow contaminated water encountered, but not requiring removal as a standard course of construction, to remain in-place and do not manage according to this special provision.

The environmental consultant will coordinate approval of contaminated water hauling and disposal. Only pump contaminated groundwater if the environmental consultant is on-site.

Discharging contaminated groundwater to any location other than that approved and provided by the environmental consultant, is at the contractor's cost. If the contractor chooses alternate discharge, at the contractor's cost, obtain DNR concurrence on any dewatering plans, and provide and operate any and all treatment and discharge equipment required.

Employ construction methods and techniques in a manner that will minimize the need for dewatering, and if dewatering is required, minimize the volume of water generated. Take measures to limit groundwater, surface water, and precipitation from entering and exiting excavations in the areas of contamination. Such measures, which may include berming, ditching, or other means, shall be maintained until construction of utilities in the areas of contamination are complete.

Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities. Notify the engineer of any dewatering activities and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Onsite Fill by the ton, acceptably completed. The department will measure Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Daily Cover and Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Direct Bury in tons of contaminated soil accepted by the DNR licensed disposal facility as documented by weight tickets generated by the disposal facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
205.0508.S.0001	Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Onsite Fill	TON
205.0508.S.0002	Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Daily Cover	TON
205.0508.S.0003	Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil – Direct Bury	TON

Payment is full compensation for excavating, segregating, stockpiling, loading, hauling, and disposal of contaminated soil; tipping fees including applicable taxes and surcharges; obtaining solid waste collection and transportation service operating licenses; and assisting in the collection of soil samples for field evaluation.

97. Backfill Controlled Low Strength, Item 209.0200.S.

A Description

This special provision describes furnishing and placing a controlled low strength material designed for use as backfill in trenches for culverts, sewers, utilities, or similar structures, as backfill behind bridges abutments, or as fill for the abandonment of culverts, pipes, or tanks.

B Materials

Provide controlled low strength backfill that consists of a designed cementitious mixture of natural or processed materials. Allowable materials include natural sand, natural gravel, produced sand, foundry sand, produced gravel, fly ash, Portland cement, and other broken or fragmented mineral materials. The designed mixture shall be self-leveling and shall be free of shrinkage after hardening. Design the mixture to reach a state of hardening such that it can support foot traffic in no more than 24 hours. Provide a mixture that also meets the following requirements.

TEST	METHOD	VALUE
Flow (inch)	ASTM D-6103	9 min
Compressive	ASTM D-6024	20-40 @ 14 days
Strength (psi)		40-80 @ 28 days
		80-120 @ 90 days

Chemical admixtures to control air content and setting time are allowable. Ten days before placement, furnish the engineer with a design mix detailing all components and their proportions in the mix.

C Construction

Place controlled low strength backfill at the locations and to the lines and grades as shown on the plan. Proportion and mix materials to produce a product of consistent texture and flow characteristics. The engineer may reject any materials exhibiting a substantial change in properties, appearance, or composition.

If the official Weather Bureau forecast for the construction site predicts temperatures at or below freezing within the next 24 hours after placement of controlled low strength backfill, protect the placed materials from freezing during that time period. If the temperature is not forecast to rise above 40° F for 72 hours after placement, the engineer may require protection from freezing for up to 72 hours.

No controlled low strength backfill shall be allowed to enter any stream, lake, or sewer system. The contractor shall be responsible for any clean up or remediation costs resulting from such occurrences.

D Measurement

The department will measure Backfill Controlled Low Strength in volume by the cubic yard of material, placed and accepted. Such volume shall be computed from actual measurements of the dimensions of the area to be backfilled. In irregular or inaccessible areas, the engineer may allow volume to be determined by other appropriate methods.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
209.0200.S	Backfill Controlled Low Strength	CY

Payment is full compensation for designing the mix; supplying all materials; preparing the proportioned mix; hauling it to the construction site; placing the material; and protecting it from freezing.

stp-209-010 (20191121)

98. Asphaltic Mixture For Extreme Conditions, Item 450.1100.S.

A Description

This special provision describes assigning responsibility for extreme weather paving to the department.

This special provision applies only to work done under standard spec 450 through 490 that the contract requires to be performed within the following prescribed times:

- In the northern asphalt zone: between November 1 and April 15 inclusive.
- In the southern asphalt zone: between November 15 and April 1 inclusive.
- When ambient temperatures are less than 36 F for upper layers, 32 F for lower layers, and the contractor is asked to pave.

CMM 4-53 figure 2 defines asphalt zones.

This special provision applies only to following work:

DESCRIPTION	LOCATION
EMERGENCY PAVEMENT REPAIR	IH 94

B Materials

Conform to the materials requirements of standard spec 450 through 490 as modified in other contract special provisions for work specified in A.

C Construction

Conform to the construction requirements of standard spec 450 through 490 as modified in other contract special provisions for work specified in A, and as follows:

Delete standard spec 450.3.2.1.1(1) and 450.5.2(3).

Replace standard spec 450.3.2.1.2.2(2) with the following:

- (2) Engineer written acceptance is required for the cold weather paving plan. Engineer acceptance of the plan does not relieve the contractor of responsibility for the quality of HMA pavement placed in cold weather except as specified in E.

D Measurement

The department will measure Asphaltic Mixture For Extreme Conditions by the ton placed for work specified in A. The department will only measure work performed under standard spec 460, 465, and related special provision bid items if that work conforms to an engineer-accepted cold weather paving plan.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
450.1100.S	Asphaltic Mixture For Extreme Conditions	TON

Payment for Asphaltic Mixture For Extreme Conditions is full compensation for additional materials and equipment required for operations in extreme conditions for work specified in A.

The department will not assess disincentives for density or ride deficiencies the engineer attributes to cold weather paving. The department is responsible for damage or defects the engineer attributes to temperature or other extreme conditions. The department will pay separately for repairing this damage or these defects as extra work.

The department will pay separately for work done under standard spec 450 through 490 and associated special provisions. The department will not pay separately for the HMA Cold Weather Paving bid item for work specified in A.

stp-450-010 (20170615)

99. Cold Patch, Item 495.1000.S.

A Description

This special provision describes furnishing cold patch and filling potholes and other voids in existing pavement surfaces as the engineer directs.

B Materials

Furnish a mixture of course aggregate, natural sand, and MC-250 bituminous material designed to have a workability range of 15-100° F without heating. Ensure that the mixture:

- Adheres to wet surfaces.
- Resists damage from water, salt, and deicing products.
- Requires no mixing or special handling before use.
- Supports traffic immediately after placement and compaction.

Conform to the following gradation:

SIEVE SIZE	PERCENT PASSING (by weight)
1/2-inch (12.5 mm)	100
3/8-inch (9.5 mm)	90 - 100
No. 4 (4.75 mm)	90 max
No. 8 (2.38 mm)	20 - 65
No. 200 (0.074 mm)	2 - 10
Bitumen	4.8 - 5.4

The department will accept cold patch based primarily on the engineer's visual inspection. The department may also test for gradation.

C Construction

Stockpile cold patch on site on a smooth, firm, well-drained area cleared of vegetation and foreign material. Cover the stockpile and ensure that it is easily accessible. Replenish the stockpile throughout the project duration but limit the size at any given time to 10 tons on site unless the engineer approves otherwise. Dispose of unused material at project completion unless the engineer directs otherwise.

Place cold patch by hand. Remove ponded water and loose debris before placement. Compact flush with a tamper, roller, or vehicle tire after placement.

Refill patched areas as necessary to maintain a flush pavement surface until project completion.

D Measurement

The department will measure Cold Patch by the ton, acceptably stockpiled on site.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
495.1000.S	Cold Patch	TON

Payment for Cold Patch is full compensation for providing and maintaining patches; for furnishing and replenishing stockpiled material on-site; and for disposing of excess material at project completion.

stp-495-010 (20160607)

100. Ice Hot Weather Concreting, Item 501.1000.S.

Conform to standard spec 501.3.8.2 except the department will pay for ice at the contract unit price under the Ice Hot Weather Concreting bid item. This special provision only applies to work done under the following contract bid items:

- Concrete Pavement Approach Slab
- Concrete Masonry Ancillary Structures
- Concrete Masonry Bridges
- Concrete Masonry Retaining Walls
- Concrete Barrier (Type)
- Concrete Barrier Fixed Object Protection (Type)
- Concrete Barrier Transition (Type)
- Concrete Barrier (Type) End Anchor

HPC Masonry Structures
HPC Pavement 9-Inch
HPC Pavement HES 9-Inch
HPC Pavement 12-Inch

Replace standard spec 501.4 and 501.5 with the following:

501.4 Measurement

- (1) The department will measure Ice Hot Weather Concreting by the pound acceptably completed, measured only if the conditions prescribed in standard spec 501.3.8.2 are met.

501.5 Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
501.1000.S	Ice Hot Weather Concreting	LB

- (2) Payment for Ice Hot Weather Concreting is full compensation for ice used to cool concrete placed in hot weather as specified in standard spec 501.3.8.2.
- (3) The department will not pay directly for the concrete specified under this section. Concrete is incidental to the various bid items using it. Payment under those bid items includes providing all materials, including aggregates and associated aggregate source testing, cement, fly ash, slag, and admixtures; and for preparing, transporting, storing, protecting and curing concrete.
- (4) If required to remove and replace any concrete damaged by lack of proper protection. Perform this work at no expense to the department.

stp-501-010 (20210708)

101. Concrete Masonry Soldier Pile Footings, Item 502.0110.S.

A Description

This special provision describes furnishing and placing concrete into predrilled holes for soldier piles and installing soldier piles. Perform work conforming to standard spec 502.

B Materials

Provide and use concrete masonry for Concrete Masonry Soldier Pile Footings conforming to grade A as specified in standard spec 501. Perform QMP testing conforming to standard spec 716 for Class II Ancillary Concrete for all concrete masonry for Concrete Masonry Soldier Pile Footings.

C Construction

Before placing concrete masonry, give the engineer sufficient notice to allow inspection of the predrilled holes, soldier piles, and casting preparations. For concrete masonry soldier pile footings constructed without the use of slurry, no more than 3 inches of standing water is permitted in the bottom of the drilled hole before beginning soldier pile installation and immediately before placing concrete masonry in the hole around the soldier pile. If necessary, place up to 2 feet of concrete at the bottom of the hole to assist in aligning the soldier pile. Block or clamp the soldier pile in place at the ground surface before placing concrete.

For holes drilled or excavated without slurry, the department will allow the contractor to place concrete by free-falling the concrete from the ground surface down the shaft around the soldier pile. If temporary casing is used, begin placement of the concrete before removing the casing. Remove the casing while the concrete remains workable. For holes drilled or excavated using slurry, place concrete using a tremie method from the bottom of the shaft. Withdraw the tremie pipe slowly as the level of concrete rises in the shaft and never let the level of the tremie pipe outlet exceed the height of the slurry.

D Measurement

The department will measure Concrete Masonry Soldier Pile Footings by the cubic yard, acceptably completed. The department will only include material within the limits and in the places the plans show.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
502.0110.S	Concrete Masonry Soldier Pile Footings	CY

Payment is full compensation for furnishing all materials, pumping, placing, QMP testing, finishing, curing, and protecting installation of soldier piles.

stp-502-030 (20210708)

102. Bar Steel Reinforcement HS Stainless Structures, Item 505.0800.S.

A Description

This special provision describes furnishing and placing stainless steel reinforcing bars and associated stainless steel bar couplers.

Conform to standard spec 505 as modified in this special provision.

B Materials

B.1 General

Furnish stainless steel reinforcing bars conforming to ASTM A955 and to one of the following Unified Numbering System (UNS) designations: S31653, S31803, S32205, or S32304. Supply grade 60 bars, all of the same UNS designation. Conform to the chemical composition specified for the given UNS designation in ASTM A276 table 1.

Supply bars that are free of dirt, mill scale, oil, and debris by pickling to a bright or uniform light finish. The department may reject bars displaying rust/oxidation, questionable blemishes, or lack of a bright or uniform pickled surface.

Furnish chairs or continuous supports made of stainless steel or recycled plastic to support high-strength stainless bar steel reinforcement subject to the plastic chair restriction stated in standard spec 505.3.4(1).

Furnish couplers made from one of the UNS alloys allowed for bar steel.

Furnish tie wire made from one of the UNS alloys allowed for bar steel or from an engineer-approved plastic or nonmetallic material. Ensure that stainless steel tie wire is dead soft annealed.

B.2 Fabrication

Before fabrication, supply test results from an independent testing agency certifying that the reinforcement meets the requirements of Annex A1 of ASTM A955.

Bend bars conforming to standard spec 505.3.2 and according to ASTM A955. Bend and cut bars using equipment thoroughly cleaned or otherwise modified to prevent contamination from carbon steel or other contaminants. Use tools dedicated solely to working with stainless steel.

B.3 Control of Material

Identify reinforcement bars delivered to the project site with tags bearing the identification symbols used in the plans. Include the UNS designation, heat treat condition, heat number, grade corresponding to minimum yield strength level, and sufficient documentation to track each bar bundle to a mill test report.

Provide samples for department testing and acceptance according to CMM 8-50 Exhibit 1 requirements for concrete masonry reinforcement for uncoated bar steel.

Provide mill test reports for the project that do the following:

1. Verify that sampling and testing procedures and test results conform to ASTM A955, ASTM A276 table 1, and these contract requirements.
2. Include a chemical analysis with the UNS designation, heat lot identification, and the source of the metal.
3. Include tensile strength, yield strength, and elongation tests results conforming to ASTM A955 for each size furnished.
4. Certify that the bars have been pickled to a bright or uniform light finish.

C Construction

C.1 General

Ship, handle, store, and place the stainless steel reinforcing as follows:

1. Separate from regular reinforcement during shipping. Pad points of contact with steel chains or banding, or secure with non-metallic straps.
2. Store on wooden cribbing separated from regular reinforcement. Cover with tarpaulins if stored outside.
3. Handle with non-metallic slings.
4. Do not flame cut or weld. Protect from contamination when cutting, grinding, or welding other steel products above or near the stainless steel during construction.
5. Place on plastic or stainless steel bar chairs. If placing stainless steel chairs on steel beams, use chairs with plastic-coated feet.
6. Tie with stainless steel wire or an engineer-approved plastic or nonmetallic material.

Do not tie stainless steel reinforcing bars to, or allow contact with, uncoated reinforcing bars or galvanized steel. Maintain at least 1 inch clearance between stainless steel bars or dowels and uncoated or galvanized steel. Where 1 inch clearance is not possible, sleeve bars with a continuous polyethylene or nylon tube at least 1/8 inch thick extending at least 1 inch in each direction and bind with nylon or polypropylene cable ties. Sleeves are not required between stainless steel bars and shear studs. Stainless steel bars can be in direct contact with undamaged epoxy-coated bars.

Cut flush with the top flange or remove uncoated fasteners, anchors, lifting loops, or other protrusions into a bridge deck before casting the deck on prestressed concrete beams.

C.2 Splices

Splice as the plans show. Provide stainless steel couplers conforming to the minimum capacity, certification, proof testing, and written approval requirements of standard spec 550.3.3.4. The contractor may substitute stainless steel couplers for lap splices the plans show if the engineer approves in writing.

If increasing or altering the number or type of bar splices the plans show, provide revised plan sheets to the engineer showing the reinforcement layout, type, length, and location of revised bar splices and revised bar lengths. Obtain engineer approval for the location of new lap splices or substitution of mechanical bar couplers before fabrication. Ensure that new lap splices are at least as long as those the plans show.

D Measurement

The department will measure Bar Steel Reinforcement HS Stainless Structures by the pound, acceptably completed, computed from the nominal weights of corresponding sizes for carbon steel deformed bars in AASHTO M31 regardless of stainless steel alloy provided. The department will not measure extra material used if the contractor alters the reinforcement layout as allowed under C.2, extra material for splices or couplers the plans do not show, or the weight of devices used to support or fasten the steel in position.

The department will measure the Bar Couplers Stainless bid items as each individual coupler, 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
505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB

Payment for Bar Steel Reinforcement HS Stainless Structures is full compensation for furnishing and placing stainless steel reinforcing bars, including supports. Where the plans specify bar couplers, the department will pay for the length of bars as detailed with no deduction or increase for installation of the coupler.

Payment for the Bar Couplers Stainless bid items is full compensation for providing couplers; including bar steel that is part of the coupler and not detailed in the plan; for threading reinforcing bars; for installing and coating the splice; and for supplying and testing 3 couplers.

stp-505-005 (20190618)

103. Sawing Pavement Deck Preparation Areas, Item 509.0310.S.

A Description

This special provision describes sawing around deteriorated areas requiring deck repairs under the Preparation Decks bid items on decks receiving asphalt or polymer overlays and for deck repairs that will not receive an overlay.

B (Vacant)

C Construction

The department will sound and mark areas of deteriorated concrete that require deck preparation. The engineer may identify and mark additional areas as the work is being performed.

Wet cut a minimum of 1 inch deep and at least 2 inches outside of the marked areas. Bound each marked area by providing cuts aligned parallel and perpendicular to the deck centerline.

Remove sawing sludge after completing each area. Do not allow sludge or resulting residue to enter a live lane of traffic, storm sewer, stream, lake, reservoir, marsh, or wetland. Dispose of sludge at an acceptable material disposal site located off the project limits or, if the engineer allows, within the project limits.

D Measurement

The department will measure Sawing Pavement Deck Preparation Areas by the linear foot, acceptably completed, measured as the total linear feet of bounding cuts.

The department will not measure for payment over-cuts or cuts made beyond what is required to bound engineer-marked deterioration limits.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.0310.S	Sawing Pavement Deck Preparation Areas	LF

Payment is full compensation for making all saw cuts; and for debris disposal.

stp-509-070 (20180628)

**104. Concrete Staining R-40-734, Item 517.1010.S.0734;
Concrete Staining R-40-735, Item 517.1010.S.0735;
Concrete Staining R-40-736, Item 517.1010.S.0736;
Concrete Staining R-40-737, Item 517.1010.S.0737;
Concrete Staining R-40-739, Item 517.1010.S.0739;
Concrete Staining R-40-740, Item 517.1010.S.0740;
Concrete Staining R-40-744, Item 517.1010.S.0744;
Concrete Staining B-40-1036; Item 517.1010.S.1036;
Concrete Staining B-40-1037; Item 517.1010.S.1037;
Concrete Staining B-40-1039. Item 517.1010.S.1039.**

A Description

This special provision describes providing a two coat concrete stain on the exposed concrete surfaces of structures as the plans show.

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, as part of the two coat finish system:

Tri-Sheen Concrete Surfacers, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure & Seal EPX by Chem Masters
H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations.

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

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas

Before applying stain to the structure, apply the stain to sample panels measuring a minimum of 48 inches x 48 inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between the stones produced by the form liner if applicable. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces according to the plan.

D Measurement

The department will measure Concrete Staining (Structure Number) in area by the square foot of surface, acceptably prepared and stained.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.0734	Concrete Staining R-40-734	SF
517.1010.S.0735	Concrete Staining R-40-735	SF
517.1010.S.0736	Concrete Staining R-40-736	SF
517.1010.S.0737	Concrete Staining R-40-737	SF
517.1010.S.0739	Concrete Staining R-40-739	SF
517.1010.S.0740	Concrete Staining R-40-740	SF
517.1010.S.0744	Concrete Staining R-40-744	SF
517.1010.S.1036	Concrete Staining B-40-1036	SF
517.1010.S.1037	Concrete Staining B-40-1037	SF
517.1010.S.1039	Concrete Staining B-40-1039	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.

stp-517-110 (20140630)

- 105. Noise Barriers Double-Sided Sound Absorptive N-40-110, Item 541.0300.S.0110; Noise Barriers Double-Sided Sound Absorptive N-40-111, Item 541.0300.S.0111; Noise Barriers Double-Sided Sound Absorptive N-40-112, Item 541.0300.S.0112; Noise Barriers Double-Sided Sound Absorptive N-40-113, Item 541.0300.S.0113; Noise Barriers Double-Sided Sound Absorptive N-40-114, Item 541.0300.S.0114; Noise Barriers Double-Sided Sound Absorptive N-40-115, Item 541.0300.S.0115; Noise Barriers Double-Sided Sound Absorptive N-40-116, Item 541.0300.S.0116; Noise Barriers Double-Sided Sound Absorptive N-40-117, Item 541.0300.S.0117; Noise Barriers Double-Sided Sound Absorptive N-40-118, Item 541.0300.S.0118.**

A Description

This special provision describes designing, fabricating, transporting, and erecting composite concrete double-sided sound absorptive noise barriers as the plans show and conforming to department-approved installation specifications.

B Noise Wall System

B.1 System Pre-Qualification and Selection

The noise wall system supplied must be pre-qualified by the department. The department maintains a list of pre-qualified systems which can be viewed online at:

<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/default.aspx>

Systems eligible for use on this project shall be pre-qualified before the award of this contract.

Provide the name of the selected system, and the intended fabricator to the engineer within 25 days after award of the contract. Schedule a pre-design meeting with the engineer subsequent to award of the contract and before beginning design of the noise barrier. A representative of the fabricator of the noise barrier components shall attend this meeting.

B.2 Design

B.2.1 Structural and Foundation Design

The structural and foundation design of the noise barrier system shall conform to the current edition of "AASHTO LRFD Bridge Design Specifications" published by the American Association of State Highway and Transportation Officials (AASHTO), 444 North Capitol Street, NW, Suite 225, Washington, DC 20001, with the following exceptions:

The minimum design wind pressure shall be 35 pounds per square foot (Strength III) for ground mounted noise barriers and 40 pounds per square foot (Strength III) for structure mounted noise barriers, unless specified otherwise on the plans. For ground and structure mounted noise barriers, the minimum Service I design wind pressure shall be 15 pounds per square foot. All wind loads shall be applied perpendicular to the barrier, alternately in each direction.

Design drilled shaft foundations using the Broms Method or the p-y Method. Ignore the top 1 foot of supporting soil at a minimum, in the design of ground-mounted barrier foundations. Evaluate locations where the adjacent finished grade drops in elevation from the noise barrier finished grade at wall face, to determine additional depth of supporting soil to ignore for the foundation design.

In addition to wind loads, design the bottom noise barrier panel to support the dead load (weight) of the panels directly above it and its own dead load. Assume this dead load to be distributed uniformly across the bottom panel acting as a simple beam supported at the posts.

Bottom noise barrier panels shall have a minimum amount of perimeter reinforcement of a #4 bar which shall be continuous around the corners. Reinforcing steel in the concrete core of noise barrier panels shall have a minimum clear cover of 1 inch. Clear cover does not include sound absorptive material. Design the reinforced concrete core to resist the loads without considering any composite action from other material in the panel.

Provide a neoprene bearing pad or equivalent material of 1/4 inch minimum thickness between the foundation and the bottom panels. The allowable bearing stress shall not exceed 900 psi. Precast concrete pedestals placed between the foundation and bottom panels shall be reinforced if over 1'-0" high. The bearing pads shall be preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80.

B.2.2 Fire Hose Access Openings

Design fire hose access openings, at locations the plans show, with additional reinforcement and clear cover around the opening as necessary to maintain structural integrity. Detail drawings shall show the additional reinforcement and method for attaching the Fire Hydrant Location Signs to the barrier panel.

At the fire hose access openings, provide rounded over or chamfered edges at the faces of the panels to ensure edge surfaces are smooth and free of sharp protrusions.

B.2.3 Barrier Profile

Unless the plans show or the engineer approves otherwise, design the top of the noise barrier to be horizontal and at or above the acoustic elevation line the plans show. The bottom elevation of the noise barrier shall be as the plans show. Changes in elevation shall be accomplished by stepping sections at posts. Steps shall not exceed 3-feet in height. All joints shall be horizontal or vertical and shall be aligned with the adjacent panels.

B.2.4 Panel Orientation

Design the panels to prevent entrapment and ponding of water. Avoid inadvertently providing areas for perching, nesting of birds or collecting of dirt and debris in the design of the noise barrier system.

B.2.5 Sound Transmission Loss (TL)

Design the noise barrier panel material to achieve a transmission loss equal to or greater than 20 decibels in all test frequency bands, as referenced in ASTM E90.

B.2.6 Noise Reduction Coefficient (NRC)

Design the noise barrier system so that the highway sides of the noise barrier panels have a minimum NRC of 0.80 and the residential sides have a minimum NRC of 0.70 as referenced in ASTM C423.

B.2.7 Design Coordination

Design the noise barrier post spacing so as not to interfere with the existing utility and drainage facilities.

Design the noise barrier post spacing so as not to interfere with proposed utility and drainage facilities the plans show. This includes proposed roadway lighting and ITS facilities.

For noise barriers mounted behind or near proposed retaining walls, coordinate and design the noise barrier post spacing so as to not interfere with embedded portion of the proposed retaining walls, including MSE wall soil reinforcement and tieback anchors on soldier pile and timber lagging retaining walls.

For noise barriers mounted on proposed bridges and retaining walls, coordinate and design the noise barrier post spacing to coincide with noise barrier post and embedded noise barrier anchor assembly spacing shown on the bridge and retaining wall plans. Coordinate any required changes to the noise barrier post spacing and embedded noise barrier anchor assembly locations shown on the bridge and retaining wall plans, if required for the design of the noise barrier.

Noise Barrier Wall	Mounted on Structure ¹	Ground Mounted Behind Structure ¹
N-40-110 ²	R-40-734: Sta. 10+00 to 14+00	NA
N-40-111 ²	R-40-734: Sta. 16+77 to 21+92	
N-40-112	R-40-735: Sta. 14+49 to 17+05 R-40-737: Sta. 10+00 to 12+25	NA
N-40-113	R-40-736: Sta. 10+05 to 15+55	NA
N-40-114	R-40-736: Sta. 18+15 to 23+15	NA
N-40-116 ²	R-40-739: Sta. 10+10 to 18+30	NA
N-40-117 ²		R-40-743: Sta. 10+00 to 11+20
N-40-118 ²	R-40-740: Sta. 13+00 to 16+50 R-40-744: Sta. 11+55 to 13+75	

¹ Stations given are retaining wall stations and are approximate unless otherwise noted.

² Portion(s) of noise barrier wall are ground mounted.

B.2.8 Weep Hole Openings

Design panels such that weep hole openings in noise wall to allow water to drain can be field installed per C.3 at locations the plans show.

B.2.9 Maintenance Doors

Design maintenance doors and door portals in noise walls, at locations the plans show, with additional reinforcement and clear cover around the opening as necessary to maintain structural integrity per B.2.1.

B.3 Materials

Required material certifications and testing are the responsibility of the contractor. All certifications and test reports shall carry the name and address of the fabrication facility where the specific material was produced.

B.3.1 Concrete Masonry

Provide grade A concrete conforming to standard spec 501 as modified in standard spec 716 for concrete posts and the core component of composite concrete sound absorbing panels. Provide QMP for class II ancillary concrete as specified in standard spec 716.

B.3.2 Materials Testing General

All test reports shall carry the name and address of the laboratory where testing was performed, and the name of the person in responsible charge of the specific tests for which data is presented. Materials tested shall be representative of materials manufactured for this specific contract. Panels tested or from which samples will be taken will be selected and appropriately marked by the engineer either at the manufacturer's plant or from panels delivered to the project at the engineer's option.

Testing as detailed below is required for each lot of material not to exceed 100,000 SF of noise barrier produced. Conduct testing on panels within the first 30,000 SF of production of each lot not exceeding 100,000 SF. For projects that do not exceed 100,000 SF, a minimum of two lots of material will represent the project, each lot representing equivalent square footage. The first set of tests conducted for projects that do not exceed 100,000 SF shall be within the first third of the total square footage of the project. Provide the shipping record of the samples to the laboratory within five days of sampling. Begin testing as soon as practicable after sampling.

Test all materials as fabricated, including any specified finishing.

B.3.2.1 Noise Reduction Coefficient (NRC)

Test noise barrier panels according to ASTM C423, and placed according to ASTM E795, mounting type A, to determine the noise reduction coefficient (NRC) of the material. Submit to the engineer an independent laboratory test report that shows that the noise barrier panels achieve an NRC as specified in B.2.6 for the highway side of the barrier.

B.3.2.2 Long-term Durability

Test all sound absorbing composite concrete and composite concrete components for long-term durability according to ASTM C672 and the following modifications and/or requirements:

B.3.2.2.1 Test Specimens

Three specimens of a full cross section of the composite panel at least 144 square inches in face area will be selected at random from the provided composite panel as defined in B.3. Sample specimens shall be representative of the manufacturer's continuous production operation, as selected and marked by the engineer. Specimens shall be 2D-symmetric and shaped according to the testing laboratory's accommodations.

Prepare the surfaces of the sample specimens for testing as follows. Brush the surfaces of the sample to remove any loose particles. Before testing, submerge the test specimens be submerged in water for a period of 24 hours before testing. Immediately following this, cover the specimens with the sodium chloride solution as stated below.

B.3.2.2.2 Test Procedure

Place samples in a 5 sided water tight container, fully submerged in a solution of sodium chloride (concentration 3% by mass). Maintain 1/4 inch of sodium chloride solution above the top surface of the fully submerged specimen within the container.

Subject the submerged specimens to continuous freeze-thaw cycles as follows:

After each five cycles, remove the salt solution and particles of deteriorated concrete from the slab and collect in a watertight container. The operation is best accomplished by tilting the slab in a funnel approximately 20 inches in diameter and washing the surface of the slab with a 3% sodium chloride solution. Continue this washing until all loose particles are removed from the sample. Strain the solution through a filter and dry the residue at 221 degrees Fahrenheit to a constant mass condition. Cumulatively weigh the residue after each five cycles. The dry residue is defined as the loss of mass. Calculate the loss of mass to the nearest 0.01 pounds per square foot, not including the exposed surface of any core material on the cast or cut edges. Visually rate the surfaces according to 10.1.5 of ASTM C672 including any delamination of the sound absorbing material from the concrete core for composite concrete materials. After each washing of each sample, re-establish the initial submerged condition with a new solution of 3% sodium chloride before continuing with freeze-thaw cycling.

Continue the test until 30 freeze-thaw cycles have been completed.

During the test position and support each specimen to allow free circulation of the test solution under, around, and over test pieces. Support the bottom of the specimens on blocks in a manner to facilitate movement of moisture through and around the test specimens.

B.3.2.2.3 Test Report

Submit to the engineer an independent testing laboratory test report which shows that all solid and composite concrete products meet or exceed the following criteria:

1. After 30 freeze-thaw cycles the test specimens shall not exhibit excessive deterioration in the form of cracks, spalls, aggregate disintegration, delamination or other objectionable features.
2. Compliance with the test requirements is based upon a loss of mass of not more than 0.2 pounds per square foot from the surface after 30 cycles of freezing and thawing.
3. The report shall include the following:
 - 3.1. Name of manufacturer.
 - 3.2. Location of production.
 - 3.3. Production description.
 - 3.4. Date product sample was cast.
 - 3.5. Date testing began.
 - 3.6. Specimen identification.
 - 3.7. 5x7-inch color photographs of the test specimens before and after the 30 cycles of freeze-thaw test showing both sound absorbing faces and at least one representative side view of a cut (not cast) face, and any defects.
 - 3.8. A graph of the cumulative mass loss of each specimen plotted against the number of freeze-thaw cycles for 5, 10, 15, 20, 25, and 30 freeze-thaw cycles.
 - 3.9. Visual rating according to ASTM C672 Section 10.1.5, including report of any delamination of the sound absorbing material from the concrete core for composite concrete components.

B.3.3 Materials Certification - General

Provide certification of compliance or sample fabrications as noted below. All material certifications shall reference the specific facility manufacturing the material and this contract. Certification is required for each lot of material not to exceed 100,000 SF of noise barrier produced, and shall include dates of fabrication for the lot being certified. For projects that do not exceed 100,000 SF, a minimum of two lots of material will represent the project, each lot representing equivalent square footage.

B.3.3.1 Color and Surface Texture

Supply and deliver to the engineer a 3 foot x 5 foot minimum test panel for each panel type with the specified pattern and colors. Obtain the engineer's acceptance of the panel's pattern and color before production of the panels required for the contract. The accepted pattern and color test panels shall remain on the project site in a readily accessible location for the duration of the project. The accepted pattern and color sample panels will be the standard for all noise barriers on the project.

Manufacture noise barrier posts of the same materials throughout the project. Shop apply coating and coloring of the post and panels.

Unless otherwise shown and provided for in the plans, wall pattern shall contain textures with relief features of sufficient depth and quantity to be distinguishable at an observation distance of 500-feet. The colors and textures chosen will be within the following parameters; however, at the discretion of the engineer, a single color and/or a single texture may be selected for either side of the noise barrier.

	FREEWAY SIDE	RESIDENTIAL SIDE
Number of colors	2	2
In the proportion of	75:25 (+/- 5%)	75:25 (+/-5%)
Number of textures	2	2
In the proportion of	75:25 (+/- 5%)	75:25 (+/- 5%)

The final color of the noise barrier wall panels shall be as shown on the plans and match the AMS standard color system.

The engineer will visually inspect panels for color consistency upon arrival at the project. The panels shall have no substantial variation in color from the accepted sample panel submitted for the project. All panels with substantial color variation will be rejected and shall be removed from the project.

B.3.3.2 Structural Steel

Submit to the engineer certification of compliance, including mill certifications and heat numbers, that structural steel conforms to the properties required on the plans and shop drawings, and is galvanized after fabrication by the hot-dip process according to ASTM A123. Galvanize all steel hardware and threaded fasteners, bolts, nuts, and washers according to ASTM A153.

Shop coat all steel galvanized surfaces exposed to view with a department-approved paint system. Clean galvanizing surfaces to be painted according to SSPC-SP1 to remove, chlorides, sulfates zinc salts, oil, dirt, organic matter and other contaminants. Brush Blast clean the surfaces according to SSPC-SP7 to create a slight angular surface profile (1.0 – 1.5 mils suggested) for adhesion. Do not fracture the galvanized finish or remove any dry film thickness during these processes.

After cleaning, provide a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface. The tie coat shall etch the galvanized surface and prepare the surface for the top coat. Apply a top coat matching the finished color specified on the plans, matching the AMS standard color system. Use a pre-approved top coat that is resistant to the effects of the sun, and is suitable for use in a marine environment. Exercise care so as not to damage the painted surfaces during shipment and erection of the noise barriers.

Use one of the qualified paint sources and products given below. An equivalent system may be used with the written approval of the engineer. Supply the engineer with the product data sheets before applying any coating. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, the minimum drying time for shop applied coats, and the recommended procedures for coating galvanized bolts, nuts, and washers.

Producer	Coat	Products	Dry Film Minimum Thickness (mils)	Minimum Time Between Coats (hours)
Sherwin Williams Co. (847) 330-1250	Tie	Recoatable Epoxy Primer B67-5 Series/B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline Co. (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Top	Carboline 133 LH	4	NA
Wasser Corp. (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA

B.3.3.3 Sound Transmission Loss (TL)

Submit to the engineer certification of compliance that the sound transmission loss of the panel material, when tested according to ASTM Standard E90, achieves a transmission loss as specified in B.2.5.

B.3.3.4 Accelerated Weathering

Submit to the engineer certification of compliance that all coatings on barrier components, with the exception of structural steel and wood components comply with the following requirements when tested according to ASTM Standard G155, G153, or G152 after 2400 hours of exposure on a cement based test specimens:

1. No checking when rated according to ASTM D660.
2. No cracking when rated according to ASTM D661.
3. No blistering when rated according to ASTM D714.
4. No difference in adhesion between the unexposed control sample and an exposed sample when tested according to ASTM D3359, Method A.
5. No chalking less than #7 rating when rated according to ASTM D4214.

6. No color change greater than 5 NBS units when measured according to ASTM D2244, using illuminant D65 and the 1964 10-degree standard observer.

B.3.3.5 Corrosion Resistance (Salt Fog Exposure)

Submit to the engineer certification of compliance that all coated steel components, with the exception of structural steel, has a coating system that has been tested for corrosion resistance according to ASTM B117 and comply with the following requirements:

1. No checking when rated according to ASTM D660.
2. No blistering when rated according to ASTM D714.
3. No loss of adhesion when tested according to ASTM D3359 with no evidence of corrosion along the edges of the samples or along the score lines or both or other defects.

B.4 Project Submittal Requirements

Furnish required submittals according to the following:

B.4.1 Pre-Construction Submittals

A minimum of 14 days before beginning any shop or field work, submit the following documents to the engineer conforming to standard spec 105.2 with electronic submittal to the fabrication library under standard spec 105.2.2.

1. Structural and foundation design calculations
2. Design calculations shall be on 8 1/2 x 11-inch sheets, neatly bound with a title sheet listing the complete project identification number and sound barrier designation. Structural and foundation calculations shall be signed, sealed, and dated by a professional engineer licensed in the State of Wisconsin.
3. Detailed design/shop drawings.
4. Design/shop drawings shall conform to the contract plans and the requirements of these special provisions. The design/shop drawings shall consist of plan and profile sheets, details, explanatory notes, erection diagrams, aesthetic treatments, and other working plans. All dimensions, sizes of material, material information and other information necessary for the complete fabrication and construction of the noise barrier shall be designated on the appropriate sheets. The design/shop drawings shall be drawn to an appropriate scale on reproducible sheets 11 x 17 inches including borders. Each sheet shall carry the complete project identification number and noise barrier designation. Design/shop drawings shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.
5. Specifications regarding installation requirements and sequence of construction, including a detailed bill of materials.
6. Detailed color plan of the aesthetic treatments and finishes for the entire noise barrier.
7. Shipping, handling, and storage plan identifying methods or practices to limit post production damage.

Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings.

B.4.2 Pre-Installation Submittals

Supply and deliver to the engineer the sample panel required under Section B.3.3.1 at least 14 calendar days before beginning production and/or installation of job materials. Acceptance of the sample panel will be by: Eric Hanson; 414-840-9341; ericd.hanson@dot.wi.gov. If the panel is not acceptable, a second panel shall be produced and submitted for acceptance. Sample panel to be representative of quality for precast panel work after acceptance. Deliver test panels to the Department's Service Facility at 935 South 60th Street, Milwaukee, WI, for comparison purposes during production of project panels.

B.4.3 Payment Submittals

Submit certifications and test data as required under B.3 for all materials, including trade name of the products along with the name and address of the manufacturers.

B.4.4 Submittal Review

The engineer's review and acceptance of the drawings, calculations, and related material, submitted by the contractor, is for compliance with design intent only, and does not relieve the contractor from responsibility in regard to errors or omissions on said submittals.

The final accepted design documents and/or shop drawings will become a part of the contract. Any substitution of materials or dimensions contemplated by the contractor's submitted documents, different from materials or dimensions shown on the contract plans, shall be made only when approved by the engineer, and in such case, additional costs resulting from such substitution shall be borne by the contractor.

Ordering materials before department acceptance of submittals is at the contractor's risk.

C Construction

C.1 General

Construct the noise barriers at the locations the plans show, according to the contract specifications and design drawings and/or as the engineer directs. Deliver all sound absorbing composite concrete components to the project site as a finished component. A sound absorbing composite concrete system, which has the sound absorbing material glue-laminated or alternately affixed by a secondary adhesion method on the project site, will not be allowed.

Provide a minimum ten day notice to the engineer of the date that the fabrication of the noise barrier material will begin.

Inspect all materials delivered to the construction site for proper dimensions, honeycombing, cracks, voids, surface defects, consistency in color and texture, and any other damage or imperfections, before installation.

If any part of the noise barrier material fails to comply with any requirements of the contract specification, the component shall either be corrected, permanently marked as unacceptable and be disposed of by the contractor or accepted at a reduced price. The decision will be made by the engineer and is dependent on the severity of the specification deviation.

Erect noise barriers to avoid conflict with any existing facilities or utilities to remain in place. Any damage caused by construction activities shall be repaired by the contractor at no cost to the department.

C.2 Fire Hydrant Location Signs

Provide additional reinforcement to accommodate the attachment of fire hydrant location signs to the noise barrier at each location the plans show by a method the department's approved drawings show. The signs immediately adjacent to the access hole, one on each side of the noise barrier, shall conform to and be of the type specified in the department's sign plate book, plate D9-54 and/or D9-54A. Blank blue identifier plaques to be mounted perpendicular to the noise barrier, on both sides of the barrier on the top panel.

C.3 Weep Hole Openings

Provide weep hole openings for drainage at the locations and sized as noted on the plan. Install weep holes by drilling through the wall after erection of the noise barrier. Use 6" PVC Schedule 40 pipe sleeve conforming to ASTM D-1785. Epoxy 6" PVC Schedule 40 pipe sleeve into bored weep hole. PVC pipe sleeve shall fit snugly in cored hole through wall. Epoxy PVC pipe sleeve into bored weep hole in noise barrier. Locate and construct weep holes according to the plans and as the engineer directs. Place weep holes at locations the plans show unless the engineer approves adjusting locations to fit field conditions. The engineer will field verify the height and location of the weep hole for positive drainage.

C.4 Name Plates

Provide name plates conforming to the requirements of standard spec 506.2.4. Install one name plate on each noise barrier at the location the plans show. Rigidly attach each plate to the barrier by a means approved by the engineer.

Compensation for furnishing and placing of name plates shall be included in the contract price for Noise Barriers, Double-Sided Sound Absorptive Structure and no additional compensation therefore will be allowed.

C.5 Structure Mounted Noise Barriers

Do not erect noise barriers mounted to bridge or retaining wall structures until after the concrete for bridge decks and parapets or retaining wall moment slabs and parapets have attained their specified 28-day strength.

For noise barriers mounted to moment slabs and parapets on top of MSE retaining walls, erection of the noise barrier is limited to two-thirds the height of the noise barrier acoustical line the plans show before placement of earth fill or pavement over the top of the moment slab as the plans show. Erection of the noise barrier in excess of two-thirds its height to the full height of the noise barrier acoustical line the plans show may not occur until after the earth fill or pavement structure over the top of the moment slab the plans show is complete.

C.6 Construction Tolerances

Install the posts and panels comprising the noise barrier plumb within 1/2 inch in 15-feet. Locate the posts to the line and grades as the plans show to within +/- 3/4 inch. Align horizontal joints of adjacent panels to a vertical tolerance of 1/4 inch. Where vertical adjustments are required for alignment, use a mortar base or steel shims. Galvanize and prime coat steel shims according to B.3.3.2.

D Measurement

The department will measure Noise Barriers Double-Sided Sound Absorptive (Structure #) by the square foot, acceptably completed, as the area the original plans show plus engineer-approved modifications to the plan quantity caused by plan corrections or revisions.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
541.0300.S.0110	Noise Barriers Double-Sided Sound Absorptive N-40-110	SF
541.0300.S.0111	Noise Barriers Double-Sided Sound Absorptive N-40-111	SF
541.0300.S.0112	Noise Barriers Double-Sided Sound Absorptive N-40-112	SF
541.0300.S.0113	Noise Barriers Double-Sided Sound Absorptive N-40-113	SF
541.0300.S.0114	Noise Barriers Double-Sided Sound Absorptive N-40-114	SF
541.0300.S.0115	Noise Barriers Double-Sided Sound Absorptive N-40-115	SF
541.0300.S.0116	Noise Barriers Double-Sided Sound Absorptive N-40-116	SF
541.0300.S.0117	Noise Barriers Double-Sided Sound Absorptive N-40-117	SF
541.0300.S.0118	Noise Barriers Double-Sided Sound Absorptive N-40-118	SF

Payment is full compensation for providing noise barrier including coloring and aesthetic treatment on panels, preparing the design drawings and calculations, furnishing and delivering sample and test panels, materials testing, furnishing materials test reports and certifications, excavation, preparing the site, constructing foundations, erecting posts and panels, and disposing of waste materials.

The department will pay separately for furnishing and installing fire hydrant access hole signs under other bid items in this contract.

106. Cover Plates Temporary, Item 611.8120.S.

A Description

This special provision describes providing and removing steel plates to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

B Materials

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

C (Vacant)

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	EACH

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

The steel plates shall become the property of the contractor when no longer needed in the contract work.

stp-611-006 (20151210)

107. Pipe Grates 18-Inch, Item 611.9850.S.

A Description

This special provision describes providing pipe grates for pipe apron endwalls as detailed in the plans.

B Materials

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

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction

Repair pipes, rods, angles and brackets on which the galvanized coating has been damaged according to the requirements of AASHTO M36.

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9850.S	Pipe Grates 18-Inch	EACH

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to apron endwalls.

stp-611-010 (20230113)

108. Fence Temporary, Item 616.0600.S.

A Description

This special provision describes providing and removing temporary fencing at the locations the plans show and as the engineer directs.

B (Vacant)

C Construction

Construct fence to the minimum strength and height required to contain livestock, as approved by the engineer.

D Measurement

The department will measure Fence Temporary in place by the linear foot from end posts, center to center, along the ground line.

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E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0600.S	Fence Temporary	LF

Payment is full compensation for furnishing all materials; erecting posts and fence; and for removing and disposing of fencing.

stp-616-025 (20101008)

109. 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)

110. Digital Speed Reduction System (DSRS), Item 643.0370.S.

A Description

This special provision describes furnishing, installing, repositioning, operating, maintaining, monitoring, testing and removing a Digital Speed Reduction System (DSRS) per plan or as the engineer directs.

B Materials

B.1 Digital Speed Limit Trailer (DSLTL)

Furnish items from the department's approved products list.

B.2 Automated System Manager (ASM)

Furnish an ASM from the department's approved products list to remotely change the speed limit on the DSRS devices.

C Construction

C.1 General

Trailer-mount the speed limit sign so that the bottom is a minimum 7 feet above the roadway.

Provide training to the department as needed on the use and operation of the field hardware and the website for the DSRS.

Ensure the DSRS operates continuously when deployed on the project.

Provide a local specialist to respond to emergency situations within 2 hours of being notified. Equip the local specialist with sufficient resources to correct deficiencies in the DSRS.

The Contractor will be responsible for coordinating with the engineer when the work zone speed limits are to be changed.

Place DSLTL at the following locations or per plan:

- 1,500 feet upstream of start of lane closure taper
- At existing post-mounted speed limit sign after the end of the acceleration lane of each entrance ramp. If there is not an existing sign, place 1,500 feet beyond the end of the acceleration lane of each entrance ramp
- Minimum of every 1 mile

Place DSLTLs on the right side of the roadway unless located in advance warning area, infeasible or as directed by the engineer.

Place DSLTL in a location that does not interfere with the function of existing signs or roadside devices.

R2-1 sign shall be 48" x 60" and follow standard spec 643 for sign requirements.

C.2 Programming

C.2.1 General

Program the DSRS to ensure the following operations are performed:

- Provide a password protected login to the ASM, website and all other databases.
- Provide real-time data from the ASM to a website and refresh every 60 seconds. The website should have a full-color mapping feature. Data on the website should be available to the department staff at all times for the duration of the work zone activity and should include:
 - Dates and times of speed limit changes
 - Device locations
 - Archive all data in a spreadsheet format with date and time stamps.
 - Configure the website to quantify system failures which includes DSLTL malfunction, loss of power, low battery, etc.
 - Ensure the devices autonomously restart in case of any power failure.
 - Provide the department access to manually override the DSRS for a user-specified duration. Document all override messages.
 - The digital display portion automatically adjusts the brightness under varying light conditions to maintain legibility.

- Speed limit values shown on the digital display legend continuously displays without animation. Brief blanking may be experienced, up to 10 seconds, only during digital display legend user input utilizing the hard-wired hand control.
- The digital display changes between the original posted speed limit and the approved temporary speed limit on the digital speed limit trailer when directed by the engineer.
- The beacon on the DSLT shall flash when the speed limit has been reduced per the temporary speed declaration.

C.2.2 System Operation Strategy

When active work is taking place, the nearest upstream DSLT of the work area and any DSLT in the active work area shall display the work zone speed limit and the beacons on the DSRT shall flash. All other DSLT shall display the posted speed limit.

If there is more than one work area and the distance between the work areas is greater than 3 miles, the DSLT between the work areas shall display the posted speed limit. If the distance between multiple work areas is less than 3 miles, the DSLT between the work areas shall display the work zone speed limit.

C.3 Reports

Provide an electronic copy of a weekly summary report and end of project summary report via email to the engineer and Bureau of Traffic Operations (DOTBTOWorkzone@dot.wi.gov). Include timestamped information on the date, time, messages, and speed limit for when the DSRS was changed.

D Measurement

The department will measure DSRS by the day acceptably completed, measured as each complete system per roadway.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
643.0370.S	Digital Speed Reduction System	DAY

Payment is full compensation for furnishing, installing, repositioning, operating, maintaining, monitoring, testing and removing the DSRS consisting of DSLT and ASM.

The department will deduct one day for each calendar day the DSRS is required but out of service for more than 2 hours.

The engineer will have the sole discretion to assess the deductions for an improperly working DSRS.

stp-643-037 (20250108)

111. Connected Arrow Board, Item 643.0810.S.

A Description

This special provision describes providing, repositioning, operating, maintaining, monitoring, and removing connected arrow board(s) capable of reporting real-time work zone lane closure information to Wisconsin 511 and third-party vendors.

B Materials

Furnish items from the department's approved products list.

C Construction

C.1 General

Follow all requirements in Spec 643.3.

Place connected arrow board per plan or as the engineer directs.

Ensure the connected arrow board operates continuously when deployed on the project.

Ensure the connected arrow board and work zone location markers are from the same manufacturer.

Provide a local specialist to respond to emergency situations within 2 hours of being notified. Equip local specialist with sufficient resources to correct deficiencies in the connected work zone start and end location markers.

C.2 Testing and Configuration

Prior to deployment, test the connected arrow board with the engineer to ensure the device is showing in the WZDx Device Feed. Send an email to DOTBTOworkzone@dot.wi.gov to notify BTO that the devices have been turned on.

C.3 Programming

Connected arrow board may be switched between the following pattern displays per the plan:

- Blank
- Right Arrow Static
- Right Arrow Flashing
- Right Arrow Sequential
- Left Arrow Static
- Left Arrow Flashing
- Left Arrow Sequential

When the connected arrow board is not displaying a pattern, the display shall be blank and the connected arrow board transmits its status to the data feed. When a connected arrow board is switched to a pattern, the connected arrow board transmits its location and its current operating mode to the data feed.

The connected arrow board and the remote management software shall provide a public GeoJSON/API feed, updated at least every minute, compliant with FHWA's Work Zone Data Exchange (WZDx) v4.2 (<https://www.transportation.gov/av/data/wzdx>) Device Feed specification.

C.3 Reporting

If requested by the engineer, provide real-time status change alerts to a list of designated personnel via text and/or email. Send an alert each time a connected arrow board is switched between operating modes (e.g., each time a connected arrow board is switched between blank, flashing left arrow mode and flashing right arrow mode). Include the current operating mode, the previous operating mode, the date and time of the mode switch, and the location (latitude and longitude) of the device at the time of the mode switch in the alert.

D Measurement

The department will measure the connected arrow board by the day, acceptably completed, measured per roadway.

The department will not measure the connected arrow board on days it is not required.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
643.0810.S	Connected Arrow Board	DAY

Payment is full compensation for providing, repositioning, operating, maintaining, monitoring, testing, and removing the connected arrow board.

The department will deduct one day for each calendar day the connected work zone start and end location markers is required but out of service for more than 2 hours.

stp-643-012 (20250108)

112. Truck or Trailer-Mounted Attenuator, Item 643.1055.S.

A Description

This special provision describes protecting work operations with a truck or trailer-mounted attenuator (TMA).

B Materials

Furnish and maintain a TMA conforming to NCHRP Report 350 test level 3 or to MASH crashworthiness criteria. Submit written certification from the manufacturer that the host vehicle/attenuator configuration provided conforms to crashworthiness criteria. Include the federal-aid reimbursement eligibility letter with that submittal.

Provide a host vehicle and mount the attenuator conforming to the attenuator manufacturer's specifications. Provide the engineer a copy of the manufacturer's specifications and installation instructions.

C Construction

Coordinate with the engineer at least 72 hours before its intended use so the engineer can determine if the work operation requires TMA protection.

Position the attenuator at a manufacturer-recommended location in advance of a stationary work operation. Position and maintain the attenuator consistently at the manufacturer-recommended distance from a mobile work operation. Ensure that an operator stays with the host vehicle while protecting a mobile work operation.

D Measurement

The department will measure Truck or Truck-Trailer-Mounted Attenuator by the day acceptably completed, measured to the 1/2-day based on the engineer-determined time the attenuator is required to protect work operations. The department will measure 4 or less hours per calendar day as a half day and over 4 hours as a full day.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
643.1055.S	Truck or Trailer-Mounted Attenuator	DAY

Payment is full compensation for providing the portable attenuator, host vehicle, and operator.

stp-643-015 (20140630)

113. Connected Work Zone Start and End Location Markers, Item 643.1220.S.

A Description

This special provision describes providing, repositioning, operating, maintaining, monitoring, and removing connected work zone start and end location markers capable of reporting real-time work zone location information to Wisconsin 511 and third-party vendors.

B Materials

Furnish items from the department's approved products list.

C Construction

C.1 General

Follow all requirements in Spec 643.3.

Place work zone start location marker at the beginning of the work zone per plan or as the engineer directs. Clearly label the work zone start location marker so that it is easily distinguishable by field personnel.

Place work zone end location marker at the end of the work zone per plan or as the engineer directs. Clearly label the work zone end location marker so that it is easily distinguishable by field personnel.

Ensure the connected work zone start and end location markers operate continuously when deployed on the project.

Ensure the work zone location markers and connected arrow board are from the same manufacturer.

Provide a local specialist to respond to emergency situations within 2 hours of being notified. Equip local specialist with sufficient resources to correct deficiencies in the connected work zone start and end location markers.

C.2 Testing and Configuration

Prior to deployment, test the connected work zone start and end location markers with the engineer to ensure devices are showing in the WZDx Device Feed. Send an email to DOTBTOworkzone@dot.wi.gov to notify BTO that the devices have been turned on.

C.3 Programming

When the work zone start location marker is switched to the ON mode, the begin location marker transmits to the data feed its location and identity as a work zone start location marker. The end location marker functions similarly.

The connected work zone start and end location markers and their remote management software shall provide a public GeoJSON/API feed, updated at least every minute, compliant with FHWA's Work Zone Data Exchange (WZDx) v4.2 (<https://www.transportation.gov/av/data/wzdx>) Device Feed specification.

Switch the work zone start and end location markers to OFF mode when temporary traffic control is removed, and the normal traveled way is restored.

C.4 Reporting

If requested by the engineer, provide real-time status change alerts to a list of designated personnel via text and/or email. Send an alert each time the connected work zone start and end location markers are switched between operating modes (e.g., each time a work zone start/end location marker is switched between ON mode and OFF mode). Include the date and time of the mode switch, and the location (latitude and longitude) of the device at the time of the mode switch in the alert.

D Measurement

The department will measure the connected work zone start and end location markers by the day, acceptably completed, measured per roadway.

The department will not measure the connected work zone start and end location markers on days they are not required.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
643.1220.S	Connected Work Zone Start and End Location Markers	DAY

Payment is full compensation for providing, repositioning, operating, maintaining, monitoring, testing, and removing the complete system consisting of connected work zone start and end location markers.

The department will deduct one day for each calendar day the connected work zone start and end location markers is required but out of service for more than two hours.

stp-643-122 (20250108)

114. Temporary Audible Message Devices, Item 644.1900.S.

A Description

This special provision describes providing, maintaining, and removing temporary audible message devices. These devices are used on temporary pedestrian facilities to guide individuals with sight disabilities.

B Materials

Furnish temporary audible message devices from the approved products lists.

C Construction

Provide and maintain temporary audible message device. Maintain and repair devices within two hours of being notified by the project engineer of an issue.

Contractors record messages as approved by the engineer.

Mount temporary audible message devices on drums, temporary sign supports, or other locations approved by the engineer. Locate motion detection areas that will be effective in activating the device to operate properly. Avoid locating motion detection areas that will cause activation by trees, traffic, or other known regular activity.

Move and adjust devices after disruptions by the work or the public.

Maintain devices in a working condition and replace batteries as needed. Replace any devices that are not working properly within 2 hours of being notified of an issue.

Use tamper-proof hardware for mounting.

D Measurement

The department will measure temporary audible message devices by the day, 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
644.1900.S	Temporary Audible Message Device	DAY

Payment is full compensation for providing, maintaining, and removing temporary audible message device.

The department will not pay for devices that are inoperable.

stp-644-190 (20250108)

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

A Description

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

B Materials

Use conduits, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the standard spec.

C Construction

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

D Measurement

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

E Payment

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

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

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

stp-652-070 (20230629)

**116. Ramp Closure Gates 24-FT, Item 662.1024.S;
Ramp Closure Gates 30-FT, Item 662.1030.S;
Ramp Closure Gates 37-FT, Item 662.1037.S.**

A Description

This special provision describes providing freeway on-ramp closure gates on type 5 steel luminaire poles.

B Materials

B.1 General

Provide five user manuals and a listing of vendors and contact information for each manufactured component including flasher electrical components.

The engineer may allow alternates equal to specified manufactured components. The engineer may require plan detail modifications to accommodate alternates. The engineer may accept alternate arms or mounting adaptors only if the contractor can demonstrate that the department can easily remove and replace the arms.

B.2 Components

Furnish type 5 steel poles designed to carry twin 15-foot luminaire arms and conforming to standard spec 657 and with dimensions for acceptable installation of the ramp gate hardware as shown on the detail. Ensure a contiguous pole by eliminating the hand hole near base of pole, thus allowing uninhibited mounting of the gate pivot assembly.

Furnish galvanized steel nuts and bolts conforming to ASTM A307 except where designated as high strength (HS), conform to ASTM F3125. For the ramp closure gate locking mechanism, furnish a 3/4-inch handle nut.

Furnish grade A36 steel for the gate supports, gate pivot assembly, and associated hardware galvanized after fabrication by either a mechanical or hot-dip process. Grind welded connections, rough edges, and burrs smooth before galvanizing to ensure a finished appearance. Ensure that the galvanized coating conforms to ASTM A 153.

Provide aluminum/fiberglass gate arms of the nominal length the bid item indicates and conforming to plan dimensions. Cover gate arms on two sides with alternating red and white shop-applied type H reflective from the department's approved products list. Also provide a shear pin base that is the manufacturer's "permanent pivot" style. Obtain components from:

B&B Roadway
15191 Hwy 243
Russellville, AL 35654
Tel: (888) 560-2060
Gate arm: Model MU605

Furnish a worm gear winch with a single line vertical lift capacity of 2000 lbs. Ensure that the winch has hardened steel gears, a handgrip, permanently lubricated bearings, a reinforced arc-welded reel assembly, and mounting plate. Ensure that the winch can be mounted to the winch mount plate shown on the construction details and the handgrip can be operated without conflict with the pole or ramp gate assembly. Furnish a 2-inch outdoor rated, rot resistant polyester strap for the connection between the worm gear winch and the gate arm pivot assembly.

C Construction

Provide ramp closure gate at the locations the plans show. Apply marine grade anti seize compound to all bolt threads and to the interface between the aluminum base and steel pole. The

engineer may direct adjustment of the gate arm assembly to ensure the correct vertical and angular orientation of the completed closure gate.

Install structure identification plaques in the location the plan details show.

D Measurement

The department will measure the Ramp Closure Gates (length) as each gate installation, 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
662.1024.S	Ramp Closure Gates 24-FT	EACH
662.1030.S	Ramp Closure Gates 30-FT	EACH
662.1037.S	Ramp Closure Gates 37-FT	EACH

Payment for the Ramp Closure Gate bid items is full compensation for providing ramp closure gates including support poles; for gate arm assemblies including guides, collars, and gate arms; and for structure identification plaques.

stp-662-005 (20191121)

- 117. Electrical Service Meter Breaker Pedestal (MBDMS400019) Item 656.0201.2001;
Electrical Service Meter Breaker Pedestal (MBDMS400132) Item 656.0201.2002;
Electrical Service Meter Breaker Pedestal (MBDMS400042) Item 656.0201.2003;
Electrical Service Meter Breaker Pedestal W O'Connor St & S 70th St, Item 656.0201.3001;
Electrical Service Meter Breaker Pedestal W Kearney St & S 70th St, Item 656.0201.3002;
Electrical Service Meter Breaker Pedestal W O'Connor St & S 68th St, Item 656.0201.3003;
Electrical Service Meter Breaker Pedestal W Kearney St & S 68th St, Item 656.0201.3004;
Electrical Service Meter Breaker Pedestal IH 94 WB On Ramp & N Hawley Rd, Item
656.0201.3005;
Electrical Service Meter Breaker Pedestal IH 94 EB Off Ramp & S Hawley Rd, Item
656.0201.3006.**

Append standard spec 656.2.3 with the following:

- (2) The department will be responsible for the electrical service installation request for any department maintained facility.
- (3) Electrical utility company service installation costs and energy costs will be billed to and paid for by the Department. Contact Joyce Murphy at (262) 548-5933 to pay the installation costs. The department will be responsible for the monthly electrical energy service cost for any department maintained facility.
- (4) Install the cabinet base and meter breaker pedestal first, so the electrical utility company can install the service lateral. Install a 3" conduit from the point of service from the utility to the meter breaker pedestal. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electrical utility company.

Append standard spec 656.5 with the following:

- (8) Payment is full compensation for grading the service trench; replacing topsoil; and for fertilizing, seeding, and mulching to restore the disturbed area of the service trench.

118. Lamp, Ballast, LED, Switch Disposal by Contractor, Item 659.5000.S.

A Description

This special provision describes the detachment and packaging of lamps, ballasts, LEDs, and mercury containing switches (e.g., overhead roadway lighting, underdeck bridge, wall packs, pedestrian signals, traffic control stop lights and warning flashers, fluorescent bulbs, and thermostats) removed under this contract for disposal as hazardous materials.

For Lamp, Ballast, LED, Switch Disposal by Contractor, coordinate removal from the work site by the department's hazardous waste disposal vendor. Disposal will be billed to the department by the hazardous waste disposal vendor.

B Materials

B.1 Disposal by Contractor

Items removed under this contract will be considered the property of the department for waste generator identification. The contractor is responsible for coordinating with the department's hazardous waste vendor for disposal:

<https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/hazwaste-contacts.pdf>

B.2 Disposal by Department (Vacant)

C Construction

C.1 Removal

Arrange for the de-energizing of luminaires after receiving approval from the engineer that the existing luminaires can be removed. Do not remove luminaires that cannot be replaced with proposed LED units and operational within the same workday. The new LED units need to be operational prior to sunset of the same workday.

Detach and remove luminaires and lamps from the existing traffic signal poles or respective structure. Avoid breaking fixtures whenever possible.

Lamps, ballasts, LED, and switches will become property of the department, and will be disposed of in an environmentally sound manner.

C.2 Packaging of Hazardous Materials

Provide a secure, level location removed from the travelled way for storage of the material for disposal.

Pack intact fixtures in the packaging of the new lamps used to replace them, or packaging affording the equivalent protection. Place in full, closed stackable cartons.

Pile cartons no more than four high if palletized and secure cartons with shrink wrap to prevent shifting or falling of the loads. Clearly mark each pallet with the words "Universal Waste Lamps" or "Universal Waste Ballasts", the date, and the number of fixtures on each pallet.

Pack broken fixtures into (min.) 6 mil thick plastic bags and place inside sturdy cardboard boxes or the equivalent. Mark the outer packaging with the term "Broken Fixtures/Lamps", the date and the number of broken fixtures clearly marked on the box.

The hazardous waste vendor will not accept fixtures improperly packaged. The vendor will reject any fixtures not removed as part of a contract pay item or otherwise required under this contract.

Pack ballasts and mercury containing switches in appropriate containers.

C.3 Disposal by Contractor

Complete the lamp and ballast inventory (<https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/dotlampballastinventory.dotx>) and contact the hazardous waste vendor to coordinate pickup and disposal at a location specified by the contractor. Consolidate all pallets and boxes from one project at a single location. Contact the hazardous waste vendor to set up an appointment for pickup. The hazardous waste vendor requires a minimum of one week advance notice to schedule pickup.

C.4 Disposal by Department (Vacant)

D Measurement

The department will measure Lamp, Ballast, LED, Switch Disposal by Contractor as each individual unit removed and received by the hazardous waste vendor, properly packaged and acceptably completed, matching the total number of units provided on the inventory form. The department will not measure broken fixtures that exceed a total of 10 percent of all fixtures to be disposed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH

Payment for Lamp, Ballast, LED, Switch Disposal by Contractor is full compensation for detachment, handling, packaging, labeling and scheduling disposal with the hazardous waste vendor; and scrapping and disposal of all other materials

119. Temporary Traffic Signals for Intersections W Kearney St & S 70th St, Item 661.0201.3001.

Replace 661.2.1(1) of the standard specifications with the following:

- (1) Furnish control cabinet, signal controller, and control equipment. Provide a cabinet with a Corbin #2 door lock and an access door that allows placing the controller in emergency flash. Provide keys to the access door to the engineer and law enforcement agencies as required. Also provide a manual control accessible by the police. Supply a controller capable of executing the timing program supplied in this contract for this temporary traffic signal. Test traffic signal control cabinets before installation. The City of Milwaukee will provide the initial traffic signal timing for the controller, and the City of Milwaukee will be responsible for all subsequent signal timing changes. The contractor shall not implement timing changes during peak hours.

Replace 661.2.1(3) of the standard specifications with the following:

- (3) A temporary electrical service will be needed. WisDOT will submit the request. Contact Joyce Murphy at 262-548-5933 as early as possible to begin the process.

Contact the local electrical utility at least four days prior to making the switch from the Temporary Traffic Signal to the new Permanent Traffic Signal.

Append 661.2.1 of the standard specifications with the following:

- (6) Provide four R1-1F folding stop signs to be installed as part of the temporary traffic signal installation.

Replace 661.3.1(2) of the standard specifications with the following:

- (2) Request a signal inspection of the completed temporary traffic signal installation to the engineer at least five working days prior to the time of the requested inspection. Notify the SE Region Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The SE Region electrical personnel will perform the inspection.

Append 661.3.1.4 of the standard specifications with the following:

- (4) Arrange for every other week inspections with the engineer to check the height of the span wire above the roadways to ensure that the bottom of the traffic signal heads remain within the minimum and maximum heights allowed above the roadway. Make all height adjustments within 1-hour of an inspection indicating that adjustments are required. Notify the engineer in writing upon completion of all necessary adjustments. Maintain a written log to properly document the date of each biweekly (i.e. once every two weeks) inspection, the heights above the roadway, the roadway clearance after adjustments have been made, and acceptance by the engineer. Provide all documentation related to the biweekly span wire height checks as well as all records related to maintenance performed on the temporary traffic signal installations to the engineer.

Replace 661.3.2.7(2) of the standard specifications with the following:

- (2) Respond within one hour of notification to provide corrective action to any emergency such as but not limited to knockdowns, signal cable problems, and controller equipment failures. If equipment becomes damaged or faulty beyond repair, replace it within one working day. In order to fulfill this requirement, maintain, in stock, sufficient materials and equipment to provide repairs. Replace the traffic signal control equipment including the cabinet and cabinet accessories within 4 hours. If the outcome of the response identifies damage to the department furnished signal controller, notify the Traffic Management Center at (800) 375-7302 who will then dispatch the SE Region Electrical Field Unit.

Replace 661.5(2) of the standard specifications with the following:

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

1. Furnishing and installing replacement equipment.

Payment is full compensation for drilling holes; 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 properly disposing of surplus materials; for making inspections; for cleaning up and properly disposing of waste.

120. Install ITS Field Cabinet, Item 673.1200.S.

A Description

This special provision describes installing a department-furnished type 170, size 334 field cabinet.

B Materials

The department will furnish the type 170, size 334 field cabinet. Provide all necessary miscellaneous mounting hardware and internal power cables. With the field cabinet, the department will furnish cabinet bolts to anchor the cabinet to the concrete base.

C Construction

Install the field cabinet on a new or existing concrete base paid separately. Make all power connections to the cabinet, isolating the neutral bus from the cabinet and equipment ground.

Effectively ground all cable grounding shields and any spare or unused conductors in the field cabinet to the equipment grounding terminal strip.

D Measurement

The department will measure Install ITS Field Cabinet by the unit, installed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
673.1200.S	Install ITS Field Cabinet	EACH

Payment is full compensation for installing the state-furnished field cabinet; making all connections; and grounding as necessary.

stp-673-005 (20220107)

121. Install Pole Mounted Cabinet, Item 673.1225.S.

A Description

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

B Materials

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

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

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

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

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

C Construction

Coordinate receiving the cabinet from the department's vendor and protect and store the cabinet between receiving the cabinet and installing as shown on the plans. Note and photograph any damage to the cabinet upon receipt and notify the engineer and the Statewide ITS Engineer of any damage.

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

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

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
673.1225.S	Install Pole Mounted Cabinet	EACH

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

stp-673-010 (20230629)

122. Removing 50-Foot Camera Pole, Item 677.9051.S.

A Description

This special provision describes removing existing camera poles and all equipment mounted on them.

B (Vacant)

C Construction

The contractor may request a meeting with the engineer to assess the condition and operability of equipment mounted on the pole before beginning work removing the pole. Any damage or improper operation not noted at the meeting, or before the contractor starting work on the removal, will be assumed to be the fault of the contractor; repair or replace the equipment. Store the equipment for pick up by department representatives.

Disconnect all cables, wiring and equipment that are mounted on or in the poles, and remove the pole from the concrete footing. The department will pick up any antennae, cameras, or other equipment mounted on the pole; contact maintenance staff at (414) 227-2166 at the department's Statewide Traffic Operations Center, when the material is ready to be picked up. Properly dispose of the pole, conduit, cabling, and wiring away from the project site.

D Measurement

The department will measure Removing (Height) Camera Pole by the unit, acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
677.9051.S	Removing 50-Foot Camera Pole	EACH

Payment is full compensation for removing and disposing of the existing camera pole; disconnecting any necessary wiring; removing the equipment mounted on the poles; disposing of cabling and wiring; disposing of the pole properly off the project site; and transportation.

stp-677-901 (20230629)

123. Removing CCTV Camera, Item 677.9200.S.

A Description

This special provision describes removing existing CCTV cameras as the plans show from existing camera poles that are not being removed as part of the project. Removal of CCTV cameras on poles also being removed is included with the pay items for removing the poles.

B (Vacant)

C Construction

The contractor may request a meeting with the engineer to assess the condition and operability of the camera before beginning work on removing the camera. Any damage or improper operation not noted at the meeting, or before the contractor starting work on the removal, will be assumed to be the fault of the contractor; repair or replace the camera. Store the camera until the department picks up the camera.

Disconnect all wiring at the control cabinet and at the top of the camera pole. Remove all fastening hardware and remove the existing camera and pan, tilt, and zoom mechanisms from the top of the pole. Salvage and store the cameras for pick up by the department; contact maintenance staff at (414) 227-2166 at the department's Traffic Management Center (TMC) to coordinate when the materials will be picked up.

D Measurement

The department will measure Removing CCTV Camera by the unit, acceptably and completely removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
677.9200.S	Removing CCTV Camera	EACH

Payment is full compensation for removing an existing CCTV camera; for disconnecting all necessary cables and wiring; and properly storing the materials.

stp-677-902 (20230629)

124. Install Overhead Freeway DMS Full Matrix, Item 678.0100.S.

A Description

This special provision describes installing a state-furnished, or an existing salvaged, dynamic message sign on a new or existing sign structure.

B Materials

The department will provide the sign, or it will be salvaged, controller, and the control cable. The control cable will be multi-mode fiber optic cable.

Use an AWG #6 copper wire or equivalent bonding straps to bond the sign and cabinet to the structure.

Use an AWG #6 solid, bare copper wire to bond the sign structure to ground rods.

1. For the three wires carrying 120/240 VAC power from the cabinet to the sign, use single conductor, stranded copper, 120/240 VAC, XLP insulated, USE rated wire. Size the wire to carry the maximum amperage permitted by the main breakers in the sign.

Provide a 100-amp 120/240-VAC load center in the controller cabinet, along with breakers recommended by the sign manufacturer.

C Construction

Within two weeks of Notice to Proceed, contact the engineer and Statewide ITS Engineer, Dean Beekman at (414) 227-2154). Provide the address and contact information for the contractor-controlled location for delivery and the desired delivery schedule for the DMS. The department will coordinate with the department's contracted DMS vendor for delivery as close as possible to desired delivery date.

The contractor may request that the engineer or other department representative be present at delivery to witness condition of the DMS, controller, and cable. Photograph and note any damage or irregularities in the materials being delivered. The engineer or department representative will coordinate resolution of any damage or irregularities with the DMS vendor. Store the DMS while resolution is being coordinated with the DMS vendor.

Store the DMS, controller, and controller cable in a safe and secure location until installation.

Transport the DMS, controller, and controller cable to the installation site.

Install the load center so that the main breakers control all power to the sign and cabinet. Provide at least three branch circuits, one for the sign, one for the controller and communication equipment, and one for all cabinet accessories, such as fan, light, and heater. Only protect the branch serving the controller and communication equipment with the second stage of the surge protector. Connect the power and control cables according to the manufacturer's recommendations. Run the cables in rigid metallic conduit or flexible metallic conduit, or combination of these, within the sign structure.

Bond the sign directly to one or more ground rods per the manufacturer's instructions and Article 250 of the NEC. Do not bond the sign to the structure. Use exothermic welding at each end of the ground wire. Use an AWG # 6 solid, bare copper wire to bond the sign structure to the ground rod(s). Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement

The department will measure Install Overhead Freeway DMS Full Matrix by each sign, acceptably installed and tested.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
678.0100.S	Install Overhead Freeway DMS Full Matrix	EACH

Payment is full compensation for fabrication and installation of all mounting hardware; receiving delivery of the DMS, controller, and cable; storing the materials until installation; transporting the materials to installation site; installing and testing the sign and controller; providing cables, conduits, and fittings; for testing the sign.

stp-678-010 (20230629)

125. Roadway Embankment, Item SPV.0035.0001.

A Description

This special provision describes placing in embankments and in miscellaneous backfills, material obtained under the bid items in the roadway and drainage excavation or excavation for structure sections; or material obtained off site as specified under these special provisions.

B Materials

B.1 Embankment

Furnish roadway embankment conforming with standard spec 207.2 except as follows:

Add the following to standard spec 207.2(1):

If the contractor utilizes offsite material to construct embankments, the material shall conform to standard spec 208 except as follows:

Delete standard spec 208.2.2(2).

C Construction

Construct roadway embankment according to standard spec 207.3 except as follows:

Add the following to standard spec 207.3.6:

Prior to placing any material for a succeeding layer, ensure the previous layer does not have excessive rutting, displacement, or distortion under the compacting or hauling equipment. If rutting, displacement, or distortion is observed, the contractor shall inform the engineer how yielding material will be addressed prior to continuing roadway embankment construction.

If off site material is utilized, construction must conform to standard spec 208.3.

Replace standard spec 205.3.2(4) with the following:

If placing embankment on side slopes 10 feet high or higher and steeper than one vertical to 3 horizontal, provide vertically-faced, horizontal benches at least 2 feet wide into the existing embankment slope every 2-foot of vertical height.

If constructing embankment on only one side of abutments, wing walls, or piers, construct the embankment so that the area immediately adjacent to the structure is not compacted in a manner that causes overturning of or excessive pressure against the structure. If constructing embankment on both sides of a concrete wall, pipe, or box type structure, construct the embankment so that the elevation on both sides of the structure is always approximately the same.

D Measurement

The department will measure Roadway Embankment without any correction for shrinkage or expansion factors by the cubic yard acceptably completed in its final location using the method of average end areas, except as follows:

- a) The engineer and contractor mutually agree to an alternative volume calculation method.
- b) If it is not possible to compute volumes of the various classes of roadway and drainage embankment by the method of average end areas due to erratic location of isolated deposits, the department may compute the volumes by three-dimensional measurements.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.0001	Roadway Embankment	CY

Payment is full compensation for furnishing offsite and onsite sources, for forming, compacting, shaping, sloping, trimming, finishing, and maintaining embankments. If offsite materials are utilized for roadway embankments, payment included full compensation for all items listed in standard spec 208.5(2), for obtaining all required permits, and all other incidental work required under this section.

126. HPC Masonry Structures, Item SPV.0035.4000.

A Description

This special provision describes requirement to place HPC Masonry Structures for bridge construction during nighttime hours, specialized material and construction requirements for high-performance concrete

used in bridge structures. Conform to standard spec 501, 502, and 509, as modified in this special provision. Conform to standard spec 715 for QMP Concrete Pavement, Cast-in-Place Barrier, and Structures.

B Materials

501.2.7.3 Coarse Aggregates

501.2.7.3.1 General

Replace the entire text of 501.2.7.3.1 with the following:

- (1) Provide coarse aggregates from a department-approved source. Use an approved source listed on the APL or follow the source approval process specified in standard spec 106.3.4.2.
- (2) Use clean, hard, durable crushed stone or crushed gravel free of excess flat and elongated pieces, lightweight particles, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.
- (3) Use virgin aggregates only.
- (4) Contact the engineer a minimum of 4 weeks prior to pouring concrete to collect a sample of the aggregates proposed for the project. The department will perform tests for LA wear, sodium sulfate soundness, freeze-thaw soundness and lightweight pieces at least once per calendar year for aggregates used in high-performance concrete mixes. Only the department test results will be used for aggregate acceptance.
- (5) The department will randomly sample coarse aggregate for lightweight pieces testing at least once per 1,000 cubic yards during placement of HPC Masonry Structures.
- (6) For coarse aggregates with marginal freeze-thaw soundness test results per standard spec 106.3.4.2.2.1, the department will randomly sample coarse aggregate for freeze-thaw soundness testing at least once per 1,000 cubic yards during placement of HPC Masonry Structures.

501.2.7.3.2 Physical Properties

Replace 502.2.7.3.2(1) with the following:

- (1) Furnish coarse aggregates approved for use in concrete masonry structures and conforming to the following:

Aggregate Quality Test	Test Method	Maximum Percent by Weight
LA Wear (100 and 500 revolutions) ^[1]	WTM T96	30
Sodium Sulfate Soundness (R-4, 5 cycles) ^[1]	WTM T104	6
Freeze-Thaw Soundness ^[1]	WTM T103	12
Lightweight Pieces ^{[1] [2]}	WTM T113	2.0

^[1] Coarse aggregate sizes used in the Portland Cement Concrete mixture design (DT2221 Concrete Mixture Design – Optimized Aggregate Gradation) will be tested individually and the results weighted by the blend percentage listed in the mix design. Do not consider fine aggregate percentage as part of the weighted result.

^[2] Material having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of lightweight pieces in the sample retained on the 3/8-inch sieve by the weight of the total sample.

501.2.7.3.3 Deleterious Substances

Replace 501.2.7.3.3(1) with the following:

- (1) Furnish aggregates that conform to the following:

Deleterious Substance	Test Method	Maximum Percent by Weight
Coal, clay lumps, shale, and other deleterious substance	Visual	3.0
Flat or elongated pieces based on a 3:1 ratio ^[1]	WTM D4791	15.0
Materials passing the No. 200 sieve	WTM T11	1.5

501.2.8 Concrete Curing Materials

Replace entire text with the following:

- (1) Furnish burlap conforming to AASHTO M 182, class 1, 2, 3 or 4.

710.5 Sampling and Testing

Supplement 710.5 with the following:

710.5.8 Chloride Penetration Resistance

- (1) For each new or changed mix design, measure chloride penetration resistance according to AASHTO T277 at a frequency of 1 test per 3 months (quarterly) of production.
- (2) Strip permeability samples from molds and wet cure according to AASHTO T277 Accelerated Moist Curing. Upon completion of the curing process, obtain one sample from each cylinder and test according to AASHTO T277.
- (3) Provide concrete mixtures that meet the chloride penetration maximum resistance limit of 1500 coulombs based on AASHTO T277. Quarterly chloride resistance test results exceeding 1500 coulombs will require adjustment of the concrete mix going forward to improve the chloride penetration resistance.

715.2 Materials

715.2.1 General

Replace 715.2.1(4) with the following:

- (4) The regional materials engineer must review and approve the submitted mix design within 7 business days of receiving the mix design submittal and complete Project Staff Review section of mix design certification within DT2220 or DT2221.

715.2.2 Class I Concrete Mixes

715.2.2.2 Structures

Supplement 715.2.2.2 with the following:

- (5) Provide a mix design using optimized aggregate gradation and a cementitious content within the range of 470 to 540 pounds per cubic yard. For all superstructure and substructure concrete, unless the engineer approves otherwise in writing, concrete mixtures must use an IL, IP, IS, or IT blended cement.
- (6) In addition to the standard spec mix design laboratory trial batching for structures, include the results of the following tests:
 1. WTM T119 Slump of Hydraulic Cement Concrete.
 2. AASHTO T277 Rapid Determination of the Chloride Permeability of Concrete, using the modified curing procedure according to 710.5.8 in this special provision.
- (7) Provide concrete with a 28-day compressive strength that equals or exceeds the following:
 - Contract specified f'c.
 - 4000 psi, if the contract does not specify f'c.
- (8) Provide concrete with a maximum chloride penetration resistance of 1500 coulombs at 28-days.

C. Construction

501.3.2.4.3.3 Extended Delivery Time

Delete 501.3.2.4.3.3(1).

501.3.5 Ready-Mixed Concrete

501.3.5.1 General

Replace 501.3.5.1(1) with the following:

- (1) Use central-mixed concrete as defined in standard spec 501.3.5.1(2) for all work performed under this special provision.

501.3.5.2 Delivery

Replace 501.3.5.2(3) with the following:

- (3) Deliver and completely discharge all concrete within one hour beginning when adding water to the cement, or when adding cement to the aggregates. A decrease in air temperature below 60 F or the use of department-approved retarders does not increase the discharge time.

501.3.7.1 Slump

Replace the entire text with the following:

- (1) Provide concrete with a 2-inch to 4-inch slump
- (2) Perform slump tests for concrete according to WTM T119.

501.3.8.2 Hot Weather Concreting

501.3.8.2.1 General

Replace the entire text with the following:

- (1) The contractor is responsible for the quality of concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions to control concrete temperature if the concrete temperature at the point of placement exceeds 80 F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.
- (2) If the concrete temperature at the point of placement exceeds 80 F, do not place concrete for items covered in this special provision.
- (3) The department will pay \$0.75 per pound for the quantity of ice required to reach a target concrete temperature of 75 F if the following conditions are met:
 1. The un-iced concrete temperature exceeds 80 F.
 2. The contractor has performed the actions outlined in the contractor's accepted temperature control plan.
 3. The contractor elects to use ice.
- (4) Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80 F. If project information is not available, the contractor should obtain information from similar mixes placed for other nearby work.

501.3.8.2.2 Bridge Decks

Replace the entire text with the following:

- (1) Do not place concrete for bridge decks when the air temperature is above 80 F.
- (2) For concrete placed in bridge decks, submit a written evaporation control plan at each pre-pour meeting. In that plan, outline the actions to maintain concrete surface evaporation at or below 0.15 pounds per square foot per hour. Do not place concrete for bridge decks without the engineer's written acceptance of that evaporation control plan. If the engineer accepts an evaporation control plan calling for ice, the department will pay \$0.75 per pound for that ice. Perform the work as outlined in the evaporation control plan.
- (3) If predicting a concrete surface moisture evaporation rate exceeding 0.15 pounds per square foot per hour, do not place concrete for bridge decks.
- (4) Provide evaporation rate predictions to the engineer 24 hours before each bridge deck pour.
- (5) Compute the evaporation rate from the predicted ambient conditions at the time and place of the pour using the nomograph, or computerized equivalent, specified in [CMM 525](#), figure 1 or using a computerized equivalent. Use weather information from the nearest national weather service station. The engineer will use this information to determine if the pour will proceed as scheduled.
- (6) At least 8 hours before each pour, the engineer will inform the contractor in writing whether to proceed with the pour as scheduled. If the actual computed evaporation rate during the pour exceeds 0.15 pounds per square foot per hour, at the engineer's discretion, the contractor may be allowed to implement immediate corrective action and complete the pour.

502.3.5.4 Superstructures

Delete 502.3.5.4(5).

502.3.7.8 Floors

Replace 502.3.7.8(5) with the following:

- (5) Set the rails or tracks that the finish machine rides on, to the required elevation; and ensure they adjust to allow for settlement under load. Support the rails or tracks outside the limits of the finished riding surface. Do not support rails or tracks on the tops of girders, or within the finished riding surface, without the engineer's written permission.

Delete 502.3.7.8(13),(14),(15). Add the following to 502.3.7.8:

- (19) Do not place bridge deck concrete more than 10 feet ahead of the finishing machine. If there is a delay of more than 10 minutes during the placement of a bridge deck, cover all concrete (unfinished and finished) with wet burlap to protect the concrete from evaporation until placement operations resume.
- (20) Keep hand finishing to a minimum. Hand finishing the edge of deck is acceptable. Equip the finishing machine with a pan behind the screed. Apply micro texture using a broom or turf drag following the use of a 10-foot straight edge. Only finish by hand as necessary to close up finished concrete. Begin wet curing the deck within a timeframe acceptable to the engineer following the micro texture.

502.3.8 Curing

502.3.8.1 General

Replace 502.3.8.1(1) with the following:

- (1) Maintain adequate moisture throughout the concrete mass to support hydration for at least 14 days.

502.3.8.2 Curing Requirements

502.3.8.2.1 General

Replace entire text of 502.3.8.2.1 with the following:

- (1) Wet-cure the concrete for bridge decks, structural approach slabs, sidewalks on bridges and raised medians on bridges for 14 days by use of a soaker hose system, or other engineer-approved methods. Cover the finished surface of bridge decks and overlays with one layer of wetted burlap within 10 minutes after the finishing machine has passed. Apply the burlap gently to minimize marking of the fresh concrete. Keep the first layer of burlap continuously wet until the bridge deck or overlay is sufficiently hard to apply a second layer of wetted burlap. Immediately after applying the second layer of burlap, continue to keep the deck wet until placing and activating the soaker hose system. Throughout the remainder of the curing period, keep the burlap continuously wet with soaker hoses hooked up to a continuous water source. Inspect the burlap twice daily to ensure the entire surface is moist. If necessary, alter the soaker hose system as needed to ensure the entire surface is covered and stays moist. After 48 hours from the time of completion of the bridge deck or overlay pour, the soaker hose system and burlap may be covered with polyethylene sheeting. Provide a continuous flow of water through the soaker hose system for the entire curing period.
- (2) Do not uncover any portion of the deck at any time for any reason during the first 7 days of the curing period.
- (3) Set up and test the fogging system before each bridge deck, structural approach slab, bridge mounted sidewalk or bridge mounted raised median pour. Keep the fogging system set up and operational during the pour.

502.3.8.2.3 Decks

Delete the entire text.

502.3.8.2.4 Parapets

Replace the entire text with the following:

- (1) Cure the inside and outside concrete faces and tops of railings or parapets by covering with wetted burlap immediately after form removal and surface finish application. Keep the burlap thoroughly wet for at least 7 days; or by covering for the same period with thoroughly wet polyethylene-coated burlap conforming to standard spec 501.2.8.

- (2) Secure coverings along all edges to prevent moisture loss.

502.3.9 Cold Weather Protection

502.3.9.6 Bridge Floors

Replace the entire text of 502.3.9.6 with the following:

- (1) Protect concrete in bridge floors as specified for structural masonry, and except for parapets and similar pours, according to the following requirements:
1. Do not place concrete for bridge floors or other superstructure elements when the national weather service forecast for the construction area predicts temperatures to fall below 32 F within 24 hours, unless the engineer specifically allows or requires in writing.
 2. Protect the underside of the bridge floor, including the girders, by housing and heating when the national weather service forecast predicts temperatures to fall below 32 F during the cold weather protection period. Maintain a minimum temperature of 40 F in the enclosed area under the floor for the entire 14-day curing period.

D Measurement

502.4.1 Concrete for Bridges

Replace the entire text of 502.4.1 with the following:

- (1) The department measures the Concrete Masonry Bridges and HPC Masonry Structures bid items by the cubic yard acceptably completed, based on the dimensions the plans show or, if the engineer revises the plan, on revised plan dimensions. The volume in the haunches of prestressed concrete girder bridges is based on the average haunch height the plans show.
- (2) The department deducts for the volume displaced within components as follows:
- Cast-in-place concrete piling embedded in footings, pile caps and abutments.
 - Prestressed concrete girders embedded in superstructure diaphragms.
 - Flanges of steel and precast concrete beams embedded in decks.

E Payment

502.5.1 General

Supplement 502.5.1(1) with the following:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
SPV.0035.4000	HPC Masonry Structures	CY

502.5.2 Concrete for Bridges

Replace the entire text of 502.5.2(1) with the following:

- (1) Payment for the Concrete Masonry Bridges and HPC Masonry Structures bid items is full compensation for providing forms and falsework; for placing, finishing, curing, protecting, and heating concrete; for measuring concrete opening strength, including fabricating and testing cylinders, and evaluating maturity; for treating joints, including sealing, providing preformed joint filler and waterproofing; for sealing cracks identified in the initial crack survey; for providing bridge seat protection; and for providing nameplates.

127. Truck Entering Warning System, Item SPV.0045.0504.

A Description

This special provision describes furnishing, installing, integrating, calibrating, making functional, and maintaining a Truck Entering Warning System to provide advance warning of construction vehicles merging into the traffic stream. The warning system must be functional at all times for the respective work zone is in use.

This system will include one solar powered flashing beacon sign (FBS) with a static traffic control sign, a wireless sensor system to detect construction vehicle traffic as it is about to merge into the traffic stream, and communications between the sensor and the FBS that will activate the sign upon detection of a merging construction vehicle.

B Materials

B.1 Traffic Detection System

Provide a Traffic Detection System that is non-intrusive to the roadway pavement. Locate the portable traffic sensor(s) (PTS) to provide a maximum 5 second delay, or other time as directed by the engineer, between the construction vehicle reaching the access point and trigger the FBS beacon activation.

B.2 Static Traffic Control Signs with Temporary Flashing Beacon Signs (FBS)

Provide static traffic control signs conforming to standard spec 643 and Standard Sign Plate W8-77.

Provide temporary FBS conforming to the standard spec 658.2.2, Traffic Signal Faces.

B.3 Automated System Manager (ASM)

Provide an ASM that assesses current detector data captured by the traffic detection system that activates/deactivates the FBS based on work zone vehicle truck locations.

B.4 System Communications

Ensure Truck Entering Warning System communications meet the following requirements:

1. Perform required configuration of the Truck Entering Warning System's communication system automatically during system initialization.
2. Communication between the server and the FBS or PTS are independent throughout the full range of deployed locations, and do not rely upon communications with any other FBS or PTS.
3. Incorporate an error detection/correction mechanism into the Truck Entering Warning System to ensure the integrity of all traffic condition data and motorist information messages.
4. All communications systems within this system shall be certified to be compliant with all pertinent F.C.C. regulations.

B.5 System Acceptance

Submit vendor verification to the engineer 14 calendar days before the pre-construction meeting that the system will adequately perform the functions specified in this special provision. Adequate verification includes past successful use of the system by other agencies, and/or demonstration of the system.

Provide contact information for a designated representative responsible for monitoring the performance of the system and for making modifications to the operational settings as the engineer directs.

Provide all testing and calibration equipment.

C Construction

C.1 General

Install and reposition Truck Entering Warning System per plan or as the engineer directs. FBS are typically located 1500' in advance of the truck merging location. Quantity and location of the detectors shall be determined by the contractor.

Provide technical personnel for all system calibration, operation, maintenance, and timely on-call support services.

Promptly correct the system within 24 hours of becoming aware of a deficiency in the operation or individual part of the system. A minimum of three days before deployment, place the Truck Entering Warning System and demonstrate to the department that the Truck Entering Warning System is operational.

Maintain the Truck Entering Warning System for the duration identified in the plan. Ensure the system operates continuously during work hours throughout the duration of the project.

Remove the system upon completion.

C.2 Meetings

Attend mandatory in-person/virtual pre-construction meetings with the department. Attend additional meetings as deemed necessary by the department. These meetings may be held in person or via teleconference, as scheduled by the department.

C.3 Programming

C.3.1 General

Program the Truck Entering Warning System to ensure the following general operations are performed:

1. Provide a password protected login to the ASM and all other databases.
2. Ensure the system autonomously restarts in case of any power failure.

C.3.2 System Operations Strategy

Arrange for the vendor/manufacturer to coordinate system operation, detection, and trends/thresholds with the engineer.

FBS shall be activated to give approaching traffic adequate advance warning and be activated throughout the vehicles entrance onto the highway.

C.4 Calibration and Testing

At the beginning of the project and monthly throughout the duration of the project, perform a successful field test and calibration to verify the system is accurately detecting trucks entering the highway and accurately relaying the information to the ASM and FBS.

Send email of successful calibration and testing to the engineer.

D Measurement

The department will measure Truck Entering Warning System by the day, acceptably completed, measured as each complete system per access location.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV 0045.0504	Truck Entering Warning System	DAY

Payment is full compensation for providing, repositioning, operating, maintaining, monitoring, calibrating, testing, and removing the complete system consisting of FBS, PTS, ASM, and system communications.

Failure to correct a deficiency to the FBS, PTS, or ASM within 24 hours after notification from the engineer or the department will result in a one-day deduction of the measured quantity for each day in which the deficiency is not corrected.

It is the engineer's sole discretion to assess the deductions for an improperly working Truck Entering Warning System.

- 128. Corridor Smart Work Zone System. Flashing Beacon Sign (SWZ), Item SPV.0045.0505; PCMS with Cellular Communications (SWZ), Item SPV.0045.0506; Portable Traffic Sensor (SWZ), Item SPV.0045.0507; Moving FBS, Item SPV.0060.0573; Moving PCMS, Item SPV.0060.0574; Moving PTS, Item SPV.0060.0575; Mobilizations Emergency Traffic Control, Item SPV.0060.0576.**

A Description

This special provision describes furnishing, installing, mounting sensors, relocating, operating, collecting data, reporting, maintaining, monitoring, calibrating, testing and removing a Smart Work Zone (SWZ) system capable of measuring vehicular speeds at downstream sections of a roadway, and displaying the

speed information on portable changeable message signs (PCMS) and flashing beacon signs (FBS) at upstream locations.

This section also describes emergency mobilizations for traffic control.

The Smart Work Zone System shall accommodate staging for Project ID 1060-27-71 and 1060-27-74.

B Materials

Provide SWZ components and software that is National Transportation Communications for ITS Protocol (NTCIP) compliant.

B.1 Portable Changeable Message Signs (PCMS) with Cellular Communications (SWZ)

Provide PCMS conforming to standard spec 643. Ensure each PCMS is integrated with a modem, and other equipment (e.g., automated system manager) mounted on it, and acts as a single device for communicating with similarly integrated devices and displaying real-time traffic condition information.

B.2 Portable Traffic Sensors (PTS) (SWZ),

Provide PTS that are nonintrusive and capable of capturing vehicle speed in mph. Integrate each sensor with a modem to communicate with the automated system manager (ASM). Provide mounting equipment that fastens sensors to PCMS, FBS, WZDSL-SF sign trailers, or posts.

B.3 Static Traffic Control Signs with Temporary Flashing Beacon Signs (FBS) (SWZ),

Provide static traffic control signs with temporary flashing beacon signs conforming to standard spec 658.2(2) for Traffic Signal Faces. Ensure each FBS is integrated with a modem, and other equipment (e.g., automated system manager) mounted on it, and acts as a single device for communicating with similarly integrated devices and displaying real-time traffic conditions.

B.4 Automated System Manager (ASM)

Furnish ASM from the department's approved product list that assesses current traffic data captured by the system PTS and communicates appropriate messages to the motorists through PCMS based on predetermined speed thresholds and messages.

B.5 System Communications

Ensure SWZ communications meet the following requirements:

- Perform required configuration of the SWZ's communication system automatically during system initialization.
- Communication between the server and any individual PCMS, FBS, or PTS are independent through the full range of deployed locations, and do not rely upon communications with any other PCMS, FBS, or PTS.
- Incorporate an error detection/correction mechanism into the SWZ communication system to ensure the integrity of all traffic condition data and motorist information messages.

B.6 System Acceptance

Submit vendor verification to the engineer and Bureau of Traffic Operations (DOTBTOWorkzone@dot.wi.gov) 14 calendar days before the pre-construction meeting that the system will adequately perform the functions specified in this special provision.

Adequate verification includes past successful performance of the system, literature and references from successful use of the system by other agencies, and/or demonstration of the system.

Provide contact information for a designated representative responsible for monitoring the performance of the system and for making modifications to the operational settings as the engineer directs.

Provide all testing and calibration equipment.

C Construction

C Construction

C.1 General

Install and reposition the Smart Work Zone System per plan or as the engineer directs. Provide plan to the engineer and Bureau of Traffic Operations (DOTBTOWorkzone@dot.wi.gov) 14 calendar days before each corridor contract pre-construction meeting.

PTS may be mounted on PCMS, FBS, WZDSL-SF sign trailers, or posts. Posts and mounting equipment are incidental to the Portable Traffic Sensor bid item.

Install PTS at the following locations:

- Within the work zone as indicated on the plans or as directed by the engineer.
- Within the lane closure taper.
- 3,100 feet upstream of the lane closure taper (for lane reduction configurations only).
- 5,700 feet upstream of the lane closure taper/work area.
- 2 miles upstream of the lane closure taper/work area.
- Place any additional sensors even distances (in miles) upstream as shown on the plans or as directed by the Engineer.

Install PCMS or FBS at the following locations, delineated by 5 drums:

- PCMS 200 feet upstream of the lane closure taper, offset to ensure downstream arrow board can be seen (for lane reduction configurations only).
- PCMS 3,100 feet upstream of the lane closure taper (for lane reduction configurations only).
- 5,700 feet upstream of the lane closure taper/work area.
- 2 miles upstream of the lane closure taper/work area.
- Place additional PCMS or FBS even distances (in miles) upstream as shown on the plans or as directed by the engineer.

If there are more than 2 lanes or specified in the plans, place PCMS or FBS on both sides of the roadway.

Number the devices in sequential order so they are visible from the shoulder with 6-inch white high reflective sheeting.

Provide technical personnel for all system calibration, operation, maintenance, and timely on-call support services.

Repair damaged or malfunctioning PCMS, FBS, or PTS units or a malfunctioning ASM within 2 hours after discovering a problem.

Maintain the SWZ for the duration of the project. Ensure the system operates continuously (24 hours, 7 days a week) in the automated mode throughout the duration of the project.

Remove the system upon project completion.

C.2 Reports

Provide an electronic copy of a weekly summary report of all data via email to the engineer. Ensure the report includes, at a minimum, the average speed per sensor, time in congestive state per sensor and number of triggers per day.

C.3 Meetings

Attend mandatory pre-construction meetings with the department. Attend additional meetings as deemed necessary by the department. These meetings may be held in person or via teleconference, as scheduled by the department.

C.4 Programming

C.4.1 General

Program the SWZ to ensure that the following general operations are performed:

- Provide password protected login(s) to the ASM, website, and all other databases.
- Automatic setting of the PCMS message sequences and FBS to reflect current traffic flow status updated every 60 seconds for a congestion message. Remove a congestion message when 180 seconds of average traffic speeds above the current level are observed, or utilize a customized frequency as determined by the engineer.
- The PCMS shall activate based on pre-determined speed thresholds as shown on the Plans or as determined by the engineer.

- The FBS shall activate based on pre-determined speed thresholds or as determined by the engineer:
 - o FBS #7 & 8 on I-94 EB as shown on plan sheet *SMART WORK ZONE – I-94 EB 2-LANE CONFIGURATION* shall activate based on traffic speeds of 0-39 mph at the PTS within the lane closure taper or PTS one half mile upstream of the lane closure.
 - o FBS #7 on I-94 EB as shown as shown on plan sheet *SMART WORK ZONE – I-94 EB 3-LANES WITH EEL LANE REDUCTION* shall activate based on traffic speeds of 0-39 mph at the next I-94 EB downstream PTS.
 - o FBS #8 on I-94 EB as shown on plan sheet *SMART WORK ZONE – I-94 EB 3-LANES WITH EEL LANE REDUCTION* shall activate based on traffic speeds of 0-39 mph at the PTS within the Early East Leg lane closure taper or PTS one half mile upstream of the lane closure.
 - o FBS located on I-94 EB west of I-41 shall activate based on traffic speeds of 0-39 mph at the next I-94 EB downstream PTS.
 - o FBS located on the I-41 NB to I-94 EB system ramp and I-41 SB to I-94 EB system ramp shall activate based on traffic speeds of 0-39 mph at the PTS located downstream on I-94 EB at approximately 92nd Street.
 - o FBS located on I-94 WB shall activate based on traffic speeds of 0-39 mph at the next PTS located downstream on I-94 WB.
 - o FBS located on the Marquette Interchange system ramps to I-94 WB shall activate based on traffic speeds of 0-39 mph at the PTS located downstream on I-94 WB west of 16th Street.
 - o FBS located on I-794 WB shall activate based on traffic speeds of 0-39 mph at the PTS located downstream on I-794 WB.
- Provide real-time data from the ASM to a website with a full color mapping feature and refresh every 60 seconds. Make data on website available to the department staff at all times for the duration of the work zone activity. Ensure website includes:
 - o Device ID
 - o Vehicle speeds
 - o PCMS messaging
 - o FBS triggers
 - o Device locations

Archive all traffic data and PCMS messages in a Microsoft Excel format with date and time stamps.

Configure the website to quantify system failures which includes communication disruption between any devices in the system configuration, PCMS/FBS malfunctioning, PTS malfunction, loss of power, low battery, etc.

Automatically generate and send an email alert any time a user specified queue is detected by the system.

Provide default and advisory messages automatically based on traffic conditions.

Ensure the system autonomously restarts in case of any power failure.

Provide the department access to manually override PCMS messages for a user-specified duration, after which automatic operation will resume display of messages appropriate to the prevailing traffic conditions. Document all override messages.

C.4.2 System Operation Strategy

Arrange for the vendor/manufacturer to coordinate system operation, detection, trends/thresholds, and messaging parameters with the engineer.

Refer to the Smart Work Zone Plans for the minimum required PCMS messaging sequences and can be adjusted by the engineer at their discretion. In addition to the Smart Work Zone Plans, the sequences below

are a minimum requirement for Dynamic Late Merge System (DLMS) PCMS and can be adjusted by the engineer at their discretion. The DLMS PCMS, by plan sheet, are:

Plan Sheet	Point of Merge PCMS	Intermediate PCMS
I-94 EB 2-LANE CONFIGURATION	9, 10	7, 8
I-94 EB 3-LANES WITH EEL REDUCTION	10	9
I-94 WB 2-LANE CONFIGURATION	5	4

Free Flow:

If the current PTS-measured speed within the lane closure taper or at one half mile from the lane closure taper is at or above 40 mph, display no lane messages, and therefore allow traffic to resume typical early merge operation. The PCMS placed at 200' upstream of the lane closure taper shall display a flashing arrow (flashing arrow merge mode) following applicable arrow board standards. The intermediate PCMS shall display nothing except for lighting the four corners (flashing caution mode) to show that it is on.

Congestion:

If the current PTS-measured speed near the lane closure taper is at or below 39 mph, the following two-phase messages shall be displayed on the upstream PCMS as shown below:

- Point of merge PCMS:

FRAME 1	FRAME 2
MERGE HERE	TAKE TURNS

- Intermediate PCMS:

FRAME 1	FRAME 2
STAY IN LANE	DO NOT MERGE

C.5 Calibration and Testing

At the beginning of the project perform a successful field test and calibration at a SWZ location to verify the system is detecting accurate vehicle speeds, and accurately relaying the information to the ASM, the PCMS, and the FBS.

Send email of successful calibration and testing to the engineer.

C.6 Moving FBS, Moving PCMS, and Moving PTS

Under the Moving FBS, Moving PCMS and Moving PTS bid items, transport and install a device from an existing location where the device is operating to a new location as shown on the plans or as directed by the engineer.

C.7 Mobilizations Emergency Traffic Control

Provide a preferred method of notification and contact information for the contractor's responsible party (the person or persons in charge of coordinating and completing repair efforts) to the engineer at the pre-construction meeting. This person(s) shall be available 24 hours a day, 7 days a week, to respond to any event that impacts the free flow of traffic for the duration of this contract.

Notification is defined as the first phone call/voice message, text message, or email. Impacts to traffic may include, but are not limited to, smart work zone device impacts. The contractor designated person needs to be able to promptly address the issues impacting traffic once notified by the engineer.

The contractor shall provide staff to the incident site within one hour of receiving a repair request from the responding agency, that is able to assess the situation, plan, and coordinate the repair operations. The contractor shall consult with the department's representative on potential repair or replacement options to restore the free flow of traffic. Staff and equipment deployed shall be capable of completing the needed repairs as quickly as possible once repair work is started.

D Measurement

The department will measure Flashing Beacon Sign (SWZ), PCMS with Cellular Communications (SWZ), and Portable Traffic Sensor (SWZ) by each individual device by the day, acceptably completed.

The department will measure Moving FBS, Moving PCMS, and Moving PTS by each individual device, acceptably completed.

The department will measure Mobilizations Emergency Traffic Control as each individual mobilization acceptably completed. The department will not include delivering and installing traffic control devices provided for in specific contract bid items.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.0505	Flashing Beacon Sign (SWZ)	DAY
SPV.0045.0506	PCMS with Cellular Communications (SWZ)	DAY
SPV.0045.0507	Portable Traffic Sensor (SWZ)	DAY
SPV.0060.0573	Moving FBS	EACH
SPV.0060.0574	Moving PCMS	EACH
SPV.0060.0575	Moving PTS	EACH
SPV.0060.0576	Mobilizations Emergency Traffic Control	EACH

Payment for Flashing Beacon Sign (SWZ), PCMS with Cellular Communications (SWZ), and Portable Traffic Sensor (SWZ) is full compensation for furnishing, installing, mounting sensors, operating, collecting data, reporting, maintaining, monitoring, calibrating, testing, and removing the complete system consisting of FBS, PCMS, PTS, ASM, and system communications.

Payment for Moving FBS, Moving PCMS and Moving PTS is full compensation for transporting and installing a device from an existing location where the device is operating to a new location as shown on the plans or as directed by the engineer.

Failure to correct a deficiency to a PCMS, FBS, PTS, or the ASM within 2 hours after notification from the engineer, the department, or an email alert from the ASM will result in a \$75 assessment for each 2-hour interval for ASM, a \$10 assessment for each 2-hour interval for PCMS/FBS, and a \$1 assessment for each 2-hour interval for PTS following the allotted 2-hour response time that the deficiency is not corrected for each device and the device will not be paid for until the deficiency is corrected. Increments of 2 hours or less will be assessed as a 2-hour increment. The engineer, or designated representative, will be the sole authority in determining assessable 2-hour increments. Fee assessments will be assessed under the administrative item Failing to Open Road to Traffic.

Payment for Mobilizations Emergency Traffic Control is full compensation for the emergency moving of personnel, moving equipment, and moving materials. The department will pay separately for delivery and installation of traffic control devices under the other bid items in this contract.

If the contractor fails to be on-site of an incident with appropriate staff within one hour of receiving notification for a repair request for Mobilizations Emergency Traffic Control, the department will assess the contractor a \$500 fee assessment for each 15-minute interval that the contractor is not present following the allotted one-hour response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Fee assessments will be assessed under the administrative item Failing to Open Road to Traffic.

Payment for Mobilizations Emergency Traffic Control is full compensation for the emergency moving of personnel, moving equipment, and moving materials. The department will pay separately for delivery and installation of traffic control devices under the other bid items in this contract.

If the contractor fails to be on-site of an incident with appropriate staff within one hour of receiving notification for a repair request for Mobilizations Emergency Traffic Control, the department will assess the contractor a \$500 fee assessment for each 15-minute interval that the contractor is not present following the allotted one-hour response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining

assessable 15-minute increments. Fee assessments will be assessed under the administrative item Failing to Open Road to Traffic.

**129. Baseline CPM Progress Schedule, Item SPV.0060.0001;
Monthly CPM Progress Schedule Updates, Item SPV.0060.0002.**

Replace standard spec 108.4 with the following:

108.4 Critical Path Method Progress Schedule

108.4.1 Definitions

- (1) The department defines terms used in 108.4 as follows:

Activity	An administrative or construction task performed during the course of the project with a defined duration, and scheduled (or actual) start and finish dates.
Critical Path	The sequence of activities that must start and finish on time to minimize the overall duration and ensure interim and project completion milestones are completed by the contract completion dates.
Longest Path	The sequence of activities through a project network from start to finish where the total duration is longer than any other path.
Construction Activity	Construction activities are discrete work activities performed by the contractor, subcontractors, utilities, or third parties within the project limits.
CPM Progress Schedule	A Critical Path Method (CPM) Progress Schedule is a network of logically related activities. The CPM schedule calculates when activities can be performed and establishes the critical or longest continuous path or paths of activities through the project.
Float	Float, as used in this special provision, is the total float of an activity; i.e., it is the amount of time between the date when an activity can start (the early start), and the date when an activity must start (the late start). In cases where the total float of an activity has a different value when calculated based on the finish dates, the lower (more critical) value will govern.
Forecast Completion Date	The completion date predicted by the latest accepted CPM Update, which may be earlier or later than the contract completion date, depending on progress.
Fragnet	A group of logically-related activities, typically inserted into an existing CPM schedule to model a portion of the project, such as the work associated with a change order.
Initial Work Plan	The initial work plan is a time-scaled CPM schedule showing detailed activities for the first 90 calendar days of work and summary level activities for the remainder of the project.
Intermediate Milestone Date	A contractually required date for the completion of a portion of the work, so that a subsequent portion of the work or stage of traffic phasing may proceed.
Department's Project Schedule Template	The department's project schedule template for the overall IH 94 Freeway Program, including interim and final contract completion dates, and containing codes for use as a template for the development of the contractor's schedule.
Work Breakdown Structure (WBS)	A framework for organizing the activities that make up a project by breaking the project into successively greater detail by level. A WBS organizes the project work. It does not address the sequencing and scheduling of project activities.

108.4.2 Department's Project Schedule Template

108.4.2.1 Project Schedule

- (1) Within five business days after award, the department will provide its current Project Schedule Template, containing intermediate milestone constraints, standard activity codes, and a standard WBS for the contractor to use to develop its schedule.

108.4.2.2 Use of Project Schedule Template

- (1) The Project Schedule Template provides information to assist the contractor in preparing its schedule. The Project Schedule Template is not a contract document. The logic contained in the Project's Schedule Template is not intended to alter or supplement contract requirements for the phasing of the work, but to reflect those requirements.

108.4.3 Contractor's Scheduling Responsibilities

- (1) Prepare and submit a CPM progress schedule that accurately reflects the plan for the performance of the work, based on the physical requirements of the Work, and Traffic Phasing requirements. The CPM schedule is the contractor's committed plan to complete all work within the completion deadlines. Full responsibility is assumed for the prosecution of the work as shown. The CPM schedule is not part of the contract. Schedule the Work in the manner required to achieve the completion date and interim completion dates specified in the Prosecution and Progress Special Provision. The contractor will schedule and attend a CPM Initial Workshop. If necessary, the engineer may modify the workshop schedule to ensure attendance by the necessary department and contractor personnel; however, the CPM Initial Workshop must be completed prior to issuing the Notice to Proceed. The CPM Initial workshop will include:
 1. Department presentation of the use of CPM scheduling on the project.
 2. Contractor presentation of the conceptual work plan for the project.
 3. Department and contractor discussion of the level of detail on features in the CPM Initial Work Plan and the Baseline CPM Progress Schedule.
- (2) Use the department-provided Project Schedule Template to develop the Initial Work Plan and the Baseline CPM Progress Schedule. Use the Project's Schedule Template ID coding structure to categorize activities by Contract, Stage, Location, and Responsibility to ensure compatibility with the Project Schedule Template and with schedules prepared by other contractors. Add additional activity codes as necessary, but do not delete the coding structure provided.
- (3) To ensure compatibility with the Project Schedule Template, use the latest version of Primavera P6 Project Management, by Oracle Corporation, Redwood Shores, CA, to prepare the Initial Work Plan, Baseline CPM Progress Schedule, and Monthly CPM Updates.
- (4) Designate a Project Scheduler who will be responsible for scheduling the Work and submit a professional resume describing a minimum of three years of scheduling experience on urban, interstate-highway reconstruction work of similar size and complexity, including recent experience with P6. Obtain approval of the submitted resume before scheduling the work.

108.4.4 Submittals

108.4.4.1 Initial Work Plan

- (1) Within ten business days after the CPM Initial Work Plan Workshop, submit an Initial Work Plan as follows:
 1. Develop the Initial Work Plan using the Project Schedule Template. Identify the contemplated start and completion dates for each activity.
 2. Provide a detailed plan of activities to be performed within the first 90 calendar days of the contract. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
 3. Provide activities as necessary to depict administrative work, including submittals, reviews, and procurements that will occur within the first 90 calendar days of the contract. Show additional activities that require department review or approval. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.
 4. Provide summary activities for the balance of the project. Summary activities may have durations greater than 28 calendar days (20 business days).
 5. Submit electronic printout (PDF) copies of the Initial Work Plan and the corresponding Oracle Primavera P6 schedule (XER) in a format acceptable to the engineer.
 6. The engineer will accept the contractor's Initial Work Plan or provide comments within five business days after receipt of the Initial Work Plan. Address comments and resubmit the Initial Work Plan as necessary. Do not begin work until the engineer accepts the Initial Work Plan. The department will use the initial work plan to monitor the progress of the work until the Baseline CPM Progress Schedule is accepted.

7. Submit an updated version of the Initial Work Plan monthly until the engineer accepts the Baseline CPM Progress Schedule. With each update, include actual start dates, completion percentages, and remaining durations for activities started but not completed. Include actual finish dates for completed activities.
8. Ensure the Initial Work Plan shows completing the work within the interim completion dates and specified completion date.
9. Include activities that describe essential features of the work and activities that might potentially delay contract completion. Identify activities that are controlling items of work.

108.4.4.2 Baseline CPM Progress Schedule

- (1) Within 15 business days after the CPM Initial Workshop, submit a Baseline CPM Progress Schedule and written narrative. The department will use the schedule to monitor the progress of the work.
 1. Develop the Baseline CPM using the Project Schedule Template. The Baseline CPM is the contractor's committed plan to complete the Work within the time frames required to achieve the contract completion date and intermediate milestone dates.
 - 1.1. Provide a detailed plan of activities to be performed during the entire contract duration, including all administrative and construction activities required to complete the work as described in the contract documents. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.
 - 1.2. Provide activities as necessary to depict administrative work, including submittals, reviews, procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.
 - 1.3. Submit a temporary drainage plan showing the interface between various stages of a project as well as the interface with adjacent projects.
 - 1.4. Include activities that describe essential features of the work and activities that might potentially delay contract completion. Identify activities that are controlling items of work.
 - 1.5. Show completing the work within interim completion dates and the specified completion date.
 - 1.6. Provide activities as necessary to depict third party work related to the contract.
 - 1.7. Make allowance for specified work restrictions, non-working days, time constraints, calendars, and weather; and reflect involvement and reviews by the department, and coordination with adjacent contractors, utility owners, and other third parties.
 - 1.8. With the exception of the Project Start Milestone and Project Completion Milestone, all activities must have predecessors and successors. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag unless the engineer accepts requested exceptions. Do not use negative lags with any relationships.
 - 1.9. Activity constraints shall be limited to contract-imposed completion dates. Do not use constraints on start or finish dates unless the engineer accepts requested exceptions. Do not use float constraints on any construction task activities. The engineer reserves the right to temporarily delete any date and/or float constraint when evaluating the effects of delays.
 - 1.10. Schedule all intermediate milestones in the proper sequence and input as either a "Start-no-Earlier-Than" or "Finish-no-Later-Than" date. Provide predecessors and successors for each intermediate milestone as necessary to model each Stage of the Work. Unless the engineer accepts a requested exception, the schedule should encompass all the time in the contract period between the starting date and the specified completion date.
 - 1.11. Using the bid quantities and unit prices, develop an anticipated cash-flow curve for the project, based on the Baseline CPM.
 2. Provide a written narrative with the baseline CPM explaining the planned sequence of work, as-planned critical path, critical activities for achieving intermediate milestone dates, traffic phasing, and planned labor and equipment resources. Use the narrative to further explain:
 - 2.1. The basis for activity durations in terms of production rates for each major type of work (number of shifts per day and number of hours per shift), and equipment usage and limitations.
 - 2.2. Use of constraints.
 - 2.3. Use of calendars.
 - 2.4. Estimated number of adverse weather days on a monthly-basis.
 - 2.5. Scheduling of permit and environmental constraints, and coordination of the schedule with other contractors, utilities, and public entities.

- (1) Submit electronic printout (PDF) copies of the Baseline CPM and the corresponding Oracle Primavera P6 schedule file (XER) in a format acceptable to the engineer.
- (2) Within ten business days of receiving the Baseline CPM, the engineer will provide comments and schedule a meeting for the contractor to present its Baseline CPM and answer questions raised in the engineer's review.
- (3) At the meeting scheduled by the engineer, provide a presentation of the Baseline CPM. In the presentation, include a discussion of the staging and sequencing of the work, understanding of traffic phasing, and application of labor and equipment resources to the Work. Address comments raised in the engineer's review.
- (4) Within five business days after the meeting, the engineer will accept the contractor's Baseline CPM schedule or provide comments. Address the engineer's comments and resubmit a revised Baseline CPM within ten business days after the engineer's request. If the engineer requests justification for activity durations, provide information that may include estimated labor, equipment, unit quantities, and production rates used to determine the activity duration.
- (5) The department will only make progress payments for the value of materials, as specified in standard spec 109.6.3.2, until the contractor has submitted the Baseline CPM Schedule. The department will retain 10 percent of each estimate until the department accepts the Baseline CPM Schedule.
- (6) The engineer will accept the Baseline CPM based solely on whether the schedule is complete as specified in this section. The engineer's acceptance of the schedule does not modify the contract or validate the schedule.
- (7) The department will not consider requests for contract time extensions as specified in 108.10 or additional compensation for delay specified in standard spec 109.4.7 until the department accepts the Baseline CPM schedule.

108.4.4.3 Monthly CPM Updates

- (1) Submit CPM Updates on a monthly basis after acceptance of the Baseline CPM as follows:
 1. Include actual start dates, completion percentages, and remaining durations for activities started but not completed, and actual finish dates for completed activities, through the final acceptance of the project.
 2. Include additional activities as necessary to depict additions to the contract by changes and logic revisions as necessary to reflect changes in the contractor's plan for prosecuting the work.
 3. Include a narrative report that includes a brief description of monthly progress, changes to the critical path from the previous update, sources of delay, potential problems, work planned for the next 30 calendar days, and changes to the CPM schedule. Changes to the logic of the CPM schedule include the addition or deletion of activities and changes to activity descriptions, original durations, relationships, constraints, calendars, or previously recorded actual dates. Justify changes to the CPM schedule in the narrative by describing associated changes in the planned methods or manner of performing the work or changes in the work itself.
 4. Submit electronic printout (PDF) copies of each CPM Update and the corresponding Oracle Primavera P6 schedule file (XER) in a format acceptable to the engineer.
- (2) Within five business days of receiving each CPM Update, the engineer will provide comments and schedule a meeting as necessary to address comments raised in the engineer's review. Address the engineer's comments and resubmit a revised CPM Update within five business days after the engineer's request.
- (3) The department will only make progress payments for the value of materials, as specified in standard spec 109.6.3.2, until the contractor has submitted the Monthly CPM Update. The department will retain 10 percent of each estimate until the department accepts the Monthly CPM Update.

108.4.4.4 Three-Week Look-Ahead Schedules

- (1) Submit Three-Week Look-Ahead Schedules on a weekly basis after the notice to proceed (NTP). The schedule can be hand drawn or generated by computer. With each Three-Week Look-Ahead include:
 1. Activities underway and as-built dates for the past week.
 2. Actual as-built dates for completed activities through final acceptance of the project.
 3. Planned work for the upcoming two-week period.
 4. The activities underway and critical RFIs and submittals, based on the CPM schedule.
 5. Details on other activities not individually represented in the CPM schedule.

- (2) On a weekly basis, the department and the contractor shall agree on the as-built dates depicted in the Three-Week Look-Ahead schedule or document all disagreements. Use the as-built dates from the Three-Week Look-Ahead schedules for the month when updating the CPM schedule.

108.4.4.5 Weekly Production Data

- (1) Provide estimated and actual weekly production rates for items of work on a weekly basis as follows:

1. Data on the following items by area or station:
 - 1.1. Retaining Walls
 - 1.1.1. Leveling Pads - LF
 - 1.1.2. Set Panels - SF
 - 1.1.3. Parapets - LF
 - 1.1.4. Wall Face - Bay
 - 1.1.5. Tie Backs – Each
 - 1.1.6. Anchor Slabs – LF
 - 1.1.7. Drilling - Each
 - 1.1.8. Coping – LF
 - 1.1.9. Footing - LF
 - 1.2. Bridge Construction
 - 1.2.1. Footings—Each
 - 1.2.2. Columns—Each
 - 1.2.3. Abutments—Each
 - 1.2.4. Pier Caps—Each
 - 1.2.5. Girder Spans – Each
 - 1.2.6. Decked Spans – Each
 - 1.2.7. Poured Spans – Each
 - 1.3. Roadway Excavation—CY per week
 - 1.4. Roadway Structural Section
 - 1.4.1. Grading/Subgrade Preparation—SY
 - 1.4.2. Base Material Placement—Ton
 - 1.4.3. Base Material Subgrade Preparation—SY
 - 1.4.4. Asphalt Pavement—Ton
 - 1.4.5. Concrete Pavement – SY
 - 1.5 (Vacant)
 - 1.6. Noise Walls
 - 1.6.1. Drill/Set Ground Mounted Posts - Each
 - 1.6.2. Install Ground Mounted Panels - Each
 - 1.6.3. Anchor/Set Structure Mounted Posts - Each
 - 1.6.4. Install Structure Mounted Panels - Each

2. The actual daily production for the past week and the anticipated weekly production for the next week.

- (2) Submit the data in an electronic spreadsheet format at the same time the Three-Week Look-Ahead is submitted. On a weekly basis, the department and the contractor shall agree on the production data or document all disagreements.

108.4.5 Progress Review Meetings

108.4.5.1 Weekly Progress Review Meetings

- (1) After completing the weekly submittal of the Three-Week Look-Ahead and production data, attend a weekly meeting to review the submittals with the department. At the meeting, address comments as necessary, and document agreement or disagreement with the department.

108.4.5.2 Monthly Update Review Meetings

- (1) After submitting the monthly update and receiving the engineer's comments, attend a job-site meeting, as scheduled by the engineer, to review the progress of the schedule. At that meeting, address comments as necessary, and document agreement or disagreement with the department. The monthly meeting will

be coordinated to take place on the same day and immediately before or after a weekly meeting, whenever possible.

108.4.6 CPM Progress Schedule Revisions

- (1) When authorized by the engineer, a CPM Progress Schedule Revision may be submitted by the contractor due to changes in the Work or project conditions. This Revision may be submitted prior to the due date of the next Monthly CPM Update. Prepare the CPM Revision in the same format as required for Monthly CPM Updates, including justification for changes to the schedule. The process for comment and acceptance of a CPM Revision will be the same as for Monthly CPM Updates. If the CPM Revision is accepted, prepare the next monthly update based on the revised CPM. If the CPM Revision is rejected, prepare the next monthly update based on the previous month's update.
- (2) **Engineer's Right to Request Revisions**—The engineer will monitor the progress of the work and may request revisions to the CPM schedule. Revise the schedule as requested by the engineer, and submit a CPM Progress Schedule Revision within ten business days of the request. The process for comment and acceptance of a CPM Revision will be the same as for Monthly CPM Updates. The engineer may request that the contractor revise the CPM schedule for one or more of the following reasons:
 1. The forecast completion date is scheduled to occur more than 14 calendar days after the contract completion date.
 2. An intermediate milestone is scheduled to occur more than 14 calendar days after the date required by the contract.
 3. The engineer determines that the progress of the work differs significantly from the current schedule.
 4. A contract change order requires the addition, deletion, or revision of activities that causes a change in the contractor's work sequence or the method and manner of performing the work.

108.4.7 Documentation Required for Time Extension Requests

- (1) To request a time extension associated with changes to the work to an intermediate milestone date or the contract completion date, provide a revised schedule based on the latest accepted CPM Update. Include a narrative detailing the work added or deleted and the other activities affected. For added work, submit a proposed fragnet of activities to be added or revised in the CPM schedule, indicating how the fragnet is to be tied to the CPM schedule.
- (2) To request a time extension associated with delays to the work to an intermediate milestone date or the contract completion date, provide a revised schedule based on the latest accepted CPM Update. Include a narrative detailing the affected activities and the cause of the delay. Requests for time extensions due to delays should meet the following criteria:
 1. Submit a proposed fragnet of activities to be added or revised in the CPM schedule, indicating how the fragnet is to be tied to the CPM schedule.
 2. For requests to extend the contract completion date, include a description of how the delay affected the project's critical path, based on the latest accepted CPM Update.
 3. For requests to extend an intermediate milestone date, include a description of how the delay affected the controlling (longest) path to the milestone, based on the latest accepted CPM Update.
 4. The department and the contractor agree that the float is not for the exclusive use or financial benefit of either party. Either party has the full use of the float on a first come basis until it is depleted.

108.4.8 Payment for CPM Progress Schedule

- (1) The department will pay for measured quantities at the contract unit price for work acceptably completed under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0001	Baseline CPM Progress Schedule	EACH
SPV.0060.0002	Monthly CPM Progress Schedule Updates	EACH

- (2) The department will only make progress payments for the value of materials, as specified in 109.6.3.2.1, until the Baseline CPM schedule has been submitted. The department will retain ten percent of each estimate until the department accepts the Baseline CPM schedule.
- (3) The department will only make progress payments for the value of materials, as specified in 109.6.3.2.1, until the Monthly CPM schedule updates have been submitted. The department will retain ten percent of each estimate until the department accepts the Monthly CPM schedule update.

- (4) Payment is full compensation for all work required under these bid items. The department will pay the contract unit price for the Baseline CPM schedule after the department accepts the schedule. Then, the department will pay the contract unit price for each Monthly CPM Update acceptably completed.

~~sef-108-005 (20231101)~~

- 130. Concrete Barrier Transition Type G1, Item SPV.0060.0101;
Concrete Barrier Transition Type G2, Item SPV.0060.0102;
Concrete Barrier Transition Type S42 to S56 Special, Item SPV.0060.0106;
Concrete Barrier Transition Type S32C Reverse Footing to S56C Reverse Footing, Item SPV.0060.0107;
Concrete Barrier Transition Type M1, Item SPV.0060.0110;
Concrete Barrier Transition Type M2, Item SPV.0060.0111.**

A Description

This special provision describes constructing Concrete Barrier Transition (Type) according to standard spec 603, details shown in the plans, and in this special provision.

B (Vacant)

C Construction

Construct the Concrete Barrier Transition (Type) to present a smooth, uniform appearance in its final position conforming to the horizontal and vertical lines the plans show or ordered by the engineer, and free of lumps, sags or other irregularities.

D Measurement

The department will measure Concrete Barrier Transition (Type) 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.0060.0101	Concrete Barrier Transition Type G1	EACH
SPV.0060.0102	Concrete Barrier Transition Type G2	EACH
SPV.0060.0106	Concrete Barrier Transition Type S42 to S56 Special	EACH
SPV.0060.0107	Concrete Barrier Transition Type S32C Reverse Footing to S56C Reverse Footing	EACH
SPV.0060.0110	Concrete Barrier Transition Type M1	EACH
SPV.0060.0111	Concrete Barrier Transition Type M2	EACH

Payment is full compensation for furnishing all materials, forming, placing, finishing, and curing of barrier transitions.

- 131. Concrete Barrier Type S42 End Anchor, Item SPV.0060.0112;
Concrete Barrier Type S56 End Anchor, Item SPV.0060.0113;
Concrete Barrier Type S42 Special End Anchor, Item SPV.0060.0114;
Concrete Barrier Type S56 Special End Anchor, Item SPV.0060.0115;
Concrete Barrier Type S56 Special 34-Inch End Anchor, Item SPV.0060.0116;
Concrete Barrier Type S32 Special End Anchor, Item SPV.0060.0117.**

A Description

This special provision describes constructing end anchorages for single slope concrete barrier conforming to standard spec 603, details shown in the plans and as provided in this special provision.

B (Vacant)

C Construction

Construct the Concrete Barrier (Type) End Anchor to present a smooth, uniform appearance in its final position conforming to the horizontal and vertical lines the plans show or ordered by the engineer, and free of lumps, sags or other irregularities.

D Measurement

The department will measure Concrete Barrier (Type) End Anchor as each individual end anchor, 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.0060.0112	Concrete Barrier Type S42 End Anchor	EACH
SPV.0060.0113	Concrete Barrier Type S56 End Anchor	EACH
SPV.0060.0114	Concrete Barrier Type S42 Special End Anchor	EACH
SPV.0060.0115	Concrete Barrier Type S56 Special End Anchor	EACH
SPV.0060.0116	Concrete Barrier Type S56 Special 34-Inch End Anchor	EACH
SPV.0060.0117	Concrete Barrier Type S32 Special End Anchor	EACH

Payment is full compensation for providing the barrier end anchor; for excavating and backfilling; for disposing of excess material; and for restoring the grade.

132. Mobilizations Emergency Pavement Repair, Item SPV.0060.0120.

A Description

This special provision describes furnishing and mobilizing personnel, equipment, traffic control, and materials to the project site to repair the existing pavement for emergencies as the engineer directs. An emergency is a sudden occurrence of a serious and urgent nature, beyond normal maintenance of the existing pavement.

B (Vacant)

C Construction

Mobilize with sufficient personnel, equipment, traffic control, materials, and incidentals on the jobsite within 4 hours of the engineer's written order to repair the existing pavement on an emergency basis.

D Measurement

The department will measure Mobilizations Emergency Pavement Repair as each individual mobilization, acceptably completed. The department will not include delivering and installing pavement repair or maintenance materials provided for in specific contract bid items. All traffic control items used for each Mobilization will be considered incidental to the Mobilization.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0120	Mobilizations Emergency Pavement Repair	EACH

Payment is full compensation for the staged moving of personnel, moving equipment, setting up and removing traffic control, traffic control materials, and moving materials. The department will pay separately for delivery and installation of pavement repair materials under the other bid items in this contract. The department will not pay separately for traffic control items and materials even though they may be included in other bid items in this contract and will consider them incidental to each Mobilization.

sef-999-025 (20170310)

133. Salvage Ramp Gate, Item SPV.0060.0123.

A Description

This special provision describes salvaging an existing ramp gate assembly, which includes removing the existing pole assembly; removing and disposing of the existing concrete base; and coordinating pickup of the assembly.

B (Vacant)

C Construction

Salvage the ramp closure gate from the location shown in the plans. Stockpile the ramp closure gate on site. Avoid damaging the gate pole assembly, as it will be reused. Do not use any equipment or devices that might damage structures, facilities, or property to be preserved and retained. Complete all operations necessary to remove ramp closure gates that might endanger its ability to be reused.

Coordinate with Milwaukee County Highway Maintenance Kevin Kent at (414) 257-6566 when the assembly is ready for pick up.

D Measurement

The department will measure Salvage Ramp Gate 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.0060.0123	Salvage Ramp Gate	EACH

Payment is full compensation for disassembly of the existing unit as needed; for removal and disposal of the existing concrete base, for stockpiling the assembly on site, and for coordination with the electrical unit for pickup of the assembly.

134. Salvage Wrong Way Driver Detection Equipment, Item SPV.0060.0124.

A Description

This special provision describes salvaging existing wrong way driver detection equipment, which includes removing the existing pole assembly, including control cabinet, AI module, IWS controller, solar panel, BlinkerSign, cameras and illuminator equipment; removing the additional BlinkerSign and solar panel assembly; removing and disposing of the existing concrete base; and coordinating the pickup of the assemblies.

B (Vacant)

C Construction

Salvage the wrong way driver detection equipment from the locations shown in the plans. Stockpile on site all components of the wrong way driver detection equipment. Avoid damaging the pole assembly and BlinkerSign assembly, as they will be reused. Do not use any equipment or devices that might damage structures, facilities, or property to be preserved and retained. Complete all operations necessary to remove wrong way driver detection equipment that might endanger its ability to be reused.

Coordinate with Milwaukee County Highway Maintenance Kevin Kent at (414)257-6566 when the assembly is ready for pickup.

D Measurement

The department will measure Salvage Wrong Way Driver Detection Equipment 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.0060.0124	Salvage Wrong Way Driver Detection Equipment	EACH

Payment is full compensation for disassembly of the existing units as needed; for removal and disposal of the existing concrete base, for stockpiling the assemblies on site, and for coordination with the electrical unit for pickup of the assemblies.

135. Section Corner Monuments, Item SPV.0060.0125.

A Description

Coordinate with Southeastern Wisconsin Regional Planning Commission (SEWRPC) for the perpetuation and replacement of a section corner (Public Land Survey System- PLSS) monument.

B Materials

SEWRPC will provide a pre-cast concrete monument or brass disk to be used to mark the PLSS corner.

Furnish base aggregate dense materials that conform to standard spec 305. Furnish concrete, asphalt, topsoil or other materials depending on the surface surrounding the corner.

C Construction

SEWRPC will perpetuate existing section corner monument. The CONTRACTOR is responsible to coordinate with SEWRPC and the WisDOT Project Manager throughout the perpetuation and replacement process. The CONTRACTOR will contact the engineer and SEWRPC at (262) 853-8463 at least two (2) weeks before starting construction operations or the preconstruction meeting to allow for section corner monument perpetuation.

CONTRACTOR must excavate and completely remove the existing monument. CONTRACTOR is responsible for providing a backfilled 3 to 4 foot deep hole where existing monument was removed. CONTRACTOR is responsible to coordinate the materials and methodology to complete the construction of the surface surrounding the monument. This may include but is not limited to a 2' x 2' "box out" or 24" diameter core hole in concrete, asphalt pavement/paving rings, coring to facilitate poured in place monuments, topsoil, seed and mulching or other materials or methodologies as agreed to by the CONTRACTOR and SEWRPC.

Contact Information:

Attn: Andy Traeger (Construction Coordinator)
Southeastern Wisconsin Regional Planning Commission
W239 N1812 Rockwood Drive
P.O. Box 1607
Waukesha, WI 53187-1607
Phone (262) 953-4296
Cell (262) 853-8463
Fax (262) 547-1103
atraeger@sewrpc.org

D Measurement

The department will measure Section Corner Monuments Special by the 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.0060.0125	Section Corner Monuments	Each

Payment is full compensation for all excavating; removal of existing monument, for placing and compacting backfill material; for disposing of surplus materials; for concrete or asphalt material, finishing of roadway or other surfaces, for all coordination with SEWRPC.

SER-621-001 (20240807)

136. Survey Project 1060-27-71, Item SPV.0060.0126.

A Description

This special provision describes modifying standard spec 105.6 and 650 to define the requirements for construction staking for this contract. Conform to standard spec 105.6 and 650 and as follows.

The department will not perform any construction staking for this contract. Obtain engineer's approval before performing all survey required to lay out and construct the work under this contract.

Replace standard spec 650.1 with the following:

This section describes the contractor-performed construction staking required under individual contract bid items to establish the horizontal and vertical position for all aspects of construction including:

- storm sewer
- subgrade
- base
- curb
- gutter
- curb and gutter
- curb ramps
- pipe culverts
- drainage structures
- structure layout
- bridges
- noise barriers
- all retaining wall layout
- pavement
- pavement markings (temporary and permanent)
- barriers (temporary and permanent)
- overhead signs
- freeway and local street lighting
- electrical installations
- supplemental control
- slope stakes
- ponds
- traffic signals
- ITS
- FTMS
- parking lots
- paths
- utilities
- conduit
- water main
- sanitary sewer
- traffic control items
- fencing

B (Vacant)

C Construction

Add the following to standard spec 650.3.1 (5):

Confirm with engineer before using global positioning methods to establish the following:

1. Structure layout horizontal or vertical locations.
2. Concrete pavement vertical locations.
3. Curb, gutter, and curb and gutter vertical locations.
4. Concrete barrier vertical locations.

5. Storm Sewer layout horizontal or vertical locations, including structure centers, offsets, access openings, rim and invert elevations.
6. Sanitary sewer construction or other gravity-based drainage system, including structure centers, offsets, access openings, rim and invert elevations.

Replace standard spec 650.3.1.1(2) with the following:

- (6) Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. This includes:
- Raw data files
 - Digital stakeout reports
 - Control check reports
 - Supplemental control files (along with method used to establish coordinates and elevation)
 - Calibration report

Make the survey notes and computations available to the engineer within 24 hours as the work progresses unless a longer period is approved by the engineer.

Add the following to standard spec 650.3 as subsections 650.3.16 and 650.3.17:

650.3.16 Water Main

Record all elevation data for the casing, grade breaks, water main pipe, bends, fittings, and all information necessary to accurately record the construction document. Submit a hard copy to the engineer within 24 hours or as requested by the engineer.

Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Locate all pipe, valves and bends to within 0.10 feet horizontal and establish the elevations to within 0.10 feet vertical.

Set construction stakes at all water main valves, fittings and bends and at maximum interval of 50 feet for water main piping.

Provide the as-built xyz coordinates and elevations, in the project horizontal and vertical datum, of all bends, fittings, valves and tie in locations for the as-built plan. Also provide the locations of the casing ends, the elevation of the top of casing.

650.3.17 Sanitary Sewer

Record all elevation data for pipe inverts, outside drops, bends, fittings, casings and other information necessary to accurately record the construction document. Submit a hard copy to the engineer within 24 hours or as requested by the engineer.

Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Locate all pipe inverts, drops to within 0.02 feet horizontally and to within 0.01 feet vertically. Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Locate all pipe inverts, drops to within 0.02 feet horizontally and to within 0.01 feet vertically.

Provide the as-built xyz coordinates and elevations, in the project horizontal and vertical datum, of all tie in locations for the as-built plan. Also provide the locations of the casing ends, the elevation of the top of casing and the size and material of all pipes.

D Measurement

Replace standard spec 650.4 with the following:

The department will measure Survey Project 1060-27-71 by each unit, acceptably completed.

E Payment

Replace standard spec 650.5 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0126	Survey Project 1060-27-71	EACH

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract; for locating and setting construction stakes; for adjusting stakes to ensure compatibility with existing field conditions; and for relocating and resetting damaged or missing construction stakes. The department will not make final payment for this item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 24 hours of completing this work. Re-staking due to construction disturbance and knock-outs will be performed at no additional cost to the department.

~~sef-650-005 (20181219)~~

137. Drilled High Performance Dowel Bars, Item SPV.0060.0140.

A Description

This special provision describes drilling in high performance dowel bars to transfer load between existing concrete and new concrete.

B Materials

Furnish high performance dowel bars from the APL.

Furnish epoxy according to the standard spec 416.2.2.2.

C Construction

Place dowel bars according to the standard spec 416.3.5.

D Measurement

The department will measure Drilled High Performance Dowel Bars by each individual bar, 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.0060.0140	Drilled High Performance Dowel Bars	EACH

Payment is full compensation for providing high performance dowel bars, including coating; for drilling holes in hardened concrete not placed under the contract; and for epoxying.

138. Round Aluminum Sign Post System in Soft Surface 10-Foot, Item SPV.0060.0151.

A Description

This special provision describes furnishing and installing sign post, post anchor and sign mounting hardware at the locations shown on the plans. All sign posts shall be round tubular aluminum and installed as shown in the plans.

B Materials

Furnish a round aluminum 2" Schedule 40 6061-T6 Extruded Aluminum post with a length of 10 feet, a V loc Soft-Soil 30" with cleanout bar post anchor for 2 3/8" round post (TAPCO SKU 034-00085, Traffic Safety Supply Company SKU DP00239, Custom Products Corporation Item RPORZVRB23VR2B or approved equal), 5/16" x 1 1/4" Stainless Steel Fender Washers and one- or two-sided sign mounting Z brackets that fit 2 3/8 inch post or approved equal, as shown in plans.

C Construction

Install Round Aluminum Sign Post System in Soft Surface as shown in plans and in accordance to 634.

D Measurement

The department will measure Round Aluminum Sign Post System in Soft Surface 10-Foot 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.0060.0151	Round Aluminum Sign Post System in Soft Surface 10-Foot	EACH

Payment is full compensation for providing, hauling, and placing the posts; and providing hardware and anchors. The department will not pay for replacing damaged posts or upper tube cut-offs.

139. Round Aluminum Sign Post System in Soft Surface 11-Foot, Item SPV.0060.0152.

A Description

This special provision describes furnishing and installing sign post, post anchor and sign mounting hardware at the locations shown on the plans. All sign posts shall be round tubular aluminum and installed as shown in the plans.

B Materials

Furnish a round aluminum 2" Schedule 40 6061-T6 Extruded Aluminum post with a length of 11 feet, a V-loc Soft-Soil 30" with cleanout bar post anchor for 2 3/8" round post (TAPCO SKU 034-00085, Traffic Safety Supply Company SKU DP00239, Custom Products Corporation Item RPORZVRB23VR2B or approved equal), 5/16" x 1 1/4" Stainless Steel Fender Washers and one- or two-sided sign mounting Z-brackets that fit 2 3/8 inch post or approved equal, as shown in plans.

C Construction

Install Round Aluminum Sign Post System in Soft Surface as shown in plans and in accordance to 634.

D Measurement

The department will measure Round Aluminum Sign Post System in Soft Surface 11-Foot 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.0060.0152	Round Aluminum Sign Post System in Soft Surface 11-Foot	EACH

Payment is full compensation for providing, hauling, and placing the posts; and providing hardware and anchors. The department will not pay for replacing damaged posts or upper tube cut-offs.

140. Round Aluminum Sign Post System in Soft Surface 12-Foot, Item SPV.0060.0153.

A Description

This special provision describes furnishing and installing sign post, post anchor and sign mounting hardware at the locations shown on the plans. All sign posts shall be round tubular aluminum and installed as shown in the plans.

B Materials

Furnish a round aluminum 2" Schedule 40 6061-T6 Extruded Aluminum post with a length of 12 feet, a V-loc Soft-Soil 30" with cleanout bar post anchor for 2 3/8" round post (TAPCO SKU 034-00085, Traffic Safety Supply Company SKU DP00239, Custom Products Corporation Item RPORZVRB23VR2B or approved equal), 5/16" x 1 1/4" Stainless Steel Fender Washers and one- or two-sided sign mounting Z-brackets that fit 2 3/8 inch post or approved equal, as shown in plans.

C Construction

Install Round Aluminum Sign Post System in Soft Surface as shown in plans and in accordance to 634.

D Measurement

The department will measure Round Aluminum Sign Post System in Soft Surface 12-Foot 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.0060.0153	Round Aluminum Sign Post System in Soft Surface 12-Foot	EACH

Payment is full compensation for providing, hauling, and placing the posts; and providing hardware and anchors. The department will not pay for replacing damaged posts or upper tube cut-offs.

141. Round Aluminum Sign Post System in Concrete Surface 10-Foot, Item SPV.0060.0159.

A Description

This special provision describes furnishing and installing sign post, post anchor, anchoring cement and sign mounting hardware at the locations shown on the plans. All sign posts shall be round tubular aluminum and installed as shown in the plans and in accordance with 634.

B Materials

Furnish a round aluminum 2-inch Schedule 40 6061-T6 Extruded Aluminum post with a length of 10 feet, a V-loc Concrete 8-inch post anchor for 2 3/8-inch round post (TAPCO SKU 037-00012B, Traffic Safety Supply Company SKU DP00241, Custom Products Corporation Item RPORZVR12382OR or approved equal), 5/16-inch x 1 1/4-inch Stainless Steel Fender Washers, one- or two-sided sign mounting Z-brackets that fit 2 3/8-inch post and pourable hydraulic cement for setting of concrete post anchor, as shown in plans.

C Construction

Install Round Aluminum Sign Post System in Concrete Surface as shown in plans.

D Measurement

The department will measure Round Aluminum Sign Post System in Concrete Surface 10-Foot 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.0060.0159	Round Aluminum Sign Post System in Concrete Surface 10-Foot	EACH

Payment is full compensation for furnishing and installing post, post anchor, anchoring cement and sign mounting hardware at the locations shown on the plans.

142. Exposing Existing Infrastructure Paved Area, Item SPV.0060.0170.

A Description

This work includes locating and exposing existing infrastructure in paved areas as directed by the engineer. The contractor shall be responsible for compliance with s.182.0175 (2), Stats., with respect to precautions to be taken to avoid and prevent damage to utility facilities. The location of existing utilities and infrastructure needed to complete the contract work shall be addressed independent of this provision. Conform to Wisconsin State Statute 182.0175 (2) and Wisconsin Administrative code Trans 220. The work includes exposing existing infrastructure, including utilities, under paved surfaces and providing both lateral and depth measurements for use in determining potential infrastructure conflict solutions, and backfilling the locate.

B Materials

B.1 Backfill Slurry

Utilize backfill slurry as specified elsewhere in these special provisions.

C Construction

C.1 General

The location of existing utilities and infrastructure needed to complete the contract work shall be addressed independent of this provision. This item will only be used as determined by the department for unique locations as directed by the engineer. It does not remove the contractor's obligation to locate utilities as specified by Wisconsin Administrative code Trans 220 and Wisconsin State Statute 182.0175. The engineer will direct all exposing existing infrastructure in writing. Coordinate infrastructure exposures with the engineer and notify the infrastructure owner or their agents of this work 2 working days in advance so that they may be present when the work commences.

C.2 Excavation

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

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

Take all lateral and depth measurements in US feet and tenths thereof. Identify horizontal locations of each exposed infrastructure with a coordinate northing and easting referenced to the Wisconsin County Coordinate System (WCCS), Milwaukee County, NAD 83 (97). Provide vertical elevations for each exposed infrastructure and reference to NAVD 88 (91).

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

C.3 Backfilling

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

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

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

C.4 Documentation

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

D Measurement

The department will measure Exposing Existing Infrastructure Paved Area as a unit for each location. A location may have multiple infrastructures located within the same exposure area. An exposure area will

include all infrastructures within 6 lateral feet of each other and payment will only be made for one unit regardless of the number of infrastructures exposed. If the distance from the existing ground elevation, located above the existing infrastructure, to a point 18 inches below the exposed infrastructure is between 0 and 6 feet, the department will measure each location as a single unit of work. If the distance from the existing ground elevation, located above the existing infrastructure, to a point 18 inches below the exposed infrastructure is greater than 6 feet and less than 12 feet, the department will pay for the item as two units of work.

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.0060.0170	Exposing Existing Infrastructure Paved Area	EACH

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

143. Exposing Existing Infrastructure Unpaved Area, Item SPV.0060.0171.

A Description

This work includes locating and exposing existing infrastructure in unpaved areas as directed by the engineer. The contractor shall be responsible for compliance with s.182.0175 (2), Stats., with respect to precautions to be taken to avoid and prevent damage to utility facilities. The location of existing utilities and infrastructure needed to complete the contract work shall be addressed independent of this provision. Conform to Wisconsin State Statute 182.0175 (2) and Wisconsin Administrative code Trans 220. The work includes exposing existing infrastructure, including utilities, under unpaved surfaces and providing both lateral and depth measurements for use in determining potential infrastructure conflict solutions, and backfilling the locate.

B Materials

B.1 Backfill Slurry

Utilize backfill slurry as specified elsewhere in these special provisions.

C Construction

C.1 General

The location of existing utilities and infrastructure needed to complete the contract work shall be addressed independent of this provision. This item will only be used as determined by the department for unique locations as directed by the engineer. It does not remove the contractor's obligation to locate utilities as specified by Wisconsin Administrative code Trans 220 and Wisconsin State Statute 182.0175. The engineer will direct all exposing existing infrastructure in writing. Coordinate infrastructure exposures with the engineer and notify the infrastructure owner or their agents of this work 2 working days in advance so that they may be present when the work commences.

C.2 Excavation

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

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

Take all lateral and depth measurements in US feet and tenths thereof. Identify horizontal locations of each exposed infrastructure with a coordinate northing and easting referenced to the Wisconsin County Coordinate System (WCCS), Milwaukee County, NAD 83 (97). Provide vertical elevations for each exposed infrastructure and reference to NAVD 88 (91).

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

C.3 Backfilling

Upon completion of the infrastructure exposure, restore the location in kind to its original condition. Use slurry backfill, conforming to standard spec 501, to backfill the exposed infrastructure locations to the subgrade elevation except for areas located within local streets. In grassy areas, place 6-inches of topsoil, sod or seed and mulch, and fertilizer. Alternate restoration methods may be used upon written approval from the engineer.

C.4 Documentation

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

D Measurement

The department will measure Exposing Existing Infrastructure Unpaved Area as a unit for each location. A location may have multiple infrastructures located within the same exposure area. An exposure area will include all infrastructures within 6 lateral feet of each other, and payment will only be made for one unit regardless of the number of infrastructures exposed. If the distance from the existing ground elevation, located above the existing infrastructure, to a point 18 inches below the exposed infrastructure is between 0 and 6 feet, the department will measure each location as a single unit of work. If the distance from the existing ground elevation, located above the existing infrastructure, to a point 18 inches below the exposed infrastructure is greater than 6 feet and less than 12 feet, the department will pay for the item as two units of work.

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.0060.0171	Exposing Existing Infrastructure Unpaved Area	EACH

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

144. Fire Hydrant Sign Mounting, Item SPV.0060.0177.

A Description

This special provision describes installing fire hydrant signs according to the plan details, according to standard spec 637, and as hereinafter provided.

B Materials

B.1 Signs

The signs and associated material indicated will consist of the following:

1. Sign Blade. The blade shall be 36" x 6", flat aluminum to accommodate two-sided reflective sheeting.

2. Mount. The mount shall be a full surround bracket w/o divider, to fit a 36" x 6" blade.
3. Fire Hydrant sign – mounted on wall, parallel to wall.

B.2 Mount

Select a mount from one of the sources shown below or an approved equal.

Supplier	Model Number
TAPCO	203-17
800 Wall Street	
Elm Grove, WI 53122	
Traffic Signal Company of Wisconsin	203-17
6318 West State Street	
Wauwatosa, WI 53213	
Decker Supply	W-800
P.O. Box 8008	
Madison, WI 53708	

B.3 Mounting Hardware for Blade Signs

Mount the signs to the sound wall with four 5/16-inch diameter stainless steel bolts with stainless steel self-tightening nuts connecting the two mounting brackets through the wall. Install one sign in each plate, such that both signs are perpendicular to the sound wall on either side of the wall. Mount fire hydrant signs using 5/16-inch diameter stainless steel bolts with stainless steel self-tightening nuts connecting the sign to the wall.

C Construction

Install the signs by drilling four 7/16-inch diameter holes through the noise barrier panel to match hole locations on the mounting brackets to be attached on each side of the panel. Attached the mount to the sound wall in a stable position, not more than 2 feet from the top of the structure. The mount will not be more than 5 feet on either side of a vertical line extending up from the actual fire hydrant access point depending on field conditions.

D Measurement

The department will measure Fire Hydrant Sign Mounting by each unit for each individual sign, 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.0060.0177	Fire Hydrant Sign Mounting	EACH

Payment is full compensation for providing all materials including hardware and reflective sheeting; and for drilling holes and anchors. The sign is paid for separately under the Signs Reflective Type II.

145. Tree Trimming, Item SPV.0060.0180.

A Description

This special provision describes performing tree trimming, having a certified arborist on site during operations, providing a trimming plan, providing all necessary equipment and labor, removal of trimmings, and disposal of trimming. Work is within the boundary of the Wood National Cemetery and must be kept within a TLE area. No equipment, tree limbs, or workers should be on ground outside of the TLE. Extra care shall be taken to remove limbs without disturbing headstones or monuments. A

bucket truck or similar type of equipment may need to be used to trim branches that reach into cemetery area not covered by the TLE.

B (Vacant)

C Construction

No tree trimming is allowed between April 15 and October 31, both dates inclusive. The contractor shall provide a trimming plan to the engineer a minimum of two weeks prior to the work. The plan shall include: name and certification number of arborist who will be on site during the work; equipment proposed; planned access; planned protection for headstones and monuments; and schedule for the work. Notify the Wood National Cemetery a week prior to performing the work.

D Measurement

The department will measure Tree Trimming by each individual tree, 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.0060.0180	Tree Trimming	EACH

Payment is full compensation for developing trimming plans, coordination, removal of trimmings, providing a certified arborist and restoration of the site.

146. Emergency Response to Traffic Incident Involving Concrete Barrier Temporary, Item SPV.0060.0554.

A Description

This special provision describes providing prompt response to an emergency repair request for damaged and/or dislodged temporary concrete barrier, including temporary concrete barrier to be left in place, installed under this project that is damaged or displaced due to a vehicular collision during the time this contract is in effect.

B (Vacant)

C Construction

The contractor shall provide staff, equipment, and materials to the incident site within one hour of receiving a repair request from the responding agency. The contractor shall consult with the department's representative on potential repair or replacement options to restore the temporary concrete barrier to proper working condition. Staff and equipment deployed shall be capable of completing the needed repairs as quickly as possible once repair work is started. Repair work shall be completed off the traveled way to the maximum extent allowable. The contractor shall provide a time log of when the repair request was received and when staff arrived at the incident site. This information shall be submitted to the engineer, for verification, within 24 hours of the repair completion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating and completing repair efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to be on-site of an incident with appropriate staff and equipment within one hour of receiving a repair request, the department will assess the contractor \$500 in liquidated damages for each 15-minute interval that the contractor is not present following the allotted one-hour response time. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item Failing to Open Road to Traffic.

For contractor owned temporary barrier, repair work shall be completed according to standard spec 603 and 643, and as directed by the engineer. For temporary barrier left in place from a previous project,

repair work is covered under article Maintain and Remove Concrete Barrier Temporary Precast of these special provisions.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the department's representative.

D Measurement

The department will measure Emergency Response to Traffic Incident Involving Concrete Barrier Temporary as each individual response, 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.0060.0554	Emergency Response to Traffic Incident Involving Concrete Barrier Temporary	EACH

Payment is full compensation for providing a prompt staff response to an emergency repair request for a damaged or dislodged concrete barrier temporary located within the project limits.

The cost of providing the appropriate level of on-call staff for 24/7 incident response shall be included in the Mobilization bid item for this project.

The department will pay for any additional traffic control measures, if required, under the respective traffic control bid items in the contract.

147. Emergency Response to Traffic Incident Involving Crash Cushion, Item SPV.0060.0555.

A Description

This special provision describes providing prompt response to an emergency repair request involving a damaged crash cushion installed under this project that is displaced or damaged due to a vehicular collision during the time this contract is in effect.

B (Vacant)

C Construction

The contractor shall provide appropriate staff to the incident site within one hour of receiving a repair request from the responding agency. Staff deployed shall be capable of immediately assessing the severity of the damage to the device and consult with the department's representative on potential repair or replacement options and the projected timeline to restore the roadside device to its proper working condition. The contractor shall provide a time log of when the repair request was received and when staff arrived at the incident site. This information shall be submitted to the engineer, for verification, within 24 hours of the repair completion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating repair efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to be on-site of an incident with appropriate staff within one hour of receiving a repair request, the department will assess the contractor \$500 in liquidated damages for each 15-minute interval that the contractor is not present following the allotted one-hour response time. Increments of

15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item Failing to Open Road to Traffic.

Repair work shall be completed according to standard spec 614, and as directed by the engineer. Once repair work has been started, work shall continue until completion. Repair work shall be completed off the traveled way to the maximum extent allowable.

Additional traffic control measures may be required depending on the severity and duration of the incident. The contractor shall provide any needed traffic control measures as directed by the department's representative.

D Measurement

The department will measure Emergency Response to Traffic Incident Involving Crash Cushion as each individual response, acceptably completed during the time this contract is in effect.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0555	Emergency Response to Traffic Incident Involving Crash Cushion	EACH

Payment is full compensation for providing prompt response to an emergency repair request for displaced or damaged crash cushion installed under this project.

The cost of providing the appropriate level of on-call staff, equipment, and materials for 24/7 incident response shall be included in the Mobilization bid item for this project.

The department will pay for any additional traffic control measures, if required, under the respective traffic control bid items in the contract.

148. Emergency Response to Pavement Repair, Item SPV.0060.0556.

A Description

This special provision describes furnishing and mobilizing personnel, equipment, traffic control, and materials to the project site to repair the existing pavement for emergencies as the engineer directs. An emergency is a sudden occurrence of a serious and urgent nature, beyond normal maintenance of the existing pavement.

B (Vacant)

C Construction

Mobilize with sufficient personnel, equipment, traffic control, materials, and incidentals on the jobsite within 4 hours of the engineer's written order to repair the existing pavement on an emergency basis.

D Measurement

The department will measure Emergency Response to Pavement Repair as each individual Response, acceptably completed. The department will not include delivering and installing pavement repair or maintenance materials provided for in specific contract bid items. All traffic control items used for each Response will be considered incidental to the Response.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0556	Emergency Response to Pavement Repair	EACH

Payment is full compensation for the staged moving of personnel, moving equipment, setting up and removing traffic control, traffic control materials, and moving materials. The department will pay separately for delivery and installation of pavement repair materials under the other bid items in this contract.

The department will not pay separately for traffic control items and materials even though they may be included in other bid items in this contract and will consider them incidental to each Response.

sef-999-025 (20170310)

149. Fixed Message Sign Portable Support Special, Item SPV.0060.0557.

A Description

This special provision describes the construction of special portable sign supports for fixed message signs for shielded applications only, as the plans show.

B Materials

Use lumber and hardware conforming to standard spec 634.2.1.

C Construction

Construct the Fixed Message Sign Portable Support Special as the plans show. Remove at the completion of the work.

D Measurement

The department will measure Fixed Message Sign Portable Support Special as each location, 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.0060.0557	Fixed Message Sign Portable Support Special	EACH

Payment is full compensation for providing, maintaining, moving and removing fixed message sign special portable supports.

sef-634-000 (20170310)

150. Traffic Control Close-Open Freeway to Freeway System Ramp, Item SPV.0060.0564.

A Description

This special provision describes closing and re-opening a freeway-to-freeway system ramp.

B (Vacant)

C Construction

Install or reposition traffic control devices required for closing a freeway system ramp and adjacent auxiliary lanes. Remove or return traffic control devices to their previous configuration when the closure is no longer required.

D Measurement

The department will measure Traffic Control Close- Open Freeway to Freeway System Ramp by each individual closure, 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.0060.0564	Traffic Control Close- Open Freeway to Freeway System Ramp	EACH

Payment is full compensation for closing and re-opening a freeway-to-freeway system ramp. Traffic Control devices will be paid separately.

sef-643-002 (20180627)

151. Traffic Control Close-Open Freeway Entrance Ramp, Item SPV.0060.0565.

A Description

This special provision describes closing and re-opening a freeway entrance ramp and associated auxiliary lane.

B (Vacant)

C Construction

Install or reposition traffic control devices required for closing a freeway entrance ramp and adjacent auxiliary lanes. Remove or return traffic control devices to their previous configuration when the closure is no longer required.

D Measurement

The department will measure Traffic Control Close-Open Freeway Entrance Ramp by each individual ramp closure, 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.0060.0565	Traffic Control Close-Open Freeway Entrance Ramp	EACH

Payment is full compensation for closing and re-opening a freeway entrance ramp. Traffic Control devices will be paid separately.

sef-643-001 (20180627)

152. Traffic Control Full Freeway Closure, Item SPV.0060.0566.

A Description

This special provision describes closing and re-opening a freeway or expressway.

B (Vacant)

C Construction

Install or reposition traffic control devices required for a full freeway closure. Remove or return traffic control devices to their previous configuration when the full closure is no longer required.

D Measurement

The department will measure Traffic Control Full Freeway Closure by each individual freeway closure that is set up and later removed in each traffic direction, 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.0060.0566	Traffic Control Full Freeway Closure	EACH

Payment is full compensation for closing and re-opening the freeway. Traffic Control devices will be paid separately.

sef-643-003 (20180627)

153. Traffic Control Local Road Lane Closures, Item SPV.0060.0571.

A Description

This special provision describes closing and reopening a local road lane or lanes, including full closure conforming to standard spec 643, the plans, and as directed by the engineer.

B (Vacant)

C Construction

Install or reposition traffic control devices required for closing a local road or lanes of a local road. Remove or return traffic control devices to their previous configuration when the closure is no longer required.

D Measurement

The department will measure Traffic Control Local Road Lane Closures by each individual closure acceptably completed. The department will not measure the closure of a local road not deemed necessary by the engineer.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0571	Traffic Control Local Road Lane Closures	EACH

Payment is full compensation for closing and re-opening a local road lane or lanes. Traffic Control devices will be paid separately.

sef-643-035 (20171004)

154. Thrie Beam Connection to Concrete Barrier Temporary Precast, Item SPV.0060.0572.

A Description

This special provision describes temporary connections between two Concrete Barrier Temporary Precast alignments.

B Materials

Use materials according to standard spec 603.2 and for steel rail and fittings according 614.2

C Construction

Where temporary barrier abuts an adjacent temporary barrier alignment, connect the two temporary alignments together with steel rail and install concrete anchor on the first abutting section of temporary barrier.

D Measurement

The department will measure Thrie Beam Connection to Concrete Barrier Temporary Precast as each individual connection acceptably complete. Anchoring barrier will be measured separately.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0572	Thrie Beam Connection to Concrete Barrier Temporary Precast	EA

Payment is full compensation for each installation including providing steel rail connections and all fittings for temporary barrier installations abutting adjacent temporary barrier.

155. Emergency Response to Incident Involving Utility, Item SPV.0060.0600.

A Description

This special provision describes providing prompt response to relocate equipment and project materials out of the ATC line blow out zone for emergency incidents. An emergency incident is defined as an unplanned need to re-energize an ATC full line or circuit during a project outage. The ATC line blow out zone is the buffer zone around energized ATC lines that takes into effect temperatures and wind. Maintain OSHA safe work site precautions and safe working clearance to all power facilities, including substations and overhead circuits. The contractor must follow the measures prescribed by OSHA for all work closer than the minimum clearance distance. The contractor is also responsible to clear all equipment and personnel outside the OSHA minimum clearance of all ATC facilities during overnight hours when work is not taking place or at any time when work is not taking place during a full or partial outage.

B (Vacant)

C Construction

The contractor shall provide staff, equipment, and materials to relocate contractor items from the ATC line blow out zone within two (2) hours of receiving a request from the engineer, utility or responding agency. The contractor shall consult with the department's representative on potential options to relocate items while the incident is resolved. Staff and equipment deployed shall be capable of moving equipment or materials as quickly as possible.

The contractor shall provide a time log of when the request was received, when additional staff arrived at the incident site, inventory of items required to be relocated, and when the line blow out zone was cleared. This information shall be submitted to the engineer, for verification, within 24 hours of the incident conclusion.

Contact information for the contractor's responsible party (the person or persons in charge of coordinating and completing efforts) shall be submitted to the engineer at the pre-construction meeting. This person(s) shall be available 24/7 during the duration of this contract. The contact information for the department's representative will be supplied to the contractor at the pre-construction meeting.

If the contractor fails to relocate contractor items from the ATC Line blow out zone within two (2) hours of receiving the request, the department will assess the contractor \$500 in liquidated damages for each 15-minute interval that the contractor items remain within the blow out zone. Increments of 15 minutes or less will be assessed as a 15-minute increment. The engineer, or designated representative, will be the sole authority in determining assessable 15-minute increments. Liquidated damages will be assessed under the administrative item 801.0104 Failing to Open Road to Traffic.

D Measurement

The department will measure Emergency Response to Incident Involving Utility as each individual response, 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.0060.0600	Emergency Response to Incident Involving Utility	EACH

Payment is full compensation for providing a prompt response to an emergency requiring removing equipment and project materials located within the ATC line blow out zone due to unplanned re-energizing.

The cost of providing the appropriate level of on-call staff for 24/7 incident response shall be included in the Mobilization bid item for this project.

156. Poles Wood 60-FT, Item SPV.0060.1001.

A Description

This special provision describes furnishing and installing a 60-foot wood pole and other incidental items as required as shown on the plans, in accordance to standard specs 651 and 657, and as hereinafter provided.

B Materials

Furnish wood poles that are Class 4 or larger with a 60-foot minimum overall length. The poles shall be shaved the entire length and conforming to ANSI 05.1.

Wood poles shall be pressure treated with a 5 percent pentachlorophenol mixture with a minimum of 1 pounds per cubic foot net retention of the oil-borne preservative.

C Construction

Install the pole in accordance to the pertinent provisions of section 657.3.1.1 of the standard specs and as shown on the plans. As necessary, install lighting components (#4 AWG grounding wire exothermically bonded to a 5/8-inch by 8-foot copper clad grounding electrode, cable guard, NEMA 3R junction box 3ft

above grade level for splice, and incidentals as necessary) or temporary FTMS components (camera, radios, vehicle detectors, conduit, and solar power assemblies).

D Measurement

The department will measure Poles Wood 60-FT 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.0060.1001	Poles Wood 60-FT	EACH

Payment is full compensation for furnishing and installing wood poles, junction boxes, grounding wire including grounding lugs, all hardware and fittings, guy wires, leveling shims, corrosion prevention, and for all excavation and backfill.

157. Wood Pole Lighting 60-FT, Item SPV.0060.1002.

A Description

This special provision describes furnishing and installing a 60-foot wood pole, arm(s) and floodlight(s), junction box, grounding system, and a lightning protection system, as shown on the plans, in accordance to standard specs 651, 657, and 659, and as hereinafter provided.

B Materials

Furnish wood poles, Class 4 or larger with a 60-foot minimum overall length. The poles shall be western red cedar in accordance to ANSI standards 05.1. Pressure treatment shall be 5% pentachlorophenol with a minimum of 1 pounds per cubic foot net retention of the oil-borne preservative. All poles shall be shaved the entire length.

Luminaire arm and luminaire for wood pole lighting units and temporary wood pole lighting units shall be per standard specs 657.2 and 659.2, respectively.

Floodlight mounting bracket arms for wood pole lighting units will be as shown on plan details. The floodlights are provided under separate bid item.

C Construction

This work shall be done in accordance to the pertinent provisions of standard spec 651.3 and as shown on the plans. Install #4 AWG equipment grounding wire exothermically bonded to a 5/8 inch by 8 foot copper clad grounding electrode. Install cable guard, NEMA 3R junction box near mounting arm, and NEMA 4X junction box at 3 feet above grade for fuses and splice on wood pole units. Install air terminal with #2 AWG grounding wire exothermically bonded to a 5/8 inch by 8 foot copper clad grounding electrode for lightning protection. Install #2 AWG bare copper exothermically bonding between grounding electrodes. Install conduit and wiring between junction boxes, wire racks, and required hardware as necessary and as shown on lighting plans and detail drawings.

Install luminaire arm for wood pole lighting units as shown on the plans and details and as per applicable portion of standard specs 657.3 and 659.3.

D Measurement

The department will measure Wood Pole Lighting 60-FT 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.0060.1002	Wood Pole Lighting 60-FT	EACH

Payment is full compensation for furnishing and installing wood poles, arms, floodlights, junction boxes, grounding wire including grounding lugs, all hardware and fittings, guy wires, leveling shims, corrosion prevention, and for all excavation and backfill.

158. Concrete Bases Type B, Item SPV.0060.1003.

A Description

This special provision describes furnishing and installing Concrete Bases Type B as shown on the plans, in accordance with section 654 of the standard specs, and as hereinafter provided

B Materials

Materials shall conform to pertinent requirements of section 654.2 of standard specs.

C Construction

Construction shall conform to pertinent requirements of section 654.3 of the standard specs.

D Measurement

The Department will measure Concrete Bases Type B 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.0060.1003	Concrete Bases Type B	EACH

Payment shall be made as described in section 654.5(2).

159. Luminaires Utility Floodlight, Item SPV.0060.1004.

A Description

This special provision describes furnishing and installing 1000 watt HPS floodlight luminaires or LED equivalent with photoelectric control in both a 240V and 480 Volt configuration as shown on the plans, in accordance to pertinent provisions of standard spec 659, and as hereinafter provided.

B Materials

Appropriate 240V Floodlight Models include or approved equal:

American Electric Lighting, Model 77X1SRNMT266TMLC1023PCSS
Cooper Lighting, Model HPNKS1000LLOA/RA1016
Lithonia, Model TFA1000SRBTBFSC22PERLPI

Appropriate 480V Floodlight Models include or approved equal:

American Electric Lighting, Model 77X1SRN5T466TMLC1023PCSS
Cooper Lighting, Model HP-NKS-1000-480V-LL-OA/RA1027
Lithonia, Model TFA-1000S-RB-480FTS-C22-PE4-LPI

Appropriate 240/480V Floodlight Models include or approved equal:

American Electric Lighting, Model ACP2LEDP10MVOLTT66BLANK
Phillips Signify, Model FDLA23740WFLSFC240
Cree Lighting, Model OSQXB50L40K766UL

Units shall have a 6X6 or 7X7 light distribution. Units shall have a photoelectric cell for control of the fixture operation.

C Construction

The following lighting control cabinets will supply 120/240V power to flood lights for temporary lighting: HL-40-SF.

The following lighting control cabinets will supply 240/480V power to flood lights for temporary lighting: HL-40-HY.

The contractor shall install the luminaire on the light poles at locations specified in lighting plan and in accordance to standard specs 659.2 and 659.3, wired and fused in accordance to standard spec 659.3.2 and as shown on the plans. Luminaires shall be orientated (0 deg = North) as shown and at an angle of 45-degrees from the vertical

D Measurement

The department will measure Luminaires Utility Floodlight 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.0060.1004	Luminaires Utility Floodlight.	EACH

Payment is full compensation for providing all materials including luminaires, fittings, brackets, hardware and attachments and for luminaire fusing.

~~SER-659.6 (20170407)~~

160. Poles Type 30-AL-BD, Item SPV.0060.1005.

A Description

This special provision describes furnishing and installing 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 in accordance with section 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 bolt down 30'-0" aluminum street lighting pole assembly shall be in accordance with this specification and City of Milwaukee (DPW-Infrastructure Services Division) Drawing #B-14-14.

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.

The work under this item is for furnishing and installation of the following materials as shown in plans and in accordance with the following.

B. Materials

B.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.

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.

The poles shall be built as a double bracket unit and supplied with one cover plate per pole.

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.1.2 Hand Hole & 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.1.3 Loading and Stability

The 30'-0" assembly furnished under this specification shall support a fifty-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.

All Welding shall be in accordance with the latest applicable A.S.M.E. Standards.

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.

A plaque with the pole number as shown on the plans shall be affixed onto the pole shaft.

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 40 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 30-AL-BD 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.0060.1005	Poles Type 30-AL-BD	EACH

Payment is full compensation for providing poles including grounding lugs and related mounting hardware; for hardware and fittings necessary to install the pole; for leveling shims; and for corrosion prevention.

161. Poles Type 25-AL-BD, Item SPV.0060.1006.

A Description

This special provision describes furnishing and installing a 25'-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 in accordance with section 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 bolt down 25'-0" aluminum street lighting pole assembly shall be in accordance with this specification and City of Milwaukee (DPW-Infrastructure Services Division) Drawing #B-14-13.

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.

The work under this item is for furnishing and installation of the following material as shown in plans and in accordance with the following.

B Materials

B.1 Pole

The 25'-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.

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.

The poles shall be built as a double bracket unit and supplied with one cover plate per pole.

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.1.2 Hand Hole & 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.1.3 Loading and Stability

The 25'-0" assembly furnished under this specification shall support a fifty-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.

All Welding shall be in accordance with the latest applicable A.S.M.E. Standards.

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.

A plaque with the pole number as shown on the plans shall be affixed onto the pole shaft using high intensity reflective 2" silver numerals on black background.

B.2. Riser Cable

Pole is to be wired as noted 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(s) 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 to be green. The cable shall conform to NEC Article 340. The riser cable shall be continuous without splices.

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 25-AL-BD 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.0060.1006	Poles Type 25-AL-BD	EACH

Payment is full compensation for providing poles including grounding lugs and related mounting hardware; for hardware and fittings necessary to install the pole; for leveling shims; and for corrosion prevention.

162. Inline 5A Fast Acting Fuse with Holder, Item SPV.0060.1013.

A Description

This special provision describes materials, general requirements, personnel qualifications, construction methods, and testing requirements used to perform electrical connections/splices required.

All work shall be in accordance with the current Wisconsin Standard Specification for Highway and Structure Section 651.

B Materials

Furnish materials conforming to the WSEC, consisting of chapter comm. 16 of the WEC combined with the NEC.

All materials furnished under this contract for street lighting installation are subject to approval by the City of Milwaukee street lighting project engineer. A prototype maybe requested for submittal by the project engineer with a cable sample installed and spliced for approval prior to field installation.

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 project engineer. The list shall be submitted within ten (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

Use either the KLM-5 Bussmann Limitron Fast Acting Fuse housed in 1-Pole Midget Fuse Holder HEB-AA Bussmann 10A 600V with 2A0600 Bussmann insulator fuse boot or else an equal fuse assembly compatible with internal raceway of light unit.

C Construction

C.1. General Requirements

Work under items related to the street lighting system shall conform to the National Electrical Code (NEC), 2020 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 (4) year apprenticeship and passed state exams.

C.3. Splices

The contractor shall perform water tight connections at pole's handhole with materials listed or equal on Street Lighting Standard Details 142. Conductor runs shall be continuous between pole locations, and no splicing of conductors outside the pull box will be allowed. The water tight splices shall reside in the pull box and above the wiring coils called for in Street Lighting Standard Details 145. The 2#12UF with ground cable (per luminaire) shall be brought to the pole hand hole where it will be spliced with the riser cable to the light fixture. See luminaire specification for information on the installation of an in-line watertight fuse holder installed in-line with the hot conductor that leads to the luminaire and accessible in pole at the hand hole.

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 Inline 5A Fast Acting Fuse with Holder 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.0060.101313	Inline 5A Fast Acting Fuse with Holder	EACH

Payment is full compensation for furnishing and installing inline fuse holder assemblies and for disposing of surplus material.

163. Luminaire Utility 2LED, Item SPV.0060.1017; Luminaire Utility 3LED, Item SPV.0060.1018.

A Description

This special provision describes furnishing and installing luminaires in accordance with current City of Milwaukee Electrical methods and National Electrical Code standards. All work shall be in accordance with section 659.

B Materials

Luminaire Utility conforms with street lighting details and plans.

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 utility style and shall conform with luminaire appearance shown on street lighting details and plans. The luminaires shall be designed so it can

efficiently produce uniform illumination in accordance with I.E.S. Type II, Type III and Type V light distribution according to the lighting plan.

TYPE: The luminaires purchased under this contract will be of standard design of a regular production LED fixture. The luminaires shall conform in overall specification as shown on Table A.

HOUSINGS: The housing 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. The door is to be cast aluminum for durability.

Level: The housing shall have an integral leveling pad or other suitable means for quick, easy and proper positioning of the luminaire.

Door: The door shall be hinged and easily opened downward for routine maintenance. All component parts shall be easily accessible with the lower housing opened. Tool-less entry is required.

Hinges: Hinges shall be 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.

Finish: The entire housing shall be polyester powder-coated for durability and corrosion resistance (4 mils/100 microns) with a ± 1 mils/24 microns of tolerance. The surface treatment shall yield >3000 hours of salt spray resistant finish per ASTM B117 standard. The housing shall have: 1) discoloration resistant finish in accordance with ASTM D2244 standard, 2) luster retention that meets ASTM D523 standard, 3) humidity proof that meets ASTM D2247 standard.

The surface treatment shall yield >3000 hours of salt spray resistant finish that meets testing performed per ASTM B117 standard.

Color: The luminaire shall be grey in color unless otherwise specified.

Label: There shall be a NEMA label as shown on Table A (clearly visible at 30 feet height) furnished separately with the luminaire. In addition, the luminaire model number and manufacturing date shall be indicated inside the housing.

Table A

	Luminaire 90W LED (Type II, III distribution)	Luminaire 135W LED (Type II and III light distribution)	Luminaire 90W LED (Type V distribution)
Factory set input power (Watt)	90 $\pm$ 5%	135 $\pm$ 5%	90 $\pm$ 5%
# of LED	≥ 40	≥ 40	≥ 48
NEMA Label	2LED2 (for Type II) 2LED3 (for Type III)	3LED2 (for Type II) 3LED3 (for Type III)	2LED5 (Type V)
Max. Dimension	22.75" (D) * 4.38" (H)*11"(W)	23.25" (D) * 4.38" (H)*11"(D)	23.25" (D) * 4.38" (H)*11"(D)
EPA (sq. ft.)	≤ 0.53	≤ 0.53	≤ 0.53
Weight	≤ 12.5 lbs.	≤ 12.5 lbs.	≤ 12.5 lbs.
BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G2

	Luminaire 90W LED (Type II, III distribution)	Luminaire 135W LED (Type II and III light distribution)	Luminaire 90W LED (Type V distribution)
Min. Efficacy (lumen/Watt)	117	112	134
Min. Delivered Lumens	10,618	15,160	10,830

LED/OPTICAL ASSEMBLY:

There shall be a minimum 40 LED on the optical assembly system. The refractor shall be UV stabilized optical grade polymer refractor lenses for optimal lighting distribution and superior lighting uniformity over time. The system is to be NEMA IP66 rated for dust and water resistant. The luminaires shall meet LM-63, LM-79 and TM-15(IESNA) standard for photometric performance.

The L70 for the luminaires, per IESNA TM-21, must be $\geq 60,000$ hours. The Lumen maintenance % is to be $>97.5\%$ at 60,000 hours of operation.

The color temperature is to be 3,000K CCT.

THERMAL MANAGEMENT:

The fixture shall be designed and built with passive cooling mechanism (no cooling device with moving parts) by natural vertical convection air flow. The fixture shall be designed and built with openings to enable natural cleaning and removal of dirt and debris, and resistant to animal trapped or building nest on the luminaire. The luminaire shall be rated for operation in ambient temperature of -40°F to 104°F .

DIMMER AND FIELD ADJUSTABLE OUTPUT SELECTOR

For Type II and Type III luminaire, a single type of luminaire (one for each type of light distribution) shall satisfy the different wattage requirement. The luminaire's input power should be factory set as shown on Table A.

The luminaire shall be supplied with dimmable driver and field adjustable output selector which enable the luminaire to provide 10,618 lumens to 15,160 lumens with efficacy >110 . The field adjustable wattage chart shall be attached on the inside of the door opening.

For Type V luminaire, due to the light distribution pattern and uniformity, a separate type of luminaire is acceptable but it is to meet the requirements shown on Table A.

POWER SUPPLY:

The electronic driver must have an expected lifespan of $\geq 60,000$ hours at 25°C ambient. The supplied driver shall be auto adjusting type with universal voltage input from 120 Volts to 277 Volts @ 60Hz.

SURGE PROTECTION:

A surge protector which provides a minimum of 20kV/10kA protection as per IEEE/ANSI C62.41 Category C and ANSI C136.2-2015 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 with option to mount the fixture at $\pm 5^{\circ}$ in 2.5° step. Provide a 2-bolt clamping mechanism with 3G vibration rating per ANSI C136.31. A built-in bird guard shall be standard with the fixture.

HARDWARE:

All nuts, bolts, latches, etc. furnished with the luminaire shall be fabricated from stainless steel or non-ferrous materials.

CONTROL:

The luminaire is to be equipped with 7 pins receptacle and shorting cap.

SMART INVENTORY AND MAINTENANCE DESIGN

Each luminaire should be uniquely identifiable by having a QR Code on each luminaire for app scanning to access the luminaire specification and configuration, in addition to the geographical location at point of installation. The app should be free of charge to purchaser for the lifetime of the luminaire.

ENERGY EFFICIENCY:

The luminaire is to be DLC certified for energy efficiency at time of purchase.

ACCESSORIES:

The luminaire shall be designed to seamlessly equip with optional light shield for further lighting control. The optional light shield for the luminaire shall be of standard product from the same manufacturer and readily available.

SENSOR READY:

The luminaire is to be equipped with D4i driver and Zhaga socket in protective cap for future sensor installation.

C Construction

Install lighting fixture on the mounting bracket on the pole according to manufacturer standards. Provisions for inserting 2#12UF with ground riser cable between the fixture and cable connecting point at the transformer base/ hand hole shall be included per applicable details within design set.

Contractor is responsible to scan the QR code of each fixture with the Signify app at point of installation. Details will be provided by Street Lighting field office.

D Measurement

The Department will measure Luminaire Utility 2LED or Luminaire Utility 3LED 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.0060.1017	Luminaire Utility 2LED	EACH
SPV.0060.1018	Luminaire Utility 3LED	EACH

Payment for the Luminaires bid items is full compensation for providing materials including luminaires, fittings, brackets, hardware and attachments; and for luminaire fusing.

164. Pull Boxes 17-Inch x 30-Inch x 24-Inch; Item SPV.0060.1020.

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) & (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) & (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 and use penta bolts to secure cover.. 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 City of Milwaukee standards. 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 pull box, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1020.	Pull Boxes 17-Inch x 30-Inch x 24-Inch	EACH

Payment is full compensation for furnishing and installing all materials, including pull box, end bells, crushed aggregate, excavation, backfilling, and for disposing of surplus material.

165. Lighting Units Relocated, Item SPV.0060.1025.

A Description

This special provision describes the removing from existing location, handling, onsite storing, and re-installing at proposed location of lighting units consisting of pole, arm, LED luminaire, wires, breakaway device, and associated hardware and appurtenances at the location shown on the plans, in accordance with sections 657 and 659 of the standard specs, and as hereinafter provided. LED luminaire, which are considered hazardous material, become the property of the contractor and shall be disposed of in an environmentally sound manner.

B (Vacant)

C Construction

No removal work will be permitted without approval from the engineer. Removal shall start as soon as the temporary lighting or permanent lighting, as applicable, is placed in approved operation. An inspection and approval by the engineer will take place before any associated proposed permanent or temporary lighting is approved for operation.

Any lighting unit damaged while removing, handling, onsite storing, and re-installing shall be replaced or repaired by the contractor at no additional cost to the State.

Re-installation of the lighting units shall be done according to pertinent requirements of standard spec 657.3 and 659.3.

Dispose of all surplus materials off the project site.

D Measurement

The Department will measure Lighting Units Relocated by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1025	Lighting Units Relocated	Each

Payment is full compensation for removing, handling, storing, reinstalling, for grounding, for hardware and fittings necessary to reinstall the lighting unit; for leveling shims; and for corrosion prevention.

166. Luminaire Arms Single Member 4-Inch Clamp 4-FT, Item SPV.0060.1026.

A Description

These special provisions describe furnishing and installing nonstandard Luminaire Arms Single Member 4-Inch Clamp 4-FT.

B Materials

Furnish material as shown in the plan and in accordance with section 657.2.2.3 of the standard specifications.

C Construction

Conform to Sections 657.3 of the standard specifications.

D Measurement

The Department will measure Luminaire Arms Single Member 4-Inch Clamp 4-FT by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1026	Luminaire Arms Single Member 4-Inch Clamp 4-FT	Each

Payment is full compensation as described in Sections 657.5(5) and 657.5(7) of the standard specifications.

167. Poles Type 5-Aluminum 20-FT, Item SPV.0060.1027.

A Description

This special provision describes furnishing and installing aluminum light poles.

B Materials

Conform to materials requirements in the plan details. Additionally, conform to applicable requirements of standard spec 657.2.

C Construction

Conform to Sections 657.3 of the standard specifications.

D Measurement

The Department will measure Poles Type 5-Aluminum 20-FT by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1027	Poles Type 5-Aluminum 20-FT	Each

Payment is full compensation as described in Sections 657.5 of the standard specifications.

168. Hydro Excavation, Item SPV.0060.1028.

A Description

This special provision describes providing hydro excavating to install signal bases when approved by the engineer.

B Vacant**C Construction**

Excavate using a truck mounted vacuum and high-pressure water system designed to be used for this type of work. Backfill with materials removed from the excavation. Dispose of excess materials removed from the excavation off the public right-of-way in a manner consistent with state and federal regulations.

D Measurement

The department will measure Hydro Excavation as each individual signal base installed using hydro excavation, 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.0060.1028	Hydro Excavation	EACH

Payment is full compensation for the excavation required to install the lighting signal base; backfilling with existing material removed from the excavation; compacting the backfill material; restoring the site; and cleanup. Existing pavement, concrete curb, gutter, and sidewalk removals necessary to facilitate hydro excavation are not considered part of, or paid for under, hydro excavation, but are considered separate, and will be measured and paid for separately as removal items. Replacement pavement, concrete curb, gutter, and sidewalk items are also considered separate from hydro excavation and will be measured and paid for separately.

169. Maintenance of Lighting Systems Project 1060-27-71, Item SPV. 0060.1031.**A Description**

Maintain existing and proposed lighting system beginning on the date that the contractor's activities (electrical or otherwise) at the job site begin. Take responsibility for the proper operation and maintenance of all existing and proposed lighting systems which are part of, or which may be affected by, the work until final acceptance or as otherwise determined by the engineer.

Before performing any excavation, removal, or installation work (electrical or otherwise) at the site, initiate a request for a maintenance transfer and preconstruction inspection, as specified elsewhere herein, to be held in the presence of the engineer and a representative of the party or parties responsible for maintenance of any lighting systems which may be affected by the work. Make the request for the maintenance preconstruction inspection no less than seven calendar days prior to the desired inspection date.

Existing lighting systems, when depicted on the plans, are intended only to indicate the general equipment installation of the systems involved and shall not be construed as an exact representation of the field conditions. Visit the site to confirm and ascertain the exact condition of the electrical equipment and systems to be maintained. Condition issues found during contractor assessment can be discussed and addressed by contacting the SE Region Lighting Engineer (Eric Perea) prior to maintenance responsibility being transferred to the contractor.

B (Vacant)**C Construction****C.1 Existing Lighting Systems**

Existing lighting systems are defined as any lighting system or part of a lighting system in service prior to this contract. The contract drawings indicate the general extent of any existing lighting. Ascertain the extent of effort required for compliance with these specifications; failure to do so will not be justification for extra payment or reduced responsibilities. Clear and replace any knockdowns or damage caused to the existing lighting system, regardless of who causes the damage. Maintain existing lighting system as follows:

Partial Maintenance: Only maintain the affected circuits if the number of circuits affected by the contract is equal to or less than 40% of the total number of circuits in a given controller and the controller is not part of the contract work unless otherwise indicated. Ensure engineer approval to isolate the affected circuits by means of in-line waterproof fuse holders as specified elsewhere.

Full Maintenance: Maintain the entire controller and all associated circuits if the number of circuits affected by the contract is greater than 40% of the total number of circuits in a given controller, or if the controller is modified in any way under the contract work.

C.2 Proposed Lighting Systems

Proposed lighting systems are any temporary or final lighting systems or part of a lighting system to be constructed under this contract.

Maintain all items installed under this contract, including, but not be limited to, any equipment failures or malfunctions as well as equipment damage either by the motoring public, contractor operations, or other means.

Excluding damage due to contractor operations, the contractor will be reimbursed for replaced equipment, materials only, if the invoice paid for the individual piece of equipment is greater than \$500. The cost of maintaining equipment installed under this contract, labor, mobilization, tools and incidentals along with repairs due to contractor operations are incidental to this bid item.

C.3 Maintenance Operations

Maintain lighting units (including sign lighting), cable runs, and lighting controls. In the case of a pole knockdown or sign light damage caused by normal vehicular traffic, promptly clear the lighting unit and circuit discontinuity and restore the system to service. Reinstall the lighting unit (if salvageable), or install a new one.

Provide weekly night-time patrol of the lighting system, with patrol reports filed immediately with the engineer and copied to the region lighting coordinator with deficiencies corrected within 24 hours of the patrol. Present patrol reports on standard forms as designated by the engineer. Uncorrected deficiencies may be designated by the engineer as necessitating emergency repairs as described elsewhere herein.

Perform corrective action on specific lighting system equipment according to the following chart. The chart lists the maximum response, service restoration, and permanent repair time.

Incident or Problem	Service Response Time	Service Restoration Time	Permanent Repair Time
Control cabinet out	1 hour	4 hours	7 Calendar days
Hanging mast arm	1 hour to clear	na	7 Calendar days
Motorist caused damage or leaning light pole 10 degrees or more	1 hour to clear	4 hours	7 Calendar days
Circuit out – Needs to reset breaker	1 hour	4 hours	na
Circuit out – Cable trouble	1 hour	24 hours	21 Calendar days
Outage of 3 or more successive lights	1 hour	4 hours	na
Outage of 75% of lights on one tower	1 hour	4 hours	na
Outage of light nearest RR crossing approach, Islands and gores	1 hour	4 hours	na
Outage (single or multiple) found on night outage survey	na	na	7 Calendar days

C.4 Lighting

Serve Response Time: The amount of time from the initial notification to the contractor until a patrolman physically arrives at the location.

Service Restoration Time: The amount of time from the initial notification to the contractor until the time the system is fully operational again. (In cases of motorist-caused damage, the undamaged portions of the system are operational.)

Permanent Repair Time: The amount of time from initial notification to the contractor until the time permanent repairs are made if the contractor was required to make temporary repairs to meet the service restoration requirement.

Failure to provide this service will result in liquidated damages of \$500 per day per occurrence. In addition, the department reserves the right to assign any work not completed within this timeframe to the State Electrical Engineering and Electronics Unit. Reimburse all costs associated to repair this

uncompleted work. Failure to pay these costs to the State Electrical Engineering and Electronics Unit within one month after the incident will result in additional liquidated damages of \$500 per month per occurrence. Unpaid bills will be deducted from the cost of the contract. Repeated failures and/or a gross failure of maintenance shall result in the State's Electrical Engineering and Electronics Unit being directed to correct all deficiencies and the resulting costs deducted from any monies owed the contractor.

C.5 Operation of Lighting

Maintain operational lighting every night, dusk to dawn. Do not operate duplicate lighting systems (such as temporary lighting and proposed new lighting) simultaneously. Do not keep lighting systems in operation during long daytime periods. Ensure that the lighting system is fully operational and approved by the engineer prior to submitting a pay request. Failure to do so will be grounds for denying the pay request.

D Measurement

The Department will measure Maintenance of Lighting Systems Project 1060-27-71 by each individual project, 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.0060.1031	Maintenance of Lighting Systems Project 1060-27-71	EACH

Payment is full compensation for Maintenance of Lighting Systems, both existing and proposed, weekly night-time patrol of the lighting system, mobilization, and filed patrol reports.

The contractor will be reimbursed for replaced equipment, materials only, if the invoice paid for the individual piece of equipment is greater than \$500.

Non-compliance with designated response, restoration, and permanent repair times will result in liquidated damages of \$500 per day per occurrence. In addition, the department reserves the right to assign any work not completed within this timeframe to the State Electrical Engineering and Electronics Unit. Reimburse all costs associated to repair this uncompleted work within one month after the incident or additional liquidated damages of \$500 per month per occurrence will be assessed. Unpaid bills will be deducted from the cost of the contract. Repeated non-response or negligent maintenance shall result in the State's Electrical Engineering and Electronics Unit being directed to correct all deficiencies and the resulting costs deducted from all monies owed the contractor.

Not understanding the effort required for compliance with these specifications will not be justification for extra payment or reduced responsibilities. No payment will be considered for damage or repairs due to contractor operations.

Not ensuring that the lighting system is fully operational and approved by the engineer before submitting a pay request will be grounds for denying the pay request.

170. Lighting System Integrator Project 1060-27-71, Item SPV. 0060.1041.

A Description

This special provision describes coordinating lighting with various parties; record keeping, and documentation. Where the Department is responsible for freeway lighting operation, maintenance, or utility locates on existing systems or systems overlapping project boundaries, the contractor's freeway lighting integrator will serve as the contractor's liaison to the Department's electrical operations unit.

B (Vacant)

C Construction

At any one time during the project, the contractor shall assign one individual person as the freeway lighting integrator. Assign personnel experienced in underground utility construction and Department lighting specifications and practices

The freeway lighting integrator shall:

1. Familiarize himself/herself with the location and nature of existing lighting circuits. This familiarity shall include the extent of any lighting system that overlaps project limits.
2. Maintain a file of applicable permits or licenses issued to the contractor, and convey copies to the Engineer.
3. Keep with him/her at all times a contact list of affected lighting personnel.
4. Maintain a record of tagouts and the clearance of tagouts.
5. Interface with Department electrical personnel to determine how contract limits might affect maintenance or operation of existing systems.
6. Maintain ongoing contact with the Department's Diggers' Hotline Coordinator to ensure that each of the two persons knows that all requested utility locates are marked in the field by the appropriate party. The intent here is to assure coordination. This special provision does not transfer additional utility locating responsibilities to the contractor, beyond those responsibilities already assigned to him/her by other provisions of the contract.
7. Inform the Department of any lighting outages, including outside the project limits where a lighting system crosses the project boundary.
8. Maintain in any format real-time records of existing, removed and new lighting facilities. Include utility service extensions. Additional required records will include temporary connections and their ultimate removal.
9. Maintain records of tests, including: "meg" tests, amperage draw per circuit leg, voltage reading at the disconnect, and voltage reading at the furthest pole per circuit leg. Convey these records at time of acceptance or partial acceptance.
- 10. At the time of acceptance or partial acceptance, convey as-built drawings in both the following formats: plan redlines and .dwg electronic. Include utility service extensions.**
11. Secure copies of operator's manuals, tear sheets, etc. as may be provided by manufacturers of some lighting materials, and convey a minimum of three sets to the Department.
12. Work with the Engineer to notify Department electrical personnel of acceptance or partial acceptance.
13. Perform related duties as may be needed to ensure continuity of freeway lighting during construction, and orderly transfer upon completion.

D Measurement

The Department will measure Lighting System Integrator Project 1060-27-71 by each individual project, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1041	Lighting System Integrator Project 1060-27-71	EACH

Payment will be full compensation for providing specified expertise, assistance and documents, and personnel costs.

171. Lighting System Survey Project 1060-27-71, Item SPV. 0060.1051.

A Description

This special provision describes performing a lighting system survey as-built for I-94, 70th Street to Zablocki Drive, Roadway, as shown on the plans, and hereinafter provided.

B (Vacant)

C Construction

Locate and survey all the lighting units, pull boxes, and control cabinets to sub-meter accuracy. Maintain neat, orderly, and complete survey notes. The survey shall be performed in NAD 83, Wisconsin County Coordinate System (WCCS), and Milwaukee Coordinates. The data shall be delivered in a comma delimited text file with metadata including datum, county, and date the survey was performed. Data for each point shall have a point number, northing, easting, and point description including pole, pull box, or cabinet number.

D Measurement

The Department will measure Lighting System Survey Project 1060-27-71 by each individual project, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.1051	Lighting System Survey Project 1060-27-71	EACH

Payment will be full compensation for locating and surveying all the lighting units, pull boxes, and control cabinets and for delivery of the comma delimited data file and all survey notes.

172. Removing Electrical Service Meter Breaker Pedestal, Item SPV.0060.2000.

A Description

This special provision describes removing an existing electrical service meter breaker pedestal, disconnecting all connected power wires, and disposing of the equipment appropriately.

B (Vacant)

C Construction

Coordinate for removal of the existing electrical service meter breaker pedestal with WE Energies.

Disconnect all connected power wires, remove the pedestal and dispose of all materials properly away from the project area.

D Measurement

The Department will measure Removing Electrical Service Meter Breaker Pedestal by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2000	Removing Electrical Service Meter Breaker Pedestal	EACH

Payment is full compensation for coordination with WE Energies; for disconnection of all wiring connections; removing all conduit connections; and for removal and disposal of materials; and any necessary restoration, including backfill, topsoil, and seeding.

173. Removing Controller Cabinet, Item SPV.0060.2001.

A Description

This special provision describes removing an existing controller cabinet.

B (Vacant)

C Construction

Remove controller cabinets at the locations shown on the plans, or as directed by the engineer. Salvage and store the cabinets and all contents for pick up by the department.

Do not remove the existing ITS control cabinets, or any other associated equipment until necessary, or as directed by the engineer. Carefully remove the existing cabinets from the concrete bases, together with all components in such a manner as to safeguard all parts and wiring from damage or loss. Salvage and store the cabinet and contents for pick up by the department.

Prior to removing the existing ITS control cabinets, remove all cables being terminated in the cabinet. Cut existing cables flush with cabinet base and cap existing conduits. Dispose of the cables properly away from the project area.

D Measurement

The Department will measure Removing Controller Cabinet by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2001	Removing Controller Cabinet	EACH

Payment is full compensation for removal and storage of the controller cabinet; disconnecting all wiring connections; for removing all conduit connections; disposal of materials; and coordination of salvaged materials.

174. Removing Controller Cabinet Base, Item SPV.0060.2002.

A Description

This special provision describes removing an existing controller cabinet concrete base.

B (Vacant)

C Construction

Remove and dispose of the concrete foundation and all other pertinent materials, and restore the disturbed area by placing 4-inches of topsoil, and fertilize, seed, and mulch all disturbed areas in accordance to the pertinent requirements of the standard specifications.

D Measurement

The Department will measure Removing Controller Cabinet Base by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2002	Removing Controller Cabinet Base	EACH

Payment is full compensation for removing of the concrete controller cabinet base, including masonry anchors, ground rods, and concrete masonry; for any necessary restoration including backfill, topsoil, fertilizer, seed and mulch; and disposal of materials.

175. Removing Microwave Detector, Item SPV.0060.2003.

A Description

This special provision describes removing an existing side-fire microwave vehicle detector from a pole or sign bridge.

B (Vacant)

C Construction

Coordinate removal of microwave detectors with the department's Statewide Traffic Operations Center (STOC) by proposing the removal schedule a minimum of 2-weeks prior to the scheduled removal. Call the STOC at (414)-227-2166 to schedule the removal.

Disconnect all cables and wiring that are mounted on or in the structure, and carefully remove the microwave detector. Salvage and store the microwave detector and pig-tail for pick up by the department.

D Measurement

The department will measure Removing Microwave Detector by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2003	Removing Microwave Detector	EACH

Payment is full compensation for removal and storage of microwave detectors; disconnecting all wiring connections; removing all conduit connections; removing all brackets; disposal of materials; and coordination of salvaged equipment.

176. Removing Ramp Control Signal Assembly Sidemount, Item SPV.0060.2004

A Description

This special provision describes removing an existing sidemount ramp control signal assembly. Removal includes traffic signal standards, pedestal bases for traffic signal use, vehicular traffic signal heads, signal mounting brackets, sign mounting brackets, and enforcement signal displays.

B (Vacant)

C Construction

Remove sidemount ramp control signal assemblies at the locations shown in the plans, or as directed by the engineer. Salvage the signal assemblies for the department to pick up or dispose of them properly as directed by the engineer.

All work shall be according to the applicable requirements of standard spec 655, 656, 657, and 658, the Wisconsin Electrical Code, these special provisions, and the details shown in the plans.

Salvage and store all removed materials for pickup by the department. Coordinate with the engineer on a schedule to have the removed items picked up. Maintain all materials in a condition suitable for reutilization. Replace all items damaged during construction operations.

Electrical work under this item shall be completed by a journeyman electrician or be completed under the supervision of a journeyman electrician. Legal status or standing as a journeyman electrician shall be certified or otherwise documented to the engineer before any electrical work may begin.

D Measurement

The department will measure Removing Ramp Control Signal Assembly Sidemount 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.0060.2004	Removing Ramp Control Signal Assembly Sidemount	EACH

Payment is full compensation for removal and storage of the ramp control signal assembly; disconnecting all wiring connections; removing all conduit connections; disposal of materials; for any necessary restoration, including backfill, topsoil, seeding; and coordination of salvaged materials.

177. Removing Ramp Control Signal Assembly Overhead, Item SPV.0060.2005.

A Description

This special provision describes removing an existing overhead ramp control signal assembly. Removal includes traffic signal heads, signal mounting brackets, and sign mounting brackets.

B (Vacant)

C Construction

Remove overhead ramp control signal assemblies at the locations shown in the plans, or as directed by the engineer. Salvage the signal assemblies for the department to pick up or dispose of them properly as directed by the engineer.

All work shall be according to the applicable requirements of standard spec 655, 656, 657, and 658, the Wisconsin Electrical Code, these special provisions, and the details shown in the plans.

Salvage and store all removed materials for pickup by the department. Coordinate with the engineer on a schedule to have the removed items picked up. Maintain all materials in a condition suitable for reutilization. Replace all items damaged during construction operations.

Electrical work under this item shall be completed by a journeyman electrician or be completed under the supervision of a journeyman electrician. Legal status or standing as a journeyman electrician shall be certified or otherwise documented to the engineer before any electrical work may begin.

D Measurement

The department will measure Removing Ramp Control Signal Assembly Overhead by each unit, acceptably removed, salvaged, and stored.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2005	Removing Ramp Control Signal Assembly Overhead	EACH

Payment is full compensation for removal and storage of the ramp control signal assembly; disconnecting all wiring connections; removing all conduit connections; removing all brackets; disposal of materials; ; and coordination of salvaged materials.

178. Removing Overhead Freeway DMS, Item SPV.0060.2006.

A Description

This special provision describes removing an existing full-matrix overhead freeway dynamic message sign, controller, and cables; removing the sign and controller; storing them for removal of desired parts by the Department, and disposing of remaining undesired parts.

Existing sign assembly consists of dynamic message sign, hardware for mounting sign on sign structure, and sign controller. Cabling for the dynamic message sign and controller is contained in rigid conduit. The above components are mounted to an overhead freeway DMS structure.

Removed dynamic message sign will be a Mark IV Industries LTD. 18-Inch Light Emitting Diode (LED), Full Matrix, Type 1 sign. The nominal dimensions of the sign are 310-Inches long, 106-Inches high, 36-Inches wide at the bottom and 42-Inches wide at the top.

B (Vacant)

C Construction

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

Store the dynamic message sign and controller in a secure and safe location until such time as the Department can have a representative remove desired parts from the sign. The Department will complete the parts removal process within 10 non-holiday business days of the sign being removed from the overhead structure and access being granted to the Department representative. Contact Dean Beekman at (414) 227-2154 for coordination of parts removal by the Department 30 days prior to the sign being made available for parts removal. After the Department has obtained all desired parts from the sign, the

contractor shall properly dispose of all remaining undesired parts off of the project area. Remaining undesired parts will include the DMS enclosure.

D Measurement

The department will measure Removing Overhead Freeway DMS 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.0060.2006	Removing Overhead Freeway DMS	EACH

Payment is full compensation for removing the DMS, sign controller and cables, including any necessary wiring disconnections; for storing the materials; any necessary restoration, including backfill, topsoil, and seeding; for disposing of materials; and coordination of salvaged materials.

179. Removing Pole, Item SPV.0060.2007.

A Description

This special provision describes removing an existing Type 2, 3, 4, 5, 6, or 7 pole; including antennae, conduit and cabling, and other equipment mounted to the poles.

B (Vacant)

C Construction

Disconnect all cables and wiring that are mounted on or in the poles, and carefully remove the pole from the concrete footing. Salvage and store all hardware for pick up by the department. Dispose of the pole and any conduit and cabling appropriately away from the project area.

D Measurement

The department will measure Removing Pole by each unit acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2007	Removing Pole	EACH

Payment is full compensation for removing the poles and equipment mounted on the poles; storing the poles and any equipment attached to them; disconnecting all wiring; removing all conduit connections; disposal of materials; and coordination of salvaged materials.

180. Salvaging Pole Mounted Cabinet, Item SPV.0060.2008.

A Description

This special provision describes removing an existing pole mounted cabinet and contents and for storing the cabinet and contents for later reinstallation.

B (Vacant)

C Construction

Remove cabinets at the locations shown on the plans, or as directed by the engineer. Salvage and store the cabinets and all contents for reinstallation later in the project.

Do not remove the existing cabinets, or any other associated equipment until necessary, or as directed by the engineer. Carefully remove the existing cabinets from the pole or other structure, together with all components in such a manner as to safeguard all parts and wiring from damage or loss. Salvage and store the cabinet and contents for reinstallation later in the project

Prior to removing the existing ITS control cabinets, remove all cables being terminated in the cabinet. Removal of cables will be paid for with other pay items in this contract.

Installation of salvaged cabinet will be paid for with other pay items in this contract.

D Measurement

The department will measure Salvaging Pole Mounted Cabinet 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.0060.2008	Salvaging Pole Mounted Cabinet	EACH

Payment is full compensation for removal and storage of the controller cabinet; disconnecting all wiring connections; removing all conduit connections; removing all brackets; disposal of materials; and transportation of salvaged materials.

181. Temporary Vehicle Detector Assembly, Item SPV.0060.2009.

A Description

This special provision describes assembling a temporary vehicle detector assembly and installing, calibrating, and integrating the assembly into the existing system. Assembly will be done on a 40-foot wood pole provided under other pay items in the contract. Inclusion of a second solar power and detector system will be paid for by additional quantities of this pay item.

B Materials

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

State-furnished materials include the following:

- (2) Two Image Sensing Systems, Inc. (ISS) Remote Traffic Microwave Sensor (RTMS) ECHO detectors with 50' cables and 12-24 VDC power supplies.
- (3) One cellular modem and antenna (if required per plans).
- (4) One solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.

Contractor furnished materials include the following:

- (5) Outdoor rated power cable for the solar power system.
- (6) Mounting hardware for solar power system and RTMS detector.
- (7) 2-Inch schedule 80 nonmetallic conduit

C Construction

RTMS Detector Installation:

Install the RTMS detector as required in standard spec 675 and connect the detector to the furnished cellular modem or Ethernet switch (as shown in plans). Coordinate integration of the detector and modem assembly into the existing communications and FTMS system.

Solar Power System Installation:

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement

The department will measure Temporary Vehicle Detector Assembly as each individual unit consisting of one detector and one solar power assembly, acceptably installed and integrated into the existing FTMS system.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2009	Temporary Vehicle Detector Assembly	EACH

Payment is full compensation for providing the contractor furnished materials, assembling the state-furnished and contractor furnished materials, installing the assembly, calibrating the detector, connecting the detector to the modem, integrating it into the existing FTMS system, making the assembly functional, and transportation.

182. Relocating Temporary Vehicle Detector Assembly, Item SPV.0060.2010.

A Description

This special provision describes relocating an already installed temporary vehicle detector assembly, including removing it from the existing location and installing, calibrating, and integrating the assembly into the existing system at the new location.

B Materials

Materials include materials previously furnished by the department and materials previously furnished by the contractor previously installed through other pay items in the contract.

These materials include the following:

- (8) One or more Image Sensing Systems, Inc. (ISS) Remote Traffic Microwave Sensors (RTMS) ECHO detector with associated cable and power supply
- (9) Cellular wireless modem and antenna (if required per plans)
- (10) One or more solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.
- (11) One 60-foot type 4 or larger wood pole.
- (12) Outdoor rated power cable for the solar power system.
- (13) Mounting hardware for solar power system and RTMS detector.

C Construction

C.1 Removal

As directed by the engineer, remove the temporary vehicle detector assemblies from their respective locations in the project. Be careful not to damage any of the components that make up the system.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

C.2 RTMS Detector Installation

Install the wood pole according to industry standards for supplied pole length.

Install the RTMS detector as required in standard spec 675. Integrate the wireless modem.

C.3 Solar Power System Installation

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement

The department will measure Relocating Temporary Vehicle Detector Assembly as a unit consisting of one or more RTMS detectors, one or more solar power systems, and a wood pole, with each assembly removed, installed, focused on initial traffic lane configuration, functioning, and accepted according to the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2010	Relocating Temporary Vehicle Detector Assembly	EACH

Payment is full compensation for removing the assembly, installing the assembly, calibrating the detector, integrating the detector into the communications system, making the assembly functional, and for all restoration work needed at the original or new location.

183. Removing Temporary Vehicle Detector Assembly, Item SPV.0060.2011.

A Description

This special provision describes removing temporary vehicle detector assemblies from their respective locations in the project area, salvaging the individual components for pick up by the department, and disposing of unwanted components as appropriate.

B Materials

Materials will include materials to be salvaged for the department and materials to revert to the contractor be disposed of as determined by the contractor.

Materials to be salvaged for the department include the following:

- (14) One or more Image Sensing Systems, Inc. (ISS) Remote Traffic Microwave Sensor (RTMS) ECHO detector with 50' cable and 12-24 VDC power supply.
- (15) Cellular modem and antenna (if required per plans).
- (16) Solar power systems consisting of solar power panels, batteries, solar power controllers, and solar power cabinets to house the batteries and controller.
- (17) Mounting hardware for solar power system and RTMS detector.

Materials to revert to the contractor or be disposed of include the following:

- (18) Wood pole
- (19) Conduit
- (20) Outdoor rated power cable for the solar power system.

C Construction

As directed by the engineer, remove the temporary vehicle detector assemblies from their respective locations in the project. Be careful not to damage any of the components to be salvaged for the department.

Salvage the materials described above for pick up by the department.

Dispose non-reusable materials appropriately away from the project site.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

D Measurement

The department will measure Removing Temporary Vehicle Detector Assembly 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.0060.2011	Removing Temporary Vehicle Detector Assembly	EACH

Payment is full compensation for removing the assembly; for salvaging appropriate materials; disposal of other materials off site; and for restoration of the site.

184. Temporary Traffic Camera Assembly, Item SPV.0060.2012.

A Description

This special provision describes assembling, installing and integrating a temporary traffic monitoring camera assembly into the existing system according to standard spec 677, as shown on the plans and as hereinafter provided.

B Materials

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

State-furnished materials include the following:

- (21) One Internet Protocol Dome CCTV camera
- (22) One solar power system consisting of 4-85W panels, 4-120 Amp-Hour batteries, a solar power controller, and two solar power cabinets to house the batteries and controller.
- (23) One mid-span Power-Over-Ethernet power injector
- (24) (2) 900 MHz ethernet bridge radios and the associated cabling.

Contractor furnished materials include the following:

- (25) Mounting hardware for solar power system and CCTV Camera.
- (26) 2-Inch schedule 80 nonmetallic conduit
- (27) 2-Inch stainless steel bands
- (28) Category 6 network cable between the wireless ethernet bridge and the power injector, and between the power injector and the CCTV camera.

C Construction

Install assembly on a 60-Foot wood pole which will be provided under other pay items in the contract.

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinets to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. Attach the brackets to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

Install one ethernet bridge radio on the temporary camera assembly site and the other ethernet radio bridge on an existing permanent or temporary installation as shown on the plans and as directed by the engineer. Integrate the ethernet radio bridges together, and into the existing communications network. Install the CCTV camera as required in Section 677 of the standard specifications, including addenda to that article included in this project.

D Measurement

The department will measure Temporary Traffic Camera Assembly as each individual unit consisting of one CCTV camera and one CCTV camera solar power assembly, acceptably installed and integrated into the existing FTMS system.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2012	Temporary Traffic Camera Assembly	EACH

Payment for Temporary Traffic Camera Assembly is full compensation for installing department-furnished camera assemblies, ethernet radio bridges, and solar power systems on poles; for providing all cables; for integrating the assembly into the existing FTMS system and making the assembly functional; and for all conduit, hardware and connections.

185. Relocating Temporary Traffic Camera Assembly, Item SPV.0060.2013.

A Description

This special provision describes relocating an already installed temporary traffic camera assembly, including removing it from the existing location and installing, and integrating the assembly into the existing system at the new location.

B Materials

Materials include materials previously furnished by the department and materials previously furnished by the contractor previously installed through other pay items in the contract.

These materials include the following:

- One 60 Foot Wood Pole
- One Internet Protocol Dome CCTV camera
- One solar power system consisting of 4-85W panels, 4-120 Amp-Hour batteries, a solar power controller, and one solar power cabinet to house the batteries and controller.
- One mid-span Power-Over-Ethernet power injector
- (2) 900 MHz ethernet bridge radios and associated cabling
- Mounting hardware for solar power system and CCTV Camera
- 2-Inch schedule 80 nonmetallic conduit
- Category 6 outdoor rated network cable between the wireless ethernet bridge and the power injector or Ethernet switch and between the power injector and the CCTV camera

C Construction

C.1 Removal

As directed by the engineer, remove the temporary traffic camera assemblies from their respective locations in the project. Be careful not to damage any of the components that make up the system.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

C.2 Installation

Install the wood pole according to industry standards for supplied pole length.

Install the CCTV camera as required in standard spec 677.

C.3 Solar Power System Installation

Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement

The department will measure Relocating Temporary Traffic Camera Assembly as a unit consisting of one CCTV camera, one solar power system, and a wood pole, with each assembly removed, installed, functioning, and accepted according to the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2013	Relocating Temporary Traffic Camera Assembly	EACH

Payment is full compensation for removing the assembly, installing the assembly, integrating the camera into the communications system, making the assembly functional, and for all restoration work needed at the original or new location.

186. Remove Temporary Traffic Camera Assembly, Item SPV.0060.2014.

A Description

This special provision describes removing and disassembling a temporary traffic camera assembly, including CCTV camera, wireless Ethernet bridge, wood pole, and solar power assembly. This work includes salvaging materials for pick up by the department.

B Materials

Materials will include materials to be salvaged for the department and materials to revert to the contractor be disposed of as determined by the contractor.

Materials to be salvaged for the department include the following:

- (29) One Internet Protocol Dome CCTV camera
- (30) One solar power system consisting of 4-85W panels, 4-120 Amp-Hour batteries, a solar power controller, and two solar power cabinets to house the batteries and controller.
- (31) One mid-span Power-Over-Ethernet power injector
- (32) (2) 900 MHz ethernet bridge radios

Materials to revert to the contractor or be disposed of include the following:

- Wood pole
- Conduit
- Mounting hardware/stainless steel bands
- Network cable and power conductors

C Construction

As directed by the engineer, remove the temporary CCTV camera assembly from its respective location in the project. Be careful not to damage any of the components to be salvaged for the department.

Salvage the materials described above for pick up by the department.

Dispose of non-reusable materials away from the project site.

Restore the site to match the existing surrounding area using standard restoration items as described in the standard specifications.

D Measurement

The department will measure Remove Temporary Traffic Camera Assembly as each individual unit consisting of one CCTV camera and one CCTV camera solar power assembly, acceptably removed with the appropriate materials salvaged for pick up by the department.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2014	Remove Temporary Traffic Camera Assembly	EACH

Payment is full compensation for removing the assembly, salvaging appropriate materials for pick up by the department, disposing of other materials, and for restoring the site to its original condition.

187. Enter Existing Splice Enclosure, Item SPV.0060.2050.

A Description

This special provision describes opening, cleaning, resealing, and reinstalling an existing fiber optic splice enclosure, as shown in the plans or as direct by the engineer.

B (Vacant)

C Construction

Open, clean, reseal, and reinstall the fiber optic splice enclosure according to the manufacturer's recommended guidelines. All work shall be done in accordance with Section 678 of the State of Wisconsin Department of Transportation Standard Specifications and as described in these specifications.

Affix the fiber optic splice enclosure to the side of the manhole or vault using the cable support brackets. All cables shall be properly dressed and affixed to rails or racks within the manhole or vault. No cables or enclosures will be permitted to lie on the floor.

D Measurement

The department will measure Enter Existing Splice Enclosure by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2050	Enter Existing Splice Enclosure	EACH

Payment is full compensation for opening, cleaning, resealing, and reinstalling the splice enclosure.

188. Loop Detector Protection, Item SPV.0060.2051.

A Description

This special provision describes furnishing and installing a loop detector splice kit for the purpose of protecting the loop detector wire between installation of the loop detector and installation of the loop detector lead-in-cable.

B Materials

Use cast-in-place splice kits from an approved manufacturer of electrical wiring from WisDOT's approved products list.

C Construction

Provide an additional 10-feet of slack loop detector wire connected to the installed loop detector in the pull box or manhole. Install the splice capsule conforming to the manufacturer's instructions around both ends of the slack loop detector wire to protect the wire until it may be permanently spliced onto the loop detector lead-in cable. At the time of splicing onto the permanent loop detector lead-in cable, cut the excess slack from the loop detector wire and discard the wire and the splice kit installed to protect it.

D Measurement

The department will measure Loop Detector Protection by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2051	Loop Detector Protection	EACH

Payment is full compensation for furnishing and installing the required protection splice kits.

189. Refocus Vehicle Detector Assembly, Item SPV.0060.2052.

A Description

This special provision describes refocusing an existing microwave detector, or detectors, on a pole or other structure, for operation with a new lane configuration.

B (Vacant)

C Construction

Coordinate all planned down-time of vehicle detector assemblies with the STOC at (414) 227-2166. Notify the STOC an amount of time ahead of planned down-time equal to the planned down-time. Examples would be that a 4-hour temporary down-time of the system would require notification 4-hours ahead of time while an 8-hour planned down-time would require 8-hours of advance notification.

Refocus and recalibrate the detector each time the adjacent traffic pattern is changed due to a change in traffic control or construction staging.

Verify to the satisfaction of the engineer that the existing detector assembly is working properly. Inspect the vehicle detector assembly for damage.

D Measurement

The department will measure Refocus Vehicle Detector Assembly 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.0060.2052	Refocus Vehicle Detector Assembly	EACH

Payment is full compensation for making the detector fully operational with a new lane configuration.

190. Signal Assembly Advance Flasher Type 1, Item SPV.0060.2053.

A Description

This special provision describes providing and installing type 1 advance flasher traffic signal assemblies for use with ramp meters, including the pedestal base, traffic signal standard, traffic signal heads, traffic signal mounting brackets, sign mounting brackets, and wiring within the assembly.

B Materials

Provide pedestal bases that meet the requirements of standard spec 657.2.6.

Provide traffic signal standards that meet the requirements of standard spec 657.2.5.

Provide two single-section 12-inch yellow face traffic signal heads meet the requirements of standard spec 658.

Provide traffic signal mounting hardware that meets the requirements of standard spec 658.

Provide sign mounting brackets that meet the requirements of standard spec 637.2.4.

Provide wiring within the assembly and from the signal heads to the pedestal base that meets the requirements of standard spec 655.2.2.

C Construction

Perform work conforming to standard spec 637, 657, and 658 and the WSEC, and as the plans show.

Ensure that the positioning, mounting height, and lateral placement of signal heads are according to the MUTCD. The contractor may be required to revisit locations to re-adjust the signal heads once the engineer observes the metering operation of the ramp.

For traffic signal cable that extends from the signal base to the terminal strips in the signal heads, provide the number of conductors as the plans show. Match the color of the conductor to the lens color.

Install conductors in continuous lengths without splices from terminal to terminal. Splice only at hand holes at the bases of the standards or poles. Do not splice in underground pull boxes or conduit.

Group and identify sets of conductors in signal cables, 3 each per signal phase, whether insulated with red, yellow, green, or other colors, at each pertinent termination. Use conductors colored to match lens colors first. The engineer shall approve the method of identification. Furnish 2 as-built cable layout drawings with labeling to the engineer upon completion of the work. Place one of those copies in the cabinet.

Connect the white 14 AWG wires to a 10 AWG current carrying neutral. Make the connection with a wire-nut. Extend the 10 AWG wire from the current carrying neutral grounding strip in the ramp meter processor assembly cabinet, being installed from base to base to the far end of each signal conduit run.

Furnish the 10 AWG USE XLP current carrying grounded conductor in white colored insulation.

Furnish the 10 AWG USE XLP equipment-grounding wire in green colored insulation.

Furnish equipment and appliances necessary to test the complete installation of the ramp meter control signal assembly, including electrical conductors.

D Measurement

The department will measure Signal Assembly Advance Flasher Type 1 as each individual assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2053	Signal Assembly Advance Flasher Type 1	EACH

Payment is full compensation for providing and installing traffic signal standards, pedestal bases, signal heads, signal mounting brackets, cabling within the assembly, and the sign support system; for providing electrical connections and grounding; and for testing.

191. Signal Assembly Ramp Control Overhead, Item SPV.0060.2054.

A Description

This special provision describes providing and installing overhead traffic signal assemblies for use with ramp meters, including, traffic signal heads, traffic signal mounting brackets, sign mounting brackets, and wiring within the respective overhead sign support.

B Materials

Provide one three-section 12-inch face traffic signal head that meets the requirements of standard spec 658.

Provide traffic signal mounting hardware that meets the requirements of standard spec 658.

Provide sign mounting brackets that meet the requirements of standard spec 637.2.4.

Provide wiring within the overhead sign support that meets the requirements of standard spec 655.2.2.

C Construction

Perform work conforming to standard spec 637 and 658 and the WSEC, and as the plans show.

Ensure that the positioning, mounting height, and lateral placement of signal heads are according to the MUTCD. For overhead signals, provide a clearance from the pavement surface of the roadway to the lowest part of the mast arm, or the lowest part of any object mounted on the mast arm, between 17 feet and 19 feet. The contractor may be required to revisit locations to re-adjust the signal heads once the engineer observes the metering operation of the ramp.

For traffic signal cable that extends from the signal base to the terminal strips in the signal heads, provide the number of conductors as the plans show. Match the color of the conductor to the lens color.

Install conductors in continuous lengths without splices from terminal to terminal. Splice only at hand holes at the bases of the standards or poles. Do not splice in underground pull boxes or conduit.

Group and identify sets of conductors in signal cables, 3 each per signal phase, whether insulated with red, yellow, green, or other colors, at each pertinent termination. Use conductors colored to match lens colors first. The engineer shall approve the method of identification. Furnish 2 as-built cable layout drawings with labeling to the engineer upon completion of the work. Place one of those copies in the cabinet.

Connect the white 14 AWG wires to a 10 AWG current carrying neutral. Make the connection with a wire-nut. Extend the 10 AWG wire from the current carrying neutral grounding strip in the ramp meter processor assembly cabinet, being installed from base to base to the far end of each signal conduit run.

Furnish the 10 AWG USE XLP current carrying grounded conductor in white colored insulation.

Furnish the 10 AWG USE XLP equipment-grounding wire in green colored insulation.

Furnish equipment and appliances necessary to test the complete installation of the ramp meter control signal assembly, including electrical conductors.

D Measurement

The department will measure Signal Assembly Ramp Control Overhead 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.0060.2054	Signal Assembly Ramp Control Overhead	EACH

Payment is full compensation for providing and installing, signal heads, signal mounting brackets, cabling within the overhead sign support, and the sign support system; for providing electrical connections and grounding; and for testing.

192. Ground Rod, Item SPV.0060.2055.

A Description

This special provision describes providing and installing ground rod and ground wire.

B Materials

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

C Construction

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2055	Ground Rod	EACH

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

193. Install Structure Mounted Cabinet, Item SPV.0060.2056.

A Description

This special provision describes installing department furnished aluminum cabinets on overhead sign structures and concrete foundations.

B Materials

Furnish stainless steel epoxy anchor bolts; stainless steel mounting nuts, bolts, and washers; and galvanized steel brackets.

Use stainless steel bolts, nuts, bolts, and lock washers designed to prevent the connections from backing off unless otherwise specified.

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

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

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

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

C Construction

Fasten the field cabinet securely onto a concrete foundation using the brackets and mounting hardware described above. Isolate dissimilar materials from one another using stainless steel fittings. Make all power connections to the cabinet as specified in standard spec 656.

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

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2056	Install Structure Mounted Cabinet	EACH

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

- 194. Install Poles Type 10, Item SPV.0060.3002;
Install Poles Type 9-Special, Item SPV.0060.3003;
Install Poles Type 10-Special, Item SPV.0060.3004;
Install Monotube Arms 15-FT, Item SPV.0060.3007;
Install Monotube Arms 20-FT, Item SPV.0060.3008;
Install Monotube Arms 25-FT, Item SPV.0060.3009;
Install Monotube Arms 30-FT, Item SPV.0060.3010;
Install Monotube Arms 35-FT-Special, Item SPV.0060.3011;
Install Monotube Arms 45-FT-Special, Item SPV.0060.3013;
Install Luminaire Arms Steel 15-FT, Item SPV.0060.3017.**

A Description

This special provision describes installing state furnished materials conforming to standard spec 657, details shown in the plans, and as modified in this special provision.

B Materials

The department will furnish the monotube poles, and monotube arms.

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

C Construction

Perform work in accordance with sections 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 of the standard specifications except as specified below.

D Measurement

The department will measure Install [Equipment] at the contract unit price acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3002	Install Poles Type 10	EACH
SPV.0060.3003	Install Poles Type 9-Special	EACH
SPV.0060.3004	Install Poles Type 10-Special	EACH
SPV.0060.3007	Install Monotube Arms 15-FT	EACH
SPV.0060.3008	Install Monotube Arms 20-FT	EACH
SPV.0060.3009	Install Monotube Arms 25-FT	EACH
SPV.0060.3010	Install Monotube Arms 30-FT	EACH
SPV.0060.3011	Install Monotube Arms 35-FT - Special	EACH
SPV.0060.3013	Install Monotube Arms 45-FT - Special	EACH
SPV.0060.3017	Install Luminaire Arms Steel 15-FT	EACH

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

- 195. Trnspt Traffic Signal & Inter Lighting Materials W O'Connor St & S 70th St, Item SPV.0060.3029;**
Trnspt Traffic Signal & Inter Lighting Materials W Kearney St & S 70th St, Item SPV.0060.3030;
Trnspt Traffic Signal & Inter Lighting Materials W O'Connor St & S 68th St, Item SPV.0060.3031;
Trnspt Traffic Signal & Inter Lighting Materials W Kearney St & S 68th St, Item SPV.0060.3032;
Trnspt Traffic Signal & Inter Lighting Materials IH 94 WB On Ramp & N Hawley Rd, Item SPV.0060.3033;
Trnspt Traffic Signal & Inter Lighting Materials IH 94 EB Off Ramp & S Hawley Rd, Item SPV.0060.3034.

A Description

This special provision describes the transporting of department furnished monotube poles, and monotube arms.

B Materials

Transport materials furnished by the department including: Monotube poles, monotube arms, and monotube luminaire arms (to be installed on monotube assemblies).

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five (5) working days prior to picking the materials up.

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

C Construction

Perform work in accordance with sections 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 of the standard specifications.

D Measurement

The department will measure Trnspt Traffic Signal & Inter Lighting Materials [Location] as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3029	Trnspt Traffic Signal & Inter Lighting Materials W O'Connor St & S 70th St	EACH
SPV.0060.3030	Trnspt Traffic Signal & Inter Lighting Materials W Kearney St & S 70th St	EACH
SPV.0060.3031	Trnspt Traffic Signal & Inter Lighting Materials W O'Connor St & S 68th St	EACH
SPV.0060.3032	Trnspt Traffic Signal & Inter Lighting Materials W Kearney St & S 68th St	EACH
SPV.0060.3033	Trnspt Traffic Signal & Inter Lighting Materials IH 94 WB On Ramp & N Hawley Rd	EACH
SPV.0060.3034	Trnspt Traffic Signal & Inter Lighting Materials IH 94 EB Off Ramp & S Hawley Rd	EACH

Payment is full compensation for transporting the monotube poles, monotube arms, and monotube luminaire arms (to be installed on monotube assemblies). Installation of these materials is included under a separate pay item.

- 196. Backplates with Reflective Border 3 Section 12-Inch, Item SPV.0060.3043.**

A Description

This special provision describes furnishing and installing traffic signal backplates with a factory installed 2-inch reflective border.

B Materials

Backplate materials shall be according to standard spec 658.2.2.2.

Reflective border materials shall be according to standard spec 637.2.2.3 and 637.2.3.4.2. The adhesive for the reflective border shall be pressure sensitive per manufacturer's recommendations. All reflective borders shall be placed on backplates by the manufacturer or prior to arrival for installation. This will prevent the placement of the reflective tape during colder temperatures in the field.

C Construction

Construction shall be according to the manufacturer's recommendations and standard spec 637.3 and 658.3. All backplates to be inspected by the engineer prior to placement.

D Measurement

The department will measure Backplates with Reflective Border (size) bid items as each individual backplate, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3043	Backplates with Reflective Border 3 Section 12-Inch	EACH

Payment is full compensation for furnishing and installing backplates with reflective border and mounting screws; and for disposing of surplus materials.

- 197. Trnspt & Install State Furn Traffic Signal Cabinet W O'Connor St & S 70th St, Item SPV.0060.3046;**
Trnspt & Install State Furn Traffic Signal W Kearney St & S 70th St, Item SPV.0060.3047;
Trnspt & Install State Furn Traffic Signal W O'Connor St & S 68th St, Item SPV.0060.3048;
Trnspt & Install State Furn Traffic Signal W Kearney St & S 68th St, Item SPV.0060.3049;
Trnspt & Install State Furn Traffic Signal IH 94 WB On Ramp & N Hawley Rd, Item SPV.0060.3050;
Trnspt & Install State Furn Traffic Signal IH 94 EB Off Ramp & S Hawley Rd, Item SPV.0060.3051.

A Description

This special provision describes the transporting and installing of department furnished materials for traffic signals as the plans show and as follows.

B Materials

Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five (5) working days prior to picking the materials up.

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

C Construction

Perform work in accordance with 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 of the standard specs except as specified below.

Request a signal inspection of the completed signal installation to the project engineer at least five (5) working days prior to the time of the requested inspection. The departments' Region Electrical personnel will perform the inspection.

D Measurement

The department will measure Trnspt & Install State Furn Traffic Signal Cabinet [Location] 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.0060.3046	Trnspt & Install State Furn Traffic Signal Cabinet W O'Connor St & S 70th St	EACH
SPV.0060.3047	Trnspt & Install State Furn Traffic Signal Cabinet W Kearney St & S 70th St	EACH
SPV.0060.3048	Trnspt & Install State Furn Traffic Signal Cabinet W O'Connor St & S 68th St	EACH
SPV.0060.3049	Trnspt & Install State Furn Traffic Signal Cabinet W Kearney St & S 68th St	EACH
SPV.0060.3050	Trnspt & Install State Furn Traffic Signal Cabinet IH 94 WB On Ramp & N Hawley Rd	EACH
SPV.0060.3051	Trnspt & Install State Furn Traffic Signal Cabinet IH 94 EB Off Ramp & S Hawley Rd	EACH

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

- 198. Trnspt & Install State Furn APS Push Button System W O'Connor St & S 70th St, Item SPV.0060.3052;**
Trnspt & Install State Furn APS Push Button System W Kearney St & S 70th St, Item SPV.0060.3053;
Trnspt & Install State Furn APS Push Button System W O'Connor St & S 68th St, Item SPV.0060.3054;
Trnspt & Install State Furn APS Push Button System W Kearney St & S 68th St, Item SPV.0060.3055;
Trnspt & Install State Furn APS Push Button System IH 94 WB On Ramp & N Hawley Rd, Item SPV.0060.3056;
Trnspt & Install State Furn APS Push Button System IH 94 EB Off Ramp & S Hawley Rd, Item SPV.0060.3057.

A Description

This special provision describes the transporting and installing of department furnished audible pedestrian signal equipment.

B Materials

Pick up the department furnished audible pedestrian signal equipment materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five (5) working days prior to picking the materials up.

C Construction

Install the department furnished audible pedestrian signal equipment per manufacturer recommendations in the locations determined by the department.

Mark each end of the lead in the traffic signal cabinet and each cable in the pole handhole to indicate the equipment label (i.e., SB1, SB2, etc.) on the plans. For a cabinet that is not operating the signal, the contractor will terminate the ends. If the cabinet is operating the signal, the cabinet wiring will be done by the department.

The department will provide the vendor's contact information. Coordinate directly with the department's audible pedestrian signal equipment vendor to arrange for the vendor to program the system on site. Notify the department and vendor at least five working days prior to the date of programming. Assist the department and vendor with equipment adjustments and setup during the system programming, if necessary.

D Measurement

The department will measure Trnspt & Install State Furn APS Push Button System [Location] 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.0060.3052	Trnspt & Install State Furn APS Push Button System W O'Connor St & S 70th St	EACH
SPV.0060.3053	Trnspt & Install State Furn APS Push Button System W Kearney St & S 70th St	EACH
SPV.0060.3054	Trnspt & Install State Furn APS Push Button System W O'Connor St & S 68th St	EACH
SPV.0060.3055	Trnspt & Install State Furn APS Push Button System W Kearney St & S 68th St	EACH
SPV.0060.3056	Trnspt & Install State Furn APS Push Button System IH 94 WB On Ramp & N Hawley Rd	EACH
SPV.0060.3057	Trnspt & Install State Furn APS Push Button System IH 94 EB Off Ramp & S Hawley Rd	EACH

Payment is full compensation for transporting and installing the audible pedestrian signal equipment and mounting hardware, assisting the department and vendor during the system setup and programming.

- 199. Trnspt & Install State Furn EVP Heads With Confirmation Lights W O'Connor St & S 70th St, Item SPV.0060.3058;**
Trnspt & Install State Furn EVP Heads With Confirmation Lights W Kearney St & S 70th St, Item SPV.0060.3059;
Trnspt & Install State Furn EVP Heads With Confirmation Lights W O'Connor St & S 68th St, Item SPV.0060.3060;
Trnspt & Install State Furn EVP Heads With Confirmation Lights W Kearney St & S 68th St, Item SPV.0060.3061;
Trnspt & Install State Furn EVP Heads With Confirmation Lights IH 94 WB On Ramp & N Hawley Rd, Item SPV.0060.3062;
Trnspt & Install State Furn EVP Heads With Confirmation Lights IH 94 EB Off Ramp & S Hawley Rd, Item SPV.0060.3063.

A Description

This special provision describes the transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads and mounting brackets.

B Materials

Pick up the department furnished audible pedestrian signal equipment materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five (5) working days prior to picking the materials up.

C Construction

Install the EVP detector heads as shown on the plans. The department will determine the exact location to ensure that the installation does not create a sight obstruction. Mount the EVP detector heads and confirmation lights and wire them per manufacturer instructions. For a cabinet that is not operating the signal, the contractor will terminate the ends and install the discriminators and card rack in the cabinet. If the cabinet is operating the signal, the cabinet wiring will be done by the department.

Notify the department's Electrical shop at (414) 266-1170 upon completion of the installation of the Emergency Vehicle Preemption (EVP) Detector Heads.

D Measurement

The department will measure transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads as each individual unit, in place and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3058	Trnspt & Install State Furn EVP Heads with Confirmation Lights W O'Connor St & S 70th St	EACH
SPV.0060.3059	Trnspt & Install State Furn EVP Heads with Confirmation Lights W Kearney St & S 70th St	EACH
SPV.0060.3060	Trnspt & Install State Furn EVP Heads with Confirmation Lights W O'Connor St & S 68th St	EACH
SPV.0060.3061	Trnspt & Install State Furn EVP Heads with Confirmation Lights W Kearney St & S 68th St	EACH
SPV.0060.3062	Trnspt & Install State Furn EVP Heads with Confirmation Lights IH 94 WB On Ramp & N Hawley Rd	EACH
SPV.0060.3063	Trnspt & Install State Furn EVP Heads with Confirmation Lights IH 94 EB Off Ramp & S Hawley Rd	EACH

Payment is full compensation for transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads and mounting brackets.

200. Temporary EVP System W Kearney St & S 70th St, Item SPV.0060.3064.

A Description

This special provision describes furnishing, installing, and maintaining a temporary EVP system with confirmation lights at the temporary signalized intersection as shown in the plans.

B Materials

Furnish an emergency vehicle preemption system, with confirmation lights, compatible with the local municipal systems and users.

C Construction

The Temporary EVP System, as shown in the temporary traffic signal plans or as directed by the engineer, shall be complete in place, tested, and in full operation during each stage and sub-stage of construction.

Install the temporary EVP system as shown in the plans and according to the manufacturer's recommendations. Determine a suitable location for the temporary EVP detectors for each stage and sub-stage of construction. Detectors may be mounted on the temporary traffic signal span wire or wood poles. Relocate the temporary EVP detectors to a suitable location if construction activities and/or construction staging changes impede the detector operation. Arrange for testing of equipment prior to acceptance of the installation for each construction stage.

All cables associated with the temporary EVP system shall be routed to the cabinet. Each lead shall be appropriately marked as to which EVP channel it is associated.

Periodic adjustment and/or moving of the temporary EVP detectors may be required due to changes in traffic control, staging, or other construction operations.

Ensure that the temporary EVP system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

Remove the temporary EVP system upon project completion.

Provide the engineer records of all EVP settings used during construction.

D Measurement

The department will measure Temporary EVP System [Location] as each individual unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.3064	Temporary EVP System W Kearney St & S 70th St	EACH

Payment is full compensation for furnishing and installing all required equipment, materials, and supplies; for maintaining and changing the EVP detectors to match the plans, traffic control, and construction staging; for relocating the temporary EVP detectors due to construction activities, if required; for testing the EVP system for each stage and sub-stage of construction; for periodically cleaning all temporary EVP detectors; and for removing the Temporary EVP System.

201. Remove Traffic Signal Equipment, Item SPV.0060.3065.

A Description

This special provision describes removing existing Traffic Signal Equipment as the plans show, conforming to standard spec 204, and as follows. Specific removal items are noted in the plans.

B (Vacant)

C Construction

Notify City of Milwaukee Signals Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] and City of Milwaukee Signals Engineering [(414) 286-3232; 841 N. Broadway Room 920, Milwaukee, WI 53202] at least three (3) working days prior to the removal of the traffic signals equipment. Complete the removal work as soon as possible following shut down of the equipment.

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

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the signal heads, wiring/cabling, and traffic signal mounting devices from each signal standard. Dispose of the internal wires off the project. Store the remaining materials, except the traffic signal LED and lamp, in an engineer approved location on the project. The City of Milwaukee will pick up the salvaged materials. Contact City of Milwaukee Signals Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] and City of Milwaukee Signals Engineering [(414) 286-3232; 841 N. Broadway Room 920, Milwaukee, WI 53202] to arrange pick up.

Traffic signal LED and lamp disposal shall be paid for as a separate item.

D Measurement

The department will measure Remove Traffic Signal Equipment bid item as 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.0060.3065	Remove Traffic Signal Equipment	EACH

Payment is full compensation for removing, disassembling, scrapping of some materials, disposing of scrap material, and for storing the requested materials for the City of Milwaukee.

202. Relocate Pedestrian Push Button (APS), Item SPV.0060.3066.

A Description

This special provision describes relocating City of Milwaukee audible pedestrian push buttons as the plans show, conforming to standard spec 204 and 658, and as follows. Specific items are noted in the plans.

B Materials

Furnish traffic signal mounting hardware in accordance with Section 658.2 of the standard specifications.

C Construction

The City of Milwaukee assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Disconnect, remove and relocate the audible push button as indicated on the plans. Installation of the relocated audible push button and mounting hardware shall be in accordance with Section 658.3 of the standard specifications and manufacturer's recommendations. Use the existing traffic signal feeder cable and provide any required wiring from the traffic signal pedestal base to the push button. Store any surplus traffic signal mounting hardware in an engineer approved location on the project. The City of Milwaukee will pick up the salvaged materials. Contact City of Milwaukee Signals Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] and City of Milwaukee Signals Engineering [(414) 286-3232; 841 N. Broadway Room 920, Milwaukee, WI 53202] to arrange pick up.

D Measurement

The department will measure Relocate Pedestrian Push Button (APS) bid item as 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.0060.3066	Relocate Pedestrian Push Button (APS)	EACH

Payment is full compensation for removing and relocating audible push buttons; for furnishing and installing traffic signal mounting hardware and wiring for the relocated audible push button; and for storing the requested materials for the City of Milwaukee.

203. Relocate Pedestrian Head, Item SPV.0060.3067.

A Description

This special provision describes relocating City of Milwaukee pedestrian heads as the plans show, conforming to standard spec 204 and 658, and as follows. Specific items are noted in the plans.

B Materials

Furnish traffic signal mounting hardware in accordance with Section 658.2 of the standard specifications.

C Construction

The City of Milwaukee assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Disconnect, remove and relocate the pedestrian heads and countdown timers as indicated on the plans. Store any surplus traffic signal mounting hardware in an engineer approved location on the project. The City of Milwaukee will pick up the salvaged materials. Contact City of Milwaukee Signals Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] and City of Milwaukee Signals Engineering [(414) 286-3232; 841 N. Broadway Room 920, Milwaukee, WI 53202] to arrange pick up.

D Measurement

The department will measure Relocate Pedestrian Head bid item as 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.0060.3067	Relocate Pedestrian Head	EACH

Payment is full compensation for removing and relocating pedestrian heads and countdown timers; for installing traffic signal mounting hardware and wiring for the relocated pedestrian head; and for storing the requested materials for the City of Milwaukee.

204. Temporary Overhead Cable W Wisconsin Ave & N Hawley Rd, Item SPV.0060.3068.

A Description

This special provision describes installing overhead traffic signal cabling at the intersection of N. Hawley Rd & W. Wisconsin Ave.

B Materials

Furnish traffic signal components from the QPL and conforming to 658.2. The contractor may furnish engineer-approved used components.

For traffic control cable, furnish 7 count, 600 volt AC 14AWG, solid copper conductor, according to IMSA 20-1.

For messenger wire, furnish 3/8-inch nominal diameter, 7-strand, galvanized steel wire conforming to ASTM A475, with a utility grade breaking strength of 15,400 lbs.

Furnish messenger wire mounting hardware as described in section 661.2.1.4. Use circumferential pole clamps instead of bolted connections.

Furnish traffic signal mounting hardware in accordance with Section 658.2 of the standard specifications.

C Construction

Notify City of Milwaukee Signals Shop [Rudy Gutierrez, Manager; (414) 286-3687 office/dispatch or (414) 708-5148 mobile; 1540 W. Canal Street, Milwaukee, WI 53233] and City of Milwaukee Signals Engineering [(414) 286-3232; 841 N. Broadway Room 920, Milwaukee, WI 53202] at least three (3) days prior to beginning work.

Perform work in accordance to the WSEC. Provide and install messenger wire, messenger wire hardware, traffic signal cable, and traffic signal cable splices as the plans show.

Attach cables to the messenger wire, at 3-ft or less intervals with 4 wraps of a department-approved adhesive tape or UV resistant, outdoor rated nylon lock fasteners.

Install messenger wire from top of light pole to top of light as identified in the plans. Minimize slack in messenger wire.

Install cable in continuous lengths without splices from traffic signal cabinet to signal head. Feed traffic signal cables to signal faces as the detail drawings show.

D Measurement

The department will measure Temporary Overhead Cable [Location] bid item as 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.0060.3068	Temporary Overhead Cable W Wisconsin Ave & N Hawley Rd	EACH

Payment is full compensation for furnish and installing necessary traffic signal cable, messenger wire, and hardware as shown in the plans.

- 205. Trnsprt and Install S-F FO Cable Pigtail 8-CT W O'Connor St & S 68th St, Item SPV.0060.3069;**
Trnsprt and Install S-F FO Cable Pigtail 8-CT W Kearney St & S 68th St, Item SPV.0060.3070;
Trnsprt and Install S-F FO Cable Pigtail 8-CT IH 94 WB On Ramp & N Hawley Rd, Item SPV.0060.3071;
Trnsprt and Install S-F FO Cable Pigtail 8-CT IH 94 EB Off Ramp & S Hawley Rd, Item SPV.0060.3072.

A Description

This special provision describes the transporting and installing of fiber optic cable pigtail 8-ct in traffic signal cabinets.

B Materials

The department will furnish the pre-terminated fiber optic patch panel. The material will be provided with the traffic signal cabinet. The patch panel will have a pre-terminated fiber optic cable pigtail. Provide all patch panel attachment hardware.

C Construction

Install the patch panel on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in standard spec 678.3.1. Fiber optic cable ends shall be covered securely to protect open ends during installation in raceways. Leave the remainder of the fiber optic cable coiled in the communication vault.

D Measurement

The department will measure Trnsprt and Install S-F FO Cable Pigtail 8-CT [Location] 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.0060.3069	Trnsprt and Install S-F FO Cable Pigtail 8-CT W O'Connor St & S 68th St	EACH
SPV.0060.3070	Trnsprt and Install S-F FO Cable Pigtail 8-CT W Kearney St & S 68th St	EACH
SPV.0060.3071	Trnsprt and Install S-F FO Cable Pigtail 8-CT IH 94 WB On Ramp & N Hawley Rd	EACH
SPV.0060.3072	Trnsprt and Install S-F FO Cable Pigtail 8-CT IH 94 EB Off Ramp & S Hawley Rd	EACH

Payment is full compensation for transporting and installing pre-terminated patch panels; furnishing and installing attachment hardware; and cleaning up and disposing of waste.

- 206. Temporary Bridge Widening B-40-083, Item SPV.0060.4083;**
Temporary Bridge Widening B-40-085, Item SPV.0060.4085;
Temporary Bridge Widening B-40-087, Item SPV.0060.4087.

A Description

This special provision describes the design, construction and maintenance of a temporary bridge widening as shown on the contract plans.

B Materials

Furnish materials conforming to standard spec part 5: Structures.

B.1 Design

Design the temporary bridge widening conforming to standard spec 526.3.2 and as specified herein.

The temporary bridge widening shall span the stream and/or underpass roadway or underpass pedestrian facility as shown on the contract plans. The structure shall have a minimum roadway clear width as shown

on the contract plans as measured between the inside faces of the existing concrete barrier to remain and the barrier included in the temporary bridge widening, measured at right angles to the centerline. The temporary bridge widening shall not reduce the vertical underclearance more than is shown on the contract plans without prior approval from the engineer. Ensure that the temporary bridge widening has sufficient lateral clear width meeting clear zone requirements per FDM 11-15-1.13. If clear zone requirements cannot be maintained, structure protection shall be required.

Use cast-in-place concrete for the deck of the temporary bridge widening, designed in accordance with the WisDOT Bridge Manual, chapter 17. A thinner deck, per Table 17.5-2 of the WisDOT Bridge Manual is acceptable. The design details must provide a means of connecting the new and existing portions of the deck as shown on the contract plans.

For multi-column piers, consider the cap connections to the existing cap as pinned and design the new portion to the current AASHTO LRFD Bridge Design Specifications criteria. The new column(s) are not required to meet LRFD 3.6.5 (loading due to vehicular collision).

Add a column as additional vertical support for the extension of a hammerhead pier.

Widen abutments to current LRFD criteria.

Design foundation support to current LRFD criteria based on existing subsurface and geotechnical data for the existing bridge, and subsurface and geotechnical data for the structures to be constructed after removal of the temporarily widened bridge. Contractor to request these files from the engineer.

When the temporary widening spans a stream, design the structure – both superstructure and substructure – with dimensions sufficient to not constrict stream flow during use. Align piers with existing pier configuration in order to not restrict waterway area as shown on the contract plans. Ensure that the widened structure has a low superstructure elevation and an open waterway area no less than the contract plans specify.

B.2 Plan Requirements and Submittals

Provide plans and submit conforming to standard spec 526.3.3.

C Construction

Construct temporary bridge widening conforming to standard spec 526.3.4.

D Measurement

The department will measure the Temporary Bridge Widening (Structure Number) as each individual bridge widening acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.4083	Temporary Bridge Widening B-40-083	EACH
SPV.0060.4085	Temporary Bridge Widening B-40-085	EACH
SPV.0060.4087	Temporary Bridge Widening B-40-087	EACH

Payment for the Temporary Bridge Widening bid item is full compensation for providing a temporary widened bridge including design and construction; for backfilling with structure backfill; and for maintaining the temporary bridge widening. All temporary shoring and other secondary structure items required to construct and maintain the temporary bridge widening are to be included as a part of this bid item.

(20230209)

207. Anchor Assemblies Noise Barrier Structures, Item SPV.0060.4200.

A Description

Furnish and install anchor bolt assemblies for noise barriers that will be installed on bridges and retaining walls as shown on the plans.

B Materials

Anchor bolts shall be of size and spacing as given on the plans and conform to AASHTO M 314 GR 55. Provide heavy hex nuts conforming to AASHTO M 292 and hardened washers conforming to AASHTO M 293. Provide embedded anchor plates for anchor assemblies as shown on the plans conforming to AASHTO M 223. Provide nuts and washers per anchor bolt as the plans show for Anchor Assemblies Noise Barriers Structures.

Hot dip galvanize the entire anchor assembly. Galvanize embedded anchor plates conforming to AASHTO M 111 and galvanize anchor bolts, nuts and washers conforming to AASHTO M 232. Provide enlarged threads on nuts for proper fit after galvanizing.

C Construction

Install embedded anchor assemblies in concrete structures at locations as shown on the plans. Mount anchor assemblies to formwork or otherwise provide positive support of anchor assembly within formwork as necessary to prevent movement, shifting or misalignment of the anchor assembly during subsequent concrete placement. Protect or clean exposed anchor bolt threads from concrete splatter.

Coordinate location and spacing of anchor assemblies embedded in bridges and retaining walls for mounting noise barriers on bridges and retaining walls with approved noise barrier shop drawings.

D Measurement

The department will measure Anchor Assemblies Noise Barriers Structures by each individual anchor assembly, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.4200	Anchor Assemblies Noise Barrier Structures	EACH

Payment is full compensation for furnishing and installing the anchorages.

208. Temporary Pier Support B-40-83, Item SPV.0060.4383; Temporary Pier Support B-40-85, Item SPV.0060.4385.

A Description

This special provision describes the design, construction, and maintenance of temporary supports of piers of existing bridges during partial bridge removal or temporary works on the existing bridges as required for traffic staging, as shown on the contract plans.

B Materials

Furnish materials conforming to standard spec Part 500: Structures.

B.1 Design

All temporary works designs are done in accordance with the AASHTO Standard Specification for Highway Bridges, 17th edition, the AASHTO Guide Specifications for Bridge Temporary Works and the specifics as shown in the contract plans and specifications.

Provide plans and design calculations, signed and sealed by a professional engineer registered in the state of Wisconsin, for all temporary structures. Submit one copy of the plans and design calculations to the engineer, for review and acceptance by the Bureau of Structures, 15 days prior to ordering materials or starting construction.

Add a temporary pier support column midway between the existing pier columns.

The temporary support shall not interfere with the underpassing traffic staging as shown on the contract plans.

Design foundation support to carry the required loads while remaining within the available area outside of the traveled way.

Contractor designed temporary works shall consider the following loads:

- Loads shown on the contract plans
- Construction and equipment loads
- Dead loads (i.e., concrete pours, erected beams, support self-weight, etc.)
- Live loads
- Wind loads
- Lateral earth pressure loads (if any)
- Jacking loads (if jacks bear on temporary works). If jacks are used as a component of the temporary pier support, the jacking loads shall be nominal and only enough force to ensure a tight fit to the underside of the pier cap and proper bearing on the bearing surface below the temporary support.
- Any other loading on the temporary works resulting from construction activities.

B.2 Plan Requirements and Submittals

Provide plans and submit conforming to standard spec 526.3.2 and as noted above.

C Construction

Construct temporary support conforming to standard spec 526.3.3.

During temporary bridge support and falsework erection, provide the proper bracing and ensure that all vertical members are constructed plumb, with an allowable deviation of 1/8 inch in 3 feet.

The temporary pier support must be installed prior to removal of any portion of the existing pier.

D Measurement

The department will measure Temporary Pier Support 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.0060.4383	Temporary Pier Support B-40-83	EACH
SPV.0060.4385	Temporary Pier Support B-40-85	EACH

Payment is full compensation for providing a temporary support, including design and construction; for maintaining and removing the temporary support; and for repairing any damage to the surface below the support related to the temporary support installation and removal. All temporary shoring and other secondary structure items required to construct and maintain the temporary support are to be included as a part of this bid item.

209. Cored Holes 4-Inch, Item SPV.0060.4400.

A Description

This special provision describes providing labor and equipment necessary to core a hole through the full depth of the reinforced concrete bridge slab to provide temporary drainage.

B (Vacant)

C Construction

Provide a core drilling device that creates a uniform core for a 4-inch diameter hole. The device shall be capable of coring the full depth of the concrete bridge slab and of coring concrete and steel materials, as reinforcement may be encountered.

Locate the core holes as shown on the plans.

D Measurement

The department will measure Cored Holes 4-Inch by each individual core, 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.0060.4400	Cored Holes 4-Inch	EACH

Payment is full compensation for each individual cored hole in the bridge slab that is used for temporary drainage.

210. Removing Hydrant/Minor SPV.0060.5008; Installing Hydrant SPV.0060.5009.

A Description

This special provision describes removing existing hydrants and installing new hydrants.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the City of Milwaukee - Milwaukee Water Works "Special Provisions for Water Main Construction". In case of conflicts between the City Water Main Specifications and the MWW Special Provisions or these special provisions, the requirements of the MWW Special Provisions and these special provisions shall govern.

The City of Milwaukee's installation specifications, special provisions for water main construction and material specifications can be found at the following website:

<https://city.milwaukee.gov/water/PermitsSpecs>

B Materials

B.1 General

The Contractor shall provide all materials for this special provision. Materials shall conform to the latest version of the City of Milwaukee's Material Specifications.

All materials will require inspection by the city.

The Contractor shall allow four (4) working day notice prior to start of construction for material inspection and for scheduling construction inspection. Contractor shall contact watengcon@milwaukee.gov for material inspection and construction inspection.

The Contractor shall provide a minimum two (2) working day notice to the Milwaukee Water Works Distribution when requesting a shut-off, wet connection, safe water sample, pressure testing, and chlorination. The Contractor shall coordinate via email watconst@milwaukee.gov.

The contractor shall return all abandoned hydrants to the DPW field headquarters - Infrastructure Operations Water Works. Contact the MWW distribution construction manager via email watconst@milwaukee.gov.

Milwaukee Water Works will test all pipe, in accordance to the City of Milwaukee Material Testing Specifications.

C Construction

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in the City of Milwaukee – Milwaukee Water Works "Special Provisions for Water Main Construction".

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be two (2) feet, and the specification shall be modified to read, "each subsequent compacted lift of material shall be one (1) foot". Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

D Measurement

The department will measure Removing Hydrant/Minor as each individual hydrant acceptably removed, including all construction parameters and requirements as described in this special provision.

The department will measure Installing Hydrant as each individual hydrant acceptably installed, including all construction parameters and requirements as described in this special provision.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.5008	Removing Hydrant/Minor	EACH
SPV.0060.500.	Installing Hydrant	EACH

Payment is full compensation for providing all materials including all hydrants, valves, fittings, and accessories required; for all excavating; for sheeting and shoring; for forming foundation; for laying pipe; for installing all valves, fittings and hydrants; for concrete base, buttresses, and anchors; for strapping and rodding; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

211. Permanent Connection to Existing 36-inch Water Main, Item SPV.0060.5001; Permanent Connection to Existing 48-inch Water Main, Item SPV.0060.5002.

A Description

This special provision describes the connection of proposed water main to existing water main as shown on the plans. Perform this work according to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

B Materials

B.1 General

Furnish all fittings (restrained joint and standard) required for installation on this project. Unless specified otherwise, water main shall be push-on rubber gasket joint ductile iron. Water main specified as restrained joint, shall be restrained joint ductile iron thickness Class 55 pipe, conforming to AWWA C-151 with fittings conforming to AWWA C110.

Contractor to provide all necessary information for furnished steel and iron items to comply with Wisconsin Department of Transportation DT2249, "Utility's Certificate of Compliance for Steel and Iron Items".

B.2 Couplings

The contractor shall supply a transition coupling at every permanent connection to the existing water system. The coupling shall be style 501 straight barrel transition coupling as manufactured by Romac Industries Incorporated or Dresser.

The coupling shall consist of center ring two end rings gasket and nuts and bolts to complete the assembly.

Center ring shall be ductile iron per ASTM A536, Grade 65-45-12 with a yellow fusion epoxy coat.

End rings shall be ASTM A356 Grade 65-45-12 color coded for the pipes that are being connected.

Gaskets shall be SBR per ASTM D2000 MBA710 for water and sewer.

Nuts and bolts shall be track head bolts heavy hex nuts rolled thread, stainless steel material for working pressures up to 260 psi.

C Construction

Construct each cut in connection to existing 36, or 48-inch cast iron or concrete water main including spool pieces, fittings, material adaptor fittings, temporary plugs, air vents, excavation shoring, backfill, and restoration.

D Measurement

The department will measure Permanent Connection to Existing 36 or 48-inch Main as each connection, 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.0060.5001	Permanent Connection to Existing 36-inch Water Main	EACH
SPV.0060.5002	Permanent Connection to Existing 48-inch Water Main	EACH

Payment is full compensation for providing all labor, equipment, materials, fittings and accessories required; for all surveying; excavating, for sheeting and shoring; for forming foundation; for laying pipe; for removing valves; for installing all valves, air vents, and fittings; for concrete base, buttresses, and anchors; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

212. Adjusting Water Valve Boxes, Item SPV.0060.5003; Adjusting Water Manholes, Item SPV.0060.5004.

A Description

This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the paving project, to all City of Milwaukee water service boxes, water valve boxes, and water manhole frames & lids located within the project limits.

B Materials

All material for the adjustment of these facilities shall meet City of Milwaukee specifications and will be provided by the City of Milwaukee by contacting Andre Lee, Milwaukee Water Works, at (414)708-1321 (or Syreeta Woodley, Milwaukee Water Works at (414)286-6302). Milwaukee Water Works Distribution General Contact Number is (414) 286-3710.

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 St.

C Construction

The Contractor, or authorized project representative, shall contact Milwaukee Water Works prior to the start of construction. The City will locate, mark, inspect and repair all water service boxes, water valve boxes, and water manhole frames & lids within the limits of the project prior to commencement of work on the project.

All water service boxes, water valve boxes, and water manhole frames & lids within the project limits shall be adjusted to proposed elevations by the Contractor using materials meeting city specifications.

Throughout the duration of the project, the Contractor must ensure that all water service boxes, water valve boxes, and water manholes 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 and manholes 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 Boxes and Adjusting Water Manholes 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.0060.5003	Adjusting Water Valve Boxes	EACH
SPV.0060.5004	Adjusting Water Manholes	EACH

Payment is full compensation for all excavation, backfilling, disposal of surplus materials, water box or water manhole adjustments, water box or water manhole clean-out, and restoration of the work site; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

213. Installing Hydrant - Alteration, Item SPV.0060.5005.

A Description

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the City of Milwaukee - Milwaukee Water Works "Special Provisions for Water Main Construction". In case of conflicts between the City Water Main Specifications and the MWW Special Provisions or these special provisions, the requirements of the MWW Special Provisions and these special provisions shall govern.

The City of Milwaukee's installation specifications, special provisions for water main construction and material specifications can be found at the following website:

<https://city.milwaukee.gov/water/PermitsSpecs>

B Materials

B.1 General

Provide all materials for this special provision. Materials shall conform to the latest version of the City of Milwaukee's Material Specifications.

All materials will require inspection by the City.

Allow 4 working day notice prior to start of construction for material inspection and for scheduling construction inspection. Contact watengcon@milwaukee.gov for material inspection and construction inspection.

Provide a minimum 2 working day notice to the Milwaukee Water Works Distribution when requesting a shut-off, wet connection, safe water sample, pressure testing, and chlorination. The Contractor shall coordinate via email watconst@milwaukee.gov.

Return all abandoned hydrants to the DPW field headquarters - Infrastructure Operations Water Works. Contract the MWW distribution construction manager at 414-286-6305 or via email watconst@milwaukee.gov.

Milwaukee Water Works will test all pipe, in accordance to the City of Milwaukee Material Testing Specifications.

B.2 Valve Box Adapters

Install all valve boxes on gate valves with the use of valve box base adapters as detailed in the Milwaukee Water Works "Special Provisions for Water Main Construction". Install the adapter in addition to the hardwood blocking.

C Construction

All costs for completing the work required for hydrant installation, hydrant removals, fitting installations and 6-inch hydrant branch pipe connections to existing hydrant branch pipe are to be included in the price for the Installing Hydrant-Alteration.

Install hydrant, 6" ductile iron branch pipe and fittings as needed, incidental to respective Installing Hydrant-Alteration. A list of fittings for each hydrant branch installation is not provided on plans.

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in the City of Milwaukee – Milwaukee Water Works "Special Provisions for Water Main Construction".

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be two (2) feet, and the specification shall be modified to read, "each subsequent compacted lift of material shall be one (1) foot". Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

Installing Hydrant-Alteration requires installing a new hydrant by connecting new hydrant branch and new fittings (unless otherwise noted to reuse existing fittings) to the existing hydrant branch, but not making a new connection to the existing water main.

D Measurement

The department will measure Installing Hydrant – Alteration as each individual hydrant acceptably installed, including all construction parameters and requirements as described in this special provision.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.5005	Installing Hydrant - Alteration	EACH

Payment is full compensation for installing and removing hydrants, providing all materials including all hydrants, branch pipe, valves, fittings, and accessories required; for all excavating; for sheeting and shoring; for forming foundation; for laying pipe; for installing all valves and fittings; for concrete base, buttresses, and anchors; for strapping and rodding; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

214. Blowoff Manhole, Item SPV.0060.5006; Inspection Manhole, Item SPV.0060.5007.

A Description

This special provision describes constructing blowoff manholes and inspection manholes, all in conjunction with the installation of new water mains and at the locations shown on the plans.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the City of Milwaukee - Milwaukee Water Works "Special Provisions for Water Main Construction". In case of conflicts between the City Water Main Specifications and the MWW Special Provisions or these special provisions, the requirements of the MWW Special Provisions and these special provisions shall govern.

The City of Milwaukee's installation specifications, special provisions for water main construction and material specifications can be found at the following website:

<https://city.milwaukee.gov/water/PermitsSpecs>. **B Materials**

B.1 General

The City will furnish manhole frames and covers for installation on this project. The Contractor shall provide all other materials for this special provision. Materials shall conform to the latest version of the City of Milwaukee's Material Specifications.

All materials will require inspection by the City.

Contact Mr. Ricardo Lopez, Inventory Services Manager, at (414)286-6123 (or Mr. Brian Kelly, Inventory Manager, at (414)286-0669) for City of Milwaukee supplied materials.

All materials will require inspection by the City.

The Contractor shall allow four (4) working day notice prior to start of construction for material inspection and for scheduling construction inspection. Contractor shall contact watengcon@milwaukee.gov for material inspection and construction inspection.

B.2 Valve Box Adapters

Install all valve boxes on gate valves with the use of valve box base adapters as detailed in the Milwaukee Water Works "Special Provisions for Water Main Construction". Install the adapter in addition to the hardwood blocking.

C Construction

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in the City of Milwaukee - Milwaukee Water Works "Special Provisions for Water Main Construction".

D Measurement The department will measure Blowoff Manhole as each individual blowoff manhole acceptably installed, including the 20-inch inspection manway, blowoff branch, riser pipe and riser manhole.

The department will measure Inspection Manhole as each inspection manhole acceptably installed including 20-inch inspection manway.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.5006	Blowoff Manhole	EACH
SPV.0060.5007	Inspection Manhole	EACH

Payment is full compensation for providing all materials (except manhole frames and covers provided by the City); for all excavating, for sheeting and shoring; for forming foundation; for sealing joints and making connections to new or existing facilities; for providing bedding material and slurry backfill material; for backfilling; for removing sheeting and shoring; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work in accordance with the contract.

215. Adjusting Sanitary Manhole; Item SPV. 0060.5100

A Description

This special provision describes providing adjusting sanitary manholes to an elevation as shown in the plan or as determined by the engineer as well as installing frame and cover, internal frame/chimney seal, in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

Add or remove masonry adjusting rings as needed. This item applies to structures to be lowered less than 6 inches or raised less than 12 inches.

B Materials

B.1 Adjusting Rings

Furnish adjustment concrete rings with steel reinforcement in conformance with ASTM C-478. Precast concrete rings shall have an inside diameter to match the manhole opening, be not less than 2 inches nor more than 6 inches high, and have a wall thickness of 6 inches unless otherwise specified. The rings shall contain a minimum of one No. 2 reinforcing rod centered within the ring. Do not use any cracked or broken rings. The top of precast manhole cones shall be set a maximum of 18 inches lower than established grade in unimproved areas, with the top of the manhole cover being ringed up flush with the existing ground. The minimum number of adjusting rings shall be one 2-inch ring. The maximum height of adjusting rings shall be 8 inches in paved areas. All joints between the adjusting rings shall be filled with grout or mortar, including between the cone and the adjusting ring and the adjusting ring and the frame. Rings shall be grooved to receive a step.

B.2 Manhole Seal

Furnish new Cretex, NPC Flexrib, or approved equal internal frame/chimney Seal, as shown in the plans. The seal shall meet the material requirements of section 8.42.3 and the performance requirements of section 8.42.4 of the SSSW.

C Construction

C.1 General

The location of existing sanitary manholes to be adjusted is indicated on the plans. Adjust these items as shown in the plans. Reconstruct manholes as necessary so that the frames and cover when placed will be at the established required grade; remove the existing frame and cover. Any temporary adjustment (wood) shims shall be removed and backfilled with grout or mortar prior to installing the seal. Install seals in accordance to the manufacturer's recommended installation procedures. Furnish and use Backfill Slurry in the manhole excavation area to existing surface or to appropriate depth for pavement restoration. Salvage the existing frame and cover.

C.2 Surface Preparation

Remove manhole cover and power wire brush the lower 3 inches of the manhole frame to remove any loose rust or scale and repair any imperfections by either grinding smooth or filling with mortar. A smooth, clean sealing surface is required. Realign the casting if it is offset more than approximately 2 inches from the chimney. Remove all loose and protruding mortar and brick from the upper 7-Inch chimney and clean surface by power wire brushing. Provide a 4-Inch wide sealing surface starting 2 inches down from the bottom of the frame.

All sealing surfaces must be circular, reasonably smooth, clean and free of any loose material or excessive voids. If such a surface does not exist for the bottom of the sleeve to seal against, use one-component, quick-set, high strength, non-shrink, polymer modified patching mortar which has been formulated for vertical or overhead use. If the bottom of the sleeve is to seal against the top of an eccentric (straight side) cone and an inadequately high vertical surface does not exist, contact the manufacturer to obtain details to build the required vertical surface.

Use caulk to fill minor irregularities in the bottom sealing surface. The caulk shall be a butyl rubber caulk conforming to AASHTO M-198, Type B. Apply a single bead of the caulk to the center portion of the lower sealing surface of the sleeve.

Any flaws in the manhole frame, such as minor cracks, pits or protrusions, shall be repaired by either filling with mortar or grinding smooth.

D Measurement

The department will measure Adjusting Sanitary Manhole by the EACH 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.0060.5100	Adjusting Sanitary Manhole	EACH

Payment is full compensation for furnishing and installing all materials including adjusting rings, masonry, and new internal frame/chimney seals; for salvaging, storing, and reinstalling the existing frame and cover; for excavating, backfilling, and compacting; for disposing of waste materials; and for cleaning out and restoring the structure, and all incidentals to complete the work.

216. Internal Sanitary Manhole Seals, Item SPV.0060.5101

A Description

This special provision describes providing Internal Sanitary Manhole Seals for each sanitary manhole identified on the plans.

B Materials

Furnish and install frame-to-chimney seals on all sanitary manholes as the plans show, or as directed by the engineer. The seals shall be as specified in the *Standard Specification for Sewer and Water Construction in Wisconsin (latest edition with addendum)*

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 Method of Measurement

The department will measure Internal Sanitary Manhole Seals by the EACH acceptably completed.

E Basis of Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.5101	Internal Sanitary Manhole Seals	EACH

Payment is full compensation for furnishing new seals and installing internal rubber chimney seals and for all incidentals to complete the work.

217. Manholes Type TES 4-FT Diameter, Item SPV.0060.5200.

A Description

The work under this item consists of a 4'-0" round precast concrete manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance to sections 301, 611 and 501 of the standard specifications, and as hereinafter provided.

B Materials

Furnish and install a 4' diameter precast concrete manhole. 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.

Supply and lay a continuous Butyl Rubber gasket on the wall joint of the base and riser section when the manhole is being assembled at the 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.

To obtain the "Casting Requisition Form" and/or for any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

Manholes Type TES 4-FT Diameter shall be installed in accordance to subsection 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 rood deck must be maintained.

Install manhole cover to proposed grade using concrete rings and/or bricks. **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.

Notify Ms. Rogne three working days in advance of completion of each manhole, for inspection and acceptance of work performed. The contractor will receive no payment until the above work is approved by City Underground Conduit.

D Measurement

The department will measure Manholes Type TES 4-FT Diameter 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.0060.5200	Manholes Type TES 4-FT Diameter	EACH

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole fame to final grade; for picking up and installing covers; furnishing and installing all materials, including precast manhole, conduit, conduit fittings, end bells, bricks, and coarse aggregate, bedding and backfilling, concrete forms, concrete placement, appurtenances, and backfilling.

218. Manholes Type TES Doghouse 4-FT Diameter, Item SPV.0060.5201.

A Description

The work under this item consists of a 4'-0" round "doghouse" manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance with sections 301, 611 and 501 of the standard specifications, and as hereinafter provided. This work includes providing and placing PVC pipe and associated fittings, cement encasement, and other appurtenances to extend existing conduit as required to provide a complete and fully functional communications manhole unit.

B Materials

B.1 Manhole

Furnish and install a 4' diameter precast concrete "doghouse" manhole. 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, lines of #10 steel wire spaced 8" vertically located in the center of the wall, and #6 rebar hoop centered in the wall 3" above the window knock-outs.

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. Pulling-in eyes to be located across from all proposed duct entrances.

Four 5/8" diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

Supply and lay a continuous Butyl Rubber gasket on the wall joint of the base and riser section when the manhole is being assembled at the job site.

The number of pulling-in eyes and/or cable rack bolt inserts ordered may vary. Size, location, shape, and number of duct entrances may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes or cable rack inserts.

Field verify window depth and locations prior to ordering manhole.

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.

To obtain the "Casting Requisition Form" and/or for any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

B.2 Conduit

The contractor shall furnish DB-60 polyvinyl chloride (PVC) conduit.

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.3 Concrete.

The type of concrete to be used to encase the ducts will be:

Type I or Type IL 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.4 Slurry Backfill.

The type of concrete to be used to encase the ducts will be:

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.

The material shall be mixed with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. The mix shall be deposited in the trench directly from a concrete transit mix truck.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

Notify Ms. Rogney three working days in advance of completion of each manhole, for inspection and acceptance of work performed. The contractor will receive no payment until the above work is approved by City Underground Conduit.

C1. Manhole

Manholes Type TES Doghouse 4-FT Diameter shall be installed in accordance with subsection 611.3. The manhole is to be installed within the excavation limits of the manhole that had been removed. The bottom section of the manhole shall be installed while avoiding damage to the live active cables. The excavation may need to be widened to slide the bottom under the existing cables. After the bottom section of the manhole has been set, the existing cables need to be placed with the window openings, splice cases and/or coils placed back into the manhole.

Extreme care must be exercised in the handling of working cables within the excavation. When cables need to be moved, particularly lead sheathed cables, move cables slowly and gradually. Avoid sharp kinks that may damage the inner core of the cables and the sheath.

The contractor shall complete the "doghouse" manhole installation without any damage or service disruption to the existing cables.

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.

Install manhole cover to proposed grade using concrete rings and/or bricks. **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.

C.2 Placing Duct

All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

All existing ducts shall be extended up to 5 feet out of the new manhole structure unless otherwise noted on the plan. Split PVC duct should be used on ducts containing cables. The split duct shall be installed per manufacturers recommendations using tape and reinforced with plastic straps to produce a rigid, stable unit

All ducts shall terminate on the inside wall of the manhole. A standard end bell fitting shall be installed on all duct access points into the manhole.

Where trace wires are present, reconnect and extend trace with #10 copper wire extended two feet past the inside wall of the manhole.

C.3 Concreting

Begin concreting after the conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts shall be three (3) inches on the top, two (2) inches on the sides, and three (3) inches on the bottom (as shown on the detail). After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed 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.3 Slurry Backfill

The backfilling of the conduit shall commence immediately after the duct has been inspected, approved and has had sufficient time to set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry 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 Manholes Type TES Doghouse 4-FT Diameter 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.0060.5201	Manholes Type TES Doghouse 4-FT Diameter	Each

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole frame to final grade; for picking up and installing covers; furnishing and installing all materials, including precast structure, bricks, conduit extensions up to 5 feet, conduit bodies, conduit fittings, trace wire, coarse aggregate, bedding, encasement, and backfilling including any concrete, stone, aggregate slurry, bracing, concrete forms, concrete placement, appurtenances, and backfilling.

219. Manholes Type TES Doghouse 4-FT Diameter, Install Over Conduit, Item SPV.0060.5203.

A Description

The work under this item consists of a 4'-0" round "doghouse" manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance with sections 301, 611 and 501 of the standard specifications, and as hereinafter provided. This work includes providing and placing PVC pipe and associated fittings, cement encasement, and other appurtenances to extend existing conduit as required to provide a complete and fully functional communications manhole unit.

B Materials

B.1 Manhole

Furnish and install a 4' diameter precast concrete "doghouse" manhole. 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, lines of #10 steel wire spaced 8" vertically located in the center of the wall, and #6 rebar hoop centered in the wall 3" above the window knock-outs.

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. Pulling-in eyes to be located across from all proposed duct entrances.

Four 5/8" diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

Supply and lay a continuous Butyl Rubber gasket on the wall joint of the base and riser section when the manhole is being assembled at the job site.

The number of pulling-in eyes and/or cable rack bolt inserts ordered may vary. Size, location, shape, and number of duct entrances may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes or cable rack inserts.

Field verify window depth and locations prior to ordering manhole.

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.

To obtain the "Casting Requisition Form" and/or for any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

B.2 Conduit

The contractor shall furnish DB-60 polyvinyl chloride (PVC) conduit.

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.3 Concrete.

The type of concrete to be used to encase the ducts will be:

Type I or IL 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.4 Slurry Backfill.

The type of concrete to be used to encase the ducts will be:

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.

The material shall be mixed with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. The mix shall be deposited in the trench directly from a concrete transit mix truck.

For any questions on materials, contact Ms. Karen Roney at (414) 286-3243.

C Construction

C.1 Conduit Alterations

Excavate to expose existing conduit. Break back by hand sections of cement encased conduit to facilitate excavation for the new proposed structure. Hand chip concrete away for the existing pipes. Carefully remove pipes from around the cables. Hand chip enough concrete away from the pipes to allow for the coupling of split ducts on to the ends of the pipes. Protect exposed pipe ends and existing cables from damage.

C.2 Manhole

Manholes Type TES Doghouse 4-FT Diameter shall be installed in accordance with subsection 611.3. The manhole is to be installed within the excavation limits of the manhole that had been removed. The bottom section of the manhole shall be installed while avoiding damage to the live active cables. The excavation may need to be widened to slide the bottom under the existing cables. After the bottom section of the manhole has been set, the existing cables need to be placed with the window openings, splice cases and/or coils placed back into the manhole.

Extreme care must be exercised in the handling of working cables within the excavation. When cables need to be moved, particularly lead sheathed cables, move cables slowly and gradually. Avoid sharp kinks that may damage the inner core of the cables and the sheath.

The contractor shall complete the "doghouse" manhole installation without any damage or service disruption to the existing cables.

Complete the "doghouse" manhole installation without any damage or service disruption to the existing cables.

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.

Install manhole cover to proposed grade using concrete rings and/or bricks. **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.

C.3 Placing Duct

All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

All existing ducts shall be extended up to 5 feet out of the new manhole structure unless otherwise noted on the plan. Split PVC duct should be used on ducts containing cables. The split duct shall be installed per manufactures recommendations using tape and reinforced with plastic straps to produce a rigid, stable unit.

All ducts shall terminate on the inside wall of the manhole. A standard end bell fitting shall be installed on all duct access points into the manhole.

Where trace wires are present, reconnect and extend trace with #10 copper wire extended two feet past the inside wall of the manhole.

C.4 Concreting

Begin concreting after the conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts shall be three (3) inches on the top, two (2) inches on the sides, and three (3) inches on the bottom (as shown on the detail). After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed 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.5 Slurry Backfill

The backfilling of the conduit shall commence immediately after the duct has been inspected, approved and has had sufficient time to set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry 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 Manholes Type TES Doghouse 4-FT Diameter, Installed Over Conduit by each individual manhole acceptably completed.

Notify Ms. Rogney three working days in advance of completion of each manhole, for inspection and acceptance of work performed. The contractor will receive no payment until the above work is approved by City Underground Conduit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.5203	Manholes Type TES Doghouse 4-FT Diameter, Installed Over Conduit	Each

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole frame to final grade; for picking up and installing covers; furnishing and installing all materials, including precast structure, bricks, conduit extensions up to 5 feet, conduit bodies, conduit fittings, trace wire, coarse aggregate, bedding, encasement, and backfilling including any concrete, stone, aggregate slurry, bracing, concrete forms, concrete placement, appurtenances, and backfilling.

220. Removing CUC Manhole, Item SPV.0060.5204.

A Description

This special provision describes removing various manholes for the City of Milwaukee Underground Conduit department at locations shown in the plans, according to standard spec 204. Removal means removal of the existing structure and any necessary conduit alterations required.

B Vacant

C Construction

C.1 General Requirements

Complete all operations necessary to remove the existing structure and that might endanger the new construction before constructing new work. Manholes designated for removal and subsequent reconstruction will ordinarily contain working cables which must be maintained during the course of this phase of work. Protective measures against damage must be observed when handling and working around these cables.

C.2 Frame and Cover Removal

Remove the frame and cover on all manholes designated for removal. If the castings are to be salvaged as directed in the plans, exercise caution with frames embedded in concrete so unnecessary damage to the frame does not occur during the process of breaking concrete. Remove all mortar and concrete from the frame. Store salvaged castings at location approved of by the engineer.

C.3 Protection of Cables

Extreme care must be exercised in the handling of working cables in manholes or exposed conduit package areas while removal work is going on. Cables may carry high voltage that may be life threatening.

No cable removed from its racks and spanning the manhole opening is to be permitted to sag appreciably from its own weight across such opening. Provide temporary supports for all cables. When cables need to be moved, particularly lead sheathed cables, move cables slowly and bend gradually. Avoid sharp kinks that may damage inner core of cables and the sheath. Cables must be left as stationary as is practicable after the cables have been temporarily located. Exercise care if further shifting is required while construction work progresses and if needed, re-support. Guard against damage to the exposed cables by falling objects such as tools, equipment and debris. Avoid stepping on cables. Do not use cables to support any objects during the course of the construction work.

Promptly notify Mr. Brian Pawlak at (414) 286-5970 work / (414) 708-2118 cell, of any visible cable defects discovered at the time the cable is exposed. Report any signs of abrasion, sheath rupture, kinking in the cable or evidence of sheath cracks.

The contractor will be held liable for all damage due to carelessness and to neglect and is responsible for protecting and safeguarding cables. All damage will be repaired at the contractor's expense.

C.4 Removing Existing Structure

After removal of the castings and protecting and supporting the cables, carefully remove the manhole roof, walls, floor and all hardware. No portion of the existing structure is to remain. The increase in the size of the excavation will be determined by the size of the manhole to be reconstructed as indicated in the detail plans. Remove all waste material accumulated by the removal of the existing structure from the work site. No part of this waste material can be used as backfill material.

C.5 Conduit Alterations

Break back by hand sections of cement encased conduit to facilitate excavation for the new proposed structure. Hand chip concrete away for the existing pipes. Carefully remove pipes from around the cables. Hand chip enough concrete away from the pipes to allow for the coupling of split ducts on to the ends of the pipes. Protect exposed pipe ends and existing cables from damage.

D Measurement

The department will measure Removing CUC Manhole 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.0060.5204	Removing CUC Manhole	Each

Payment is full compensation for breaking down and removing structure; conduit alterations; for proving cable protection; and for hauling and disposing of materials.

221. Hawley Pond Outlet Storm Sewer Structure, Item SPV.0060.8000.

A Description

Furnish and install Hawley Pond Outlet Storm Sewer Structure in accordance to the pertinent provisions of standard spec 611, as shown on the plans and as hereinafter provided. Furnish and install trash racks on the outlet Storm Sewer Structure. Furnish and install trash racks in accordance to the pertinent

provisions of standard spec 506 and 513, as shown on the plans and as hereinafter provided. Provide orifice holes, baffle wall, and anti-seep collar as shown on the plan.

B Materials

Furnish manhole materials in accordance to standard spec 611.

Furnish steel conforming to the requirements of standard spec 506.2.2.1. Furnish steel galvanized in accordance to ASTM A123 and ASTM 1153 as applicable.

Trash racks shall be fabricated from structural steel shapes, flat bar and plates and shall be galvanized after fabrication. Shop drawings for the trash racks shall be submitted to the engineer for approval prior to fabricating the trash racks.

Furnish bolts, nuts, and washers for the installation of the trash racks onto the Hawley Pond Outlet Storm Sewer Structures, bolts, nuts, and washers in accordance to standard spec 513.2.2.5 .

C (Vacant)

D Measurement

The department will measure Hawley Pond Outlet Storm Sewer Structure by the each 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.0060.8000	Hawley Pond Outlet Storm Sewer Structure	EACH

Payment is full compensation for providing and placing all materials, including all masonry, steel and pipe connections, and other fittings; furnishing and installing trash racks; for providing orifice holes, baffle wall, and anti-seep collars; (include mention) for furnishing all excavating, backfilling, disposing of surplus material, and for cleaning out and restoring the work site and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

222. Temporary Storm Sewer Plug, Item SPV.0060.8001.

A Description

Install a Storm Sewer Plug at locations specified in the plans

B Materials

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

All materials, if concrete, must conform to section 501 and section 611 of the standard specifications.

C Construction

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

D Measurement

The department will measure Temporary Storm Sewer Plug as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8001	Temporary Storm Sewer Plug	EACH

Payment is full compensation for furnishing and installing all required materials; and removal in subsequent stage.

223. Detention Pond Anti-Seep Collar, Item SPV.0060.8002.

A Description

This special provision describes furnishing and installing low permeable clay around pipes at pond outlet control structures at the locations shown on the plans.

B Materials

Furnish materials and testing of materials as specified in Item 640.1303.S of these special provisions.

C Construction

Construct clay anti-seep collars to the locations and extents as shown in the plans. Construct, place, and compact clay for anti-seep collars as specified in Item 640.1303.S of these special provisions.

D Measurement

The department will measure Anti-Seep Collar by the each 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.0060.8002	Detention Pond Anti-Seep Collar	EACH

Payment is full compensation for dewatering areas of site where the low permeable clay is to be placed; for furnishing and placing and compacting the low permeable clay and all incidentals to complete the work.

224. Reconnect Storm Sewer, Item SPV.0060.8003.

A Description

This special provision describes connecting proposed storm sewer pipe/structures to existing storm sewer pipe/structures or to proposed pipe/structures in sub-sequent stages.

B Materials

Furnish concrete for concrete collar conforming to standard spec 520.2.4.

Furnish storm sewer pipe in accordance to Section 608.2

C Construction

Remove existing concrete collars, pipe seals or end walls constructed under previous projects or in earlier stages of this project as necessary to reconnect storm sewer. Ensure that positive drainage is achieved when connecting proposed pipe to existing structures or storm sewer. Salvage any structurally sound pipe that requires removal if prior approval is granted by the engineer. Make all necessary connections using the appropriate coupling, concrete collar, or by means approved by the engineer.

D Measurement

The department will measure Reconnect Storm Sewer as each location as specified in the plans, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8003	Reconnect Storm Sewer	EACH

Payment is full compensation for performing all work; removing seals, end walls and concrete collars; providing all materials; coring or sawing; and couplings, concrete collars. Any additional pipe or materials required to reconnect the storm sewer shall be considered incidental to this bid item.

225. Fastening Sewer Access Covers, Item SPV.0060.8004.

A Description

This special provision describes sealing and bolting sewer access covers.

B Materials

Furnish preformed butyl rubber-based sealant conforming to ASTM C990 Section 6.2. Size the preformed joint sealant to fill the joint to 50% of its annular volume when assembled. If provision of bolts is not included in the standard specifications or construction details associated with the casting, furnish bolts which meet casting manufacturer specifications for permanent fastening of lid.

C Construction

Open the sewer access cover, inspect the frame and grate, and remove material that will interfere with the sealant application from the cover and casting. Apply sealant in a continuous ring around the frame without stretching. Knead the ends together with no overlap.

Bolt the lid to the frame in accordance with the standard specifications and construction details associated with the casting. If the standard specifications and construction details do not include bolting instructions, bolt the lid to the frame in accordance with the manufacturer specifications or as instructed by the engineer.

Monitor performance during the project and maintain as needed for the duration of the project. After completion of the project, perform final maintenance of sealant and bolt the lid to the frame according to the instructions above.

D Measurement

The department will measure Fastening Sewer Access Covers by the each 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.0060.8004	Fastening Sewer Access Covers	EACH

Payment is full compensation for furnishing and installing all required materials.

226. Sealing Storm Structure, Item SPV.0060.8005.

A Description

This special provision describes constructing a wall to fill and seal the void created in an existing storm sewer structure from removing an existing storm sewer pipe. The wall can be constructed of concrete, brick masonry, concrete brick, or block masonry.

B Materials

Furnish concrete conforming to standard spec 501. Furnish brick masonry, concrete brick, block masonry, or mortar conforming to standard spec 519.

C Construction

Construct concrete as specified in standard spec 501. Construct brick masonry, concrete brick, or block masonry as specified in standard spec 519.

Place concrete to conform to the inside diameter of the existing storm sewer structure in a manner that fills and seals to make watertight the void created from the removed pipe.

D Measurement

The department will measure Sealing Storm Structure as each individual sealed storm structure 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.0060.8005	Sealing Storm Structure	EACH

Payment is full compensation for providing all materials, including concrete; for furnishing, placing, finishing, protecting, and curing concrete blocks; for sawing as necessary; and for disposing of surplus material, and all incidentals necessary to complete the work.

227. Control of Water Project 1060-27-71, Item SPV.0060.8006.

A Description

This section addresses the provision for designing, furnishing all labor and material needed to control, handle, dispose and treat groundwater and surface water that may be encountered in all excavations as required for performance of the work as shown in the plans.

This special provision does not cover temporary drainage. Conform to standard specification standard spec 205 for temporary drainage.

Refer to the dewatering guidelines of WisDNR Storm Water Management Technical Standards, Code #1061, "Dewatering". This document can be found at the WisDNR website:

<http://dnr.wi.gov/runoff/stormwater/techstds.htm>

B Materials

The contractor is responsible to determine materials required to meet this special provision.

C Construction

C.1 Submittals

C.1.1 General

The discharge permits and water control plan shall be submitted to the engineer at least 30 days prior to start of excavation, unless otherwise noted.

C.1.2 Subsurface Conditions

The contractor shall review pertinent geotechnical reports for groundwater information and soil types.

C.1.3. Submittals

Discharge Permit: Submit discharge and well permit applications to Wisconsin Department of Natural Resources (WDNR) if dewatering wells are to be used. Also submit design and calculations for the sedimentation tank or clarifier system to be utilized to reduce sediment levels to minimum levels required by WDNR prior to discharging.

Water Control Plan: Water control plan shall be coordinated with requirements of special provisions, articles Shaft Excavation Support System, Tunnel Excavation, and Geotechnical Instrumentation. The following items shall be included in the water control plan, as a minimum.

- Descriptions of proposed groundwater and surface water control facilities including, but not limited to, equipment, methods, installation, standby equipment and power supply, pollution control facilities including silt removal facilities, discharge locations to be utilized, removal of water control systems, and provisions for immediate temporary water supply as required by this section.
- The contractor shall submit shop drawings showing locations, dimensions, and relationships of elements of each water control system.
- Design calculations demonstrating dewatering zone of influence, and adequacy of proposed water control systems and components. The contractor may be required to demonstrate the systems proposed in the water control plan and to verify that adequate equipment, personnel, and materials are provided to dewater the excavations at all locations and times required. The contractor shall provide manufacturer's literature describing installation, operation, and maintenance procedures for all components of the water control system.
- Monitoring plans including measurement of: pumping rates at excavated locations and wells, reading of piezometers, and water quality sampling of discharge.

- e. Method(s) to measure discharge quantities.
- f. If system is modified during installation or operation, revise or amend and resubmit Water Control Plan.

Quality Control: During construction, submit rate of discharge, pumping rate measurements, water level readings taken at piezometers, groundwater quality data, and sediment content test results. Contractor's readings shall be performed in addition to any readings taken by the engineer. Submit the data and test results within 24 hours of readings.

C.1.4 Acceptance

All Information Submittals should be submitted to the engineer. The engineer can reject the submittals which do not contain adequate detail, as required herein. The contractor shall resubmit the rejected submittals within 7 days upon the receipt of the engineer's rejection notice.

C.2 General Requirements

The contractor shall continuously control, handle, treat and dispose water at all times during the course of construction, and provide adequate backup systems to accomplish control of water in conformance with this special provision to obtain satisfactory working conditions and to maintain the progress of the work. Water to be controlled includes groundwater, contaminated groundwater; and surface water (precipitation and run-off).

All required drainage, pumping, treatment, and disposal shall be done without damage to adjacent property or structures and without interference with the operations of other contractors, or the rights of public and private owners, or pedestrian and vehicular traffic.

The contractor shall modify the water control system at their own expense if, after installation and while in operation, it causes or threatens to cause damage to adjacent property or to existing buildings, structures, or utilities.

C.3 Regulatory Requirements

Storm water discharge to storm sewers, watercourses, lakes, and wetlands shall conform to the requirements of local, state, and Federal regulations. Water from excavations shall be kept separate from storm water discharge associated with surface construction.

In the event that contaminated waters are encountered, the contractor is required to notify the department prior to discharging contaminated water. Comply with WDNR regulations regarding disposal of contaminated groundwater. Obtain additional permits, if required. Notify the Milwaukee Metropolitan Sewerage District for any discharge of contaminated water into the sewer system, and provide laboratory test results documenting contaminant concentrations.

C.4. Surface Water Control

Intercept and divert surface drainage away from the work sites by the use of dikes, curbwalls, ditches, sumps, or other means. Design surface drainage systems to prevent erosion either on or off the site. Control surface runoff to prevent entry of surface water into excavations and to prevent erosion either on or off the site. Remove drainage systems when no longer needed.

C.5. Water Control in Excavations

Use water control methods that are appropriate, as determined by the contractor, to permit conditions, ground conditions, construction operations, and requirements of these plans and special provisions. The methods shall involve removal of water accumulating within excavations from precipitation and groundwater infiltration, and may involve removal of water outside excavations by means such as the use of dewatering or pressure relief wells.

Water control methods shall minimize adverse effects of elevated or reduced water pressure on the work, the surrounding ground and adjacent facilities and structures. Design and operate the water control measures to prevent removal of in-situ materials (development of lost ground), or loosening or softening of subgrade soils within excavations.

Water control methods shall be capable of lowering and maintaining the free water and piezometric levels to an elevation at least 2 feet below excavation bottoms regardless of the water volume. The methods shall have sufficient capacity to accomplish this desired result allowing for normal variations in precipitation and soil and aquifer properties.

Control groundwater and surface water such that the construction of tunnels and shafts excavations, trenches and other structures can be performed without adverse effects of water on the facilities being

constructed, including prevention of hydrostatic uplift pressures on the new facilities until construction has been adequately completed. If the water level cannot be maintained at the specified levels, contractor shall, at no additional cost to the department, control seepage of groundwater by whatever means are necessary to assure that there is no loss of ground by erosion or piping of fines with seepage through shoring or lagging into excavated areas and no instability of slopes due to seepage. Control water during periods when excavating, installing ground support systems, installing subgrade protection measures, placing concrete (except tremie concrete), placing pipe, and at such other times as is necessary for efficient and safe execution of the work.

If water enters the excavation in volumes that could adversely affect the performance of the work or has the potential to cause loss or damage to adjacent property or structures, take immediate steps to reduce or mitigate the water inflow.

Provide standby pumps and standby power supply where disruption of water control systems could allow water inflows to threaten the work or the safety of personnel.

C.6. Monitoring of Groundwater Levels

Monitor groundwater levels as necessary to evaluate the sufficiency of the water control system. A system of construction piezometers is required to evaluate the effectiveness of the water control system in fulfilling the requirements specified herein. Piezometers shall be of adequate numbers and in suitable arrangements and depths for determining the free water surface elevations and piezometric elevation over the area. A minimum of one piezometer per four dewatering wells or one piezometer per excavation location shall be installed with the dewatering system at locations and depths proposed by the contractor.

Piezometers shall be installed using direct rotary drilling methods with drilling fluid that does not impact the development of the piezometer and conforms to ASTM D5783. During drilling, soil samples shall be obtained at intervals of 2.5 feet or less using standard penetration tests according to ASTM D1586. Piezometers shall be constructed and developed according to ASTM D5092, with development a minimum of 24 hours after completion. The contractor's engineer shall determine the depth of the sensing zone for each piezometer based on observations of retained soil samples.

Make a minimum of one reading at each piezometer, per 24-hour period, 5 days per week during the period of dewatering activities (including dewatering by pumping seepage from sumps within shafts or other excavation areas) and one reading at each piezometer per week until the end of construction during periods of no dewatering.

C.7. Dewatering Wells

Obtain a site-specific dewatering discharge or construction site storm water discharge permit if the WDNR has specific concerns that are not addressed by other permits that might otherwise apply.

Obtain a WDNR permit for operation of any well or well system that has a combined pumping capacity of 70 gallons per minute or more (a high capacity extraction system). For purposes of permitting, a well is defined as any opening made in the ground where the depth of the opening is greater than its largest surface dimension and extends more than 10 feet below ground surface. The permit will require that wells be constructed, operated, and abandoned according to Chapter NR 812, Wisconsin Administrative Code.

Keep dewatering influence zone to the minimum necessary for execution of the work. Obtain any additional geotechnical information necessary for design of a dewatering well system, including performing pump tests, grain size analyses, groundwater chemical analyses, and subsurface investigations. Design and operate wells so as to prevent removal of fine soils with seepage through backpack material and screens. Provide means by which water discharge from each well can be measured and flow rates adjusted. Construct and operate wells according to WDNR requirements. Monitor the rate of discharge from each well on a daily basis with an accuracy of at least 2 percent of the flow.

Wells shall be designed, installed and operated in a manner that will preclude removal of materials by the pumping operation (hereafter referred to as "piping of fines"). After installation, each well shall be individually pump-tested at maximum design flow to verify acceptability with respect to piping of fines (sediment mostly consisting of silt and sand) as measured using a centrifugal tester. Any well or wellpoint segment found to be causing piping of fines at a rate exceeding 2 parts per million (ppm) by volume during the individual pump-test at the maximum design flow shall be replaced in a manner acceptable to the engineer, and at no additional cost to the department. Each well shall be checked for sediment piping using a centrifugal tester immediately after installation and at least once per month during operation.

Measure the sediment content of the total dewatering effluent using a centrifugal tester at least once every 30 days. If the sediment content of the total effluent is greater than 1 ppm, contractor shall identify and abandon wells that are producing excessive sediments and replace them. All sediment content tests shall be performed in the presence of the engineer.

C.8. Ground Loss from Dewatering Operations

Support any structure including, but not limited to, buildings, bridges, freeway surfaces, streets, and utilities, or portions of such structure, including footings, foundations, basements, walls or concrete driveways that become unstable or vulnerable to settlement due to removal or disturbance of groundwater. Cease excavation and other construction operations that result or have the potential to result in further settlement until corrective measures are implemented. Support shall include but not be limited to shoring; sheeting; bracing; underpinning; compaction grouting; driving piles; excavating, backfilling, and placing new structural concrete beneath or adjacent to the unstable structure; or other means necessary to rectify the particular problem involved.

The contractor shall bear the costs of all loss or damage arising from removal or disturbance of groundwater including, but not limited to claims for subsidence and loss of structure support that may occur in the prosecution of the work. If the contractor fails to correct the damage resulting from his operations, the engineer may deem the work to be unacceptable work as defined in standard spec 105.3.2.2.

C.9. Treatment and Disposal of Water

Discharge all water removed from the construction site through pipes or hoses. Do not convey water in open ditches or trenches. Discharge water in a manner that will not cause soil erosion at the discharge point. Discharge shall not cause sediment accumulation or flooding in any stream, storm sewer, or on adjacent properties.

Treat all water to remove suspended solids, oils, cement, bentonite, and other contaminants by use of settling basins, on-site treatment plant, or other means selected by the contractor. Design the treatment systems for the maximum discharge rates. Treatment systems shall be capable of expansion if greater capacity becomes necessary during the course of the work. The contractor shall provide copies of all records required by the WDNR.

Obtain permission to use storm sewers or drains for water disposal purposes from the authority having jurisdiction. Protection of storm sewers and drains shall be in conformance with the Wisconsin Construction Site Best Management Practices Handbook, latest revision and the requirements by authority having jurisdiction. Any requirements and costs for such use shall be the responsibility of the contractor. Do not cause flooding by overloading or blocking the flow in the drainage facilities, and leave the facilities unrestricted and as clean as originally found. Document the condition of the drainage facilities prior to and subsequent to their use. The engineer may independently verify the condition of such facilities. Repair or restore any damage to facilities as a result of the contractor's operations as directed by the authority having jurisdiction, at the contractor's expense.

Should requirements of any permit be different than requirements herein, the more stringent requirements shall control.

Ventilate enclosures around wells and water discharge points to prevent the accumulation of combustible gas that may escape from solution in groundwater.

On completing the work, clean out and dispose of all sediments and residues in settling basins, treatment facilities, and the like. Dispose of sediments and residues according to applicable regulations.

C.10 Abandonment of Piezometers and Dewatering Wells

Abandon the design phase piezometers and all piezometers and dewatering wells installed during construction according to standard spec 204.3.3.3 and according to NR 812 Wisconsin Administrative Code, whichever is more stringent.

D Measurement

The department will measure Control of Water Project 1060-27-71 by the each acceptably completed. The contractor is responsible for removing all surface and ground water regardless of the quantity during construction to accomplish the work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8006	Control of Water Project 1060-27-71	EACH

Payment is full compensation for, but not limited to complete dewatering system design, installation, monitoring, discharge, and all incidentals necessary to complete the work.

228. Cover Plates Left In Place, Item SPV.0060.8007

A Description

This special provision describes providing a steel plate to cover and support construction, backfill material, and traffic loading at storm sewer structures as the plans show, conforming to the appropriate provisions of standard spec 611, and as modified in this special provision.

Cover plates left in place becomes the property of the department after final acceptance by the engineer.

B Materials

Provide a 0.75-inch minimum thickness steel plate that extends to the outside edge of the existing masonry walls. Backfill with base aggregate dense 1 1/4 inch.

Provide 1/4 inch diameter steel bolts and epoxy to secure the cover plate to the top deck of the existing structure.

C Construction

Remove the existing grate, frame, and accompanying grade adjusting rings. Remove 2' minimum concrete block. Remove all loose debris and other accumulated material found on the structure deck which would otherwise interfere with cover plate installation. Drill a single 3/8-inch hole centered in each corner of the cover plate. Set the cover plate on the existing structure deck, ensuring the access hole is covered and that the cover plate extends to the edges of the existing masonry. Place cover plate over portion of storm sewer structure which is below the proposed flow line elevation. Do not extend covers above the proposed flow line to prevent flow bypass of the inlet.

Embed and epoxy each 1/4-inch steel bolt a minimum of 2-inches into the structure deck through each drilled hole. Backfill to the subgrade elevation construction voids above the cover plate with base aggregate dense 1-1/4 inch.

Place cover plates as the plans show.

D Measurement

The department will measure Cover Plates Left-In-Place as each individual cover plate left in place 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.0060.8007	Cover Plates Left In Place	EACH

Payment is full compensation for providing the cover plate and leaving cover plates in place; providing drilled epoxy bars; base aggregate dense 1 1/4 inch backfill; removing inlet frame and lid; removing 2 foot minimum concrete block; and for excavation.

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229. Inlet Covers Type Beehive A, Item SPV.0060.8008

A Description

This special provision describes providing Inlet Covers Type Beehive A in accordance with section 611 of the standard specifications and as shown on the plans.

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B Materials

Furnish materials in conformance with section 611.2 of the standard specifications. Inlet Covers Type Beehive A should be Neenah R-2561.

C Construction

Comply with section 611.3 of the standard specifications.

D Measurement

The department will measure Inlet Covers Type Beehive A 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.0060.8008	Inlet Covers Type Beehive A	EACH

Payment is full compensation for providing new covers, including frames, grates or lids, and other required materials and for installing and adjusting each cover.

230. Manhole Cover Type MS 58-A, Item SPV.0060.8009**A Description**

Perform work under these items in accordance with the requirements of Section 611 of the Standard Specifications and the details as shown on the plans.

B Materials

Furnish materials under these items in accordance with the requirements of Section 611 of the Standard Specifications and the details as shown on the plans.

C (Vacant)**D Measurement**

The department will measure Manhole Cover Type MS 58-A by the each 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.0060.8009	Manhole Cover Type MS 58-A	EACH

Payment is full compensation for providing new covers, including frames, grates or lids, and other required materials and for installing and adjusting each cover.

231. Inlet Cover Type MS 57, Item SPV.0060.8010**A Description**

Perform work under these items in accordance with the requirements of Section 611 of the Standard Specifications and the details as shown on the plans.

B Materials

Furnish materials under these items in accordance with the requirements of Section 611 of the Standard Specifications and the details as shown on the plans.

C (Vacant)**D Measurement**

The department will measure Inlet Cover, Type MS 57 by the each acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8010	Inlet Cover Type MS 57	EACH

Payment is full compensation for providing new covers, including frames, grates or lids, and other materials and for installing and adjusting each cover.

232. Inlet Cover Type MS 55, Item SPV.0060.8012

A Description

Perform work under these items in accordance with the requirements of Section 611 of the Standard Specifications and the details as shown on the plans.

B Materials

Furnish materials under these items in accordance with the requirements of Section 611 of the Standard Specifications and the details as shown on the plans.

C (Vacant)

D Measurement

The department will measure Inlet Cover, Type MS 55 by the unit in place, furnished, installed, and acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.8012	Inlet Cover Type MS 55	EACH

Payment is full compensation for providing new covers, including frames, grates or lids, and other materials and for installing and adjusting each cover.

233. Pavement Cleanup Project 1060-27-71, Item SPV.0075.0200.

A Description

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site. Pavement Cleanup includes surveillance and reporting of all active haul routes.

B Materials

B.1 Pavement Cleanup

Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Use vacuum equipment with a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified in this special provision or approved by the engineer.

C Construction

C.1 Surveillance

Provide daily surveillance of active haul routes to identify if material is being tracked from the jobsite. Document the condition of the roads and all sweeping recommendations in a daily report. Submit reports to the engineer daily, including hourly metered tickets for that day's sweeping activities.

C.2 Pavement Cleanup

Keep all pavements, sidewalks, bike paths, driveways, curb lanes and gutters within the project boundaries, free of dust and debris generated from all activity under the contract. Keep all pavements, sidewalks, bike paths, driveways, curb lanes, and gutters adjacent to the project free of dust and debris that are caused by land disturbing, dust generating activities, as defined in the contractor's Dust Control

Implementation Plan (DCIP). Provide routine sweeping of all pavements, sidewalks, bike paths, driveways, curb lanes and gutters on local-street active haul routes as defined in the DCIP or as directed by the engineer. Include the following roadways for routine sweeping:

- W. O'Connor Street (76th Street to 68th Street)
- W. Kearney Street (76th Street to 68th Street)
- W. Main Street (76th Street to 70th Street)
- W. Dixon Street (68th Street to 64th Street)
- W. Fairview Avenue (68th Street to 60th Street)
- W. Park Hill Avenue (59th Street to Hawley Road)
- 76th Street (Main Street to Bluemound Road)
- 70th Street (Main Street to Bluemound Road)
- 68th Street (Main Street to Bluemound Road)
- 64th Street (Main Street to Bluemound Road)
- 59th Street (60th Street to Park Hill Avenue)
- Hawley Road / 60th Street (National Avenue to Bluemound Road)
- General Mitchell Boulevard (Selig Drive to Bluemound Road)
- And all other roadways approved by the department

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to eliminate dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Coordinate with engineer to determine deadlines for responding to emergency sweeping requests and cleaning up spillage and material tracked to/from the project.

Skid steers with mechanical power brooms may only be used on sidewalks, bike paths and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer. Do not dry sweep. Ensure all broomed equipment used for sweeping has a functioning water bar.

D Measurement

The department will measure Pavement Cleanup (Project 1060-27-71) by the hour, acceptably completed.

Tickets shall include:

- Date
- Company
- Operator name
- Equipment make/model
- Routes swept
- Total hours.

Total hours shall be to the nearest 0.25 hour that work under this item was performed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.0200	Pavement Cleanup Project 1060-27-71	HR

Payment is full compensation for daily surveillance; preparing and submitting the daily surveillance report with hourly metered tickets; mobilization; sweeping; and disposing of materials.

~~see 104-006 (20170323)~~

**234. Obstructions Foundation Drilling, Item SPV.0075.4010;
Obstructions Piling Steel Sheet Permanent Installed, Item SPV.0075.4020.**

A Description

A.1 General

The work included herein consists of removing, drilling, or coring through unknown, and unidentified, man-made subsurface obstructions when encountered for construction of drilled foundation shafts, foundation drilling for soldier pile retaining walls, drilling for concrete masonry sign supports, or permanent steel sheet piling installation.

A.2 Definitions

Surface obstructions are defined as any objects, man-made or naturally deposited, encountered within 6 feet of the ground surface. Subsurface obstructions are defined as man-made obstructions that are encountered by the drilling equipment or steel sheet piling installation methods at a depth greater than 6 feet below the ground surface. Obstructions include only man-made materials, such as old concrete foundations or abandoned utilities. Known obstructions are man-made obstructions that are shown or identified in the plans. Unknown obstructions are man-made obstructions that are not shown or identified in the plans. Naturally occurring deposits such as rock, boulders, cobbles, nested cobbles and nested boulders, are not considered obstructions and therefore are not applicable to the provision of this pay item.

B (Vacant)

C Construction

Remove surface and subsurface obstructions at drilled shaft and permanent steel sheet piling locations. For drilled foundation shafts and foundation drilling, use special tools and/or procedures when the contractor cannot advance the hole more than 12 inches in 60 minutes using conventional rock augers fitted with teeth, drilling buckets, or under reaming tools operating at maximum power, torque, and down thrust. For drilling associated with the construction of sign supports, use special tools and/or procedures when the contractor cannot advance the hole more than 12 inches in 60 minutes using conventional earth augers operating at maximum power, torque, and down thrust. For permanent steel sheet piling installation, use special tools and/or procedures when the contractor cannot advance the piling more than 12 inches in 60 minutes using conventional installation equipment and procedures operating at maximum power and down thrust. Special procedures and/or tools may be required but are not limited to chisels, breakers, core barrels, air hammer tools, and hand excavation. Other methods for obstruction removal can be employed to aid in the removal if acceptable to the engineer. Blasting is not permitted.

D Measurement

The department will measure Obstructions (Type) by the hour for each hour the contractor actively spends removing or coring through unknown man-made subsurface obstructions. A quantity of one hour will be paid upon the determination that a subsurface obstruction is encountered based on lack of hole advancement with conventional tools as set forth in this specification. Upon removal of the unknown man-made subsurface obstruction, portions of the final hour measured will be rounded up to the next whole hour. Down time spent planning for subsurface obstruction removal or delays caused by the mobilization of special equipment and tools not readily available at the site will not be measured for payment.

Measurement Example		Paid Obstruction Hours
1	Drilling encounters possible obstruction. Contractor notifies engineer. Start clock.	0.00
2	Conventional drilling equipment does not advance 12 inches after attempting to do so for at least 60 minutes.	1.00
3	Contractor resumes work clearing obstruction the following day. Assume the obstruction is cleared in aggregate total of 1 hour and 15 minutes of time. Obstruction is identified to be a previously unknown and unidentified man-made obstruction.	2.00

Only unknown (not identified in the plans), man-made subsurface obstructions, will be measured for payment. Work to clear and remove surface obstructions, known obstructions identified on the plans, and

any natural deposits (rock, boulders, cobbles, nested cobbles and nested boulders) will not be measured separately for payment and shall be included in the applicable items for Drilled Shaft Foundation, Foundation Drilling, Sign Supports Concrete Masonry, or Piling Steel Sheet Permanent Installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.4010	Obstructions Foundation Drilling	HRS
SPV.0075.4020	Obstructions Piling Steel Sheet Permanent Installed	HRS

Payment is full compensation for removal and disposal of unknown, man-made subsurface obstructions; and for furnishing all materials, labor, equipment, additional concrete, and incidentals necessary to complete the work.

235. Concrete Curb & Gutter 55-Inch, Item SPV.0090.0250; Concrete Curb & Gutter 4-Inch Sloped 60-Inch Type A, Item SPV.0090.0251.

A Description

This special provision describes constructing Concrete Curb & Gutter 55-Inch and Concrete Curb & Gutter 4-Inch Sloped 60-Inch Type A according to pertinent requirements of standard spec 601, construction details, and plan details.

B Materials

Use materials as described in the construction details shown in the plans and as described in standard spec 601.2.

C Construction

Perform work including placing expansion joints according to standard spec 601.3.

D Measurement

The department will measure Concrete Curb & Gutter 55-Inch and Concrete Curb & Gutter 4-Inch Sloped 60-Inch Type A by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0250	Concrete Curb & Gutter 55-Inch	LF
SPV.0090.0251	Concrete Curb & Gutter 4-Inch Sloped 60-Inch Type A	LF

Payment is full compensation for construction of curb & gutter conforming to standard spec 601.5.

236. Concrete Barrier Type S56 Special 34-Inch, Item SPV.0090.0252; Concrete Barrier Type S56 Special Vertical Back, Item SPV.0090.0254; Concrete Barrier Type S42 Special, Item SPV.0090.0255; Concrete Barrier Type S56 Special, Item SPV.0090.0256; Concrete Barrier Type S42C Special, Item SPV.0090.0257; Concrete Barrier Type S56C Special, Item SPV.0090.0258; Concrete Barrier Type S32 Special, Item SPV.0090.0259; Concrete Barrier Type S32C Reverse Footing, Item SPV.0090.0265; Concrete Barrier Type S56C Reverse Footing, Item SPV.0090.0266.

A Description

This special provision describes constructing Concrete Barrier (Type) according to pertinent requirements of standard spec 603, construction details, and plan details.

B Materials

Use materials as described in the construction detail shown in the plans and as described in standard spec 603.2.

C Construction

Perform work as specified in standard spec 603.3.

D Measurement

The department will measure Concrete Barrier (Type) 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.0090.0252	Concrete Barrier Type S56 Special 34-Inch	LF
SPV.0090.0254	Concrete Barrier Type S56 Special Vertical Back	LF
SPV.0090.0255	Concrete Barrier Type S42 Special	LF
SPV.0090.0256	Concrete Barrier Type S56 Special	LF
SPV.0090.0257	Concrete Barrier Type S42C Special	LF
SPV.0090.0258	Concrete Barrier Type S56C Special	LF
SPV.0090.0259	Concrete Barrier Type S32 Special	LF
SPV.0090.0265	Concrete Barrier Type S32C Reverse Footing	LF
SPV.0090.0266	Concrete Barrier Type S56C Reverse Footing	LF

Payment is full compensation for construction of barrier conforming to standard spec 603.5.2.

237. Concrete Barrier Type S56 Special Light Pole Base, Item SPV.0090.0253.**A Description**

This special provision describes constructing Concrete Barrier Type S56 Special Light Pole Base according to pertinent requirements of standard spec 603, construction details, and plan details.

B Materials

Use materials as described in the construction detail shown in the plans and as described in standard spec 603.2.

C Construction

Perform work as specified in standard spec 603.3.

D Measurement

The department will measure Concrete Barrier Type S56 Special Light Pole Base 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.0090.0253	Concrete Barrier Type S56 Special Light Pole Base	LF

Payment is full compensation for anchor assemblies, conduit, junction boxes, and for construction of barrier conforming to standard spec 603.5.2.

238. Pipe Underdrain 6-Inch Special, Item SPV.0090.0261.**A Description**

This special provision describes providing necessary subsurface drainage by constructing trenches, placing the required geotextile fabric, installing the designated pipes or drainage devices, connecting the

underdrain to receiving structures, providing cored connection holes, back-plastering and or mortaring connections to storm sewer structures (both on the external and internal sides of the receiving structure), providing and installing PVC or HDPE fittings, and caps or plugs ,for excavating, plowing, backfilling the trenches with the specified backfill material in accordance to standard spec 310, 612 and 645, salvaging; disposing of surplus material; and restoring the work site as shown on the plans and details, and as hereinafter provided.

B Materials

B.1 Base Aggregate

Use only base aggregate open graded conforming to standard spec 310.2.

B.2 Geotextile Fabric

Utilize geotextile fabric consisting of Type DF Schedule A and conforming to standard spec 645.2.4. Completely wrap the installation trench with geotextile fabric.

C (Vacant)

D Measurement

The department will measure Pipe Underdrain 6-Inch Special by the linear foot, acceptably completed. The department will measure along the centerline of the pipe, center to center of junctions and fittings.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0261	Pipe Underdrain 6-Inch Special	LF

Payment is full compensation for providing, handling, and placing all materials, including pipe, base aggregate open graded, geotextile fabric Type DF Schedule A, providing cored connections, making all necessary connections to the receiving structures, performing back-plastering and or mortaring of underdrain connections to storm sewer structures, providing and installing all fittings, and caps or plugs; for furnishing all excavating, plowing, and re-compacting, salvaging; disposing of surplus material; and restoring the work site.

239. Marking Stop Line Epoxy 24-Inch, Item SPV.0090.0270.

A Description

This special provision describes furnishing and installing Marking Stop Line Epoxy 24-Inch as directed by the engineer, as shown on the drawings and as hereinafter provided.

Perform work under these items according to the requirements of standard spec 646 and the details as shown on the plans, with the exception of the differences noted here within.

B Materials

Furnish epoxy pavement marking and glass bead material according to the standard spec 646.

C Construction

Construction of pavement markings shall be according to manufacturer application and installation procedures, standard spec 646, and the engineer.

All pavement marking areas shall be laid out by the contractor and then reviewed by the engineer. Approval of the marking layout shall be approved by the engineer prior to placement of material.

The contractor shall protect the pavement markings from damage and allow them to fully cure prior to allowing traffic to drive over markings. Any damage shall be corrected by the contractor at the contractor's expense.

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.0090.0270	Marking Stop Line Epoxy 24-Inch	LF

Payment is full compensation for preparing the surface, furnishing, and installing all materials.

240. Marking Crosswalk Epoxy Transverse Line 12-Inch, Item SPV.0090.0271.

A Description

This special provision describes furnishing and installing Marking Crosswalk Transverse Line Epoxy 12-Inch as directed by the engineer, as shown on the drawings and as hereinafter provided.

Perform work under these items according to the requirements of standard spec 646 and the details as shown on the plans, with the exception of the differences noted here within.

B Materials

Furnish epoxy pavement marking and glass bead material according to the standard spec 646.

C Construction

Construction of pavement markings shall be according to manufacturer application and installation procedures, standard spec 646, and engineer.

All pavement marking areas shall be laid out by the contractor and then reviewed by the engineer. Approval of the marking layout shall be approved by the engineer prior to placement of material.

The contractor shall protect the pavement markings from damage and allow them to fully cure prior to allowing traffic to drive over markings. Any damage shall be corrected by the contractor at the contractor's expense.

D Measurement

The department will measure Marking Crosswalk Epoxy Transverse Line 12-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.0090.0271	Marking Crosswalk Epoxy Transverse Line 12-Inch	LF

Payment is full compensation for preparing the surface, furnishing, and installing all materials.

241. Marking Crosswalk Epoxy Block Style 12-inch, SPV.0090.0272.

A Description

This special provision describes furnishing and installing Marking Crosswalk Epoxy Block Style 12-inch White as directed by the engineer, as shown on the drawings and as hereinafter provided.

Perform work under these items according to the requirements of standard spec 646 and the details as shown on the plans, with the exception of the differences noted here within.

B Materials

Furnish epoxy pavement marking and glass bead material according to the standard spec 646.

C Construction

Construction of pavement markings shall be according to manufacturer application and installation procedures, standard spec 646, and engineer.

All pavement marking areas shall be laid out by the contractor and then reviewed by the engineer. Approval of the marking layout shall be approved by the engineer prior to placement of material.

The contractor shall protect the pavement markings from damage and allow them to fully cure prior to allowing traffic to drive over markings. Any damage shall be corrected by the contractor at the contractor's expense.

D Measurement

The department will measure Marking Crosswalk Epoxy Block Style 12-inch White by the linear foot, acceptably completed. The department will measure the Marking Block Crosswalk bid items as linear foot of each line placed.

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.0090.0272	Marking Crosswalk Epoxy Block Style 12-inch	LF

Payment is full compensation for preparing the surface, furnishing, and installing all materials.

242. Concrete Barrier Temporary Precast Left In Place, Item SPV.0090.0702.

A Description

This special provision describes leaving in place temporary precast reinforced concrete barrier conforming to the shape, dimensions, and details the plans show and conforming to the appropriate provisions of standard spec 603 and as modified in this special provision.

Concrete Barrier Temporary Precast Left In Place becomes property of the department after final acceptance by the engineer.

B (Vacant)

C Construction

C.1 Delivery, On-The-Project Trucking, and Removal

Replace standard spec 603.3.2.2 (1) with the following:

Under the Concrete Barrier Temporary Precast Left In Place bid item, furnish and deliver temporary barrier to worksites within the project and leave it in place upon project completion.

D Measurement

The department will measure the Concrete Barrier Temporary Precast Left In Place by the linear foot acceptably completed, measured as the linear feet of installed length left in place once for each contract- identified worksite within the project and other moves the engineer directs. The department will only measure moves requiring a truck haul. The department will not measure moves made solely to accommodate the contractor's means and methods. The department will measure concrete barrier anchoring separately.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0702	Concrete Barrier Temporary Precast Left In Place	LF

Replace standard spec 603.5.3 (1) with the following:

Payment for Concrete Barrier Temporary Precast Left In Place is full compensation for providing barrier, initial delivery or trucking between worksites and leaving barrier after final acceptance.

Replace standard spec 603.5.3 (2) with the following:

Payment for Concrete Barrier Temporary Precast Left In Place is full compensation for steel rail connections, steel cap rail for installations abutting permanent barrier.

~~see 603-010 (20171004)~~

243. Fence Temporary 6-Foot, Item SPV.0090.0703.

A Description

This special provision describes furnishing, erecting and maintaining temporary chain link fence 6-foot including gates, as shown on the plans and as directed by the engineer, according to standard spec 616, and as hereinafter provided. The intent of this specification is to provide a secure enclosure.

B Materials

Fencing parts furnished do not have to be new materials. Used, re-rolled and open seam materials will be permitted. Gates shall be a minimum of 12 feet wide.

No specific metallic coating will be required for the chain link fencing materials. Materials furnished do not have to be of the same type. Fence height shall be a minimum of 6 feet.

The engineer may reject fencing materials which, in the engineer's opinion, are too damaged or misaligned to provide acceptable closure.

C Construction

Fence posts may be driven into the ground or set in augered holes, backfilled and compacted. Minimum embedment shall be 4 feet. In paved areas fence posts shall be fastened to either temporary concrete barrier or the pavement by methods ensuring a secure enclosure. Where fence is installed in areas that are not to be disturbed by subsequent construction activities, the disturbed area shall be restored in kind at no additional cost to the department.

D Measurement

The department will measure Fence Temporary 6-Foot in place by the linear foot from end posts, center to center, along the ground line, acceptably completed. Temporary fence will be measured once for payment. Additional measurement for fence maintenance and removal will not be made.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0703	Fence Temporary 6-Foot	LF

Payment is full compensation for furnishing all materials; erecting posts, gates and fence; maintaining fencing; removing and disposing of fencing; and for restoring disturbed areas.

244. Glare Screens Temporary, Item SPV.0090.0704.

A Description

This special provision describes furnishing, installing, maintaining, and removing a modular paddle glare guard system on concrete barrier temporary precast at the indicated locations according to the plans and standard specifications, as directed by the engineer and as hereinafter provided.

B Materials

Utilize modular glare guard units consisting of vertical blades, bases, and a horizontal base rail. Utilize paddle devices a minimum of 24-inches in height and constructed of durable, impact resistant, non-warping flexible materials.

Utilize modular units with cumulative nominal length equal to the length of the temporary barrier on which they are installed so that the joint between the barrier sections shall not be spanned by any one unit. Units shall not alter the design of the concrete barrier.

Design the relative connection strengths between various components of the assembly to minimize the potential impact and debris hazard to approaching traffic and to simplify repairs. Fabricate the modular units in a manner to allow replacement of individual blades while the modular unit remains in place.

The blade, base and rail shall be made of high impact materials with sufficient strength to withstand three impacts from a horizontal steel bar traveling at 40 mph and impacting at mid-height of the blade. After three impacts, there shall be no evidence of cracking, splitting, delaminating or separation from the system.

Provide a paddle glare guard from a manufacturer below or an approved equal:

Manufacturer	Address
Valtir	15601 Dallas Parkway, Suite 525, Addison, Texas, 75001
Carsonite A Valmont Company	19845 U.S. Highway 76, Newberry, South Carolina, 29108
Flexstake Incorporated	2150 Andrea Lane, Fort Myers, Florida, 33912

C Construction

Attach the base rail to the top of the concrete barrier temporary precast by a mechanical or adhesive system with a minimum pullout and shear of 3000 psi. All mounting hardware shall be as specified by the manufacturer.

D Measurement

The department will measure Glare Screens Temporary by the linear foot of paddle glare guard, 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.0090.0704	Glare Screens Temporary	LF

Payment is full compensation for furnishing, installing, maintaining and removing the Glare Screens Temporary.

245. Glare Screens Left In Place, Item SPV.0090.0705.

A Description

This special provision describes furnishing, installing, and maintaining a modular paddle glare guard system on concrete barrier temporary precast at the indicated locations according to the plans and standard specifications, as directed by the engineer and as hereinafter provided.

Glare screens left in place becomes the property of the department after final acceptance by the engineer.

B Materials

Utilize modular glare guard units consisting of vertical blades, bases, and a horizontal base rail. Utilize paddle devices a minimum of 24-inches in height and constructed of durable, impact resistant, non-warping flexible materials.

Utilize modular units with cumulative nominal length equal to the length of the temporary barrier on which they are installed so that the joint between the barrier sections shall not be spanned by any one unit. Units shall not alter the design of the concrete barrier.

Design the relative connection strengths between various components of the assembly to minimize the potential impact and debris hazard to approaching traffic and to simplify repairs. Fabricate the modular units in a manner to allow replacement of individual blades while the modular unit remains in place.

The blade, base and rail shall be made of high impact materials with sufficient strength to withstand three impacts from a horizontal steel bar traveling at 40 mph and impacting at mid-height of the blade. After three impacts, there shall be no evidence of cracking, splitting, delaminating or separation from the system.

Provide a paddle glare guard from a manufacturer below or an approved equal:

Manufacturer	Address
Valtir	15601 Dallas Parkway, Suite 525, Addison, Texas, 75001
Carsonite A Valmont Company	19845 U.S. Highway 76, Newberry, South Carolina, 29108
Flexstake Incorporated	2150 Andrea Lane, Fort Myers, Florida, 33912

C Construction

Attach the base rail to the top of the concrete barrier temporary precast by a mechanical or adhesive system with a minimum pullout and shear of 3000 psi. All mounting hardware shall be as specified by the manufacturer.

D Measurement

The department will measure Glare Screens Left In Place by the linear foot of paddle glare guard, 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.0090.0705	Glare Screens Left In Place	LF

Payment is full compensation for furnishing, installing, and maintaining the Glare Screens Left in Place.

246. Removing Concrete Barrier Precast, Item SPV.0090.0711.

A Description

This special provision describes Removing Concrete Barrier Precast according to the pertinent provisions of standard spec 204 and as hereinafter provided. The barrier has been left in place under a previous contract.

The concrete barrier precast including any attached temporary glare screen and reflectors becomes the property of the contractor at the completion of the contract.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Concrete Barrier Precast in linear feet, 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.0090.0711	Removing Concrete Barrier Precast	LF

Payment is full compensation for removing concrete barrier temporary precast including any attached temporary glare screen and reflectors.

**247. Cable Aerial Aluminum 6 AWG Triplex, Item SPV.0090.1001;
Cable Aerial Aluminum 4 AWG Triplex, Item SPV.0090.1002.**

A Description

Furnish, install, and connect temporary overhead cable complete with all splicing, identifications, terminations and guy wires at wood poles. The removal of the overhead cable after the temporary lighting is approved for removal.

B Materials

Overhead cable shall be aluminum conductors according to ASTM B 230 and shall be Class B stranded according to ASTM B 231, and shall conform to the values listed in the table below:

Phase Conductor			Messenger Wire		
Size AWG	Stranding	Avg. Insulation Thickness		Min. Size AWG	Stranding
		mm	mils		
6	7	1.1	45	6	6/1
4	7	1.1	45	4	6/1
2	7	1.1	45	2	6/1
1/0	7	1.1	45	1/0	6/1

The aerial cable shall be an assembly of insulated aluminum conductors and a steel messenger wire according to ANSI/ICEA S-76-474. The cable assembly may have the messenger wire intertwined with the insulated cables or lashed to the insulated cables by a factory wrap. The cable shall be assembled according to ANSI/ICEA S-76-474.

All cable shall be rated 600-V. The cable shall be rated 105° C dry and 90° C wet and shall be suitable for installation in wet and dry locations, and shall be resistant to oils and chemicals, and UV rated. The UL listing mark, cable voltage, insulation type and ratings, as well as the cable size, shall all be clearly printed on the cable in a color contrasting with the insulation color. When specified, each cable installed shall be identified with its complete circuit number at each termination, splice, junction box or other location where the wire is accessible.

All electric cables installed shall be color coded. Neutral wires shall be color-coded white. Single phase three wire runs of cable shall be color-coded one black, one red, and one white. Insulated ground wires, where applicable, shall be green. Color striping of cables will not be acceptable in lieu of the specified color coding means.

Make the luminaire connections to the aerial cable with listed parallel tap insulation piercing connectors. The connector shall be rated for 600-V, and be listed under UL Standard 486B.

C Construction

Overhead cable as shown on temporary lighting plans will not be needed for final lighting. Remove temporary overhead cable. Removal of temporary overhead cable will be incidental to this pay item and it will become property of the contractor. The bid price shall reflect the salvage value of the temporary overhead cable.

Upon written request by the contractor, the engineer may permit to reuse removed temporary overhead cable of ampacity equivalent to the specified cable and of a type and condition approved by the engineer, if possible.

Install guy wires as necessary per WisDOT standard details for Spanwire Temporary Traffic Signal.

Conform to standard spec 655.3.5(9) for ground resistance testing.

D Measurement

The department will measure Cable Aerial Aluminum 6 AWG Triplex; Cable Aerial Aluminum 4 AWG Triplex; and Cable Aerial Aluminum 2 AWG Triplex in length by the linear foot in place, acceptably completed, and will be taken as the length of the messenger wire. Measurement will be made in a straight line between changes in direction and to the centers of light standards and control cabinets. Sag of the aerial cable or vertical cable will not be measured for payment. The rewiring to facilitate relocation of the cable due to staging or other construction requirements will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.1001	Cable Aerial Aluminum 6 AWG Triplex	LF
SPV.0090.1002	Cable Aerial Aluminum 4 AWG Triplex	LF

Payment is full compensation for providing electrical wire; for making all connections; for providing all connectors, including wire nuts, fuses, fuse holders, splices, tape, and insulators; for providing messenger wire, and guy wires; and for removing temporary overhead cable.

248. Conduit 3-Inch HDPE Schedule 40, Item SPV.0090.1004.

A Description

This special provision describes furnishing and installing conduit 3-inch-high density polyethylene HDPE schedule 40 for lighting, and/or other electrical work.

B Materials

General

Furnish electrical conduit and fittings with a UL or NRTL label on each piece installed.

High-Density Polyethylene HDPE Conduit

Furnish orange, smooth, high-density polyethylene (HDPE), solid-wall conduit rated for outdoor and underground use conforming to ASTM F2160. Use the size the plans show with a size-to-diameter ratio (SDR) of 11.

The construction and testing of the conduit must comply with applicable EIA/TIA, ANSI, and ASTM standards.

Furnish bends, adapters, couplings, fittings, and other materials used to install conduits. They are to meet duct manufacturer's installation recommendations.

Pull Tape

Provide pull tape for empty ducts in the run. The pull tape must have documentation as duct cutting resistant, tensile strength of greater than 1,500 pounds, nominal width of 5/16 inch, and marked every foot. Dry silk or equal.

Contractor must submit a certificate of compliance certifying that the conduit rigid nonmetallic as furnished conform to the above requirements. Send a copy of the certificate of the conduit rigid nonmetallic to:

Eng Kie Lee
City of Milwaukee
Infrastructure Services Division
Transportation Section
Street Lighting & City Underground Conduit
841 N. Broadway (Room 920)
Milwaukee WI. 53202

C Construction

General

Use conduit of the nominal inside diameter the plans show. Make each run of conduit the distance the plans show or as the engineer directs. Install each run of conduit between adjacent access points using one size for its entire length. A run is the conduit from pull box to pull box, junction box to junction box, or pull box to junction box. If the engineer approves, the contractor may substitute a larger size of conduit than the contract shows for that run.

Install pull tape in each conduit run that will receive future conductors as the conduit is laid.

Cap or plug rigid nonmetallic conduit immediately after installation, unless the conduit terminates in a pull box, and keep capped or plugged until installing the wire or cable. Install end bells on rigid nonmetallic conduit raceway access points before installing pull tape or cable. Ream non-metallic conduits to eliminate internal sharp edges before installing end bells.

Excavate trenches true to line and grade to provide the conduit uniform bearing throughout its length. Do not backfill the trench before inspecting the conduit. Carefully tamp the backfill in place as specified for placing backfill in layers in 651.3. Place at least 0.7 cubic feet of size No. 2 coarse aggregate conforming to 501.2.7.4.2 directly under each drainage hole. Effective with the November 2021 Letting 2022 Standard WisDOT Specifications

Installing HDPE Conduit

Install conduit by directional boring, or trenching.

Do not exceed the minimum bending radius of the cable installed in the conduit. Do not pull cable over edges or corners, over or around obstructions, or through unnecessary curves or bends.

Use directional bore installations if the contract specifies.

Repairs are not allowed. Remove broken, chipped, cracked, or impaired lengths of fittings or conduit and replace with new materials. Do not install conduit above ground or on structures.

Marking and Inspecting

Mark the location of each conduit as the plans show.

After the conduit installation is complete, inspect each installed conduit before any wire is pulled. During this inspection, ensure that the conduit raceway is fully open for its entire length. Replace any conduit that the engineer determines is crushed, damaged, or unsatisfactory.

If the engineer directs, expose the conduit at a randomly selected conduit arrow mark. If the distance from that conduit's centerline to a plumb line projected down from the tip of the arrow mark is more than six inches, expose all arrow marked conduits. Destroy arrow marks not meeting the six-inch limit and remark the conduit.

D Measurement

The department will measure Conduit 3-Inch HDPE Schedule 40 in length by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.1004	Conduit 3-Inch HDPE Schedule 40	LF

Payment is full compensation for providing the conduit, conduit bodies, and fittings; for providing conduit hangers, clips, attachments, and fittings used to support conduit on structures; for pull wires or ropes; for expansion fittings and caps; for excavating, bedding, and backfilling, including any sand, concrete, or other required materials; and for making inspections.

249. Electrical Cable Type 3#12 UF with Ground, Item SPV.0090.1008.

A Description

Furnish and install type UF cable in accordance with current City of Milwaukee Electrical methods and National Electrical Code standards. All work shall be in accordance with section 651.

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 overhead or underground cable for lighting installations.

Strip the minimum length of jacket necessary to make terminations in a neat and technically proficient manner.

D Measurement

The department will measure Electrical Cable Type 3#12 UF with Ground in length by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.1008	Electrical Cable Type 3#12 UF with Ground	LF

Payment is full compensation for providing electrical wire; for making connections; for providing connectors, including wire nuts, fuses, fuse holders, splices, tape, insulating varnish or sealant; and for testing the circuits. The department will pay for wiring from the underground feeder system to the luminaire under the Electrical Wire Lighting bid item appropriate for the wire size the plans show.

250. Electrical Cable Type 4#8/1#8 XLP, Item SPV.0090.1009; Electrical Cable Type 4#6/1#8 XLP, Item SPV.0090.1010; Electrical Cable Type 4#4/1#8 XLP, Item SPV.0090.1011.

A Description

This special provision describes furnishing and installing service cable in accordance with current City of Milwaukee Electrical methods and National Electrical Code standards. The service cable shall consist of five (5) cross-linked polyethylene covered, stranded, copper conductors. All work shall be in accordance with Wisconsin DOT Standard Specifications section 651.

B Materials

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 round annealed uncoated stranded copper conductor per ASTM B-3, ASTM B-8, and UL Standard UL-44. Conductors No. 8 A.W.G. or larger shall be stranded. Conductors smaller than No. 8 A.W.G. shall be solid unless otherwise specified. Stranding must meet the requirements of ASTM B8, Class B.

B.2. Insulation

B.2.1. 600V

The insulation for cable rated 600V shall be cross XLPE thermosetting chemically crosslinked polyethylene insulation in accordance with industry standard ICEA Pub. No. S-95-658/Nema WC-70 (2009), latest revision, and shall be a nominal 45 mils. thickness. Insulation shall meet the ANSI/ASTM D2220-74 (latest revision) accelerated water absorption requirements and -30°C (-22°F) cold bend test with a separator applied between the stranded conductor and insulation to facilitate cable stripping. The outside diameter of the insulating covering must be circular and extruded concentrically over the conductor.

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). Individual cable will be black, white, red, gray and green.

B.3. Marking

Identification for each conductor must be provided by colors in accordance with I.M.S.A. Standards. The outer insulation must be marked with the following information at a minimum: conductor size (AWG), 600V, XLPE, USE-2, manufacturer's name, date of manufacture. All markings must be a minimum of one-eighth inch (1/8") in height. Marking shall be at approximately two (2) foot intervals. A sequential footage marking must be located on the opposite side of the jacket. All marking must be perfectly legible with permanent white ink.

B.4. Round Cable

This cable shall consist of stranded, uncoated, conductors each concentrically encased with a cross linked polyethylene USE-2 rubber insulation.

B.4.1. 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 in accordance with 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

	4#2/1#8		4#4/1#8	
Size of Conductor	#2	#8	#4	#8
Number of Conductors	4	1	4	1
Number of Wires in Conductor	7	7	7	7
Type of Insulation	4 Cross-Linked Polyethylene (XLPE)	1 Cross-Linked Polyethylene (XLPE)	4 Cross-Linked Polyethylene (XLPE)	1 Cross-Linked Polyethylene (XLPE)
Insulation Thickness	60 mils	60 mils	60 mils	60 mils

Insulation Voltage Rating	600 volt	600 volt	600 volt	600 volt
Insulation Color Code	1-black (hot) 1-white (neutral) 1-red (hot) 1-gray (neutral)	1-green (ground)	1-black (hot) 1-white (neutral) 1-red (hot) 1-gray (neutral)	1-green (ground)
Non-Hydroscopic Fill	None		None	
Moisture Resisting Sheath				
Jacket Thickness	None		None	
	4#6/1#8		4#8/1#8	
Size of Conductor	#6	#8	#8	#8
Number of Conductors	4	1	4	1
Number of Wires in Conductor	7	7	7	7
Type of Insulation	4 Cross-Linked Polyethylene (XLPE)	1 Cross-Linked Polyethylene (XLPE)	4 Cross-Linked Polyethylene (XLPE)	1 Cross-Linked Polyethylene (XLPE)
Insulation Thickness	60 mils	60 mils	60 mils	60 mils
Insulation Voltage Rating	600 volt	600 volt	600 volt	600 volt
Insulation Color Code	1-black (hot) 1-white (neutral) 1-red (hot) 1-gray (neutral)	1-green (ground)	1-black (hot) 1-white (neutral) 1-red (hot) 1-gray (neutral)	1-green (ground)
Non-hydroscopic Fill	None		None	
Moisture Resisting Sheath				
Jacket Thickness	None		None	

All conductors shall be uncoated annealed soft copper.

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 overhead or underground cable for lighting installations.

Strip the minimum length of jacket necessary to make terminations in a neat and technically proficient manner. The cable shall be installed in HDPE, PVC, and Liquidtight Flexible Non-Metallic 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, pull boxes, and transformer bases / hand holes, must be completed by the contractor unless otherwise designated on plans. Do not splice directly in underground 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 in the luminaire, pole or transformer base 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 15 inches beyond the pole hand hole. Make all electrical splices in the pull box with pre-approved insulated direct burial and submersible multi-port splice and tap connectors with wire range 2/0 - #14 AWG.

For all cables entering each pull box/vault, provide an extra loop, approximately 3 feet in length, to remain in each pull box/vault. 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.

When there is more than one circuit, bundle the circuit conductors with nylon cable ties or engineer approved electrical tape at access points.

At each pull box, identify the line side of each circuit with an attached tag using a fade-resistant waterproof black marker pen and provide the following Info:

Circuit ID: (*Cir.WD-E*)

Line Side coming from unit street light unit is on: (*Street Name*)

Side of street light unit is on: (*N,S,E,or W*)

Number of street lighting units from nearest crossing street: (*1,2,3,4,5*)

Direction from the nearest crossing street: (*N,S,E,or W*)

Name of the nearest crossing street: (*Street Name*)

Example of Tag Info:

Cir.WD-E,

Line Side from: *W. Canal St. / N. / 1 / W. /of Potawatomi Cir.*

Install conductors in continuous lengths without splices from termination to termination. The contractor may only splice at pull boxes that connect to light poles by using pre-approved insulated direct burial and submersible multi-port splice and tap connectors with wire range 2/0 - #14 AWG. At locations where no pull box or transformer bases exist, splice at the hand-holes in poles.

D Measurement

The department will measure Electrical Cable Type 4#8/1#8 XLP, 4#6/1#8 XLP, and 4#4/1#8 XLP in length by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.1009	Electrical Cable Type 4#8/1#8 XLP	LF
SPV.0090.1010	Electrical Cable Type 4#6/1#8 XLP	LF
SPV.0090.1011	Electrical Cable Type 4#4/1#8 XLP	LF

Payment is full compensation for providing electrical wire; for making connections; for providing connectors, including wire nuts, fuses, fuse holders, splices, tape, insulating varnish or sealant; and for testing the circuits. The department will pay for wiring from the underground feeder system to the luminaire under the Electrical Wire Lighting bid item appropriate for the wire size the plans show.

251. Outdoor Rated Network Cable, Item SPV.0090.2000.

A Description

This special provision describes furnishing and installing outdoor rated network cable in new or existing conduit or as directed by the engineer. It also includes installing state-furnished network communications extenders as required.

B Materials

Furnish outdoor rated Category 5e, or better, UTP cable with water-blocking flooded core and UV-resistant polyethylene jacket. Cable shall consist of 4-pairs of 24 AWG solid copper conductors and shall meet the requirements of ANSI/TIA/EIA 5 68A Category 5e, CENELEC EN50173, ICEA S-90-661, and ISO/IEC 11801.

Furnish an RJ45 connector for each end of the cable.

State-furnished network communications extenders.

C Construction

Install the cable following the manufacturer's installation guidelines.

Install the RJ45 connectors (if not done prior to installation) according to manufacturer's installation guidelines.

Install a network communications extender as shown on the plans when cable length exceeds 100 meters.

Use a purpose built "Pass-Fail" network cable tester to test the network cable installation for Category 5, Class E compliance. Repair any connections or cable as needed for the test to register a "Pass".

Connect the cable to the devices on each end as shown on the plans or as directed by the engineer.

D Measurement

The department will measure Outdoor Rated Network Cable, in length by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.2000	Outdoor Rated Network Cable	L.F.

Payment is full compensation for furnishing, installing, and testing the outdoor rated network cable; for installing network communications extenders where required; and for connecting the cable to the devices at each end of the cable.

252. Removing Existing Timber Piling, Item SPV.0090.4000.

A Description

This special provision describes removing existing timber piles that conflict with proposed new piling for substructures as shown on the plans.

B (Vacant)

C Construction

Remove any existing timber piling that conflicts with proposed piling locations and as shown on the contract plans. An existing timber pile conflicts with a proposed pile if it is within 2.5 proposed-pile diameters (center-to-center spacing) of a proposed pile.

One of the following methods of removing shall be used:

- a. **Direct Pull:** Remove the piling from the soil by pulling directly upward.
- b. **Vibratory Excavation:** Remove the piling by vibrating the piling loose and pulling the piling directly upward.
- c. **Coring:** Core through the timber pile to an elevation that will permit the installation of the proposed pile without interference. Unless directed otherwise, make the diameter of the core hole only as large as is required to eliminate the pile conflict.
- d. **Contractor Proposed:** If the contractor chooses to use an alternate method to remove the existing timber piling, the contractor shall provide the engineer with a written methodology for review and acceptance.

When an existing timber piling is found to conflict with the proposed location of a new piling, the contractor shall notify the engineer and receive written acceptance on the method of removal that was chosen prior to beginning any work to remove the timber piling.

Backfill any holes left by pile removal with Backfill Granular Grade 1 or 2 before driving the new piling.

Loading, hauling, and disposal of removed creosote timber piles to be per the requirements of the Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil article.

D Measurement

The department will measure Removing Existing Timber Piling by the linear foot acceptably completed. Measurement will be made along the vertical length of the timber piling removed or the depth of the cored hole.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.4000	Removing Existing Timber Piling	LF

Payment is full compensation for removing existing timber piling, backfilling and for disposing of all material removed. Any additional excavation necessary is included with the bid item Excavation for Structures.

(BOS 20220210)

253. Foundation Drilling 36-Inch Diameter, Item SPV.0090.4020.

A Description

This special provision describes drilling holes for the H pile posts for retaining walls.

B (Vacant)

C Construction

C.1 Installation Plan Submittal

Determine the proper means, methods, and procedure for accomplishing the work as specified herein and on the plans. Submit the proposed method for foundation drilling before beginning construction. If slurry is proposed to be used for excavation stabilization, the submitted installation plan must include all details related to use of slurry including:

- Type: Include slurry manufacture literature and mixing instructions.
- Equipment: Storage /mixing tanks, containment vessels, pumps, mixers, hoses, valves.
- Operations: Slurry mixing, pumping, containment, and recovery procedures.
- Quality Control: Slurry quality control procedures and testing during construction.

C.2 Excavation

Drill holes to the diameter and depth the plans show. If necessary, use casing or alternative engineer-approved methods to maintain an open hole. Do not leave excavated, uncased holes open overnight prior to filling with concrete. If bentonite or other slurry is used to maintain an open hole, prevent spillage of the slurry onto adjacent roadways or into adjacent waterways. Locate the holes within the following tolerances:

Horizontal Location:	3 inches
Vertical Location:	1 inch
Vertical Alignment:	1/8 inch per foot
Hole Diameter:	-0 inch to +2 inches

Provide equipment for checking the dimensions and alignment of each shaft. Remove loose material from the bottom of the shaft. For holes drilled or excavated without slurry, no more than 3 inches of standing water is permitted in the bottom of the drilled hole prior to beginning solid pile installation and immediately prior to placing concrete masonry in the hole around the solid pile.

D Measurement

The department will measure Foundation Drilling by the linear foot, acceptably completed, measured from the bottom of the footing to the top of the footing as indicated on the plans..

E Payment

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

Item Number	Description	Unit
SPV.0090.4020	Foundation Drilling 36-inch Diameter	LF

Payment is full compensation for drilling holes; for furnishing casing or alternative drilling methods; and, if rock is encountered, for coring rock.

Placement of and drilling through any material added to existing groundline to facilitate drilling operations will be considered incidental to Foundation Drilling.

Removal of unknown man-made subsurface obstructions for Foundation Drilling will be measured and paid for separately under the bid item Obstructions Foundation Drilling included in the contract.

254. Steel Casing w/ Ductile Iron 36-Inch Carrier, Item SPV.0090.5001.

A Description

This special provision describes the installation of a steel casing pipe with a Ductile Iron carrier pipe to the length and elevations as shown on the plans.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the "Milwaukee Water Works Standard

Plan Notes for Water Main Construction", June 14, 2011. Notes 4, 6, 16 through 18, and 21 shall not apply to this project. In case of conflicts between the City Water Main Specifications and the standard specifications or these special provisions, the requirements of the city standard specifications and the special provisions shall govern. Contact Ms. Angela Baldwin, at (414) 286-2813 to purchase copies of the required documents.

A.2 Submittals

Address all required submittals to Milwaukee Water Works as follows:

Superintendent
Milwaukee Water Works
Zeidler Municipal Building
841 North Broadway, Room 409
Milwaukee, WI 53202

B Materials

B.1 General

Furnish all fittings (restrained joint and standard) required for installation on this project. Water main shall be Restrained Joint Ductile Iron Thickness Class 55 pipe, conforming to the City of Milwaukee's Material Specifications and AWWA C-151. Furnish all fittings conforming to the City of Milwaukee's Material Specifications and AWWA C110.

All materials will require inspection by the City of Milwaukee. Notify Mr. Craig Schmidt, (414) 708-9661 for materials inspection and the City of Milwaukee's Construction Section, (414) 286-2497, for construction inspection, four working days prior to starting construction.

Contractor to provide all necessary information for furnished steel and iron items to comply with Wisconsin Department of Transportation DT2249, "Utility's Certificate of Compliance for Steel and Iron Items".

Milwaukee Water Works will test all pipe, including restrained joint pipe, in accordance to the City of Milwaukee Material Testing Specifications. Material testing done by the city will remove at least one welded end from a restrained pipe piece. Provide enough pipe for testing and installation. The department will not pay for additional pipe length used for material testing purposes.

B.2 Steel Casing Pipe

For casing pipe over 36-inch diameter, provide extra strong, spiral welded steel pipe conforming to ASTM A139, Grade B. Provide all steel casing pipe fabricated in sections for welded field joints. Steel casing shall have minimum yield strength of 35,000 psi and shall be spiral-welded steel pipe, uncoated, or equal. Steel casing shall have a minimum thickness minimum thickness of 5/8" (0.625). The casing pipe must have sufficient thickness to withstand both earth loads and live loads imposed from traffic. Provide engineer with manufacturer certification of steel casing pipe, including minimum yield strength, wall thickness, manufacturer, and ASTM Grade and class.

All welds shall be free from embedded scale and slag, and have a tensile strength across the weld not less than that of the thinner of the connected sections. Make all pipe welds watertight. Use butt welds for all shop-welded joints (to be approved by Milwaukee Water Works). Welders shall be certified as specified in AWWA C200 and C206. The use of back-up welding strips or rings for welds will not be permitted. Repair leaks and defects in welds as directed by Milwaukee Water Works.

Install wrap around pull on type boot seals, or approved equal on both ends of the Steel Casing pipe after pipe installation. The seals shall be watertight and the type of seal shall be approved by the engineer before backfilling. Seals shall have a minimum of two type 304 stainless steel bands with worm screws. Boot seals shall be provided by same manufacturer as casing spacers.

C Construction

Notify engineer and the WisDOT in accordance to permit requirements before commencing casing installation. Provide complete installation at line and grade indicated on Drawings.

Prepare and submit a plan to the engineer for approval for casing installation means and methods. When applicable, submittal shall include detailed information on bore pit size and location, type and size of equipment, shaft construction, advance auger tooling, means for controlling grade line, lubrication,

welding, means for preventing voids, over-ream, and means to fill over-ream voids, and any information necessary for casing installation.

Limit over-reaming thickness to ½-inch. The contractor shall bear all the costs associated with sidewall over-reaming and concrete required to fill the additional over-reaming volume of excavation.

Ductile Iron carrier pipe shall be centered and restrained using stainless steel factory-fabricated (wood not allowed) spacers in conformance with manufacturer's specifications. Provide spacers at intervals according to manufacturers' specifications with a minimum two spacers for each pipe length. Spacers shall be located within 2' of the end of casing. Design spacers to prevent uplifting of carrier pipe by hydrostatic forces and attach to pipe using stainless steel bands minimum (1 inch) wide. Spacers shall be a minimum 12" wide with a minimum 6 runners per spacer. Shell, risers and spacers shall be type 304 stainless steel or approved equal. Casing spacers shall be provided by same manufacturer as end boot seals.

Store pipes on level ground free of sharp objects which could damage the pipe. Limit the Stacking of the pipe to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature condition. Where necessary due to ground conditions, store the pipe on wooden sleepers, spaced suitably and of such widths as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.

Pipe shall be homogenous throughout and free of voids cracks, inclusions and other defects and shall be uniform in color, density and other physical characteristics.

Plug all open ends of all sections of joined and/or installed pipe (not in service) at night to prevent anything from entering the pipe line or section. The practice of stuffing cloth or paper in the open ends of the pipe will be considered unacceptable.

Prepare and submit a plan to the engineer for approval for insertion of the water main into the casing. Include pullback procedure, ballasting, use of rollers, side booms and side rollers, coating protection, internal cleaning, internal gauging, and purging in the plan.

Store excavated material from the boring and receiving pits in locations that minimize the interference with operations, minimize environmental damage, and protect adjacent areas from flooding, runoff and sedimentation.

Damage to utilities and the resulting repair, temporary service cost, etc., shall be borne by the contractor. Backfill access pits in accordance to the appropriate specifications.

Properly sheet/shore all excavations in accordance to relevant specifications for trench safety systems. Any damage resulting from improperly shored excavations shall be corrected to the satisfaction of the engineer with no compensation due to the contractor.

The Milwaukee Water Works will shut off the water main to be altered and provide temporary hose connections to affected services as required.

D Measurement

The department will measure the Steel Casing w/ Ductile Iron 36-Inch Carrier by the linear foot of pipe in place measured along the top centerline of the casing acceptably complete.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.5001	Steel Casing w/ Ductile Iron 36-Inch Carrier	LF

Payment is full compensation for furnishing all labor, equipment, tools, materials and accessories required; for all surveying; excavating for sheeting and shoring, for laying pipe, for boring and receiving pit; for sheeting, shoring, bracing; for installing casing pipe, carrier pipe, spacers, end seals and lubricant work; for installing all valves and fittings; for concrete base, buttresses, and anchors; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for backfilling; for dewatering; for removing shoring, sheeting, bracing; for cleaning out the site of the work and incidentals necessary to complete the work and in accordance to the contract.

**255. Ductile Iron Water Main 36-Inch, Item SPV.0090.5002;
Ductile Iron Water Main 48-Inch, Item SPV.0090.5003;
Ductile Iron Water Main 12-Inch, Item SPV.0090.5007.**

A Description

This special provision describes the installation of 12-Inch, 36-Inch and 48-Inch diameter Ductile Iron water main.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the City of Milwaukee - Milwaukee Water Works "Special Provisions for Water Main Construction". In case of conflicts between the City Water Main Specifications and the MWW Special Provisions or these special provisions, the requirements of the MWW Special Provisions and these special provisions shall govern.

The City of Milwaukee's installation specifications, special provisions for water main construction and material specifications can be found at the following website:

<https://city.milwaukee.gov/water/PermitsSpecs>.

A.2 Submittals

Address all required submittals to Milwaukee Water Works as follows:

Superintendent
Milwaukee Water Works
Zeidler Municipal Building
841 North Broadway, Room 409
Milwaukee, WI 53202

A.3 Sequence of Construction

Due to the nature of this work, including traffic staging and coordination with other work, the Contractor is advised there may be multiple mobilizations to complete the water main work. No additional payment will be made by the department for said mobilizations.

Determine sequence and schedule for water main construction, subject to the requirements herein.

Prepare and submit for review by the Superintendent of Milwaukee Water Works a detailed construction schedule stating the anticipated dates and duration of all interruptions in water service necessary to complete the work under the contract.

B Materials

B.1 General

The contractor shall furnish all fittings required for installation on this project. Contractor shall furnish all ductile iron water main conforming to the latest version of the City of Milwaukee's Material Specifications.

All materials will require inspection by the City.

The Contractor shall allow four (4) working day notice prior to start of construction for material inspection and for scheduling construction inspection. Contractor shall contact watengcon@milwaukee.gov for material inspection and construction inspection.

The Contractor shall submit to the Superintendent of Milwaukee Water Works a detailed construction schedule stating the anticipated dates and duration of all interruptions in water service necessary to complete the work under the contract. Provide a minimum one (1) week notice to the Milwaukee Water Works Distribution when requesting a shut-off, wet connection, safe water sample, pressure testing, and chlorination watengcon@milwaukee.gov

Milwaukee Water Works will test all pipe, in accordance to the City of Milwaukee Material Testing Specifications.

B.2 Valve Box Adapters

Install all valve boxes on gate valves with the use of valve box base adapters as detailed in the Milwaukee Water Works "Special Provisions for Water Main Construction". Install the adapter in addition to the hardwood blocking.

C Construction

All costs for completing the work required for valve installations are to be included in the price for the Ductile Iron Water Main item(s).

Install fittings as shown on plans, incidental to respective ductile iron water main item(s). A list of fittings for each water main installation is provided on plans.

Contractor shall provide all surveying required to layout and construct the water main relocations.

The Milwaukee Water Works will shut off the water main to be altered and provide temporary hose connections to affected services as required.

The 36-inch water main installation includes two 36-inch butterfly valve installations. All costs for completing the work required for the 36-inch valve installations is to be included in the price for furnishing and installing 36-inch water main under this item.

The 48-inch water main installation includes one 48-inch butterfly valve installation. All costs for completing the work required for the 48-inch valve installation is to be included in the price for furnishing and installing 48-inch water main under this item.

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in the City of Milwaukee - Milwaukee Water Works "Special Provisions for Water Main Construction".

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be two (2) feet, and the specification shall be modified to read, "each subsequent compacted lift of material shall be one (1) foot". Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

D Measurement

The department will measure Ductile Iron Water Main 12-Inch, Ductile Iron Water Main 36-Inch, and Ductile Iron Water Main 48-Inch, by the linear foot of water main of the type and diameter specified acceptably completed, including all construction parameters and requirements as described in this special provision.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.5002	Ductile Iron Water Main 36-Inch	LF
SPV.0090.5003	Ductile Iron Water Main 48-Inch	LF
SPV.0090.5007	Ductile Iron Water Main 12-Inch	LF

Payment is full compensation for providing all labor, equipment, materials; for all surveying; for all excavating; for sheeting and shoring; for forming foundation; for laying pipe; for removing valves; for installing all valves and fittings; for concrete base, buttresses, and anchors; for strapping and rodding; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

**256. Abandon Existing 36-Inch Water Main, Item SPV.0090.5004;
Abandon Existing 48-Inch Water Main, Item SPV.0090.5005.**

A Description

Perform the work according to the plans, the Standard Specifications for Highway and Structure Construction, latest edition and amendments, the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

B Materials

All materials and work required to abandon existing water main will conform to the SSSW.

B.1 Cellular Concrete

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 501.2.4.1 for Type 1 or Type 1L Portland Cement. Provide sand meeting the requirements of standard spec 501.2.7.2. Provide water meeting the requirements of standard spec 501.2.6.

C Construction

Abandon water main according to Section 3.2.24 of the SSSW except modified to require all water main which is to be abandoned and has not been removed shall be filled with cellular concrete. Field verify water main has been decommissioned prior to abandonment.

D Measurement

The department will measure Abandon Existing 36 or 48-inch Water Main by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.5004	Abandon Existing 36-Inch Water Main	LF
SPV.0090.5005	Abandon Existing 48-Inch Water Main	LF

Payment is full compensation for providing all materials including all excavation and abandoning existing water main with cellular concrete; for providing backfill material, and surface restoration.

257. Removing Water Main, Item SPV.0090.5006.

A Description

This special provision describes the demolition and removal of existing water main piping, fittings, valves and all appurtenances and disposing of all resulting materials as shown in the plans, according to standard spec 204 and as hereinafter provided.

This item includes removing existing concrete steel, ductile iron and cast iron utility pipes 18 inches and greater in diameter as shown on the plans. Removal of carrier pipes inside casing pipes is incidental to the item Removing Water Main. Removal of existing concrete, steel, ductile iron and cast iron utility pipes less than 18 inches in diameter are not included in the item Removing Water Main and are considered incidental to the Excavation Common bid item. Asbestos lined pipes will be removed by the original utility owner and are not included in the item Removing Water Main. Removal of existing utility pipes consisting of materials other than steel of any size are incidental to the Excavation Common bid item.

B (Vacant)

C Construction

The contractor is responsible for the safe methods and sequence of controlled removal operations. As directed by the engineer, completely remove the existing water main to the extent required to avoid interfering with new construction work. Upon removal, water main piping becomes the contractor's property. Water main designated for removal shall be removed from the project site.

D Measurement

The department will measure Removing Water Main by the linear foot, acceptably completed, measured along the centerline of pipe, from one end of existing pipe to the other end of existing pipe. Quantity to be measured shall include the removal through valves and other fittings.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.5006	Removing Water Main	LF

Payment is full compensation for removing all water main as per the plans, details, schedules, and these special provisions, including but not limited to cutting and removal of pipe, fittings, spacers, annular fill, debris, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

258. Ductile Iron Hydrant Branch 6-Inch, Item SPV.0090.5008.

A Description

This special provision describes installing 6" diameter hydrant branch alterations.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the City of Milwaukee - Milwaukee Water Works "Special Provisions for Water Main Construction". In case of conflicts between the City Water Main Specifications and the MWW Special Provisions or these special provisions, the requirements of the MWW Special Provisions and these special provisions shall govern.

The City of Milwaukee's installation specifications, special provisions for water main construction and material specifications can be found at the following website:

<https://city.milwaukee.gov/water/PermitsSpecs>

B Materials

B.1 General

The Contractor shall provide all materials for this special provision. Materials shall conform to the latest version of the City of Milwaukee's Material Specifications.

All materials will require inspection by the city.

The Contractor shall allow four (4) working day notice prior to start of construction for material inspection and for scheduling construction inspection. Contractor shall contact watengcon@milwaukee.gov for material inspection and construction inspection.

The Contractor shall provide a minimum two (2) working day notice to the Milwaukee Water Works Distribution when requesting a shut-off, wet connection, safe water sample, pressure testing, and chlorination. The Contractor shall coordinate via email watconst@milwaukee.gov.

Milwaukee Water Works will test all pipe, in accordance to the City of Milwaukee Material Testing Specifications.

B.2 Valve Box Adapters

Install all valve boxes on gate valves with the use of valve box base adapters as detailed in the Milwaukee Water Works "Special Provisions for Water Main Construction". Install the adapter in addition to the hardwood blocking.

C Construction

All costs for completing the work required for valve installations on hydrant branches are to be included in the price for the Ductile Iron Hydrant Branch item.

Install fittings as shown on plans, incidental to respective ductile iron hydrant branch item. A list of fittings for each hydrant branch installation is provided on plans.

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in the City of Milwaukee – Milwaukee Water Works “Special Provisions for Water Main Construction”.

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be two (2) feet, and the specification shall be modified to read, “each subsequent compacted lift of material shall be one (1) foot”. Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

Ductile Iron Hydrant Branch 6-inch requires installing all new hydrant branch pipe, new fittings, and connections to existing water main or existing hydrant branch.

D Measurement

The department will measure Ductile Iron Hydrant Branch 6-Inch by the linear foot of hydrant branch of the type and diameter specified acceptably completed, including all construction parameters and requirements as described in this special provision.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.5008	Ductile Iron Hydrant Branch 6-inch	LF

Payment is full compensation for providing all materials including valves, fittings, and accessories required; for all excavating; for sheeting and shoring; for forming foundation; for laying pipe; for installing all valves, and fittings; for concrete base, buttresses, and anchors; for strapping and rodding; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

259. Sewer Exams by Closed Circuit Television - Post Construction, Item SPV.0090.5120.

A Description

This special provision describes providing Post Construction Closed Circuit Television (CCTV) Exams. CCTV Exams shall be in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), except where modified herein.

B Materials

Furnish all necessary equipment and materials and perform the work needed to properly complete the examinations and submit the reports and USB Flash Drives. All equipment and materials shall be rated for use in the conditions present in the sewers to be examined. Sewers with an interior vertical dimension of 54-inches or greater shall be examined by man-entry and walk through. The television camera used for the inspection shall be one specifically designed and constructed for such inspection and shall be capable of radial view for inspection of the entire pipe including lateral connections. The camera shall be mounted on adjustable skids, or self-propelled, and positioned in the center of the pipe. Lighting of the camera shall be supplied by a lamp on the camera and shall be capable of lighting the entire periphery of the pipe. The camera shall be operative in 100% humidity conditions and shall have a minimum of 400 lines of resolution. The view seen by the televising camera shall be transmitted to a monitor of not less than 17 inches.

Two copies of all CCTV exams shall be provided on separate USB Flash Drives. Each Flash Drive must have sufficient memory capacity to store all CCTV examinations performed under this contract. One copy will be provided to the City of Milwaukee and the other to the department. Both Flash Drives will become the property of the respective entities.

C Construction

The contractor will be required to handle or work around sewer flow during the examinations. If the contractor chooses to bypass or pump flow around any runs to be examined, all related costs shall be included in the respective unit price bid price. The contractor shall submit to the City of Milwaukee Environmental Engineering Section and, when appropriate, the Milwaukee Metropolitan Sewerage District

requests to bypass or pump flow prior to performing the work. Sewer examinations shall not be performed during periods of wet-weather.

The contractor shall keep debris from entering the sewer as a direct result of the work and work practices under this contract. The contractor shall remove any materials and equipment that enter the sewer as a result of the examinations. At the end of each workday, the contractor shall be responsible for cleanup of all work areas.

In addition to the requirements of Chapter 7.1.2 of the SSSW, each sewer examination and report pair shall include an identical visual, audio, and written identification of the following:

Start and end stations of all pipe defects and features, including:

1. Pipe collapsed
2. Pipe gull-winged or losing shape and extent thereof (amount of deformation)
3. Missing pieces of pipe, brick, or mortar (size and location by clocking).
4. Longitudinal cracks (width of crack and location by clocking).
5. Circular cracks (width of crack and location by clocking).
6. Pipe wall deterioration and defects.
7. Bricks loose, shifting, or bulging (number of bricks and location by clocking)
8. Open joints (width of joint opening).
9. Offset joints (offset in inches and location).
10. Cut in connection (if protruding, how far).
11. Mineral deposits (size and location by clocking)
12. Roots at joints (classified as heavy, medium or light and location by clocking).
13. Roots in connections (classified as heavy, medium or light).
14. Joint leaks (estimated infiltration by gallons per minute [gpm], location by clocking, and classified as clear or containing sediment particles).
15. Crack leaks (estimated infiltration by gpm and classified as clear or containing sediment particles).
16. Deviations in horizontal or vertical alignment (i.e., bends and sags).
17. Changes in pipe cross-section.
18. Any other defect or features that should be noted.

Depth of sewer flow and depth and type of deposits in the flowline of the sewer at each manhole and at stations where the depth changes by one inch or more.

Condition of the manholes including assessments of the iron, brickwork (noting number of courses needing repair), steps, corbel, barrel, and bench and measure-down depths of the manholes.

The meter shall be capable of reducing readings for reverse movement of the camera and be able to be manually re-zeroed for each sewer run. The output of this metering device shall be constantly displayed on the examination video footage.

Total length of each run in stations and the measured distance between manholes. The distance between manholes shall be measured by surface grade taping. If the counter and taping distances differ by more than 3 feet per 100 feet, the run shall be re-televised at the contractor's expense. The taped distance shall be noted on the examination reports.

Within three (3) months of the installation of the sewers, the contractor shall provide the City with two (2) copies of a Post-Installation CCTV exam and report of the sewers and manholes built in this contract. These CCTV exams and reports will become property of the City of Milwaukee. All costs associated with this work shall be included in the unit bid price for Sewer Exams By CCTV– Post Construction.

The City will promptly review the reports and exams and determine if any corrective action must be taken by the contractor. If it is determined that corrective action is required, additional exams may be ordered by the construction engineer. No extras will be paid for this additional work.

All sewers, drains, and manholes constructed in this contract, as well as the existing downstream run of sewer to the next downstream manhole, shall be examined by CCTV. The television camera shall be

equipped with and utilize a rotating head to allow for proper examination of the reconnections to existing sewers, building sewers, and drains. The contractor shall also examine the most downstream 25 feet of all adjacent existing upstream runs of sewer.

The contractor shall provide a video exam of the manhole frame and adjusting rings, showing proper underpinning and internal seals, where applicable. Where permanent pavement restoration is postponed by the construction engineer, examinations of the manholes shall be performed within 5 days of completion of permanent restoration activities. At the discretion of the construction engineer, the contractor may request to extend the time of completion for a specific location if the contractor wishes to perform examinations for multiple locations at one time.

The contractor is solely responsible for developing and implementing a health and safety program for man-entry sewer examinations in the sewers to be examined. The contractor shall comply with all applicable federal, state, and local regulations, rules, and requirements relevant to this type of work. The health and safety program shall be based on the assumption that all sewers to be inspected are in service and that personnel working in these areas will be exposed to unusual hazards, including, but not limited to, explosive and toxic gases and infectious disease-producing organisms. The sewers and manholes shall be considered confined spaces and are subject to all federal, state, and local regulations, rules, and requirements governing confined space entry and entrance procedures.

The contractor shall have the right to abandon work at locations, if, in their professional opinion, the working environment is unsafe or there exists excessively high risk to the equipment. The contractor shall notify the City immediately after abandoning any locations.

D Measurement

The department will measure Sewer Exams by CCTV - Post Construction by the linear foot acceptably completed. This measurement equals the distance along the centerline of the pipe, from the pipe end at a free outlet to the center of the end catch basin, manhole, inlet, junction or other drainage structure; or from center to center of catch basins, end manholes, inlets, other drainage structures or junctions. The department will make no deduction from these measured lengths for intermediate catch basins, manholes, inlets, other drainage structures, junctions, or fittings. Both the department and the City of Milwaukee shall have final acceptance of the linear feet 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.0090.5120	Sewer Exams by CCTV – Post Construction	LF

Payment is full compensation for Sewer Exams by CCTV - Post Construction and for all incidentals to complete the work, unless otherwise specifically stated in the special provisions.

260. 4-Duct Conduit Cement Encased 4-Inch Conduit DB-60, Item SPV.0090.5201.

A Description

This work consists of furnishing and installing cement encased multiple duct conduit packages below grade in accordance to the applicable sections of the standard specifications, as shown on the plans and as hereinafter described.

B Materials

B.1 Conduit

The contractor shall furnish DB-60 polyvinyl chloride (PVC) conduit.

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 1-1/2" vertical and 1-1/2" 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 to be used to encase the ducts will be:

Type I or Type IL 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 prove and 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.

The material shall be mixed with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. The mix shall be deposited 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

B.7 Copper Wire

Furnish #10 copper wire meeting the standard specification for item 655.0615 Electrical Wire Lighting 10 AWG.

For any questions on materials, contact Ms. Karen Roney 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:

No. of Ducts Wide	Minimum	Maximum
2	14 5/8"	17 1/8"
3	20 3/4"	23 1/4"
4	25 3/8"	27 7/8"

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.

Open-cut trenches shall be sheathed and braced 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, the contractor shall expose the existing manhole and conduit lines. The object of this is to permit adjustments in line and grade to avoid special construction methods. The exposed manhole and conduit shall be protected from damage.

The conduit shall be laid 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 shall be 28 inches.

The standard cover shall be maintained wherever possible and any deviation less than the minimum may be allowed only with specific approval of the engineer.

The trench shall be graded so that it will 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 Inspector 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, the bottom of the trench shall be prepared to receive the conduit. The duct bed shall be brought to the final grade and graded uniformly from the high point to the low or drainage points. Stone chips or limestone screenings shall be used for grading the trench.

C.2 Placing of Duct

Placing of the duct is to proceed as soon as the duct bed has been completed. All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a

smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

The duct shall be placed (as shown on the detail) 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, the cut end shall be placed at the manhole.

Full length pieces shall be used 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 on base spacers, the next higher tier of ducts shall then be placed on the intermediate spacers. These spacers shall be two feet from each duct end and one in the middle. The intermediate spacers and ducts shall be placed for the remaining tiers. Each length shall be glued into the adjoining coupling. A twist and push on the duct being placed will suffice for a water tight joint. Caution must be exercised in the driving operation, so that neither the coupling nor duct will be split or damaged in any way. After the full formation has been completed, wood trench and duct bracing shall be placed 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 (as shown on the detail) 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, inside abutment wall, or inside wall of bridge house. A standard end bell fitting shall be installed on all duct access points into manholes.

A #10 copper tracer wire shall be installed along and above the centerline of the duct for encasement in the concrete. The wire shall be 2 feet longer than the run of conduit and extend beyond the end of the grout encasement.

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

After sufficient conduit has been laid and the trench and duct have been inspected, concreting is to begin. The minimum concrete encasement of the ducts shall be three (3) inches on the top, two (2) inches on the sides, and three (3) inches on the bottom (as shown on the detail).

After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed 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

The backfilling of the conduit shall commence immediately after the duct has been inspected, approved and has had sufficient time to set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

C.5 Acceptance of Work

Notify Ms. Karen Roney at (414) 286-3243 three working days in advance of completion for final acceptance of work performed. The contractor will receive no payment until the above work is approved by City Underground Conduit.

D Measurement

The department will measure Duct Conduit Cement Encased 4-Inch Conduit DB-60, by the linear foot acceptably installed. The linear feet of encased duct will be measured along the centerline of duct between ends of conduit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.5201	4-Duct Conduit Cement Encased 4-Inch Conduit DB-60	LF

Payment is full compensation for furnishing the conduit, conduit bodies, conduit fittings, conduit spacers, end caps, pull ropes and trace wires; 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.

261. Conduit Subduct 1-Inch, Item SPV.0090.5210.

A Description

This special provision is to furnish and install 1-Inch conduit to be used as subduct for fiber optic cable installation.

B Material

Furnish 1-Inch PVC Carlon riser-gard with pull tape, Part number Carlon DF4X1C-2700 or an alternative approved by David Henke at the City of Milwaukee, (414) 286-5511.

C Construction

Install Conduit Subduct 1-Inch where shown on the plans within the communication conduit prior to fiber optic cable installation. Install the conduit as per the manufacturer's instructions.

D Measurement

The department will measure Conduit Subduct 1-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.0090.5210	Conduit Subduct 1-Inch	LF

Payment is full compensation for furnishing and installing conduit subduct.

262. Furnish Municipal Fiber Optic Cable 72 Count, Item SPV.0090.5211.

A Description

This special provision is to furnish 72 – count fiber optic cable.

B Material

Furnish ALTOS Loose Tube, Gel-Free Cable 72 F, Single Mode (OS2) fiber optic cable or an alternative approved by David Henke at the City of Milwaukee, (414) 286-5511.

C (Vacant)

D Measurement

The department will measure Furnish Municipal Fiber Optic Cable 72 Count by the linear foot.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.5211	Furnish Municipal Fiber Optic Cable 72 Count	LF

Payment is full compensation for furnishing fiber optic cable. The department will pay for installation, splices, enclosures, and subduct separately.

263. Drain Slotted Vane Temporary, Item SPV.0090.8000.

A Description

This special provision describes providing and removing Drain Slotted Vane Temporary as the plans show conforming to standard spec 611 as modified in this special provision.

B (Vacant)

C Construction

Before encasing the pipe in concrete, cover the upper end of the slotted drain as the plans show, or as approved by the engineer.

Before construction operations adjacent to the slotted area of the slotted vane drain pipe, cover the slots on the top of the drain. Remove any material entering the pipe at the contractor's expense.

Exercise care to avoid damage to the slotted vane drainpipe. If any section of pipe is damaged or is unsatisfactory as determined by the engineer, replace the drainpipe at contractor's expense.

D Measurement

The department will measure Drain Slotted Vane Temporary 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.0090.8000	Drain Slotted Vane Temporary	LF

Payment is full compensation for furnishing all materials; hauling and placing the pipe; making connections to existing inlets; furnishing concrete masonry, end plug or cap; cleaning out and restoring site of work, removal and disposing of waste material, removal of Drain Slotted Vane Temporary and all incidentals to complete the work.

264. Pipe Underdrain Exploration, Item SPV.0090.8001.

A General

This special provision describes performing the exploratory trenching in sufficient advance of the grading and storm sewer construction operations to allow uninterrupted progress of these operations.

B (Vacant)

C Construction

Construct the trench a minimum 12 inches wide and deep enough to intercept all existing pipes (underdrain pipes and storm sewer laterals). Do not backfill trench until approved by the engineer. Backfill with suitable fill material conforming to standard spec 209.

D Measurement

The department will measure Pipe Underdrain Exploration 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.0090.8001	Pipe Underdrain Exploration	LF

Payment is full compensation for furnishing all excavating, for placing and compacting backfill material, for restoring the work site.

265. Drain Slotted Vane Permanent, Item SPV.0090.8002.

A Description

This special provision describes providing slotted vane drain as the plans show conforming to standard spec 611, standard detail drawing "Slotted Vane Drain" and as modified in this special provision.

B (Vacant)

C Construction

Before encasing the pipe in concrete, cover the upper end of the slotted drain as the plans show, or as approved by the engineer.

Before construction operations adjacent to the slotted area of the slotted vane drain pipe, cover the slots on the top of the drain. Remove any material entering the pipe at the contractor's expense.

Exercise care to avoid damage to the slotted vane drainpipe. If any section of pipe is damaged or is unsatisfactory as determined by the engineer, replace the drainpipe at contractor's expense.

D Measurement

The department will measure Drain Slotted Vane Permanent by the linear foot, completed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.8002	Drain Slotted Vane Permanent	LF

Payment is full compensation for furnishing all materials; hauling and placing the pipe; making connections to existing inlets; furnishing concrete masonry, end plug or cap; cleaning out and restoring site of work, removal and disposing of waste material, and all incidentals to complete the work.

266. Timber Lagging, Item SPV.0110.4000.

A Description

This special provision describes furnishing, delivering, and installing all timber lagging for soldier pile and lagging walls. Perform work according to pertinent parts of the standard specifications, the plans, and these special provisions.

B Materials

Furnish materials that conform to lumber as specified in standard spec 507 except that preservative treatments according to standard spec 507.2.2.6 are not required and untreated lumber may be used. Use Douglas fir or Southern pine construction grade rough-cut lumber with a minimum thickness of 3-inches. Where necessary provide certification that the timber conforms to the grade, species, and other specified requirements.

Alternate lagging materials, with properties equal to or better than above requirements, or provisional lagging with a design signed and sealed by a professional engineer currently registered in the state of

Wisconsin may be submitted to the engineer for approval. No additional compensation will be paid to contractor for use of any approved alternate materials or systems.

C Construction

Place timber lagging from the top-down in sufficiently small lifts immediately after excavation to prevent erosion of materials into excavation. Before placing lagging, smooth the soil face to create a contact surface for the lagging. Backfill and compact large voids behind the lagging. Maintain a minimal gap between each vertically adjacent board for drainage between adjacent lagging sections. Never place lagging in tight contact to adjacent lagging.

D Measurement

The department will measure Timber Lagging by the 1000 foot board acceptably completed. The department will compute the measured quantity from the theoretical pay limits the contract plans show. The department will make no allowance for wall area constructed above or below the theoretical pay limits. All work beyond the theoretical pay limits is incidental to the cost of work. The department will make no allowance for as-built quantities.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0110.4000	Timber Lagging	MBM

Payment is full compensation for Timber Lagging; for furnishing, framing, installing, and the timber lagging.

267. Vibration Monitoring, Item SPV.0135.0301.

A Description

This special provision describes developing a vibration monitoring plan, deploying seismographs for continuous monitoring and recording, and submittal of required documentation.

The department is conducting and documenting a crack and damage survey of the buildings or structures below prior to performing any vibration monitoring. The contractor is responsible for arranging with the property owner the right of entry to their property, to install, maintain, and remove vibration monitoring equipment.

Any damage resulting from excessive vibration due to the contractor's operations or claims of damage during construction is the responsibility of the contractor to resolve.

B Equipment

Use seismographs meeting the requirements of Wisconsin Department of Safety and Professional Services (SPS)307.43, Wisconsin Administrative Code, that are continuous data recorders supplied with all accessories for making vibration observations.

C Construction

C.1 General

Vibration Monitoring shall be performed if a building/structure is located within 200 feet of a vibration-inducing construction operation. Establish recordings at the closest location affected by the vibration-inducing construction operation by placing seismograph(s) on a stable surface within 3 feet of the building/structure.

C.2 Monitoring Plan

Submit a monitoring plan that includes the following:

- Location of each vibration-inducing construction operation to be monitored
- Locations at which the approved seismographs will be placed
- Anticipated vibration levels at the closest building(s) or other sensitive facility during the various activities
- Anticipated monitoring duration for each monitoring location
- A recommended maximum safe peak particle velocity threshold

- Mitigation plan to reduce potentially excessive vibration levels to acceptable limits.

Obtain the engineer's acceptance of the monitoring plan prior to performing any vibration-inducing construction operation on the project.

C.3 Monitoring and Recording

Conduct monitoring procedures conforming to SPS 307.44 and as follows: Take seismograph readings before construction operations to establish an ambient or background index. Place seismographs to monitor all vibration-inducing construction operations per the accepted monitoring plan.

Monitor the following construction operations for their entire duration:

- Bridge demolition
- Bridge and sign bridge pile driving
- Sheet pile installation and removal
- Drilled Shaft installation
- MSE wall compaction
- All compaction activities utilizing large vibratory rollers
- Any other activities that may cause vibration damage to adjacent buildings, structures, or utilities.

If construction operations exceed the maximum peak particle velocity limits as established in the contractor's monitoring plan, according to SPS 304.7, stop the construction operation in progress and notify the engineer. Implement alternate construction methods to produce results within the allowable peak particle velocity limits.

C.4 Reporting

Furnish a monthly report of data recorded to the engineer.

Include the following in the report:

- Date vibration monitoring operations began for each location with an associated compilation of total days currently monitored at each site
- Identification of vibration inducing construction operations monitored each day at each location
- Serial number of vibration monitoring instrument used and record of latest calibration
- Description of contractor's equipment
- Name of observer and interpreter
- Distance and direction of recording station from vibration source
- Surficial material type at recording station
- Principal frequency and particle velocity in each component direction
- Copy of records of seismograph readings
- Contractor documentation of any operational changes necessary to reduce vibration below nuisance levels

D Measurement

The department will measure Vibration Monitoring acceptably completed by calendar month when an active seismograph is recording in a given month or a portion thereof, according to the accepted monitoring plan or as approved by the engineer.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0135.0301	Vibration Monitoring	MON

Payment of the item Vibration Monitoring is full compensation for coordination with property owners, for providing, setting up and removal of all seismographs according to the accepted monitoring plan, providing the vibration monitoring plan including any monthly updates, performing continuous monitoring and recording of vibrations, and for providing the monthly reports and all other required documentation.

268. Tactile Directional Indicators, Item SPV.0165.0400.

A Description

This special provision describes providing and constructing tactile directional indicators in concrete sidewalk.

B Materials

Furnish wet-set, replaceable, cast iron tactile directional indicator plates from Advantage Tactile, a Division of SureWerx, Elgin, IL, 60123 (844-697-2920), www.advantagetactile.com, or Neenah Foundry, Neenah, WI 54956 (920-725-7000), www.groupnei.com, or approved equal, conforming to the following requirements.

- (33) Gray cast iron, ASTM A48, Class 30 minimum
- (34) Uncoated natural patina
- (35) Size 12" wide x 12" long, or 12" wide x 24" long
- (36) Raised elongated bar spacing 3.0", bar length 10.75"
- (37) ISO 23599 compliant
- (38) Integral anchors

Castings shall be sound, free from pouring faults, cracks, blowholes and other defects.

Submit manufacturer's literature describing products, installation procedures, and routine maintenance to the engineer. Submit shop drawings to the engineer prior to procuring the plates.

Submit one sample plate that shows bar size and spacing to the engineer. Submit complete test reports to qualify that materials proposed for use are in compliance with requirements and meet or exceed the properties indicated in the specifications.

Manufacturer's Warranty: The plates shall be warranted in writing for a period of ten (10) years from date of substantial completion. The warranty shall include factory defects, breakage, and deformation.

C Construction

Coordinate with the engineer and plate manufacturer so that the surfaces being prepared and fabricated to receive the plates are constructed correctly and adequately for plate installation. Review manufacturer drawings and instructions with the engineer prior to the construction.

Embed (wet-set) tactile directional indicators in plastic concrete in accordance with manufacturer-recommended procedures. Do not install on hardened concrete. Stringline or use other engineer-approved methods to install the plates in straight lines or arcs.

Do not field cut plates except as allowed by the manufacturer. Smooth the edges of field cuts.

Anchor the plates per manufacturer instructions.

D Measurement

The department will measure Tactile Directional Indicators by the square foot acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.0400	Tactile Directional Indicators	SF

Payment is full compensation for providing and installing tactile directional indicators of the specified configuration and color, including hardware and anchoring.

The underlying concrete sidewalk will be paid separately under contract bid items.

269. High Friction Traffic Marking Green Bike Lane Panel, Item SPV.0165.0401.

A Description

The Contractor shall furnish and install white methyl methacrylate (MMA) resin with hardwearing aggregate and premium pigments to deliver a durable, highly visible and color stable bike lane panel that meets the non-slip requirements needed for pedestrians, cyclists and vehicles at the locations shown on the plans, in conformance with the details, and the material specifications included herein.

B Materials

The methyl methacrylate material shall be a two-part material. The composition is 98 parts of Component "A", homogeneously composed of pigment, filler, resins and anti-skid aggregate, and 2 parts of Component "B", liquid hardener. Part "B" shall be a benzoyl peroxide catalyst.

Use Color-Safe Pavement Marking with Anti-Skid Surface by Transpo Industries, CycleGrip MAXX by Ennis-Flint, or Roadzilla or an approved equal. Color "bike lane green" or approved equivalent. Use an MMA based resin system capable of retaining an aggregate topping under vehicular traffic conditions. Install Methyl Methacrylate (MMA) Two-Component Traffic Markings in accordance with manufactures specifications and these special provisions.

The material shall comply to the following:

Property	Value	Test Method
Tensile Strength @ 7 days, psi, minimum	400	ASTM D 638
Hardness, Shore D, minimum	50	ASTM D 2240
Gel Time, minutes, minimum	10	ASTM D 2471
Cure Rate, hours, maximum	3	Film @ 75 degrees F
Water Absorption @ 24 hours, maximum	0.25% CELL	ASTM D 570

Aggregate: The aggregate shall be high friction crushed Bauxite, No. 1 Silica, or Phonolite or equivalent. Deliver the aggregate to the construction site in clearly labeled bags or sacks. The aggregate shall be clean, dry and free from foreign matter. Aggregate shall meet the following requirements:

Property	Value	Test Method
Hardness, minimum	7	Mohs Scale

Submittal: Submit certificates of compliance certifying that the products supplied under the contract conform to these specifications. Submit Application Instructions a minimum 72 hours prior to application.

C Construction

General: Install Methyl Methacrylate (MMA) Two-Component Traffic Marking green bike lane panels in accordance with manufactures specifications.

Preparation: Prepare surfaces so that they are clean, dry, and free of all dust, oil, debris and any other material that might interfere with the bond between the MMA based resin system and existing surfaces. Contaminates that might interfere with the proper adhesion of the material must be removed by sandblasting or shotblasting. The surface should be visibly dry, and the moisture content should be tested according to ASTM D4263 (modified to 2 hours). Concrete must be fully cured for a minimum of 28 days prior to installation. Surface contaminants such as curing agents, membranes, bond breakers or laitance shall not be mechanically removed prior to marking.

Protect utilities, drainage structures, curbs and any other structure within or adjacent to the treatment location against the application of the surface treatment materials. Cover and protect all existing pavement markings that are adjacent to the application surfaces as directed by the Engineer.

Pre-treat joints greater than ¼ inches in width and depth with the MMA resin system specified herein or by using an alternative procedure proposed by the manufacturer and agreed upon by the Engineer. Proceed with the MMA resin system installation once the product, in the pre-treated areas, has gelled or once the alternative procedure has been accomplished.

Mix: MMA traffic marking is made up of three components (resin, hardener, and aggregate) that must be mixed thoroughly for uniform curing and performance. Liquid components must be homogeneously stirred

in the original containers before mixing components A and the liquid BPO concentrate catalyst, called Part B. Thoroughly mix by weight, 2 parts of the liquid hardener (Part B) with 98 parts of Component A. Mixing must be done by using a static mix tube or impingement system just prior to spray gun application on the job site.

Temperature: Material, pavement surface and ambient air temperature must be between 40° F and 105° F, and at least 5° F above dew point prior to striping. Relative humidity must be less than 75%. Installing the materials on surfaces above 105° F can lead to improper cure and dirt pickup. Surface and ambient temperatures should be checked hourly at a minimum if weather conditions cause temperatures to fluctuate during the course of the striping operation. Please note that drying time will be increased when striping at low temperatures. Both the Part A and B must be mixed thoroughly prior to application by any of the various application techniques.

Mixing and Application: Follow the MMA resin technical data sheet for application details. This material should be readily applied to Portland cement concrete and HMA surfaces sprayed at a thickness of 45 mils, and no greater than 50 mils.

Curing: Allow the MMA based resin system to cure in accordance with manufacturer recommendations. Protect treated surfaces from traffic and environmental effects until the area has cured.

PERFORMANCE REQUIREMENTS

The following guidelines shall be followed to ensure total understanding of what is expected in the application of any permanent pavement marking material on new pavement surfaces.

The pavement marking shall be uniform thickness across the entire cross section of the marking with well-defined edges. Heavy inner thickness and thin edges or vice-versa will not be accepted. Aggregate shall be spread uniformly over the entire marking. Beginning and ends of markings shall be clean cut and perpendicular to the centerline of the street.

Remove and replace methyl methacrylate that has foreign covering, discolored areas, improper adhesion, improper width, length, or thickness as verified by the Engineer against the plans or this special provision. Remove and replace areas that present a ragged appearance, areas that do not present clear and sharply defined edges, and areas with abrupt unintended changes in alignment. Remove excessive dripping of marking material between markings and remove and replace any marking applied with a lack or excess of aggregate. Remove, to the satisfaction of the Engineer, all pavement marking applied outside the scope or limits of this project. Removal and replacement of unsatisfactory pavement marking will be at the Contractor's expense. The replaced Colored White surface treatment shall meet the requirements of this sub-article.

Remove and replace Colored White surface treatment that ravels, delaminates, or wears off within 90 days after placement, unless approved to remain in place by the Engineer. The limits of removal and replacement shall be approved by the Engineer.

Lack of specified thickness: The full unit price bid per unit (each) shall be withheld if lack of thickness is found at each bike lane arrow or symbol. Each bike lane arrow or symbol marking shall be checked a minimum of one time.

Lack of specified width: Payment shall be made with penalty being equal to 25% of the unit price bid per each for each ¼ inch of width lacking not to exceed 100% of the unit price bid.

Improper adhesion: The full unit price bid per item shall be withheld for each occurrence if improper adhesion is found.

Deviation: A marking that in the judgment of the Engineer deviates from the specified layout by an unreasonable amount shall be replaced. The Contractor shall be responsible for removal of the deviated marking material/repair of the pavement as designated by, and to the satisfaction of, the Engineer at no additional compensation.

Excessive Dripping between Symbols: The full unit price bid item shall be penalized for the length of any open space between symbols that is not removed to the satisfaction of the Engineer before leaving the project site that workday. Penalty shall be imposed upon the first occurrence and every occurrence thereafter.

Warranty: The MMA based resin system material shall be installed per plans and manufacturer specification. The Engineer will notify the Contractor within 48 hours of installation regarding any of the MMA based resin system material not installed per specification or to the satisfaction of the Engineer.

Non-conforming MMA based resin system material shall be removed at no charge to WisDOT and replaced with conforming product.

The warranty period in reference to the following points is to be 1 year from date of installation. Warranty of the following items shall be submitted in writing by the Contractor or his installer prior to the pre-construction meeting.

- The MMA based resin system material will maintain its original color in the surface area throughout the 'warranty period' with the exception of natural weathering, tire and dirt deposits and abnormal markings applied after installation.
- Friction will achieve a minimum BPN of 60 in accordance with ASTM E-303
- The MMA based resin system material will maintain its skid resistance qualities in 100% of its surface area to never fall below a BPN of 60 during the 'warranty period'
- With the exception of structural cracking or excessive movement of the surface beneath, the MMA based resin system will not be subject to excessive cracking in its surface

D Measurement

The department will measure High Friction Traffic Marking Green Bike Lane Panel by the square foot acceptably completed. No deduction will be made for the areas occupied by manholes, inlets, drainage structures, pavement markings or by any public utility appurtenances within the area.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.0401	High Friction Traffic Marking Green Bike Lane Panel	SF

Payment is full compensation for furnishing and installing all materials including any re-application or repair required under the Performance Requirements and Warranty as provided herein.

270. Longitudinal Grooving Bridge Deck, Item SPV.0165.4000.

A Description

This special provision describes providing longitudinal deck grooves parallel to the centerline of the roadway prior to opening the bridge to traffic as directed by the engineer.

B Materials

Use a grooving machine containing blades mounted on a multi-blade arbor on a self-propelled machine built for grooving hardened concrete surfaces.

Use a grooving machine with a depth control device that detects variations in the deck surface and adjusts the cutting head height to maintain a specified depth of groove.

Equip the grooving machine with a guide device to control multi-pass alignment.

C Construction

Groove the pavement longitudinally without damaging the concrete deck surface.

Complete a longitudinal grooving operation that results in a uniformly grooved deck surface.

Cut grooves continuously across the deck width to within 18 inches of the barrier rail, curb line, or median divider. If metal floor drains extend more than 18 inches from the barrier rail, curb line, or median divider; all grooves on the bridge deck surface are to end within 6 inches of the floor drain perimeter.

At skewed metal edged expansion joints in the bridge deck surface, end all grooves on the bridge deck surface within 6 inches of the joint leaving no ungrooved surface adjacent to each side of the joint greater than 6 inches in width on the deck side of the expansion joints.

Produce grooves that are continuous across construction joints or other joints in the concrete deck surface less than 1/2-inch wide.

Construct longitudinal grooves with the following criteria:

Width (in)	Depth (in)	Spacing C-C (in)	Width Tolerance (in)	Depth Tolerance (in)	Spacing Tolerance (in)
1/8	3/16	3/4	0 to 1/16	± 1/16	± 1/16

Collect, remove and dispose of solid material residue and liquid waste resulting from grooving operations by vacuuming in a manner satisfactory to the engineer.

D Measurement

The department will measure Longitudinal Grooving Bridge Deck by the square foot acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4000	Longitudinal Grooving Bridge Deck	SF

Payment is full compensation for providing the required machinery and operators; for grooving, for collecting, removing and properly disposing of all waste materials.

(BOS 20241030)

271. Geocomposite Drain Board, Item SPV.0165.4100.

A Description

This special provision describes supplying and installing prefabricated geocomposite drain board as indicated on the plans. Perform work according to pertinent provisions of the standard specifications, the plans, and as hereinafter provided.

B Materials

Use materials that conform to the following:

Physical Properties	Test Method	Value
Thickness		0.25 inch
Flow capacity, (at 3600 psf with I = 1)	ASTM D 4716	9 gpm/ft
Geotextile tensile strength	ASTM D 4632	100 lb
Compressive strength	ASTM D 1621	10,000 lbs/SF
Static (CBR) Puncture	ASTM D 6241	Min. 200 lb
Apparent opening size	ASTM D 4751	#70 mesh
Flow rate	ASTM D 4491	Min 140 gpm/SF

C Construction

Handle the prefabricated geocomposite drainage board in such a manner as to ensure the geocomposite is not damaged in any way. Take care during the placement of the geocomposite not to entrap dirt or excessive dust in the geocomposite that could cause clogging of the drainage system. Deliver, store, and handle the geocomposite according to manufacturer's recommendations. Place and secure geocomposite against the retaining wall back face as indicated on the plans with the fabric facing outward towards the backfill. Make seams and overlaps between adjacent boards according to the manufacturer's recommendations and specifications.

D Measurement

The department will measure Geocomposite Drain Board by the square foot, acceptably completed. The department will not pay for repairs to the geocomposite and will not pay for overlap of drain elements.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4100	Geocomposite Drain Board	SF

Payment is full compensation for furnishing, installing, and trimming all materials; and for furnishing all equipment, fasteners, and incidentals necessary to complete the contract work.

272. Piling Steel Sheet Permanent Installed R-40-801, Item SPV.0165.4500.

A Description

This special provision describes installing permanent steel sheet piling for retaining wall R-40-801, which is immediately adjacent to Wood National Cemetery and Spring Hill Cemetery and Mausoleum.

B (Vacant)

C Construction

Conform to the requirements of standard spec 512.3 except as modified herein.

Replace standard spec 512.3.1.1 with the following:

- (1) Coordinate piling installation operations to prevent damage or displacement of concrete in substructure units or damage to adjacent facilities due to vibrations. The adjacent mausoleum building has marble facing walls that are sensitive to vibration.
- (2) Install sheeting with a variation of ¼ inch or less per foot from the vertical or from the batter the plans show. Ensure that sheet piles are within 3 inches of the plan position after installation. Do not damage sheet piles attempting to correct for misalignment.
- (3) Remove and replace, or otherwise correct, sheet piles the engineer deems unacceptable under standard spec 105.3. Submit details of planned corrections to the engineer for review and approval before initiating any corrective action.
- (4) Install sheet piles to or beyond the required tip elevation the plans show.

Replace standard spec 512.3.1.2 with the following:

- (1) Furnish a sheet pile installation system capable of installing the sheet piles to the required minimum tip elevation the plans show.
- (2) The engineer may order the contractor to remove a pile installation system component from service if it causes insufficient energy transfer or damages the sheet piles. Do not return a component to service until the engineer determines that it has been satisfactorily repaired or adjusted.
- (3) Vibratory or driven sheet piles shall not be used. Install sheet piles with a hydraulic press-in system to mitigate vibration and settlement risks.
- (4) Prior to installing the sheet piles near the Spring Hill Cemetery mausoleum building, excavate at the location shown in R-40-801 plans, to expose the top of foundation wall footing for the building. The top of footing is anticipated to be approximately four feet below floor elevation based on available existing plans. Take care to expose the electric service line buried near the foundation wall. At the same location, expose the top of footing for existing wall R-40-88 taking care not to undermine the building footing while excavating. Confirm the selected sheet pile section will not conflict with either footing during installation.
- (5) Prepare shop drawings showing layout of existing adjacent structures and utilities. Clearly describe the installation sequence and equipment required for installation and submit to the Engineer for review. Consider and include equipment space requirements near adjacent structures as part of the installation plan.

D Measurement

The department will measure Piling Steel Sheet Permanent Installed R-40-801 by the square foot acceptably completed. The department will measure the area of the wall based on plan wall lengths and the top and bottom of sheet pile elevations provided in the plans. The department will make no allowance for overlap of the piles.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4500	Piling Steel Sheet Permanent Installed R-40-801	SF

Payment is full compensation for preparing shop drawings and installation plan; installing and cutting off the steel sheet piles; and for cutting openings in the sheet piles, adding splice plates and field welding splice plates at pipe crossings as shown in the plans.

273. Screening Fence Structure Mounted, Item SPV.0165.4600; Screening Fence Ground Mounted, Item SPV.0165.4610.

A Description

This special provision describes fabricating, transporting, and erecting a precast concrete screening fence as the plans show and conforming to department-approved installation specifications, including providing an architectural surface treatment and multi-color concrete stain on the exposed concrete surfaces of the structure as the plan details show; providing structural steel posts, painting and fabrications; providing anchor bolts; and drilling shafts and placing concrete for the ground mounted foundation application.

B Materials

B.1 Screening Fence System

Required material certifications and testing are the responsibility of the contractor. All certifications and test reports shall carry the name and address of the fabrication facility where the specific material was produced. Obtain all precast concrete panels from fabrication plants that comply with the department's plant certification program in standard spec 106.3.3.3.1.

B.1.1 Concrete Masonry

Provide grade A concrete conforming to standard spec 501 as modified in standard spec 716 for precast concrete panels. Provide QMP for class II ancillary concrete as specified in standard spec 716.

B.1.2 Structural Steel

Submit to the engineer certification of compliance, including mill certifications and heat numbers, that structural steel conforms to the properties required on the plans and shop drawings, and is galvanized after fabrication by the hot-dip process according to ASTM A123. Galvanize all steel hardware and threaded fasteners, bolts, nuts, and washers according to ASTM A153.

Shop coat all steel galvanized surfaces exposed to view with a department-approved paint system. Clean galvanizing surfaces to be painted according to SSPC-SP1 to remove, chlorides, sulfates zinc salts, oil, dirt, organic matter and other contaminants. Brush Blast clean the surfaces according to SSPC-SP7 to create a slight angular surface profile (1.0 – 1.5 mils suggested) for adhesion. Do not fracture the galvanized finish or remove any dry film thickness during these processes.

After cleaning, provide a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface. The tie coat shall etch the galvanized surface and prepare the surface for the top coat. Apply a top coat matching the finished color specified in B.3.2. Use a pre-approved top coat that is resistant to the effects of the sun, and is suitable for use in a marine environment. Exercise care so as not to damage the painted surfaces during shipment and erection of the screening fence.

Use one of the qualified paint sources and products given below. An equivalent system may be used with the written approval of the engineer. Supply the engineer with the product data sheets before applying any coating. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, the minimum drying time for shop applied coats, and the recommended procedures for coating galvanized bolts, nuts, and washers.

Producer	Coat	Products	Dry Film Minimum Thickness (mils)	Minimum Time Between Coats (hours)
Sherwin Williams Co. (847) 330-1250	Tie	Recoatable Epoxy Primer B67-5 Series/B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline Co. (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Top	Carboline 133 LH	4	NA
Wasser Corp. (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA

B.1.3 Bearing Pads

Provide a neoprene bearing pad or equivalent material of 1/4 inch minimum thickness between the foundation and the bottom panels. The allowable bearing stress shall not exceed 900 psi. Precast concrete pedestals placed between the foundation and bottom panels shall be reinforced if over 1'-0" high. The bearing pads shall be preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80.

High impact plastic shims conforming to ASTM D793 and D695 are also permissible. Do not make shims of multiple layers.

B.1.4 Precast Concrete Panels

B.1.4.1 Form Liners

Use form liners that attach easily to the forming system, and do not compress more than 1/4 inch when poured at a rate of 10 vertical feet/hour.

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

Wall ties shall have set "break-backs" at a minimum of 3/4 inches from the finished concrete surface.

B.1.4.2 Concrete Staining Multi-Color Materials

B.1.4.2.1 Mortar

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

Preblended, Packaged Type II Cement:

Tri-Mix by TK Products

Thorseal Pearl Gray by Thoro Products

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

Acrylic Bonding Admixture:

TK-225 by TK Products

Achro 60 by Thoro Products

Achro Set by Master Builders

B.1.4.2.1 Concrete Stain

Shop apply concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

Tri-Sheen Concrete Surfacers, Smooth by TK Products

Tri-Sheen Acrylic by TK Products

TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products

Safe-Cure & Seal EPX by Chem Masters

H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

B.1.4.3 Test Panel

Supply and deliver to the engineer a 3 foot x 5 foot minimum test panel with the specified pattern and colors shown in the plans to demonstrate workmanship in the use of the form liner specified on the structure. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, before staining. Submit color samples to the department before staining the sample panels. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between stones produced by the form liner. Do not apply stain to the structure until the department approves the test panels. The accepted pattern and color test panels shall remain on the project site in a readily accessible location for the duration of the project. The accepted pattern and color sample panels will be the standard for all screening fence on the project.

The engineer will visually inspect panels for color consistency upon arrival at the project. The panels shall have no substantial variation in color from the accepted sample panel submitted for the project. All panels with substantial color variation will be rejected and shall be removed from the project.

B.1.5 Anchor Bolt Assemblies

Anchor bolts shall be of size and spacing as given on the plans and conform to AASHTO M 314 GR 55. Provide heavy hex nuts conforming to AASHTO M 292 and hardened washers conforming to AASHTO M 293. Provide embedded anchor plates for anchor assemblies as shown on the plans conforming to AASHTO M 223. Provide nuts and washers per anchor bolt as the plans show.

Hot dip galvanize the entire anchor assembly. Galvanize embedded anchor plates conforming to AASHTO M 111 and galvanize anchor bolts, nuts and washers conforming to AASHTO M 232. Provide enlarged threads on nuts for proper fit after galvanizing.

B.2 Project Submittal Requirements

Furnish required submittals according to the following:

B.2.1 Pre-Construction Submittals

A minimum of 14 days before beginning any shop or field work, submit the following documents to the engineer conforming to standard spec 105.2 with electronic submittal to the fabrication library under standard spec 105.2.2.

1. Detailed design/shop drawings.
2. Design/shop drawings shall conform to the contract plans and the requirements of these special provisions. The design/shop drawings shall consist of plan and profile sheets, details, explanatory notes, erection diagrams, aesthetic treatments, and other working plans. All dimensions, sizes of material, material information and other information necessary for the complete fabrication and construction of the screening fence shall be designated on the appropriate sheets. The design/shop drawings shall be drawn to an appropriate scale on reproducible sheets 11 x 17 inches including borders. Each sheet shall carry the complete project identification number and screening fence designation. Shop drawings shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.
3. Specifications regarding installation requirements and sequence of construction, including a detailed bill of materials.
4. Detailed color plan of the aesthetic treatments and finishes for the entire screening fence.
5. Shipping, handling, and storage plan identifying methods or practices to limit post-production damage.

Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings.

B.2.2 Pre-Installation Submittals

Supply and deliver to the engineer the sample panel required under Section B.3.3.1 at least 14 calendar days before beginning production and/or installation of job materials. Acceptance of the sample panel will be by: Eric Hanson; 414-840-9341; ericd.hanson@dot.wi.gov. If the panel is not acceptable, a second panel shall be produced and submitted for acceptance. Sample panel to be representative of quality for precast panel work after acceptance. Deliver test panels to the DEPARTMENT's Service Facility at 935 South 60th Street, Milwaukee, WI, for comparison purposes during production of project panels.

B.2.3 Submittal Review

The engineer's review and acceptance of the drawings and related material, submitted by the contractor, is for compliance with design intent only, and does not relieve the contractor from responsibility in regard to errors or omissions on said submittals.

The final accepted design documents and/or shop drawings will become a part of the contract. Any substitution of materials or dimensions contemplated by the contractor's submitted documents, different from materials or dimensions shown on the contract plans, shall be made only when approved by the engineer, and in such case, additional costs resulting from such substitution shall be borne by the contractor.

Ordering materials before department acceptance of submittals is at the contractor's risk.

C Construction

C.1 General

Construct the screening fence at the locations the plans show, according to the contract specifications and design drawings and/or as the engineer directs.

Provide a minimum ten-day notice to the engineer of the date that the fabrication of the screening fence material will begin.

Inspect all materials delivered to the construction site for proper dimensions, honeycombing, cracks, voids, surface defects, consistency in color and texture, and any other damage or imperfections, before installation.

If any part of the screening fence material fails to comply with any requirements of the contract specification, the component shall either be corrected, permanently marked as unacceptable and be disposed of by the contractor or accepted at a reduced price. The decision will be made by the engineer and is dependent on the severity of the specification deviation.

Erect screening fence to avoid conflict with any existing facilities or utilities to remain in place. Any damage caused by construction activities shall be repaired by the contractor at no cost to the department.

C.2 Precast Concrete Panels

C.2.1 Form Liner

Stamping of the architectural surface treatment is not allowed.

C.2.1.1 Form Liner Preparation

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

Apply form release per manufacturer's recommendations.

C.2.1.2 Form Liner Attachment

Place adjacent liners less than 1/4 inch from each other, attach liner securely to forms according to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

C.2.2 Preparation of Concrete Surfaces

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

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

3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.2.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations. The color of the staining shall produce a multi-color effect that consists of multiple colors replicating varying natural stone coloration. Stain the joints between stones produced by the form liner to create the appearance of grouted joints.

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

If touch up staining is required, wait until adjacent earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.3 Name Plates

Provide name plates conforming to the requirements of standard spec 506.2.4. Install one name plate on each screening fence at the location the plans show. Rigidly attach each plate to the screening fence by a means approved by the engineer.

Compensation for furnishing and placing of name plates shall be included in the contract price for Screening Fence Structure Mounted and Screening Fence Ground Mounted.

C.4 Structure Mounted Screening Fence

Do not erect screening fence panels mounted to retaining wall structure R-40-801 until after the concrete cap and facing have reached their specified 28-day strength.

C.5 Construction Tolerances

Install the posts and panels comprising the screening fence plumb within 1/4 inch in 8-feet. Locate the posts to the line and grades as the plans show to within +/- 3/4 inch. Align horizontal joints of adjacent panels to a vertical tolerance of 1/4 inch. Where vertical adjustments are required for alignment, use a mortar base or steel shims. Galvanize and prime coat steel shims according to B.2.2.

C.6 Anchor Bolt Assemblies

Install embedded anchor assemblies in wall R-40-801 at locations as shown on the plans. Mount anchor assemblies to formwork or otherwise provide positive support of anchor assembly within formwork as necessary to prevent movement, shifting or misalignment of the anchor assembly during subsequent concrete placement. Protect or clean exposed anchor bolt threads from concrete splatter.

Coordinate location and spacing of anchor assemblies embedded in retaining wall R-40-801 for mounting the screening fence on the wall with approved screening fence shop drawings.

C.7 Drilled Shafts

C.7.1 Installation Plan Submittal

Determine the proper means, methods, and procedure for accomplishing the work as specified herein and on the plans. Submit the proposed method for foundation drilling before beginning construction. If slurry is proposed to be used for excavation stabilization, the submitted installation plan must include all details related to use of slurry including:

- Type: Include slurry manufacture literature and mixing instructions.
- Equipment: Storage /mixing tanks, containment vessels, pumps, mixers, hoses, valves.
- Operations: Slurry mixing, pumping, containment, and recovery procedures.
- Quality Control: Slurry quality control procedures and testing during construction.

C.7.2 Excavation

Drill holes to the diameter and depth the plans show. If necessary, use casing or alternative engineer-approved methods to maintain an open hole. Do not leave excavated, uncased holes open overnight prior to filling with concrete. If bentonite or other slurry is used to maintain an open hole, prevent spillage of the slurry onto adjacent roadways or into adjacent waterways. Locate the holes within the following tolerances:

Horizontal Location: 3 inches
 Vertical Location: 1 inch
 Vertical Alignment: 1/8 inch per foot
 Hole Diameter: -0 inch to +2 inches

Provide equipment for checking the dimensions and alignment of each shaft. Remove loose material from the bottom of the shaft. For holes drilled or excavated without slurry, no more than 3 inches of standing water is permitted in the bottom of the drilled hole prior to beginning post installation and immediately prior to placing concrete masonry in the hole around the soldier pile.

D Measurement

The department will measure Screening Fence Structure Mounted and Screening Fence Ground Mounted by the square foot, acceptably completed, as the area the original plans show plus engineer-approved modifications to the plan quantity caused by plan corrections or revisions.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4600	Screening Fence Structure Mounted	SF
SPV.0165.4610	Screening Fence Ground Mounted	SF

Payment is full compensation for providing Screening Fence including coloring and aesthetic treatment on the precast panel; preparing the shop drawings; furnishing and delivering sample panels; furnishing materials test reports and certifications; furnishing, fabricating, galvanizing, painting and installing structural steel posts; furnishing and installing anchor bolt assemblies; drilling shafts and placing concrete for the ground mounted foundation application; excavation; preparing the site; erecting posts and panels; and disposing of waste materials.

274. Temporary Wall Wire Faced Mechanically Stabilized Earth, Item SPV.0165.4700.

A Description

This special provision describes designing, furnishing materials and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract.

This special provision describes the quality management program (QMP) for Mechanically Stabilized Earth (MSE) walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

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

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

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Temporary Wire Faced Mechanically Stabilized Earth Wall systems. Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The department maintains a list of pre-approved proprietary wall systems. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract.

To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid closing date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared in accordance with the

requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section at the following email address: DOTDLStructuresFabrication@dot.wi.gov.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design conforms to the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit shop drawings to the engineer conforming to 105.2 with electronic submittal to the fabrication library under 105.2.2. Certify that shop drawings conform to quality control standards by submitting department form [DT2329](#) with each set of shop drawings. Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the WisDOT project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the wall shall conform to the current American Association of State Highway and Transportation Officials LRFD (AASHTO LRFD) Bridge Design Specifications with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current Standard Specifications for Highway and Structure Construction (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the Department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance with Table 11.5.7-1 in AASHTO LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf in accordance with Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided in the wall plans.

The design of the wall by the Contractor shall consider the internal and compound stability of the wall mass in accordance with AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. The value of the pullout resistance factor, F^* , used in design calculations shall be obtained from the AASHTO LRFD Figure 11.10.6.3.2-2 as appropriate to the proposed reinforcement type. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

The wall facings shall be designed in accordance with AASHTO 11.10.2.3. A fine metallic screen and a geotextile shall be used at the front face of the wall to retain the fines of the soil mass.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height, or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement shall be the same length from the bottom to the top of the wall. All soil reinforcement layers shall be connected to wire facing panels. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 24 inches. The uppermost layer of the reinforcement shall be located between 6 inches and 12 inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

The nominal long term design strength to be used in steel reinforcement and connector design shall consider the corrosion losses and based upon conditions at the end of the design life, as described in Chapter 14 of the WisDOT LRFD Bridge Manual and AASHTO LRFD Section 11.

Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Unless approved by the Bureau of Structures cutting or altering of the basic structural section of either the strip or grid at the site is prohibited, a minimum clearance of 3" shall be maintained between any obstruction and reinforcement, and splicing steel reinforcement is not allowed.

The minimum embedment of the MSE wall shall be 1 foot 6 inches, or as given on the contract plan. Step the wall to follow the general slope of the ground line. Frost depth shall not be considered.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All documentation related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Steel Components

Provide steel reinforcement that meets the following requirements:

(39) **Welded Wire Fabric Soil Reinforcement**

Provide shop fabricated welded wire reinforcement from cold drawn steel wire that has a yield stress of 65,000 psi and conforming to the minimum requirements of ASTM A1064 and be welded into the finished configuration in accordance to ASTM A1064. Replace welded wire fabric that has been damaged during handling, placing or backfilling at the direction of the engineer, at no expense to the department.

(40) **Steel Reinforcing Strips and Tie Strips**

As an alternate to welded wire reinforcing mesh, provide steel reinforcing strips or ladder reinforcing strips or equal, hot-rolled from bars, to the required shape and dimensions meeting the requirements of ASTM A572 Grade 65 minimum. Tie strips shall be shop fabricated of hot-rolled steel meeting the requirements of ASTM A1011 Grade 50.

(41) **Welded Wire Fabric Facing Panels**

Provide welded wire fabric that is used to fabricate the facings of the wire-faced wall that has a yield stress of 65,000 psi. All steel shall be shop fabricated of cold drawn steel wire conforming to the minimum requirements of ASTM A1064 and be welded into the finished configuration in accordance to ASTM A1064. Replace welded wire fabric that has been damaged during handling, placing or backfilling at the direction of the engineer, at no expense to the department.

(42) **Fasteners**

High strength bolts meeting the requirements of AASHTO M164 or equivalent.

(43) **Connector Pins and Mat Bars**

Connector pins and mat bars fabricated from cold drawn steel wire meeting the requirements of ASTM A82.

(44) Metallic Screen

Provide a steel metallic screen. The metallic screen should have an approximate opening of 1/4" and be made of 0.025" (minimum) gauge wire.

B.3.2 Geosynthetics

B.3.2.1 Geotextiles

Geotextile shall be used behind the metallic screen. Use geotextile as recommended by the wall manufacturer. If none is recommended, use Type DF (schedule B) as shown in standard spec 645 or as specified on the contract plans. Deliver in a protective wrap and keep protected from ultraviolet light until incorporated into the work.

B.3.2.2 Geogrids

Geogrid supplied as reinforcing members shall be manufactured from long chain polymers limited to polypropylene, high-density polyethylene, polyaramid, and polyester. Geogrids shall form a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right-angle orientation. The minimum grid aperture shall be 0.5 inch. The geogrid shall maintain dimension stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. The geogrid shall be furnished in a protective wrapping that shall prevent exposure to ultraviolet radiation and damage from shipping or handling. The geogrid shall be kept dry until installed. Each roll shall be clearly marked to identify the material contained.

The wall supplier shall provide the nominal long-term design strength (T_{al}) and nominal long-term connection strength, T_{alc} in accordance with AASHTO LRFD 11.10.6.4. Values for RF_{ID} , RF_{CR} , and RF_D shall be determined from product specific test results. Even with project-specific test results for temporary walls, RF_{ID} shall not be less than 1.10, RF_{CR} shall not be less than 1.20, and RF_D shall not be less than 1.10.

The Contractor shall provide a manufacturer's certificate that the Tult (MARV) of the supplied geogrid has been determined in accordance with ASTM D4595 or ASTM D6637 as appropriate. Contractor shall also provide block to block and block to reinforcement connection test reports prepared and certified by an independent laboratory. Also provide calculations in accordance with AASHTO LRFD, and using the results of laboratory tests, that the block-geogrid connections shall be capable of resisting 100% of the maximum tension load in the soil reinforcements at any level within the wall, for the design life of the wall system.

B.3.3 Backfill

Furnish and place backfill for wall as shown on the plans and as herein provided.

Use natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. Do not use foundry sand, bottom ash, blast furnace slag, crushed/recycled concrete, crushed/milled asphaltic concrete or other potentially corrosive material.

Provide material that conforms to the following gradation requirements as per AASHTO T27.

Sieve Size	% by Weight Passing
1 inch	100
No. 40	0-60
No. 200	0-15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. Provide the percent by weight, passing the #4 sieve.

In addition, backfill material shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	5.0 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm-cm min.
Organic Content	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236[1]	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99, or as modified by C.2)

[1] If the amount of P-4 material is greater than 60%, use AASHTO 236 with a standard-size shear box. Test results of this method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM 5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1" material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified report of tests (except Angle of Internal Friction test), are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. All certified report of these test results shall be less than 6 months old and performed by a certified independent laboratory.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the MSE wall shall be in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the bottom of the wall unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store any materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth, after compaction.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facings, soil reinforcement, or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. Place and compact material beyond the reinforced soil zone to allow for proper compaction of material within the reinforced zone. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

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

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf).

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the wall face. Do not use sheepsfoot or padfoot rollers within the reinforced soil zone.

A minimum of 3 inches of backfill shall be placed over the MSE reinforcement prior to working above the reinforcement.

C.3 Wall Components

C.3.1 General

Erect welded wire facing and other associated elements according to the wall manufacturer's construction guide. Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. Place remaining courses in vertical or battered positions as shown on the contract plans.

The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstruction in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

When using a temporary wall for four (4) months or more or when the installation of a permanent wall facing will not occur for four (4) months or more after placement of any geotextile material, cover the exposed geotextile material in the wall as quickly as practical, to prevent damage caused by exposure to ultraviolet light.

C.3.2 Tolerances

- (45) The overall vertical tolerance of the wall and the horizontal alignment tolerance shall not exceed 3 inches per 10 feet for permanent installations.
- (46) For battered wire facing, the final deviation from the design batter shall be within ± 1 inch for each 10 feet of battered wall height.

C.4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.

5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A proposed sequencing plan of wall construction operations and random test locations.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Grading Technician I (GRADINGTEC-I); or Assistant Certified Technician, Grading (ACT-GRADING); or Aggregate Technician I (AGGTEC-I); or Assistant Certified Technician, Aggregate (ACT-AGG) present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Nuclear Density Technician I (NUCDENSITYTEC-I) or Assistant Certified Technician, Nuclear Density Gauge Operator (ACT-NUC) perform field density and field moisture content testing.

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

C.4.3 Equipment

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

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

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

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.

Conform to AASHTO T310 and CMM 8-15 for density testing and gauge monitoring methods.

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department.

C.4.4 Documentation

- (1) Document all observations, inspection records, and process adjustments daily. Submit test results to the department's project materials coordinator on the same day they become available.
- (2) Use forms provided in CMM Chapter 8. Note other information in a permanent field record and as a part of process control documentation enumerated in the contractor's quality control plan. Enter QC data and backfill material certified report results into the applicable materials reporting system (MRS) software within 5 business days after results are available.
- (3) Submit final testing records and other documentation to the engineer electronically within 10 business days after all contract-required information becomes available. The engineer may allow submission of scanned copies of hand-written documentation.

C.4.5 Quality Control (QC) Testing

Perform compaction testing on the backfill. Conform to CMM 8-15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 150 cubic yards of backfill, or major portion thereof in each lift. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform 1 gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.1) every 2,250 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.4.6 Department Testing

C.4.6.1 General

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

C.4.6.2 Quality Verification (QV) Testing

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.3.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.
- (3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for 10 business days.
- (4) The department will conduct QV Proctor and gradation tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.4.6.3 Independent Assurance (IA)

- (1) Independent assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 1. Split sample testing.
 2. Proficiency sample testing.
 3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. Reviewing required worksheets and control charts.
 6. Requesting that testing personnel perform additional sampling and testing.
- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.4.6.4.

C.4.6.4 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E178 to evaluate potential statistically outlying data.
- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.

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

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure the Temporary Wall Wire Faced Mechanically Stabilized Earth bid items by the square foot acceptably completed at locations the plans show, measured as the area of exposed face in the plane of the wall from the front face ground line of the wall to the retained grade. Temporary Walls used for staged construction in multiple configurations will be measured once based on the configuration with the largest area of exposed face.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4700	Temporary Wall Wire Faced Mechanically Stabilized Earth	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system, constructing the retaining system including drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, performing compaction testing; covering geotextile, and for furnishing all tools, labor, equipment, and incidentals necessary to complete the contract work.

Payment limit for all walls is the line of minimum embedment per section B.2. No payment will be made for additional embedment detailed for construction purposes.

Parapets, railings, vehicle barriers and its support, abutment bodies and other items above the wall will be paid for separately. Concrete facings, facing leveling pads or footings, and copings will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price for those items.

(BOS 20240227)

- 275. Wall Concrete Panel Mechanically Stabilized Earth R-40-734, Item SPV.0165.4734;
Wall Concrete Panel Mechanically Stabilized Earth R-40-735, Item SPV.0165.4735;
Wall Concrete Panel Mechanically Stabilized Earth R-40-736, Item SPV.0165.4736;
Wall Concrete Panel Mechanically Stabilized Earth R-40-737, Item SPV.0165.4737;
Wall Concrete Panel Mechanically Stabilized Earth R-40-739, Item SPV.0165.4739;
Wall Concrete Panel Mechanically Stabilized Earth R-40-740, Item SPV.0165.4740;
Wall Concrete Panel Mechanically Stabilized Earth R-40-741, Item SPV.0165.4741;
Wall Concrete Panel Mechanically Stabilized Earth R-40-742, Item SPV.0165.4742;
Wall Concrete Panel Mechanically Stabilized Earth R-40-744, Item SPV.0165.4744;
Wall Concrete Panel Mechanically Stabilized Earth R-40-762, Item SPV.0165.4762.**

A Description

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

This special provision describes the quality management program (QMP) for Mechanically Stabilized Earth (MSE) walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

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

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

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Concrete Panel Mechanically Stabilized Earth Wall systems. Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The department maintains a list of pre-approved proprietary wall systems. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract.

To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid opening date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared in accordance with the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section at the following email address: DOTDLStructuresFabrication@dot.wi.gov.

To be eligible to provide wall facing panels for this project, a precast concrete manufacturing plant must be pre-approved by the Bureau of Technical Services under standard specification 106.3.3.3.1 prior to the bid closing date. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Technical Services at the following email address: DOTProductSubmittal@wisconsin.gov.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit shop drawings to the engineer conforming to 105.2 with electronic submittal to the fabrication library under 105.2.2. Certify that shop drawings conform to quality control standards by submitting department form [DT2329](#) with each set of shop drawings. Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the WisDOT project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the wall shall be in compliance with the current American Association of State Highway and Transportation Officials LRFD (AASHTO LRFD) Bridge Design Specifications with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current Standard Specifications for Highway and Structure Construction (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the Department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance with Table 11.5.7-1 in AASHTO LRFD.

Design and construct the walls in accordance with the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where walls or wall sections intersect with

an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf in accordance with Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans.

The design of the wall by the Contractor shall consider the internal and compound stability of the wall mass in accordance with AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. The value of the pullout resistance factor, F^* , used in design calculations shall be obtained from the AASHTO LRFD Figure 11.10.6.3.2-2 as appropriate to the proposed reinforcement type. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

The wall facing shall be designed in accordance with AASHTO LRFD 11.10.2.3. The facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length with $\frac{3}{4}$ -inch joint widths, unless the plans indicate other maximum differential settlement requirements.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height, or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. All soil reinforcement layers shall be connected to facings. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. The uppermost layer of the reinforcement shall be located between 6 inches and 18 inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads in accordance with AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Unless approved by the Bureau of Structures cutting or altering of the basic structural section of either the strip or grid at the site is prohibited, a minimum clearance of 3" shall be maintained between any obstruction and reinforcement, and splicing reinforcement is not allowed.

The minimum embedment of the wall shall be 1 foot 6 inches below finished grade, or as given on the plans. All walls shall be provided with a concrete leveling pad. Minimum wall embedment does not include the leveling pad depth. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad.

Wall facing units shall be installed on a leveling pad.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All documentation related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing

Wall facing shall consist of modular precast concrete face panels produced by a wet cast process. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The concrete for the panels shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of standard spec 501. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joint widths between panels shall be uniform and $\frac{3}{4}$ -inch, unless noted otherwise on the plans. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact. Panels shall be reinforced using coated high-strength bar steel or welded steel wire fabric conforming to standard spec 505. Welded steel wire fabric shall be epoxy-coated in accordance with ASTM A884 or galvanized in accordance with AASHTO M 111 or ASTM A641. Panel dowels for cast-in-place copings shall be coated high-strength bar steel conforming to standard spec 505. Unless approved by the Bureau of Structures, adhesive anchors are prohibited.

For reinforced cast-in-place concrete cap or coping, use poured Grade A concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast-in-place cap and coping concrete as specified in standard spec 716, Class II Concrete. Use coated high-strength bar steel conforming to standard spec 505.

Provide a minimum of two bearing pads per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be preformed EPDM rubber conforming to ASTM D2000, Grade 2, Type A, Class A with a Durometer Hardness of 80 +/-5, or high-density polyethylene pads with a minimum density of 0.034 lb/in³ in accordance with ASTM D1505.

An 18-inch wide geotextile shall be used on the backface of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

B.3.2 Leveling Pad

Provide an unreinforced cast-in-place concrete leveling pad. Use Grade A concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

The minimum width of the leveling pad shall be 12-inches. The minimum thickness of the leveling pad shall be 6-inches.

B.3.3 Backfill

Furnish and place backfill for the wall as shown on the plans and as hereinafter provided.

Place backfill in a zone extending horizontally from the back face of the wall facing to 1 foot minimum beyond the end of the reinforcement and extending vertically from the top of the leveling pad to a minimum of 3 inches above the final reinforcement layer.

Use natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. Do not use foundry sand, bottom ash, blast furnace slag, crushed/recycled concrete, crushed/milled asphaltic concrete or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	% by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. Provide the percent by weight, passing the #4 sieve.

In addition, backfill material shall meet the following requirements.

Test	Method	Value	
		(Galvanized)	(Aluminized Type 2)
pH	AASHTO T-289	5.0-10.0	5.0 – 9.0
Sulfate content	AASHTO T-290	200 ppm max.	
Chloride content	AASHTO T-291	100 ppm max.	
Electrical Resistivity	AASHTO T-288	3000 ohm-cm min.	1500 ohm-cm min.
Organic Content	AASHTO T-267	1.0% max.	
Angle of Internal Friction	AASHTO T-236 ^[1]	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99, or as modified by C.2.)	

^[1] If the amount of P-4 material is greater than 60%, use AASHTO 236 with a standard-size shear box. Test results of this method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM D5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1" material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified report of tests are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. For the additional required testing for every 2000 cubic yards of backfill placement, if the characteristic of the backfill and/or the source has not changed then Angle of Internal Friction tests are not included in the additional required testing. All certified reports of test results shall be less than 6 months old and performed by a certified independent laboratory.

B.3.4 Soil Reinforcement

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability. Soil reinforcement shall be galvanized or aluminized Type 2. Galvanized soil reinforcement shall be in accordance with AASHTO M 111 or ASTM A641. Aluminized soil reinforcement shall be in accordance with ASTM A463 Aluminized Type 2-100, SS, Grade 50, Class 2. Design of galvanized soil reinforcement shall be in accordance to Section 11.10.6.4.2 of the current AASHTO LRFD Specifications. The design life of steel soil reinforcements shall comply with AASHTO LRFD. Aluminized soil reinforcement shall be limited 16 years of steel protection. Aluminized steel shall only be used on soil reinforcement elements and shall not be used on facing connections or any other

steel portion of the wall system. Steel soil reinforcement shall be prefabricated into single or multiple elements before galvanizing.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the MSE wall and the leveling pad shall be in accordance with standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth, after compaction.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall panels, soil reinforcement, or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. Place and compact material beyond the reinforced soil zone to allow for proper compaction of material within the reinforced zone. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back panels. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the panels.

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf).

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels. Do not use sheepsfoot or padfoot rollers within the reinforced soil zone.

A minimum of 3 inches of backfill shall be placed over the MSE reinforcement prior to working above the reinforcement.

C.3 Wall Components

C.3.1 General

Erect panel facing and other associated elements according to the wall manufacturer's construction guide. Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing.

The MSE reinforcement shall lay horizontally on the top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstructions in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.3.2 Leveling Pad

Provide an unreinforced cast-in-place concrete leveling pad as shown on the plans. Vertical tolerances shall not exceed 3/4-inch when measured along a 10-foot straight edge. Allow concrete to set at least 12 hours prior to placing wall facing units.

The bottom row of wall facing units shall be horizontal and 100% of the unit surface shall bear on the leveling pad. Rubber or plastic shims may be used to level the wall facing units at the leveling pad. No more than 2 shims (each 3/16-inch thick) shall be used to level the wall facing.

C.3.3 Steel Layers

Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C.3.4 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed 3/4-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be 3/4-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed 1/2-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a uniform joint width between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this width by the use of bearing pads and/or alignment pins. The final joint width shall be within 1/4-inch of the design joint width. Failure to meet this tolerance shall cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C.4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A proposed sequencing plan of wall construction operations and random test locations.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Grading Technician I (GRADINGTEC-I); or Assistant Certified Technician, Grading (ACT-GRADING); or Aggregate Technician I (AGGTEC-I); or Assistant Certified Technician, Aggregate (ACT-AGG) present at the grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Nuclear Density Technician I (NUCDENSITYTEC-I) or Assistant Certified Technician, Nuclear Density Gauge Operator (ACT-NUC) perform field density and field moisture content testing.

If an Assistant Certified Technician (ACT) is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that

all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

C.4.3 Equipment

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

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

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

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.

Conform to AASHTO T310 and CMM 8-15 for density testing and gauge monitoring methods.

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department.

C.4.4 Documentation

- (1) Document all observations, inspection records, and process adjustments daily. Submit test results to the department's project materials coordinator on the same day they become available.
- (2) Use forms provided in CMM Chapter 8. Note other information in a permanent field record and as a part of process control documentation enumerated in the contractor's quality control plan. Enter QC data and backfill material certified report results into the applicable materials reporting system (MRS) software within 5 business days after results are available.
- (3) Submit final testing records and other documentation to the engineer electronically within 10 business days after all contract-required information becomes available. The engineer may allow submission of scanned copies of hand-written documentation.

C.4.5 Quality Control (QC) Testing

Perform compaction testing on the backfill. Conform to CMM 8-15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 150 cubic yards of backfill, or major portion thereof in each lift. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform one gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.2) every 2,250 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.4.6 Department Testing

C.4.6.1 General

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

C.4.6.2 Quality Verification (QV) Testing

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.4.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.

- (3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for 10 business days.
- (4) The department will conduct QV Proctor and gradation tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.4.6.3 Independent Assurance (IA)

- (1) Independent assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 1. Split sample testing.
 2. Proficiency sample testing.
 3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. Reviewing required worksheets and control charts.
 6. Requesting that testing personnel perform additional sampling and testing.
- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.4.6.4.

C.4.6.4 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.
- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.
- (3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth by the square foot acceptably completed. The department will compute the measured quantity from the theoretical pay limits

the contract plans show. The department will make no allowance for wall area constructed above or below the theoretical pay limits. All work beyond the theoretical pay limits is incidental to the cost of work. The department will make no allowance for as-built quantities.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4734	Wall Concrete Panel Mechanically Stabilized Earth R-40-734	SF
SPV.0165.4735	Wall Concrete Panel Mechanically Stabilized Earth R-40-735	SF
SPV.0165.4736	Wall Concrete Panel Mechanically Stabilized Earth R-40-736	SF
SPV.0165.4737	Wall Concrete Panel Mechanically Stabilized Earth R-40-737	SF
SPV.0165.4739	Wall Concrete Panel Mechanically Stabilized Earth R-40-739	SF
SPV.0165.4740	Wall Concrete Panel Mechanically Stabilized Earth R-40-740	SF
SPV.0165.4741	Wall Concrete Panel Mechanically Stabilized Earth R-40-741	SF
SPV.0165.4742	Wall Concrete Panel Mechanically Stabilized Earth R-40-742	SF
SPV.0165.4744	Wall Concrete Panel Mechanically Stabilized Earth R-40-744	SF
SPV.0165.4762	Wall Concrete Panel Mechanically Stabilized Earth R-40-762	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings, leveling pads, leveling pad steps, and shims; constructing the retaining system and providing temporary drainage; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, and performing compaction testing.

The department will pay separately for parapets, traffic barriers, railings, and other items above the wall cap or coping.

(BOS 20230502)

276. Asphaltic Material Binder, Item SPV.0180.0420.

A Description

This special provision describes furnishing and applying an asphaltic material binder to aggregate, at locations shown in the plans, to control erosion and prevent the growth of vegetation.

B Materials

B.1 General

Furnish emulsified asphalt, type RS 1 or RS 2 conforming to AASHTO M140, or type CRS 1 or CRS 2 conforming to AASHTO M208 for the asphaltic material.

Furnish evidence, to the satisfaction of the engineer, that the proposed product has been successfully used in a similar application.

C Construction

C.1 Application

Apply the Asphaltic Material binder uniformly over the dry surface at a rate just sufficient to ensure penetration and binding of the particles in the upper 2 inches of the aggregate blanket conforming to the manufacturer's recommended rate and procedures. Avoid excessive application of asphaltic material binder and prevent material run-off. Protect the surface of adjacent structures, barriers, and pavement to prevent splattering or discoloration by asphaltic material.

Protect asphaltic material binder from excessive dust exposure for the first 4 hours of curing.

C.2 Test Section

Prepare a test section utilizing aggregate and asphaltic material binder so the engineer will be able to assess the adequacy of the product and the application to yield the desired results. Test section to be a

minimum of 3-feet x 3-feet. Notify the engineer at least 24 hours before preparing the test section to allow them time to arrange for witnessing the asphaltic material binder application and mixing with the aggregate. Cure test section according to product manufacturer's requirements before the engineer will accept the product for use.

If the test section is not accepted, prepare another test section and repeat the process. Repeat this procedure until the engineer accepts the test section. Use the same asphaltic material binder means and methods when installing the product that was used in preparing the accepted test section.

D Measurement

The department will measure Asphaltic Material Binder by the square yard in place, 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.0180.0420	Asphaltic Material Binder	SY

Payment is full compensation for furnishing, mixing and applying the asphaltic material binder to the aggregate; for cleaning splatter of asphaltic material binder from adjacent structures, barriers, and pavement; and for making and disposing of test sections.

sef-460-010 (20141210)

277. HPC Pavement 9-Inch, Item SPV.0180.0421; HPC Pavement HES 9-Inch, Item SPV.0180.0422.

A. Description

This special provision describes specialized material and construction requirements for high performance concrete pavement and HES high performance concrete pavement. Conform to standard spec 415, 501, 710, and 715 as modified in this special provision.

B. Materials

415.2 Materials

415.2.1 Concrete

Replace 415.2.1(1) with the following:

- (1) Furnish grade A concrete conforming to 501 except develop a concrete mixture to follow 501.3.2.3 and as modified for class I pavement concrete in 715. Provide QMP for class I pavement concrete as specified in 715.

501.2.7.3 Coarse Aggregates

501.2.7.3.1 General

Replace the entire text of 501.2.7.3.1 with the following:

- (1) Provide coarse aggregates from a department-approved source. Use an approved source listed on the APL or follow the source approval process specified in standard spec 106.3.4.2. In addition to the requirements of standard spec 106.3.4.2, perform tests for LA wear, sodium sulfate soundness, freeze-thaw soundness and lightweight pieces at least once per calendar year when producing coarse aggregates for use in high-performance concrete mixes.
- (2) Use clean, hard, durable crushed limestone free of excess flat and elongated pieces, lightweight particles, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.
- (3) Use virgin aggregates only.
- (4) Contact the engineer a minimum of 4 weeks prior to paving to collect a sample of the aggregates proposed for the project. The engineer will obtain the sample or observe the contractor obtaining the sample. The sampler must be HTCP certified to sample aggregates.
- (5) Only the department test results will be used for aggregate acceptance.

- (6) The department will randomly sample coarse aggregate for lightweight pieces testing at least once per 10,000 cubic yards during placement of concrete pavement.

501.2.7.3.2 Physical Properties

Replace 501.2.7.3.2 paragraph one with the following:

- (1) Furnish coarse aggregates approved for use in concrete masonry structures and conforming to the following:

Aggregate Quality Test	Test Method	Maximum Percent by Weight
LA Wear (100 and 500 revolutions) ^[1]	WTM T96	35
Sodium Sulfate Soundness (R-4, 5 cycles) ^[1]	WTM T104	6
Freeze-Thaw Soundness ^[1]	WTM T103	12
Lightweight Pieces ^{[1] [2]}	WTM T113	2.0

^[1] Coarse aggregate sizes used in the Portland Cement Concrete mixture design (DT2221 Concrete Mixture Design – Optimized Aggregate Gradation) will be tested individually and the results weighted by the blend percentage listed in the mix design. Do not consider fine aggregate percentage as part of the weighted result.

^[2] Material having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of lightweight pieces in the sample retained on the 3/8-inch sieve by the weight of the total sample.

501.2.7.3.3 Deleterious Substances

Replace 501.2.7.3.3 paragraph one with the following:

- (1) Furnish aggregates that conform to the following:

Deleterious Substance	Test Method	Maximum Percent by Weight
Coal, clay lumps, shale, and other deleterious substance	Visual	3.0
Flat or elongated pieces based on a 3:1 ratio ^[1]	WTM D4791	15.0
Materials passing the No. 200 sieve	WTM T11	1.5

710.5 Sampling and Testing

710.5.5 Strength

Replace 710.5.5(1) with the following:

- (1) Cast all 6-inch x 6-inch x 21-inch beams in a set from the same sample. Do not cast more than one set of specimens from a single truckload of concrete. Mark each specimen to identify the lot and subplot or location on the project it represents.

Supplement 710.5.5 with the following:

- (4) Cast an additional set of three 6"x12" cylinders for concrete surface resistivity.

715.2.1 General

Replace 715.2.1 paragraph four with the following:

- (4) The regional materials engineer must review and approve the submitted mix design within 7 business days of receiving the mix design submittal and complete Project Staff Review section of mix design certification within DT2220 or DT2221.

715.3 Testing and Acceptance

715.3.1 Class I Concrete Testing

715.3.1.1 General

Replace 715.3.1.1 (1) with the following:

- (1) Provide slump, air content, concrete temperature, and strength test results as specified in 710.5. Provide a battery of QC tests, consisting of results for each specified property, using a single sample randomly located within each subplot. Cast 3 specimens for strength evaluation.

715.3.1.1.1 Flexural Strength

Replace 715.3.1.1.1(1) with the following:

- (1) Cast 3 beams for flexural strength acceptance testing at 28 days.

715.3.1.1.2 Surface Resistivity

Replace 715.3.1.1.2 (1) with the following:

- (1) Test concrete surface resistivity according to AASHTO T358. Submit the resistivity to the nearest tenth into MRS for information only. Perform this testing at least once per lot.

715.3.2 Strength Evaluation

715.3.2.1 General

Replace 715.3.2.1 (1) with the following:

- (1) The department will make pay adjustments for strength on a lot-by-lot basis using the flexural strength of contractor QC beams.

715.5 Payment

715.5.1 General

Replace 715.5.1 with the following:

- (1) The department will pay incentive for strength under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
715.0715	Incentive Flexural Strength Concrete Pavement	DOL

- (2) Incentive payment may be more or less than the amount the schedule of items shows.
- (3) The department will administer disincentives for strength under the Disincentive Flexural Strength Concrete Pavement administrative item.
- (4) The department will adjust pay for each lot using PWL of the 28-day subplot average strengths for that lot. The department will measure PWL relative to strength lower specification limits as follows
 - Flexural strength of 650 psi for pavements
- (5) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.
- (6) Submit strength results to the department electronically using the MRS software. The department will validate contractor data before determining pay adjustments.
- (7) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

Delete section 715.5.2.1.

C. Construction

415.3.8 Surface Finishing

415.3.8.2 Design Speed Less Than 40 MPH

Supplement standard spec 415.3.8.2 with the following:

- (4) Once the curing compound has been applied, do not alter the surface texture unless the engineer directs or allows otherwise.

415.3.8.3 Design Speed - 40 MPH and Higher

415.3.8.3.1 General

Supplement standard spec 415.3.8.3.1 with the following:

- (5) Once the curing compound has been applied, do not alter the surface texture unless the engineer directs or allows otherwise.

415.3.12 Curing Concrete

415.3.12.1 General

Supplement the standard spec 415.3.12.1 with the following:

- (3) Cure all concrete within 75 minutes from the time concrete is discharged from the truck, unless the contractor can show the engineer there is still free water on the surface.

501.3.2.4.3.3 Extended Delivery Time

Delete 501.3.2.4.3.3 paragraph one.

501.3.5 Ready-Mixed Concrete

501.3.5.1 General

Replace 501.3.5.1 paragraph one with the following:

- (1) Use central-mixed concrete as defined in standard spec 501.3.5.1(2) for all work performed under this special provision.

501.3.5.2 Delivery

Replace 501.3.5.2(3) with the following:

- (3) Deliver and completely discharge the concrete within the following limits, beginning when adding water to the cement, or when adding cement to the aggregates. A decrease in air temperature below 60 F or the use of department-approved retarders does not increase the discharge time.

Delivered in Agitating Vehicles:

- 60 minutes regardless of the concrete temperature at placement and the contractor use of a department-approved retarder.

Delivered in Non-Agitating Vehicles:

- 30 minutes if the concrete temperature is 85 F or higher at placement, and the contractor does not use a department-approved retarder.
- 45 minutes if the concrete temperature is 60 F to less than 85 F at placement, and the contractor does not use a department-approved retarder.
- 60 minutes if the concrete temperature is less than 60 F at placement.
- 60 minutes if the concrete temperature is 60 F or higher at placement, and the contractor uses a department-approved retarder

501.3.8.2 Hot Weather Concreting

501.3.8.2.1 General

Replace all of 501.3.8.2.1 with the following:

- (1) The contractor is responsible for the quality of concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions to control concrete temperature if the concrete temperature at the point of placement exceeds 80 F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.
- (2) If the concrete temperature at the point of placement exceeds 90 F, do not place concrete for items covered in this special provision.
- (3) If the air temperature exceeds 80 F, ensure that the base material is in a moist condition during concrete placement. Water the base, as required, not less than 6 hours before placing the concrete. If the base material subsequently dries, moisten it by sprinkling water just before placing the concrete. Sprinkle the water to avoid forming pools.

- (4) Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80 F. If project information is not available, the contractor should obtain information from similar mixes placed for other nearby work.

D. Measurement

The department will measure HPC Pavement 9-Inch by square yards, acceptably completed, in accordance with standard spec 415 and as modified herein.

E. Payment

Conform to standard spec 415.5 and as modified in this special provision.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0421	HPC Pavement 9-Inch	SY
SPV.0180.0422	HPC Pavement HES 9-Inch	SY

The department will pay separately for the following bid items: 715.0715 Incentive Flexural Strength Concrete Pavement. Payment for is full compensation for providing pavement; for preparing the foundation, unless provided otherwise; for placing thickness plates; and for thickness coring and filling core holes as required under 415.3.16.4. Payment also includes providing tie bars and dowel bars within concrete placed under the contract. The department will pay separately for tie bars and dowel bars used to connect the work to concrete not placed under the contract under the Drilled Tie Bars and Drilled Dowel Bars bid items as specified in 416.5. The department will not pay for removal and replacement of pavement not meeting the surface smoothness tolerances specified in 415.3.10.

278. HPC Pavement 12-Inch, Item SPV.0180.0423.

A. Description

This special provision describes specialized material and construction requirements for high performance concrete used in mainline pavement and shoulders. Conform to standard spec 415, 501, 710, and 715 as modified in this special provision.

B. Materials

415.2 Materials

415.2.1 Concrete

Replace 415.2.1(1) with the following:

- (1) Furnish grade A concrete conforming to 501 except develop a concrete mixture to follow 501.3.2.3 and as modified for class I pavement concrete in 715. Provide QMP for class I pavement concrete as specified in 715.

415.2.2 Reinforcement

Supplement standard spec 415.2.2 with the following:

- (1) Furnish High Performance Dowel Bars from the APL.

501.2.7.3 Coarse Aggregates

501.2.7.3.1 General

Replace the entire text of 501.2.7.3.1 with the following:

- (1) Provide coarse aggregates from a department-approved source. Use an approved source listed on the APL or follow the source approval process specified in standard spec 106.3.4.2. In addition to the requirements of standard spec 106.3.4.2, perform tests for LA wear, sodium sulfate soundness, freeze-thaw soundness and lightweight pieces at least once per calendar year when producing coarse aggregates for use in high-performance concrete mixes.
- (2) Use clean, hard, durable crushed limestone free of excess flat and elongated pieces, lightweight particles, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.
- (3) Use virgin aggregates only.

- (4) Contact the engineer a minimum of 4 weeks prior to paving to collect a sample of the aggregates proposed for the project. The engineer will obtain the sample or observe the contractor obtaining the sample. The sampler must be HTCP certified to sample aggregates.
- (5) Only the department test results will be used for aggregate acceptance.
- (6) The department will randomly sample coarse aggregate for lightweight pieces testing at least once per 10,000 cubic yards of concrete during placement of concrete pavement.

501.2.7.3.2 Physical Properties

Replace 501.2.7.3.2 paragraph one with the following:

- (1) Furnish coarse aggregates approved for use in concrete pavement and conforming to the following:

Aggregate Quality Test	Test Method	Maximum Percent by Weight
LA Wear (100 and 500 revolutions) ^[1]	WTM T96	35
Sodium Sulfate Soundness (R-4, 5 cycles) ^[1]	WTM T104	6
Freeze-Thaw Soundness ^[1]	WTM T103	10
Lightweight Pieces ^{[1] [2]}	WTM T113	2.0

^[1] Coarse aggregate sizes used in the Portland Cement Concrete mixture design (DT2221 Concrete Mixture Design – Optimized Aggregate Gradation) will be tested individually and the results weighted by the blend percentage listed in the mix design. Do not consider fine aggregate percentage as part of the weighted result.

^[2] Material having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of lightweight pieces in the sample retained on the 3/8-inch sieve by the weight of the total sample.

501.2.7.3.3 Deleterious Substances

Replace 501.2.7.3.3 paragraph one with the following:

- (1) Furnish aggregates that conform to the following:

Deleterious Substance	Test Method	Maximum Percent by Weight
Coal, clay lumps, shale, and other deleterious substance	Visual	3.0
Flat or elongated pieces based on a 3:1 ratio ^[1]	WTM D4791	15.0
Materials passing the No. 200 sieve	WTM T11	1.5

710.5 Sampling and Testing

710.5.5 Strength

Replace 710.5.5(1) with the following:

- (1) Cast all 6-inch x 6-inch x 21-inch beams in a set from the same sample. Do not cast more than one set of specimens from a single truckload of concrete. Mark each specimen to identify the lot and subplot or location on the project it represents.

Supplement 710.5.5 with the following:

- (4) Cast an additional set of three 6"x12" cylinders for concrete surface resistivity.

715.2.1 General

Replace 715.2.1 paragraph four with the following:

- (4) The regional materials engineer must review and approve the submitted mix design within 7 business days of receiving the mix design submittal and complete Project Staff Review section of mix design certification within DT2220 or DT2221.

715.3 Testing and Acceptance

715.3.1 Class I Concrete Testing

715.3.1.1 General

Replace 715.3.1.1 (1) with the following:

- (1) Provide slump, air content, concrete temperature, and strength test results as specified in 710.5. Provide a battery of QC tests, consisting of results for each specified property, using a single sample randomly located within each subplot. Cast 3 specimens for strength evaluation.

715.3.1.1.1 Flexural Strength

Replace 715.3.1.1.1(1) with the following:

- (1) Cast 3 beams for flexural strength acceptance testing at 28 days.

715.3.1.1.2 Surface Resistivity

Replace 715.3.1.1.2 (1) with the following:

- (1) Test concrete surface resistivity according to AASHTO T358. Submit the resistivity to the nearest tenth into MRS for information only. Perform this testing at least once per lot.

715.3.2 Strength Evaluation

715.3.2.1 General

Replace 715.3.2.1 (1) with the following:

- (1) The department will make pay adjustments for strength on a lot-by-lot basis using the flexural strength of contractor QC beams.

715.5 Payment

715.5.1 General

Replace 715.5.1 with the following:

- (1) The department will pay incentive for strength under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
715.0715	Incentive Flexural Strength Concrete Pavement	DOL

- (2) Incentive payment may be more or less than the amount the schedule of items shows.
- (3) The department will administer disincentives for strength under the Disincentive Flexural Strength Concrete Pavement administrative item.
- (4) The department will adjust pay for each lot using PWL of the 28-day subplot average strengths for that lot. The department will measure PWL relative to strength lower specification limits as follows
 - Flexural strength of 650 psi for pavements
- (5) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.
- (6) Submit strength results to the department electronically using the MRS software. The department will validate contractor data before determining pay adjustments.
- (7) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

Delete section 715.5.2.1.

C. Construction

415.3.7 Jointing

415.3.7.1 General

Add the following to standard spec 415.3.7.1:

- (9) Treat sawed surfaces and at least 1" on both sides of transverse joints and longitudinal joints with a silane joint sealer found on the department's Concrete Protective Surface Treatments approved products list. Conform to the manufacturer's recommendations for use of the product.
- (10) The contractor shall perform a field trial under the department's observation to demonstrate the application method for the silane treatment of the joint. The field trial can be done with bricks or cinder blocks and shall be constructed in a way that represents a sawed concrete joint. The field trial must show the proposed application method can consistently treat the surfaces of the joint and 1" on both sides of the joint.
- (11) Clean the saw cut by water blast and air to thoroughly remove cutting residue prior to application of the silane treatment.

415.3.8 Surface Finishing

415.3.8.2 Design Speed Less Than 40 MPH

Supplement standard spec 415.3.8.2 with the following:

- (4) Once the curing compound has been applied, do not alter the surface texture unless the engineer directs or allows otherwise.

415.3.8.3 Design Speed - 40 MPH and Higher

415.3.8.3.1 General

Supplement standard spec 415.3.8.3.1 with the following:

- (5) Once the curing compound has been applied, do not alter the surface texture unless the engineer directs or allows otherwise.

415.3.12 Curing Concrete

415.3.12.1 General

Supplement the standard spec 415.3.12.1 with the following:

- (3) Cure all concrete within 75 minutes from the time concrete is discharged from the truck, unless the contractor can show the engineer there is still free water on the surface.

501.3.2.4.3.3 Extended Delivery Time

Delete 501.3.2.4.3.3 paragraph one.

501.3.5 Ready-Mixed Concrete

501.3.5.1 General

Replace 501.3.5.1 paragraph one with the following:

- (1) Use central-mixed concrete as defined in standard spec 501.3.5.1(2) for all work performed under this special provision.

501.3.5.2 Delivery

Replace 501.3.5.2(3) with the following:

- (3) Deliver and completely discharge the concrete within the following limits, beginning when adding water to the cement, or when adding cement to the aggregates. A decrease in air temperature below 60 F or the use of department-approved retarders does not increase the discharge time.

Delivered in Agitating Vehicles:

- 60 minutes regardless of the concrete temperature at placement and the contractor use of a department-approved retarder.

Delivered in Non-Agitating Vehicles:

- 30 minutes if the concrete temperature is 85 F or higher at placement, and the contractor does not use a department-approved retarder.

- 45 minutes if the concrete temperature is 60 F to less than 85 F at placement, and the contractor does not use a department-approved retarder.
- 60 minutes if the concrete temperature is less than 60 F at placement.
- 60 minutes if the concrete temperature is 60 F or higher at placement, and the contractor uses a department-approved retarder

501.3.8.2 Hot Weather Concreting

501.3.8.2.1 General

Replace all of 501.3.8.2.1 with the following:

- (1) The contractor is responsible for the quality of concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions to control concrete temperature if the concrete temperature at the point of placement exceeds 80 F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.
- (2) If the concrete temperature at the point of placement exceeds 90 F, do not place concrete for items covered in this special provision.
- (3) If the air temperature exceeds 80 F, ensure that the base material is in a moist condition during concrete placement. Water the base, as required, not less than 6 hours before placing the concrete. If the base material subsequently dries, moisten it by sprinkling water just before placing the concrete. Sprinkle the water to avoid forming pools.
- (4) Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80 F. If project information is not available, the contractor should obtain information from similar mixes placed for other nearby work.

D. Measurement

The department will measure HPC Pavement 12-Inch by square yards, acceptably completed, in accordance with standard spec 415 and as modified herein.

E. Payment

Conform to standard spec 415.5 and as modified in this special provision.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0423	HPC Pavement 12-Inch	SY

The department will pay separately for the following bid items: 715.0715 Incentive Flexural Strength Concrete Pavement.

Payment for is full compensation for providing pavement; for preparing the foundation, unless provided otherwise; for placing thickness plates; and for thickness coring and filling core holes as required under 415.3.16.4. Payment also includes providing tie bars and High Performance Dowel Bars within concrete placed under the contract. The department will pay separately for tie bars and High Performance Dowel Bars used to connect the work to concrete not placed under the contract under the Drilled Tie Bars and Drilled High Performance Dowel Bars bid items as specified in 416.5. The department will not pay for removal and replacement of pavement not meeting the surface smoothness tolerances specified in 415.3.10.

279. HMA Longitudinal Joint Repair, Item SPV.0195.0443.

A Description

This special provision describes providing longitudinal joint repairs in HMA pavements. Conform to standard spec 204, 315, 455, and 460, and as follows.

B Materials

Furnish asphaltic mixture as specified for type 3 HT 58-28 H under standard spec 460.2.

Provide tack coat conforming to standard spec 455.2.5.

C Construction

C.1 General

Remove an area 1.5 to 3 feet wide and at least to the full depth of asphaltic pavement; the engineer will determine the repair length. Remove damaged concrete pavement discovered below the asphalt during this removal and replace with asphalt mixture.

Clean the existing exposed concrete pavement surface before placing tack coat.

Apply asphaltic materials the same day the joint is removed to prevent the entrance of water. Do not apply if weather or surface conditions are unfavorable or before impending rains.

Conform to standard spec 315.3.1 for placement of the HMA pavement.

Dispose of removed pavement and other waste materials outside of the project limits unless the engineer allows otherwise.

C.2 Maintenance

Maintain repaired joints during the contract. Remove and replace additional tack coat and HMA pavement if the engineer directs.

D Measurement

The department will measure HMA Longitudinal Joint Repair by the ton, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.0443	HMA Longitudinal Joint Repair	TON

Payment is full compensation for providing the joint repair including removing the existing asphaltic surface and damaged concrete; for tack coat and asphaltic pavement mixture; and for maintaining the repair during the contract.

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280. HMA Transverse Joint Repair, Item SPV.0195.0444.

A Description

This special provision describes providing transverse joint repairs in HMA pavements at bridges. Conform to standard spec 204, 315, 455, and 460, and as follows.

B Materials

Furnish asphaltic mixture as specified for type 3 MT 58-28 S under standard spec 460.2. Provide tack coat conforming to standard spec 455.2.5.

C Construction

C.1 General

Remove an area two feet wide and at least to the full depth of asphaltic pavement; the engineer will determine the repair length. Remove damaged concrete pavement discovered below the asphalt during this removal, and replace with asphalt mixture.

Clean the existing exposed concrete pavement surface before placing tack coat.

Apply asphaltic materials the same day the joint is removed to prevent the entrance of water. Do not apply if weather or surface conditions are unfavorable or before impending rains.

Conform to standard spec 315.3.1 for placement of the HMA pavement

Dispose of removed pavement and other waste materials outside of the project limits unless the engineer allows otherwise.

C.2 Maintenance

Maintain repaired joints during the contract. Remove and replace additional tack coat and HMA pavement if the engineer directs.

D Measurement

The department will measure HMA Transverse Joint Repair by the ton, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.0444	HMA Transverse Joint Repair	TON

Payment is full compensation for providing the joint repair including removing the existing asphaltic surface and damaged concrete; for tack coat and asphaltic pavement mixture; and for maintaining the repair during the contract.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1) HIGHWAY CONSTRUCTION SKILLS TRAINING (HCST) 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 include: 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).

The Wisconsin Department of Transportation OJT program was originally established in 1995. Highway Construction Skills Training (HCST) was previously known as Transportation Alliance for New Solutions (TrANS) and underwent a name change in early 2023. HCST is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities, and disadvantaged persons as laborers and apprentices in the highway skilled trades. Candidate preparation and contractor coordination services (OJT Supportive Services) are provided by contracted community-based organizations.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or advancement to apprenticeship of Highway Construction Skills Training (HCST) graduates and employing eligible trainees in qualifying trades will be made as follows:

- 1) **On-the-Job Training, Item ASP.1T0G, ASP 1 HCST Graduate.** At the rate of \$5.00 per hour on Federal-aid projects when HCST graduates are initially hired, or seasonally rehired, as unskilled laborers or equivalent.
Eligibility and Duration: To the employing contractor, for up to 2,000 hours or two years, whichever comes first from the point of initial hire as a HCST placement.
Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 18 HCST Graduate(s) be utilized for 72000 hours 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 HCST Program is subsequently entered into an apprenticeship contract in a qualifying trade.
Eligibility and Duration: To the employing contractor, for the length of time that the HCST graduate is in apprenticeship status.
Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 8 HCST Apprentice(s) be utilized for 36000 hours on this contract.
- 3) The maximum duration of reimbursement is two years as a HCST graduate plus time in apprentice status.
- 4) If a HCST 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 Department of Transportation Labor Development Specialist at the phone number listed below.

- 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.

II. RATIONALE AND SPECIAL NOTE

The \$5.00 per hour now being paid for HCST 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 HCST 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 HCST 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 HCST 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.*

III. 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 page 2 Dated January 2012 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 HCST graduate or a HCST apprentice. The compliance specialists utilize the information on the Certified Payrolls to track the hours accumulated by HCST Graduates and HCST 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. HCST 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. HCST 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 ensure 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 underrepresentation 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-Office of Business Opportunity & Equity Compliance (OBOEC). A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT OBOEC - Labor Development, 141 NW Barstow Street, Suite 411, PO Box 798, Waukesha, WI 53187.

VI. PROGRAM CONTACTS

Marguerite (Maggie) Givings, Labor Development Specialist

Marguerite.Givings@dot.wi.gov | 608-789-7876

Deborah Seip, Labor Development Specialist

Deborah.Seip@dot.wi.gov | 262-548-8702

ADDITIONAL SPECIAL PROVISION 3

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM IMPLEMENTATION

Authority

Wisconsin Department of Transportation (WisDOT) is a recipient of funds from the US Department of Transportation's Federal Highway Administration. The DBE program is a federal program applicable on all contracts administered by WisDOT that include federal-aid highway funds. The authority for the DBE program is the Transportation Bill as approved by Congress periodically. DBE program guidance and requirements are outlined in the Code of Federal Regulations at 49 CFR Part 26. This contract is subject to DBE provisions because it is financed with federal-aid-highway funds. Additionally, this contract is subject to the *State of Wisconsin Standard Specifications for Highway and Structure Construction* and all applicable contract documents.

Requirements

Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE program regulatory provisions will be considered a material breach of contract. This is nonnegotiable.

If a contractor fails to carry out the DBE program requirements and/or the Required Contract Provisions for Federal Aid Contracts (FHWA 1273) referenced in this document, sanctions will be assessed depending upon the facts, reasoning, severity, and remedial efforts of the contractor that may include: termination of contract, withholding payment, assessment of monetary sanctions, and/or suspension/debarment proceedings that could result in the disqualification of the contractor from bidding for a designated period of time.

- (1) The Commitment to Subcontract to DBE (Form DT1506 or digital submittal), Attachments A, and Good Faith Effort Documentation (Form DT1202) will be submitted as described in Section 2.
- (2) Any change to DBE Commitments thereafter must follow modification of DBE subcontracting commitment as described in Section 9.
- (3) The Department requires this list of DBE subcontractors from all bidders at time of bid to ensure the lowest possible cost to taxpayers and fairness to other bidders and subcontractors. Bid shopping is prohibited.
- (4) The contractor must utilize the specific DBE firms listed in the approved DBE Commitment to perform the work and/or supply the materials for which the DBE firm is listed unless the contractor obtains written consent in advance from WisDOT. The contractor will not be entitled to payment for any work or materials on the approved DBE Commitment that is not performed or supplied by the listed DBE without WisDOT's written consent.

Description

The Wisconsin Department of Transportation is committed to the compliant administration of the DBE Program. The DBE provisions work in tandem with FHWA 1273 and WisDOT's *Standard Specifications for Highway and Structure Construction* and *Construction and Materials Manual*. The WisDOT Secretary is signatory to assurances of department-wide compliance.

The Department assigns the contract DBE goal as a percentage of work items that could be performed by certified DBE firms on the contract. The assigned DBE goal is expressed on the bid proposal as a percentage applicable to the total contract bid amount.

- (1) WisDOT 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 contract DBE goal by subcontracting work to a DBE firm or by procuring services or materials from a DBE firm.

- (2) Under the contract, the prime contractor should inform, advise, and develop participating DBE firms to be more knowledgeable contractors who are prepared to successfully complete their contractual agreement through the proactive provision of assistance in the following areas:
 - Produce accurate and complete quotes
 - Understand highway plans applicable to their work
 - Understand specifications and contract requirements applicable to their work
 - Understand contracting reporting requirements
- (3) The Department encourages contractors to assist DBE subcontractors more formally by participating in WisDOT's Business Development program as a mentor, coach, or resource. For comprehensive information on the Disadvantaged Business Enterprise Program, visit the Department's Civil Rights and Compliance Section website at: <http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx>

1. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

- a. **Assigned DBE Contract Goal:** The percentage shown on the cover of the Highway Work Proposal that represents the feasible level of DBE participation for each contract. The goal is calculated using the Engineer's Estimate and DBE Interest Report. Goal assignment includes review of FHWA funds, analyzes bid items for subcontract opportunity and compatibility with DBE certified firm work codes. Additional factors considered include proximity, proportion, and regulations.
- b. **Bid Shopping:** In construction law, bid shopping is the practice of divulging a subcontractor's bid to another prospective contractor(s) before or after the award of a contract to secure a lower bid.
- c. **DBE:** Disadvantaged Business Enterprise – A for-profit small business concern where socially and economically disadvantaged individuals own at least a 51% interest and control management and daily business operations.
- d. **DBE Commitment:** The DBE Commitment is identified in the Commitment to Subcontract to DBE (Form DT1506) and is expressed as the amount of DBE participation the prime contractor has secured. The DT1506, a contract document completed by the bidder, is required to be considered a responsive bidder on an FHWA-funded contract that has an assigned DBE goal. The prime contractor will have the option to submit the DT1506 digitally, as an entry with the bid in Bid Express, or as an attachment to the bid.
- e. **DBE Utilization:** The actual participation of a DBE subcontractor on a project. WisDOT verifies DBE utilization through review of the DBE Commitment, payments to subcontractors, and contract documentation. The Prime Contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved DBE Commitment, and those submitted after approved commitment with Attachment A.
- f. **Good Faith Effort:** Legal term describing a diligent and honest effort taken by a reasonable person under the same set of facts or circumstances. For DBE subcontracting, the bidder must show that it took all necessary and reasonable steps to achieve the assigned DBE goal by the scope, intensity, and appropriateness of effort that could reasonably be expected for a contractor to obtain sufficient DBE participation.
- g. **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.
- h. **Reasonable Price:** Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price.
- i. **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.
- j. **Tied quote:** Subcontractor quote that groups multiple bid/line items at a bundled/package price with a notation that the items within the quote will not be separated.

2. WisDOT DBE Program Compliance

a. Documentation Submittal

- The Commitment to Subcontract to DBE (Form DT1506 or digital submittal) must be submitted at the time of bid (Tuesday) by all prime contractors.
- Attachments A OR quotes from all DBEs included in the Commitment must be submitted at bid (Tuesday) **OR**
- Within one-hour following bid submittal by ALL prime contractors via eSubmit (Tuesday).
- If only DBE quotes were submitted, all remaining signed Attachments A must be submitted within 24-hours of bid closing via eSubmit (Wednesday).
- If the assigned DBE contract goal is not met, Documentation of Good Faith Effort (Form DT1202) and supporting documentation must be submitted within 24-hours of bid closing (Wednesday) via eSubmit. [Instructions for eSubmit.](#)

****Bidders have the option of submitting the DBE Commitment at the time of bid via direct entry through Bid Express OR with attachment of Form DT1506 (Commitment to Subcontract to DBE). The DBE Commitment entered with bid is the digital form of the DT1506. Separate submission of Form DT1506 is not required if the DBE Commitment is entered in Bid Express. Form DT1202, if applicable, is no longer required to be submitted at time of bid; submit DT1202 within the 24-hour supplemental time frame following bid closing.**

The DBE Office will not certify Good Faith Effort and the Bureau of Project Development will consider the bid nonresponsive if the contractor fails to furnish the DBE Commitment (digitally entered into the bid OR Form DT1506 as an attachment), Attachments A, and Form DT1202 if applicable, as required. See sample forms in the Appendix.

b. Verification of DBE Commitment

The documentation related to DBE subcontract commitment submitted prior to contract award is evaluated as follows:

(1) DBE Goal Met

If the bidder indicates that the contract DBE goal is met, the Department will evaluate the DBE Commitment submitted with bid OR Form DT1506, and Attachments A to verify the actual DBE percentage calculation. If the DBE Commitment is verified, the contract is eligible for award with respect to the DBE Commitment.

(2) DBE Goal Not Met

- a) If the bidder indicates a bid percentage on the DBE Commitment that does not meet the assigned DBE contract goal, the bidder must request alternative evaluation of good faith effort through submission of Form DT1202 (Documentation of Good Faith Effort) within 24-hours of bid including narrative description. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. The Department will review the bidder's DBE Commitment and evaluate the bidder's good faith efforts submission.
- b) Following evaluation of the bidder's Good Faith Effort documentation the bidder will be notified that the Department intends to:
 1. *Approve* the request (adequate documentation of GFE has been submitted) - no conditions placed on the contract with respect to the DBE Commitment;
 2. *Deny* the request (inadequate documentation of GFE has been submitted) - the contract is viewed as non-responsive per Wisconsin Standard Specifications for Highway and Structure Construction and will not be executed.

- c) If the Department denies the bidder's request, the contract is ineligible for award. The Department will provide a written explanation for denying the request to the bidder. The bidder may appeal the Department's denial (see Section 4).

Supplemental good faith effort documentation must be submitted through eSubmit.

3. Department's Criteria for Good Faith Effort Documentation

The Federal-aid Construction Contract Provision, referenced as FHWA-1273, explicitly states that the prime contractor shall be responsible for all work performed on the contract by piecework, station work, or subcontract.

The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of the contract including assurances of equal employment opportunity laws, DBE regulations, and affirmative action. Compliance encompasses responsible and responsive action, documentation, and good faith effort.

Contractually, all contractors, subcontractors, and service providers on the contract are bound by FHWA 1273 and DBE program provisions. **Prime contractors should encourage subcontractors to utilize DBE firms whenever possible to contribute to the assigned DBE contract goal.**

Bidders are required to document good faith effort. Per 49 CFR Part 26.53, good faith effort is demonstrated in one of two ways. The bidder:

- (1) Documents that it has obtained enough DBE participation to meet the goal; OR
- (2) Documents that it made adequate good faith efforts to meet the goal, even though it did not succeed

Appendix A of 49 CFR Part 26 provides guidance concerning good faith efforts. WisDOT evaluates good faith effort on a contract basis just as each contract award is evaluated individually.

The efforts employed by the bidder should be those that WisDOT can reasonably expect a bidder to take to actively and aggressively obtain DBE participation sufficient to meet the DBE contract goal. The Department will only approve demonstration of good faith effort if the bidder documents the quality, quantity, and intensity of the variety of activities undertaken that are commensurate with expected efforts to meet the stated goal.

The Department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort activity. 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.

a. Solicitation Guidance for Prime Contractors:

- (1) Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use WisDOT-approved DBE outreach tools, including the UCP DBE Directory and the Bid Express Small Business Network to foster DBE participation on all applicable contracts.
- (2) As needed, 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. Phone numbers are (414) 438-4584 and/or (608) 267-3849; Fax: (414) 438-5392; E-mail: DBE_Alert@dot.wi.gov
- (3) Participate in and document a substantive conversation with at least one DBE firm per Let, to discuss questions, concerns, and any other contract related matters that may be applicable to the DBE firm. Guidelines for this conversation are provided in Appendix A of ASP-3.
- (4) Request quotes by identifying potential items to subcontract and solicit. In their initial contacts, contractors are strongly encouraged to include a single page, 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 B.* 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 firms 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 quotes are being sought to DBE_Alert@dot.wi.gov
- ii. Acceptable outreach tools include SBN (Small Business Network, see Appendix C): <https://www.bidx.com/wi/main>, postal mail, email, fax, and phone.
 - a. Contractors must ask DBE firms for a response in their solicitations. See *Sample Contractor Solicitation Letter*, Appendix B. This letter may be included as an attachment to the sub-quote request.
 - b. Solicit quotes at least 10 calendar days prior to the letting date 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. A follow up solicitation should take place within 5 calendar days of the letting date. Email and/or SBN are the preferred method for the 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 record of subcontractor outreach effort

b. Guidance for Evaluating DBE quotes

- (1) Quote evaluation practices required to evaluate DBE quotes:
 - i. Reasonable Price: Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price. See 49 CFR Part 26, Appendix A. IV.D(2).
- (2) Documentation submitted by the prime of the following evaluation is required to evaluate DBE quotes by contractors:
 - i. Evaluation of DBE firm's ability to perform "possible items to subcontract" using legitimate reasons, including but not limited to, **a discussion** between the prime and DBE firm regarding its capabilities prior to the bid letting. If lack of capacity is the reason for not utilizing the DBE firm's quote, the prime is 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 indicated by the NAICS code(s) listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.
 - a. In striving to meet an assigned DBE contract goal, contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.
 - b. Additional evaluation - Evaluation of DBE quotes with tied bid items. Typically, this type of quoting represents a cost saving but is not clearly stated as a discount. Tied quotes are usually presented as an 'all or none' quote. When non-DBE subcontractors submit tied bid items in their quotes, the DBE firm's quote may not appear 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.

See Appendix D – *Good Faith Effort Evaluation Measures* and Appendix E - *Good Faith Effort Best Practices*.

- c. Requesting Good Faith Effort Evaluation** At the time of bid- if the DBE goal is not met in full, the prime contractor must indicate they will file form DT1202- Documentation of Good Faith Effort within 24-hours of bid submission. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. Supporting documentation for the DT1202 is to include the following:
- (1) Solicitation Documentation: The names, addresses, email addresses, and telephone numbers of DBE firms contacted along with the dates of both initial and follow-up contact; electronic copies of all written solicitations to DBE firms. A printed copy of SBN solicitation is acceptable.
 - (2) Selected Work Items Documentation: Identify economically feasible work units to be performed by DBEs to include activities such as: list of work items to be performed; breaking up of large work items into smaller tasks or quantities; flexible time frames for performance and delivery schedules.
 - (3) Documentation of Project Information provided to interested DBEs: A description of information provided to the DBE firms regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE firm.
 - (4) Documentation of Negotiation with Interested DBEs: Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts.
 - (5) Documentation of Sound Reasoning for Rejecting DBEs and copies of each quote received from a DBE firm and, if rejected, copies of quotes from non-DBEs for same items.
 - (6) Documentation of Assistance to Interested DBEs- Bonding, Credit, Insurance, Equipment, Supplies/Materials
 - (7) Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support: Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

If the Good Faith Effort documentation is deemed adequate, the request will be approved and the DBE office will promptly notify the Prime Contractor and Bureau of Project Development.

If the DBE Office denies the request, the Prime Contractor will receive written correspondence outlining the reasons. The Department encourages the Prime Contractor to communicate with DBE staff to clarify any questions related to meeting goals and/or contractor demonstration of good faith efforts.

If the contract is awarded, the Prime Contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved DBE Commitment. No contractor, prime or subsequent tier, shall be paid for completing work assigned to a DBE subcontractor on an approved DBE Commitment unless WisDOT has granted permission for the reduction, replacement, or termination of the assigned DBE in writing. If a prime contractor or a subcontractor on any tier uses its own forces to perform work assigned to a DBE on an approved DBE Commitment, **they will not be paid for the work**. Any changes to DBE Commitment after the approval of the DBE Commitment must be reviewed and approved by the DBE Office prior to the change (see Section 9).

Additional resources for demonstrating and tracking good faith effort can be found on the “Contracting with a DBE” webpage in the [ASP-3 and Good Faith Effort Guidance](#) section.

4. Bidder's Documentation of Good Faith Effort Evaluation Request Appeal Process

A bidder can appeal the Department's decision to deny the bidder's demonstration of Good Faith Effort through Administrative Reconsideration. The bidder must provide a written justification refuting the specific reasons for denial as stated in the Department's denial notice. The bidder may meet in person with the Department if so requested. Failure to appeal within 5 business days after receiving the Department's written notice denying the request constitutes a forfeiture of the bidder's right of appeal. Receipt of appeal is confirmed by email date stamp or certified mail signed by WisDOT staff. A contract will not be executed without documentation that the DBE provisions have been fulfilled.

The Department will appoint a representative who did not participate in the original good faith effort determination, to assess the bidder's appeal. The Department will issue a written decision within 5 business days after the bidder presents all written and oral information. In that written decision, the Department will explain the basis for finding that the bidder did or did not demonstrate an adequate good faith effort to meet the contract DBE goal. The Department's decision is final.

5. Determining DBE Eligibility

Directory of DBE firms

- a. The only resource for DBE firms certified in the State of Wisconsin is the Wisconsin Unified Certification Program (UCP) DBE Directory. WisDOT maintains a current list of certified DBE firms at: <http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx>
- b. The DBE Program office is available to assist with contracting DBE firms:(608) 267-3849.
- c. DBE firms are certified based on various factors including the federal standards from the Small Business Administration that assigns a North American Industrial Classification (NAICS) Codes. DBE firms are only eligible for credit when performing work in their assigned NAICS code(s). If a DBE subcontractor performs work that is not with its assigned NAICS code, the prime contractor should contact the DBE Office to inquire about compatibility with the Business Development Program.

6. Counting DBE Participation

Assessing DBE Work

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 UCP agencies. 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:

- a. The Department counts work performed by the DBE firm's own resources. The Department includes the cost of materials and supplies the DBE firm obtains for the work. The Department also includes the cost of equipment the DBE firm leases for the work. The Department will not include the cost of materials, supplies, or equipment the DBE firm purchases or leases from the prime contractor or its affiliate, with the exception of non-project specific leases the DBE has in place before the work is advertised.
- b. The Department counts fees and commissions the DBE subcontractor charges for providing 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 program engineer deems reasonable based on experience or prevailing market rates.
- c. If a DBE firm subcontracts work, the Department counts the value of the work subcontracted to a DBE subcontractor.
- d. The contractor will maintain records and may be required to furnish periodic reports documenting its performance under this item.
- e. It is the Prime Contractor's responsibility to determine whether the work that is committed and/or contracted to a DBE 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.

- f. It is the Prime Contractor's responsibility to assess the DBE firm's ability to perform the work for which it 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.
- g. The Prime Contractor will inform the DBE office via email of all DBE subcontractors added to the project following execution of the contract. The Prime Contractor may omit submission of another form DT1506, but must submit signed Attachment A forms for additional DBE firms.
- h. See Section 7 for DBE credit evaluation for Trucking and Section 8 for DBE credit evaluation for Manufacturers, Suppliers, and Brokers

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, Attachment A" Email: DBE_Alert@dot.wi.gov

*Note: A sublet request is required for DBE work, regardless of subcontract tier, and also for reporting materials or supplies furnished by a DBE.

- Sublet Requests via form DT1925 or WS1925 are required for 1st Tier DBEs
- For all 2nd Tier and below notification of DBE sublet is indicated by the contractor entering them in CRCS

7. Credit Evaluation for Trucking

All bidders are expected to adhere to the Department's current trucking policy posted on the HCCI website at: <http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf>

The prime contractor is responsible for ensuring that all subcontractors including trucking firms, receive Form FHWA 1273: <https://www.fhwa.dot.gov/programadmin/contracts/1273/1273.pdf>

See Section 8 for Broker credit.

8. 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 firm provides under the contract for DBE credit based on whether the DBE firm is a manufacturer, supplier, or broker. Generally, DBE credit is determined through evaluation of the DBE owner's role, responsibility, and contribution to the transaction. Maximum DBE credit is awarded when the DBE firm manufactures materials or supplies. DBE credit decreases when the DBE firm solely supplies materials, and minimal credit is allotted when the DBE firm's role is administrative or transactional. It is the bidder's responsibility to confirm that the DBE firm is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506 or DBE Commitment submitted with the bid.

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, **100%** percent of the cost of the materials or supplies counts 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.
- (4) When DBE suppliers are contracted, additional documentation must accompany the DBE Commitment and Attachment A forms. An invoice or bill-of-sale that includes names of the bidder and the DBE supplier, along with 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 per b.(1) above.
 - i. The bidder should respond to the following questions and include with submission of form DT1506 or the DBE Commitment entered with bid:
 - a. What is the product or material?
 - b. Is this item in the prime's inventory or was the item purchased when contract was awarded?
 - c. Which contract line items were referenced to develop this quote?
 - d. What is the amount of material or product used on the project?
- (5) Supplies purchased in **bulk** from DBE firms at the beginning of the season may be credited to current contracts if submitted with appropriate documentation to the DBE office.
 - i. To ensure that the appropriate credit is assigned, follow the procedure below:
 - a. When DBE suppliers are contracted for bulk supply or commodity purchases, an invoice or bill-of-sale that includes names of the contractor and the DBE supplier should be submitted to the DBE Office via eSubmit (preferred during letting) or the DBE_Alert email box. The supply/commodity credit may be applied during the federal fiscal year (October- September) in which the purchase was made.
 - b. When the contractor intends to apply the credit to a particular project, submit a copy of the original invoice, documentation of the calculations for supplies/commodities to be used on the project, and an Attachment A. Indicate on the Attachment A:
 - c. This supply/commodity is in the prime's inventory or pre-paid in case of commodities
 - d. The full value of the original invoice submitted to the DBE Office, above in (1)
 - e. The amount of material or product used on this project
 - f. Fuel estimate listed on Attachment A will be recorded as a deduction from the full fuel purchase amount shown on the invoice
 - ii. DBE Office Process (Applies only to bulk purchases)
 - a. Supply/Commodity commitment is received
 - b. Engineer verifies amount listed on invoice and enters the full amount into spreadsheet
 - c. The amount of credit applied for each project is updated on the spreadsheet until the bulk purchase is exhausted
 - d. Engineer informs contractor when full amount of bulk purchase has been applied

c. Brokers, Transaction Expeditors, 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 are 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, fees, or transportation charges for the delivery of materials or supplies required on a job site.
- (4) Evaluation of DBE credit includes review of the contract need for the item/service, the sub-contract or invoice for the item/service, and a comparison of the fees customarily allowed for similar services to determine whether they are reasonable.

9. DBE Commitment Modification Policy (Formerly "DBE Replacement Policy")**a. Issuing a Contract Change Order**

Any changes or modifications to the contract once executed are considered contract modifications and as such require a change order. In addition, the DBE office must provide consent for reduction, termination, or replacement of subcontractors approved on the DBE Commitment *in advance* of the modification for the prime contractor to receive payment for work or supplies. Additions to the DBE Commitment do not require advance notification of the DBE office. (see below e. DBE Utilization beyond the approved DBE Commitment)

b. Contractor Considerations

- (1) A prime contractor cannot modify the DBE Commitment through reduction in participation, termination, or replacement of a DBE subcontractor listed on the approved DBE Commitment 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.
- (2) If a prime contractor reduces participation, replaces, or terminates a DBE subcontractor who has been approved for DBE credit toward its contract, the prime is required to provide documentation supporting its inability to fulfill the contractual commitment made to the Department regarding the DBE utilization.
- (3) The Prime Contractor is required to demonstrate efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE subcontractor that was terminated, to the extent needed to meet the assigned DBE contract goal. When additional opportunity is available by contract modifications, the Prime Contractor must utilize DBE subcontractors that were committed to equal work items, in the original contract.
- (4) 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 must undertake efforts to maintain its commitment to the assigned DBE goal.
- (5) The DBE subcontractor should communicate with the Prime Contractor regarding its schedule and capacity in the context of the contract. If the DBE firm anticipates that it cannot fulfill its subcontract, they will advise the Prime Contractor and suggest a DBE subcontractor that may replace their services and provide written consent to be released from its subcontract.
 - i. Before the Prime Contractor can request modification to the approved DBE Commitment, the Prime Contractor must:
 - a. Make every effort to fulfill the DBE Commitment by working with the listed DBE subcontractor to ensure that the firm is fully knowledgeable of the Prime Contractor's expectations for successful performance on the contract. Document these efforts in writing.

- b. If those efforts fail, provide written notice to the DBE subcontractor of the Prime Contractor's intent to request to modify the Commitment through reduction in participation, termination, and/or replacement of the subcontractor including the reason(s) for pursuing this action.
- c. Copy the DBE Office on all correspondence related to changing a DBE subcontractor who has been approved for DBE credit on a contract, including preparation and coordination efforts.
- d. Clearly state the amount of time the DBE firm has to remedy and/or respond to the notice of intent to replace/terminate. The DBE must be allowed five days from the date notice was received as indicated by email time stamp or signed certified mail, 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 engineer or project manager confirms that WisDOT has eliminated an item the DBE subcontractor was contracted for.
- e. The DBE subcontractor must acknowledge the contract modification with written response to the Prime Contractor and the DBE Office. If objecting to the subcontract modification, the DBE subcontractor must outline the basis for objection to the proposed modification, providing sound reasoning for WisDOT to reject the prime's request.

c. Request to Modify DBE Subcontracting Commitment

The written request referenced above may be delivered by email or fax. The request must contain the following:

- (1) Project ID number
- (2) WisDOT Contract Project Engineer's name and contact information
- (3) DBE subcontractor name and work type and/or NAICS code
- (4) Contract's progress schedule
- (5) Reason(s) for requesting that the DBE subcontractor be replaced or terminated
- (6) Attach/include all communication with the DBE subcontractor to deploy/address/resolve work completion

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, MODIFICATION" Email: DBE_Alert@dot.wi.gov + Project Engineer

WisDOT will review the request and any supporting documentation submitted to evaluate if the circumstance and the reasons constitute good cause for replacing or terminating the approved DBE subcontractor.

Good Causes to Replace a DBE subcontractor 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
- The prime has determined that the listed DBE subcontractor is not a responsible contractor
- The listed DBE subcontractor voluntarily withdraws from the project and provides written notice of its withdrawal
- The listed DBE subcontractor is ineligible to receive DBE credit for the type of work required

- A DBE firm owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract.

d. Evaluation and Response to the Request

WisDOT's timely response to the Prime Contractor's request for modification of the approved DBE Commitment will be provided to the prime and the WisDOT project engineer via email.

If WisDOT determines that the Prime Contractor's basis for reduction in participation, replacement, or termination of the DBE subcontractor is not consistent with the good cause guidelines, the DBE office will provide a response via email within 48-hours of receipt of request from the Prime Contractor as indicated by email time stamp. The communication will include: the requirement to utilize the committed DBE, actions to support the completion of the contractual commitment, a list of available WisDOT support services, and administrative remedies, including withholding payment to the prime, that may be invoked for failure to comply with federal DBE guidelines for DBE replacement.

The WisDOT contact for all actions related to modification of the approved DBE Commitment is the DBE Program Engineer who can be reached at DBE_Alert@dot.wi.gov or (414) 335-0413.

e. DBE Utilization beyond the approved DBE Commitment

When the prime or a subcontractor increases the scope of work for an approved DBE subcontractor or adds a DBE subcontractor who was not on the approved form DT1506 or DBE Commitment submitted with bid at any time after contract execution, this is referred to as voluntary DBE contract goal achievement. The contractor must follow these steps to ensure that the participation is accurately credited toward the DBE goal:

- (1) Forward a complete, signed Attachment A form to the DBE Office. A complete Attachment A includes DBE subcontractor contact information, signatures, subcontract value, and description of the work areas to be performed by the DBE. The DBE Office will verify the DBE participation and revise the DBE Commitment based on the email/discussion and the new Attachment A.
- (2) When adding to an existing DBE Commitment, submit a new Attachment A to the DBE Alert mailbox
- (3) OR Submit a final Attachment A to DBE Alert during the Finals Process when Compliance receives notice of "Substantially Complete"

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, New Attachment A" Email: DBE_Alert@dot.wi.gov

Special note on trucking

- DBE truckers added to the sublets in CRCS *will* be approved without DBE credit (You will see a "N" in CRCS instead of "Y")
- Prime Contractors may enter a "place holder" e.g. \$1000.00, for DBE Trucking in CRCS if the full amount of trucking is unknown for sublet purposes only
- The hiring contractor may obtain the Attachment A with DBE signature included but the **Prime Contractor** must sign the Attachment A before submitting
- DBE truckers need to be added to the DBE commitment once. If the DBE trucker is on the initial commitment (DT1506/E1506) there is no requirement to submit another Attachment A for that trucker for that contract.

10. Commercially Useful Function

- a. Commercially Useful Function (CUF) is evaluated after the contract has been executed, while the DBE certified firm is performing contracted work items.
- b. The Department uses Form DT1011, DBE Commercially Useful Function Review and Certification to evaluate if 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 firm 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 work and 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.
- d. Offsite Hauling – when DBE truck will haul between a pit and plant or location other than the construction site associated with the commitment
 - (1) Indicate Offsite Hauling on Attachment A
 - (2) Discuss offsite hauling at weekly progress meetings with Project Engineer (PE)
 - (3) PE conducts spot checks of pits/plants to verify DBE truck is hauling and/or verifying hauling log
 - (4) Prime should be prepared to submit haul tickets, plant/pit tickets, timecards, and other pertinent documentation if requested by PE or DBE Office

11. Credit Evaluation for DBE Primes

WisDOT calculates DBE credit based on the amount and type of work performed by DBE certified firms for work submitted with required documentation. If the prime contractor is a DBE certified firm, the Department will only count the work that the DBE prime performs with its own forces for DBE neutral credit. The Department will also calculate DBE credit for work performed by any other DBE certified subcontractor, DBE certified supplier, and DBE certified manufacturer on the contract in each firm's approved NAICS code/work areas that are submitted with required documentation. Crediting for manufacturers and suppliers is calculated consistent with Section 8 of this document and 49 CFR Part 26.

12. Joint Venture

A joint venture is an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest. If a DBE performs as a participant in a joint venture, the Department will only credit the portion of the total dollar value of the contract equal to the portion of the work that the DBE performs with its own forces.

13. Mentor-Protégé

- a. If a DBE performs as a participant in a mentor-protégé agreement, the Department will credit the portion of the work performed by the DBE protégé firm.
- b. DBE credit is 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.
 - (1) DBE credit may only be awarded to a non-DBE mentor firm for using its own protégé firm for less than one half of its goal on any contract; and
 - (2) Not award DBE credit to a non-DBE mentor firm for using its own protégé firm for more than every other contract performed by the protégé firm.
- c. A DBE protégé firm may be eligible for conditional NAICS code extension for training with the mentor. Request permission from the DBE Office- Certification area.
- d. Refer to WisDOT's Mentor-Protégé guidelines for guidance on the number of contracts and amount of DBE credit allowed on WisDOT projects.

14. 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 subcontractor, a prime contractor, and the regular dealer or 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 firm in cases where the DBE subcontractor and materials have been approved 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 firm is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE firm 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 Contractor 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 or the 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 approved supplies.
- b. The DBE subcontractor is responsible for furnishing and/or installing the material/work item and is not an 'extra participant' in the transaction. The DBE firm'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 Contractor 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 contractor's negotiated unit price.

15. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

Appendix A

Substantive Conversation Guidelines

The substantive conversation is critical to all bidders' demonstration of good faith effort to meet the DBE goal prior to bid opening. Relationship building between primes and subcontractors is crucial to DBE goal attainment. Responsible bidders seek to build rapport with potential DBE subcontractors to understand capacity, areas of expertise, and assess contracting feasibility. Bidders who compete for WisDOT contracts are specialty contractors responding to a growing and changing contract environment. Just as these specialists are responsible for care of the roads, they are likewise responsible for contributing to the health of the industry. The substantive conversation drives collaboration that will build industry health and capacity. The following is intended to provide guidance for such discussions but is not an exhaustive list. Contractors are encouraged to incorporate their existing strategies for cultivating business relationships as well.

Prior to Bid Opening- this discussion should happen as early as possible (WisDOT advertisements are released weeks prior to each Let)

1. Determine DBE subcontractor's interest in quoting
2. If response indicates inexperience with quoting- offer support/assistance to the DBE in understanding the industry including fundamentals a subcontractor needs to know, required reading and/or resources.
3. Assess their interest and experience in the road construction industry by asking questions such as:
 - Have you competed for other WisDOT contracts? Ratio of competed/to wins
 - Have you performed on any transportation industry contracts (locally or with other states)?
 - What the largest contract you've completed?
 - Have you worked in the industry: apprentice, journeyman, safety, inspection etc.?
 - Does this project fit into your schedule? Are you working on any contracts now?
 - Have you reviewed a copy of the plans? Are you comfortable performing within the scope and quantity considerations of this contract?
 - What region do you work in? Home base?
 - Which line items are you considering?
 - Have you read/are you familiar with WisDOT Standard Specifications? Construction Material Manual?
 - Do you understand where your work fits in the project schedule, project phases?

Following Bid Opening- this discussion can happen at any time

1. After reviewing their quote, note the following in your discussion:
 - Does the quote look complete? Irregular?
 - Are there errors in the quote? Are items very high or very low?
 - In general, does the quote look competitive?
2. Questions and Advice for the bidder to share with the potential DBE subcontractor:
 - What line items would typically be in a competitive quote for a subcontractor of their specialty?
 - How many employees and what is their role/experience/expertise in your firm?
 - Do you have resources for labor (union member, family-based, community-resourced) and capital (banking relationship, bond agent, CPA)?
 - Where have you worked: cities, states, government, commercial, residential/private sector, etc. Explain similarities or differences.
 - Refer them to reliable, trusted, industry resources that can educate or connect them to relevant resources, education/certification resources, more appropriate contract opportunities.
 - Discussion about prime contract and subcontract liability, critical path items, contract quantities, schedule risks, and potential profit/loss (for upcoming known projects or in general).
 - Discussion of bonding, insurance, and overall business risk considerations.

Appendix B

Sample Contractor Solicitation Letter Page 1

(This sample is provided as a guide, not a formatting requirement)

DBE Solicitation - [Month] [Day], [Year] WisDOT Bid Letting

Attention all DBEs. [Prime Contractor] is actively seeking your quote for the [Month][Day], [Year] Bid Letting. [Prime Contractor] is considering bidding on the projects listed on page 2 as a prime contractor. Please see page 2 for instructions and the sub-contractable opportunities for each proposal.

Does [Prime Contractor] accept quotes in areas we might self-perform? Yes, we do! We support this federal rule and (if needed) we consider areas we might self-perform an opportunity to provide in the field assistance and training if we award your quote.

Where can DBEs find the plans, specifications & addenda? Please visit [Prime Contractor's] plan room [LINK] or on WisDOT's Highway Construction Contract Information HCCI website: [Wisconsin Department of Transportation Highway Construction Contract Information \(wisconsindot.gov\)](https://wisconsindot.gov/HighwayConstructionContractInformation). This same website can be checked for the contract status.

What should your quote include? All the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should also note items that you are DBE certified to perform, tied items, and any special terms. Please use page 2 as your cover sheet for your quote.

Do you have a question regarding bonding, credit, insurance, equipment, or supplies/materials? We welcome all DBE questions! Please call [Prime Contractor] and ask to speak with [Contact]. [Prime Contractor] can provide basic information as well as a referral to a trusted industry partner for insurance and bonding needs.

When are quotes due?

[Month] [Day], [Year] at [Time]. We accept quotes via SBN, email, or fax. Please make every effort to have your quotes in by this time or earlier. Quality check your quote so it includes the correct letting date, project ID, proposal number, unit price and extension.

Who can DBEs contact for questions, information, clarification or for a quote evaluation? [Project Manager Name] [Phone] [Email]. If you are quoting [Prime Contractor] for the first time, we encourage you to come meet with us in person to discuss the project. Our office hours are 7:30 a.m. – 5:00 p.m. On bid day, we are in the office by 6:30 a.m.

Why partner with [Prime Contractor]?

DBE partnership is a core part of [Prime Contractor's] mission. Including DBEs at the beginning of each project is essential in the success of each project. We consider DBEs to be important industry partners who bring dedication and knowledge at various stages during construction. We are proud to be an industry leader with our DBE partnership. Your success as a DBE is our success.

Sample Contractor Solicitation Letter Page 2*(This sample is provided as a guide, not a formatting requirement)*

REQUEST FOR QUOTE

[Prime Contractor]**Letting Date: [Month] [Day], [Year]****Project IDs: 1234-56-00 (Proposal #1) & 1234-01-78 (Proposal #6)**

Please check all that apply:

- ☐ Yes, we will be quoting the projects & 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 Contact: _____

DBE: _____

Phone: _____

Fax: _____

Email: _____

Please circle the proposals and items you will be quoting below and contact us with any questions

Proposal	1	6
County	Dane County	Crawford County
Clearing & Grubbing	X	X
Dump Truck Hauling	X	X
Curb/Gutter/Sidewalk	X	
Erosion Control Items		X
Excavation	X	X
Pavement Marking		X
Traffic Control	X	
Sawing	X	X
QMP, Base		X
Pipe Underdrain	X	
Landscape		X
Beam Guard	X	
Electrical	X	
Signs/Posts/Markers		X
Survey/Staking		X

Again, please make every effort to have your quotes into our office by **time deadline** prior to the letting date.

Sample Contractor Solicitation Email - Simplified

(This sample is provided as a guide, not a formatting requirement)

ATTENTION DBEs

- [Prime Contractor] specializes in municipal projects in the XX Region(s)
- We have successfully competed for and completed XX WisDOT projects over the past XX years
- Consider [Prime Contractor] your partner on WisDOT Projects

[Prime Contractor] is seeking your subcontractor quote for the XX/XX/20XX WisDOT bid letting on the below projects:

Project	Proposal	County	Region
1234-56-00	2	Dane	SW
1234-01-78	6	Crawford	SW

- Please review the attachments **[attach Solicitation Letter]** and respond with your intent to quote (or not) along with the work items you are interested in performing and respond via fax or email by date. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Please include labor, equipment, material, and related bonding or insurance.
- If you have any questions regarding bonding, credit, insurance, equipment and/or materials/supplies, please feel free to call [Prime Contractor] and ask for [Contact]. **(Include if your company is willing to answer these types of DBE questions)**
- Plans and Specifications can be found: **WisDOT HCCI Website: List webpage where plans are located**
- If you do choose to quote, please make every effort to have your quote into our office by time and date. Make sure the correct letting date, project number, unit price and extension are included in your quote.
- Should you have questions regarding the mentioned project, please call our office at (414) 555-5555 and we will direct you to the correct estimator/project manager.
Our office hours are 7:30 a.m. - 5:00 p.m.

Thank you – we look forward to working with your company on this project!

Prime Contractor
Project Manager
Direct: 414-555-5555
Cell: 414-555-5556

Sample Contractor Solicitation Email to **non-DBE** WisDOT Subcontractors - Simplified

(This sample is provided as a guide, not a formatting requirement)

ATTENTION WisDOT SUBCONTRACTORS

[Prime Contractor] is considering bidding on the below projects for the XX/XX/20XX WisDOT Bid Letting:

Project	Proposal	County	Region	DBE Goal
1234-56-00	2	Dodge	SW	6.00%
1234-01-78	11	Adams	NC	3.00%
1234-00-99	20	Buffalo	NW	5.00%
1234-00-98	33	Portage	NC	6.00%

The above projects have DBE goals and [Prime Contractor] is committed to DBE inclusion with every project. As such, we are requesting:

- All WisDOT Subcontractors to **solicit and utilize** DBEs in your quotes.
- DBE participation can be achieved through purchasing materials from DBE suppliers, using DBE subcontractors and/or DBE trucking firms or any combination of these.
- If there is an opportunity to untie an item in your quote so a DBE can be utilized, please look for those opportunities as well.
- Your quote will be evaluated based on the amount of DBE participation your company is able to provide when compared to other quotes for the same work.

If you do choose to quote, please make every effort to have your quote into our office by **time and date**. Please submit all quotes to [Email]. Make sure the correct letting date, project number, unit price and extension are included in your quote.

Should you have questions regarding the mentioned project, the Project Manager contact is: [Name] [Phone Number] [Email]

Thank you for utilizing DBEs who are trusted industry partners with WisDOT projects.

Prime Contractor
Project Manager

Direct: 414-555-5555
Cell: 414-555-5556

Appendix C

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 later completion.
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 help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs. The DBE will provide free SBN accounts to DBEs when requested. Use DBE_Alert@dot.wi.gov to request an account. **DBE firms can:**

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.

Appendix D

Good Faith Effort Evaluation Measures *by categories referenced in DBE regulations*

Bidders must demonstrate that they took all necessary and reasonable steps to achieve the assigned DBE contract goal. For each contract, all bidders must submit documentation indicating the goal has been met or if falling short of meeting the assigned goal, must request a DBE Goal Waiver and document all efforts employed to secure DBE subcontractor participation on Form DT1202.

DBE staff analyze the bidder's documented good faith efforts to determine if action taken was sufficient to meet the goal. Sufficiency is measured contract-by-contract. WisDOT evaluates active and aggressive efforts, quality, quantity, scope, intensity, and appropriateness of the bidder's efforts as a scale of the principles of Good Faith outlined in 49 CFR Part 26, Appendix A. Additional emphasis is placed on the bidder's demonstration of timely submission of documentation and communication with DBE subcontractors, and business development initiatives undertaken to support DBE firm growth.

The following is a sample of good faith effort activities that are rated according to the accompanying rubric. Contractors are encouraged to identify additional activities that align with their business type(s).

- Personal, tailored solicitation to firms that specialize in work types planned or desired for subcontracting
- Follow up to initial solicitation via email or phone
- Substantive conversation including topics such as contract liability, critical path work items, schedule risks, and potential profit/loss
- SBN utilization including posting quotes
- Review and response to DBE quotes including provision of information about plans, specifications, and requirements as applicable
- Documentation requesting subcontractors support DBE goal by solicitation and inclusion of DBE subcontractor quotes
- Responsive and timely submission of organized documentation
- Analysis of number of DBE firms who do work types that you typically subcontract
- Analysis of number of DBE firms who reside in geographical areas where prime seeks work
- Analysis of firms who express interest in bidding/quoting including the number of firms who declined your solicitation
- Reference check of DBE subcontractor work or training (documentation of questions and response required)
- Number of different efforts undertaken to meet the assigned DBE goal as documented in accompanying Form DT1202
- Submission of all DBE quotes received matched with a variety of work to be performed by DBEs
- Number and names of DBE firms provided written advice, or referral to industry-specific business development resources
- Overall pattern of DBE utilization on all WisDOT contracts which may include contracting with municipalities
- Documentation of resources expended to meet assigned DBE goal (#of hours, staff titles, average pay rate, actions taken)
- Analysis of subcontractable work items to be completed by prime beyond prime contractor's 30%
- Risk analysis of work items that are typically in tied quotes that could be unbundled
- List of contract work items in smallest economically feasible units, identifying schedule impact
- Submission of a Gap Analysis identifying DBE skillset and/or industry needs
- Staff training in EEO and Civil Rights laws as documented in training logs
- Written Capacity Assessment completed with DBE firm documenting its ability to perform the work quoted
- DBE engagement efforts beyond simple solicitation that include a substantive discussion, initiated as early in the acquisition process as possible (*points added for each day prior to letting*)
- Outreach and marketing efforts with minority, women, and veteran-focused organizations at least 10 days prior to bid opening
- Active involvement in WisDOT's Business Development Program, TrANS training, facilitated networking efforts, workshops
- Customized teaching/training efforts for future opportunities with DBE subcontractor, contract specific and/or annually
- Introduction and reference provided for DBE subcontractor to a prime who has not previously contracted with the DBE firm
- Prime utilization of a DBE subcontractor the prime has not contracted with previously
- Written referral/recommendation to bond/insurance agents, manufacturer, supplier
- Documented efforts fostering DBE participation through administrative and/or technical assistance
- Evidence of negotiation with the DBE firm about current and future Let opportunities
- Recommendation of local and state services that support small business and access to opportunity: DOA, SBA, WEDC, WPI, etc.
- Advice on bonding, lines of credit, or insurance as required to complete the items quoted and contract requirements

GFE Evaluation Rubric – Phase 1 – Initial Review

DT1202	Examples	Rating	OBOEC Feedback
Solicitation Documentation	Identify all reasonable and available activities performed to solicit the interest of all certified DBEs who have capacity and ability to perform work on the project. <i>Such as: Updated solicitation letter and email, timely solicitation, and follow-up, and/or utilized various methods to communicate solicitation (ex: letter, email, publication, posting and/or website)</i>		
Selected Work Items Documentation	All work items are broken out into economically feasible units to facilitate DBE participation. <i>Such as: Selected work items are specific to each proposal and clearly identified in all solicitation(s)</i>		
Documentation of Project Information provided to Interested DBEs	Provide interested DBEs with adequate information about the plans, specifications, and any other contractual requirements in a timely manner to assist DBEs in response to solicitation. <i>Such as: Project information is clearly identified in all solicitation(s)</i>		
Documentation of Negotiation with Interested DBEs	Provide sufficient evidence demonstrating that good faith negotiations took place during the bid letting. <i>Such as: Documented attempts with DBEs or on behalf of DBEs to increase DBE participation</i>		
Documentation of Sound Reason for Rejecting DBEs	Provide sufficient evidence demonstrating that DBEs are rejected for sound reasons. <i>Such as: Detailed and thoughtful analysis that considers both the percentage and dollar difference when rejecting a DBE including past performance, relevant business experience and stability, safety record, business ethic and integrity, technical capacity, and other tangible factors.</i>		
Documentation of Assistance to Interested DBEs- bonding, credit, insurance, equipment, supplies/materials	Documented assistance in both solicitation(s) and outreach to DBEs.		
Documentation of Outreach to Minority, Women, and Community organizations and other DBE Business Development Support	Effectively use the services of minority, women, and community organizations as well as contractors' groups, local, state, and federal business assistance offices and organization that provide assistance in recruiting and supporting DBEs, as well participation in activities that support DBE business development. <i>Such as: Variety of activities that translate into meaningful DBE participation</i>		
Documentation of other GFE activities	<i>Such as: Used DT1202 Excel Workbook, Diversity & Inclusion company policy, Mentor-Protégé participant, awarded neutral DBE after bid submission, included company GFE overview/strategy information and/or company website highlights DBE opportunities and participation</i>		
Overall Demonstration of GFE			

GFE EVALUATION RATING LEGEND – PHASE 1 – Initial Review

Documentation provided by bidder is evaluated and rated on the rubric. Bidders should include activities characterized by the following types of effort:

ACTIVE & AGGRESSIVE: Demonstrated through engaged and assertive activity

QUALITY: Demonstrated through essential character of conscientious and serious activity

QUANTITY: Demonstrated through a measurable number of activities

SCOPE & INTENSITY: Demonstrated through a rigorous approach to an appropriate and purposeful range of activities

TIMING: Demonstrated through engagement efforts beyond simple solicitation, initiated early in the process

GFE EVALUATION – PHASE 2 – Team Review**GFE Team completes:**

- Review of activities included on the rubric
- Review of the intent to award and sound reasoning submitted by Prime
- Bid analysis to confirm if any bid submitted met the DBE goal
- Review average of other bidders DBE goal achievement
- Team review of combined efforts documented in Phase 1 and 2 constitute final GFE determination

Rating Scale:

- **GFE Approval:**
Bona Fide = 6 or more categories color coded green.
Genuine effort characterized by sincere and earnest activities – “Solicitation” and “Sound Reasoning” must be green
- **GFE Approval:**
Sufficient = 5 or more categories color coded green or yellow
Adequate effort documented with a variety of quality activities – “Solicitation” and “Sound Reasoning” must be green or yellow
- **GFE Denial:**
Pro Forma efforts = 4 or less categories color coded green or yellow. Perfunctory effort characterized by routine or superficial activities

Green = Exceeds expectations

Yellow = Meets expectations

Red = Areas in need of attention and/or absence of documentation

See OBOEC Rubric Analysis Feedback

Excerpt from Appendix A to 49 CFR Part 26:

V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. 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 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. As provided in §26.53(b)(2)(vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed

GFE RUBRIC ANALYSIS	
OBOEC DECISION	APPROVAL OR DENIAL
Prime Contractor	
Proposal	
Project	
Bid Letting	
DBE Goal Amount	
DBE Goal Amount Achieved	
Bid Analysis	
Goal %	Achieved %
Apparent Low Bidder	%
Bidder B	
Bidder C	
Average of OTHER Bidders (Not including Apparent Low Bidder)	
DBE Quotes Received	
DBE Quotes Awarded	
DBE Quote(s) Rejected	Rejected Quote Analysis
DBE Quote(s) Awarded	Awarded DBE Amount

Appendix E

Good Faith Effort Best Practices

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid “war room” or providing technical assistance.
- Participate in speed networking and mosaic exercises as arranged by DBE office.
- Host information sessions not directly associated with a bid letting.
- Participate in a formal mentor protégé or joint venture with a DBE firm.
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings.
- Facilitate a small group DBE ‘training session’ clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications, and communication methods.
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you.
- Quality of communication, not quantity creates the best results. Contractors should be thorough in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the ‘apparent low bidder’ list and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs.
- Participate on advisory and mega-project committees.
- Sign up to receive the DBE Contracting Update.
- Consider membership in relevant industry or contractor organizations.
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the Department are the only ways to get work.

Appendix F

Good Faith Effort Evaluation Guidance

Appendix A of 49 CFR Part 26

I. When, as a recipient, you establish a contract goal on a DOT-assisted contract for procuring construction, equipment, services, or any other purpose, a bidder must, in order to be responsible and/or responsive, make sufficient 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, you have the responsibility 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, based on the regulations and the guidance in this Appendix.

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. Determinations should not be made using quantitative formulas.

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. (1) Conducting market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.

(2) The bidder should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should 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 (for example, smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.

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 with their offer for the subcontract.

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. (1) 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 status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

(2) A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

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, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. 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 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. As provided in §26.53(b)(2)(vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under the rule.

VI. A promise to use DBEs after contract award is not considered to be responsive to the contract solicitation or to constitute good faith efforts.

[79 FR 59600, Oct. 2, 2014]

Appendix G
(SAMPLE) Forms DT1506 and DT1202

COMMITMENT TO SUBCONTRACT TO DBE

Wisconsin Department of Transportation

Proposal #

County:

0.00 %

\$	0.00	\$	0.00

**COMMITMENT TO SUBCONTRACT TO DBE
ATTACHMENT A**

CONFIRMATION OF PARTICIPATION

Project I.D.:	Proposal Number:
Letting Date:	

Name of DBE Firm Participating in this Contract:	
Name of the Prime/Subcontractor who hired the DBE Firm: <i>(list all names of tiers if more than one)</i>	
Type of Work or Type of Material Supplied:	
Total Subcontract Value:	Total DBE Credit Value:

FOR PRIME CONTRACTORS ONLY: I certify that I made arrangements with the participating DBE firm to perform the type of work listed or supply the material indicated above for the subcontract value listed above.	Prime Contractor Representative's Signature
	Prime Contractor Representative's Name (Print Name)
	Prime Contractor (Print Company Name)
	Date

FOR PARTICIPATING DBE FIRMS ONLY: I certify that I made arrangements with the Prime Contractor or the Hiring Contractor to perform the type of work or supply the material indicated above for the subcontract value listed above. FOR DBE TRUCKING FIRMS ONLY: I certify that I will utilize, for DBE credit, only trucks listed on my WisDOT approved Schedule of Owned/Leased Vehicles for DBE Credit form and I will be utilizing the number of trucks as listed below.	Participating DBE Firm Representative's Signature	Date
	Participating DBE Firm Representative's Name (Print Name)	
	Participating DBE Firm (Print Company Name)	
	DBE Firm's Address:	

# Owned Trucks	# Leased Trucks	# DBE-Owned Leased Trucks	# Non-DBE-Owned Leased Trucks

☐ Off site Hauling

**DOCUMENTATION OF GOOD FAITH EFFORT**Wisconsin Department of Transportation
DT1202.....3/2020

Project ID *****	Proposal No. *****	Letting *****
Prime Contractor *****	County *****	
Person Submitting Document *****	Telephone Number *****	
Address *****	Email Address *****	

All bidders must undertake necessary and reasonable steps to achieve the assigned DBE contract goal per federal regulatory guidance at 49 CFR Part 26. Bidders use this form to document all efforts employed to meet the assigned goal as a record of contractor good faith efforts (GFE). Refer to ASP3 or 49 CFR Part 26 for guidance on actions that demonstrate good faith effort.

It is critical to list all efforts, attach documentation, and follow the instructions to complete this submission. Documentation of good faith effort includes copies of each DBE and non-DBE subcontractor quote submitted to the bidder for the same line items. Utilize the sample documentation logs to document and organize efforts.

Submit good faith effort documentation per ASP-3 guidelines.

Instructions: Provide a narrative description of all activities pursued to demonstrate good faith efforts, any corresponding documentation, and applicable explanation on separate pages. Include the following items, organized in the order listed below.

1.→ Solicitation Documentation:

a.→ Purpose: To identify all reasonable and available activities the bidder performed to solicit the interest of all certified DBEs who have the capacity and ability to perform work on the project. All solicitation efforts should begin as early as possible to ensure DBEs have ample time to respond and ask questions.

b.→ Action: Identify and list all activities engaged in to solicit DBEs using all reasonable and available means such as written notice and follow-up communications; substantive conversations; pre-bid meetings; networking events; market research; advertising.

2.→ Selected Work Items Documentation:

a.→ Purpose: To ensure that all work items are broken out into economically feasible units to facilitate DBE participation. This must occur even when you prefer to perform the work yourself.

b.→ Action: Identify economically feasible work units to be performed by DBEs to include activities such as: list of work items to be performed; breaking up of large work items into smaller tasks or quantities; flexible time frames for performance and delivery schedules.

3.→ Documentation of Project Information provided to Interested DBEs:

a.→ Purpose: To provide interested DBEs with adequate information about the plans, specifications, and any other contractual requirements in a timely manner to assist DBEs in response to solicitation.

b.→ Action: Provide DBEs access to plans, specifications, and other contract requirements. Early solicitation allows ample opportunity to provide project information, links to Let advertisements, and substantive engagement with DBEs.

4.→ Documentation of Negotiation with Interested DBEs:

a.→ Purpose: To ensure that negotiations with interested DBEs were made in good faith providing evidence as to why agreements could not be reached for DBEs to perform work.

b.→ Action: Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts. A bidder using good business judgment considers a number of factors in negotiating with all subcontractors, and the firm's price and capabilities in addition to contract goals are taken 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 failing to meet the DBE goal as long as costs are reasonable. (see 49 CFR Part 26 Appendix A)

5.→ Documentation of Sound Reason for Rejecting DBEs:

a.→ Purpose: To ensure that bidders avoid rejecting DBEs as unqualified without sound reasons. Reasons for rejection must be based on thorough investigation of DBE capabilities.

b.→ Action: Provide sufficient evidence to demonstrate that DBE was rejected for sound reasons such as past performance, relevant business experience and stability, safety record, business ethic and integrity, technical capacity, other tangible factors.

6.→ Documentation of Assistance to Interested DBEs--Bonding, Credit, Insurance, Equipment, Supplies/Materials:

a.→ Purpose: To assist interested DBEs in obtaining bonds, lines of credit, insurance, equipment, supplies, materials, and other assistance or services.

b.→ Action: Assist interested DBEs in obtaining bonding, lines of credit or insurance, and provide technical assistance or information related to plans, specifications, and project requirements. Assist DBEs in obtaining equipment, supplies, materials or other services related to meeting project requirements (excluding supplies or equipment the DBE purchases from the prime).

7.→ Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support:

a.→ Purpose: To effectively use the services of minority, women, and community organizations as well as contractors' groups, local, state, and federal business assistance offices and organization that provide assistance in recruiting and supporting DBEs, as well as participation in activities that support DBE business development.

b.→ Action: Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

Return to:
 Wisconsin Department of Transportation
 DBE Program Office
 PO Box 7965
 Madison, WI 53707-7965
 DBE_Alert@dot.wi.gov

I certify that I have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, as demonstrated by my responses and as specified in Additional Special Provision 3 (ASP-3).

I certify that the information given in the Documentation of Good Faith Efforts is true and correct to the best of my knowledge and belief.

I further understand that any willful falsification, fraudulent statement, or misrepresentation will result in appropriate sanctions, which may involve debarment and/or prosecution under applicable state (Trans 504) and Federal laws.

		(Bidder/Authorized Representative Signature)

		(Print Name)

		(Title)

Good-Faith-Effort--Sample-Documentation-Logs

The sample logs below are provided as guides rather than exhaustive list. See ASP3, Appendix A for additional examples of demonstrable good faith efforts. Attach documentation for each activity listed.

Acceptable forms of documentation include copies of solicitations sent to DBEs, notes from substantive conversations and negotiations with DBEs, copies of advertisements placed, email communications, all quotes received from DBEs and from all subcontractors who were considered alongside DBE quotes, proof of attendance at applicable networking events; flyers for events or workshops for DBEs offered by the prime, and other physical records of good faith efforts activities.

SOLICITATION LOG

Date	Activity	Name of DBE Solicited	Follow-up
4/1/2020	Sent May-Let solicitation	Winterland Electric	Spoke with Mark Winterland on 4/15/20 to ask if he would quote.

SELECTED WORK ITEMS SOLICITED LOG

Work Type	DBE Firm	Contact Person	Date	Contact Mode
Pavement Marking	ABC Marking	Leslie Lynch	4/1/2020	Email; phone
	#1 Marking Co.	Mark Smart	4/1/2020	Email; left VM
Electrical	Winterland Electric	Tabitha Tinker	4/3/2020	Email, left VM
	Superstar Wiring	Jose Huascar	4/3/2020	Email; phone

INFORMATION PROVIDED LOG

Request Date	DBE Firm	Information Requested & Provided	Response Date
4/1/2020	Winterland Electric	Requested info on electrical requirements; provided plan and link to specs	4/3/2020
4/21/2020	Absolute Construction	Wanted to know how and when supplies are paid for by WisDOT; referred to spec that covers stockpiling	4/21/2020

NEGOTIATIONS LOG

Date	DBE Firm	Contact Name	Work Type	Quotes Rec'd?	Considered for project?	If not selected, why?
4/12/2020	ABC Landscape	John Dean	Erosion Control	Yes	No	Cannot perform all items
4/17/2020	Wild Ferns	Sandy Lynn	Erosion Control	Yes	Yes	
4/20/2020	#1 Marking	Mark Smart	Electrical	Yes	Yes	

ASSISTANCE LOG

Date	DBE Firm	Contact Person	Assistance Provided
4/1/2020	ABC Sawing	Jackie Swiggle	Informed DBE on how to obtain bonding
4/17/2020	Supreme Construction	Winston Walters	Provided contact for wholesale supply purchase

OUTREACH & BUSINESS DEVELOPMENT LOG

Date	Agency/Organization Contacted	Contact Person	Assistance Requested
4/1/2020	Women in Construction	LaTonya Klein	Contact information for woman-owned suppliers
4/28/2020	WBIC	Sam Smith	Asked for information to provide to DBE regarding financing programs through WBIC

Official Form DT1202 can be found here: <https://wisconsindot.gov/pages/global-footer/formdocs/default.aspx>

ADDITIONAL SPECIAL PROVISION 4

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.

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 is not allowed to withhold 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.

Acceptance and Final Payment

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.

ADDITIONAL SPECIAL PROVISIONS 5 FUEL COST ADJUSTMENT

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.1100	Backfill Granular Grade 1	CY	0.23
209.1500	Backfill Granular Grade 1	Ton	0.115
209.2100	Backfill Granular Grade 2	CY	0.23
209.2500	Backfill Granular Grade 2	Ton	0.115
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is \$2.55 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

- (1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.
- (2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.
- (3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.
- (4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \frac{CFI}{BFI} - 1 \times Q \times BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

Additional Special Provision 6 (ASP-6)

Modifications to the standard specifications

Make the following revisions to the standard specifications.

107 Legal Relations and Responsibility to the Public

Add subsection 107.27 effective with the November 2024 letting.

107.27 Drones or Unmanned Aircraft Systems (UAS)

107.27.1 Licensing and Compliance

- (1) Obtain and possess the necessary Federal Aviation Administration (FAA) licenses and certifications to operate drones commercially (<https://www.faa.gov/uas>).
- (2) Comply with all FAA regulations, airspace restrictions, and local laws. Operators of small drones that are less than 55 pounds for work or business must follow all requirements as listed in Title 14, Chapter 1, Subchapter F, Part 107 of the Code of Federal Regulations (14 CFR) and obtain a remote pilot certificate (https://www.faa.gov/uas/commercial_operators).
- (3) Comply with Wisconsin State Statute 942.10. Limit operations to the specific approved purpose and employ reasonable precautions to avoid capturing images of the public except those that are incidental to the project.
- (4) Provide copies of waivers required for specific project conditions to the engineer prior to any flight.

107.27.2 Flight Approval, Safety, and Incident Reporting

- (1) Submit information in 107.27.2(2) to obtain written drone flight approval from the engineer at least 3 business days prior to operating a drone within the right-of-way. Do not operate a drone within the right-of-way unless approved by the engineer.
- (2) Drone flight application for review and approval must include:
 - UAS pilot information and qualifications, images of certification
 - UAS drone information and FAA tail numbers
 - Max/ Min allowable flight parameters (weather)
 - Specifics of flight mission: capture scope
 - Estimated flight duration
 - Pre-flight checklist
 - Site-specific parameters
 - Notification protocols - Federal/Local/Agency/Owner/Responsible in Charge
 - Confirmation and verification of approved operators and hardware
 - Flight plan map diagram (including launch and landing location)
 - FAA-Airspace flight map classification and confirmation with graphics
 - UAS incident management protocol
- (3) If contractor is requesting multiple types of the same flight, a simplified request can be submitted listing weekly flight plan.
- (4) Safety measures must include but are not limited to:
 - Regular training and updates on drone regulations are required and must be provided upon request.
 - Drones must be operated in accordance with safety guidelines, including maintaining a safe distance from people, structures, vehicles, etc.
 - Conduct a pre-flight safety assessment, considering weather conditions, airspace restrictions, and potential hazards.
 - Emergency procedures (e.g., drone malfunction, loss of control) must be documented and followed.
 - All incidents must be reported to the engineer.
- (5) If the drone has an incident during flight, report the following to the engineer:
 - Incident background and details.
 - FAA (14 CFR 107.9) and NTSB (49 CFR 870) notification protocol.
 - Contractor internal notification protocol.

107.27.3 Insurance Requirements

- (1) Maintain drone liability insurance with the following limits.
 1. For drones weighing 10 pounds or less, a liability policy with a minimum limit of \$1,000,000.00 is required.

2. For drones weighing more than 10 pounds and less than or equal to 20 pounds, a liability policy with a minimum limit of \$2,000,000.00 is required.
3. For drones weighing more than 20 pounds, notify engineer and department will determine appropriate liability policy coverage levels based on size, use, location, and other risk factors.

646 Pavement Markings

646.3.2.4 Black Epoxy

Replace paragraph (1) with the following effective with the November 2024 letting.

- (1) Apply black epoxy in a grooved slot directly after the white marking. Apply epoxy at a wet mil thickness of 20. Apply black aggregate at or exceeding 25 pounds per gallon of epoxy. Do not apply glass beads to black epoxy.

ERRATA

204.3.1.3 Salvaging or Disposal of Materials

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (2) Dispose of concrete, stone, brick, and other material not designated for salvage as specified for disposing of materials under 203.3.5.

204.3.2.3 Removing Buildings

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (2) Buildings removed and materials resulting from building removal become the contractor's property unless the contract specifies otherwise. Dispose of unclaimed and removed material as specified for disposing of materials in 203.3.5.

335.3.2 Rubblizing

Replace paragraph (6) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (6) Remove reinforcing steel exposed at the surface by cutting below the surface and disposing of the steel as specified in 203.3.5. Do not remove unexposed reinforcing steel.

335.3.3 Compacting

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (2) Remove loose asphaltic patching material, joint fillers, expansion material, or other similar materials from the compacted surface. Also remove pavement or patches that have a maximum dimension greater than or equal to 6 inches that are either not well seated or projecting more than one inch. Dispose of removed material as specified in 203.3.5.

526.3.4 Construction, Backfilling, Inspection and Maintenance

Replace paragraph (3) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (3) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.5. Contractor-furnished materials remain the contractor's property upon removal.

602.3.6 Concrete Rumble Strips

Replace paragraph (5) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

- (5) At the end of each workday, move equipment and material out of the clear zone and sweep or vacuum the traveled way pavement and shoulder areas. Sweep away or vacuum up milling debris before opening adjacent lanes to traffic. Dispose of waste material as specified in 203.3.5; do not place on the finished shoulder surface.

604.2 Materials

Replace paragraph (1) with the following information to remove line and link for crushed aggregate effective with the November 2024 letting. The crushed aggregate gradation information for slope paving is now found in 604.2(3).

- (1) Furnish materials conforming to the following:

Water.....	501.2
Select crushed material.....	312.2
Concrete.....	501
Reinforcement.....	505
Expansion joint filler	415.2.3
Asphaltic materials	455.2

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. DBE firms must enter all payments to DBE and non-DBE firms regardless of tier.
6. 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).
7. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4), (5), and (6), and shall be binding on all first tier subcontractor relationships, all contractors and subcontractors utilizing DBE firms on the project, and all payments from DBE firms.

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>

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll or Labor Data Submittal

- (1) Use the department's Civil Rights Compliance System (CRCS) for projects with a LET date on or before December 2024 and AASHTOWare Project Civil Rights and Labor (AWP CRL) for projects with a LET date on or after January 2025 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 or AWP CRL. 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 or AWP CRL 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, via the online AWP Knowledge Base, or by telephone. to schedule CRCS specific training. The AWP Knowledge Base is at: <https://awpkb.dot.wi.gov/>
- (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) For firms wishing to export payroll/labor data from their computer system, have their payroll coordinator contact:
 - For CRCS: Paul Ndon at paul.ndon@dot.wi.gov. Information about exporting payroll/labor data. Not every contractor's payroll system can produce 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>
 - For AWP CRL: Contact AWP Support at awpsupport@dot.wi.gov. Additional information can be found in the AWP Knowledge Base at <https://awpkb.dot.wi.gov/Content/crl/Payrolls-PrimesAndSubs/PayrollXMLFileCreationProcess.htm>

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (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). 23 CFR 633.102(e).

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. 23 CFR 633.102(e).

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) in accordance with 23 CFR 633.102. 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 solicitation-for-bids or request-for-proposals 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). 23 CFR 633.102(b).

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. 23 CFR 633.102(d).

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. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A 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 Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 230, Subpart A, 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 (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 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 Part 35 and 29 CFR Part 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. 23 CFR 230.409 (g)(4) & (5).

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, sexual orientation, gender identity, 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 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 or other knowledgeable company official.

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, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure 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. 23 CFR 230.409. 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, sexual orientation, gender identity, 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, sexual orientation, gender identity, 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 thereunder. 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, sexual orientation, gender identity, 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, 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. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient 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 recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

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 more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, 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, sexual orientation, gender identity, 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), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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 (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to DBAconformance@dol.gov. 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.

(4) 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 will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.* 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its procurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

3. Records and certified payrolls (29 CFR 5.5)

a. Basic record requirements (1) Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) Information required. Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must 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.

(4) Additional records relating to apprenticeship. Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. Certified payroll requirements (1) Frequency and method of submission. The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) Information required. The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) Statement of Compliance. Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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 [29 CFR part 3](#); and

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) Use of Optional Form WH-347. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices (1) Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. 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. 23 CFR 230.111(e)(2). 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 journeyworkers 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 as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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 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 [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), 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 watchpersons 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. 29 CFR 5.5.

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 and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* 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.

* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901](#)–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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" in paragraph 1 of Section VI 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: (based on longstanding interpretation)

- (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. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), 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. Pursuant to 23 CFR 635.116(c), 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. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

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 Part 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. 23 CFR 635.108.

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 Part 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). 29 CFR 1926.10.

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 Part 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 11, 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 (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

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. 2 CFR 180.220 and 1200.220.

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. 2 CFR 180.320.

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. 2 CFR 180.325.

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. 2 CFR 180.345 and 180.350.

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, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient 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 recipient or subrecipient of Federal funds (such as the prime or general contract). "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. 2 CFR 180.330.

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. 2 CFR 180.220 and 180.300.

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. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. 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 System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

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 CFR 180.325.

* * * * *

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 CFR 180.335;.

(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, 2 CFR 180.800;

(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, 2 CFR 180.700 and 180.800; 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. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. 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). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant 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. 2 CFR 180.365.

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, Subpart I, 180.900 – 180.1020, 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 recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "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 recipient or subrecipient 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. 2 CFR 1200.220 and 1200.332.

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. 2 CFR 180.220 and 1200.220.

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 System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should 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 Part 20, App. A.

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.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor 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. 46 CFR 381.7.

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 Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

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).

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:

<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>
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.

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.

BUY AMERICA PROVISION

Buy America (as documented in [88 FR 57750 \(2 CFR part 184 and 200\)](#) from the Office of Management and Budget: [Federal Register: Guidance for Grants and Agreements](#)) shall be domestic products and permanently incorporated in this project as classified in the following three categories, and as noted in the Construction and Materials Manual (CMM):

1. Iron and Steel

All iron and steel manufacturing and coating processes (from the initial melting stage through the application of coatings) 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 the iron and steel manufacturing and coating processes Buy America 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.

2. Manufactured Product

All manufactured products (as defined in CMM 228.5) are covered under a previous waiver from 1983 and are currently exempt from Buy America.

3. Construction Material

All construction materials (as defined in [88 FR 57750 \(2 CFR part 184 and 200\)](#) and as referenced in CMM 228.5) must comply with Buy America. All manufacturing process of construction materials must occur in the United States.

[88 FR 55817 \(DOT-OST-2022-0124\)](#) allows a limited waiver of Buy America requirements for de minimis costs and small grants.

- The Total value of the non-compliant products is no more than the lesser of \$1,000,000 or 5% of total applicable costs for the project¹; or
- The total amount of Federal financial assistance applied to the project, through awards or subaward, is below \$500,000²

The contractor shall take actions and provide documentation conforming to CMM 228.5 to ensure compliance with this Buy America provision.

<https://wisconsindot.gov/rdw/cmm/cm-02-28.pdf>

Upon completion of the project, certify to the engineer, in writing using department form DT4567 that all iron and steel, manufactured products, and construction materials conform to this Buy America provision.

Form DT4567 is available at: <https://wisconsindot.gov/Documents/formdocs/dt4567.docx>

Attach a list of iron or steel and construction material exemptions and their associated costs to the certification form using the Buy America Exemption Tracking Tool, available at:

<https://wisconsindot.gov/hccidocs/contracting-info/buy-america-exemption-tracking-tool.xlsx>

¹ The de minimis public interest waiver does not apply to iron and steel subject to the requirements of 23 U.S.C. 313 on financial assistant administered by FHWA. The de minimis threshold in 23 CFR 635.410(b)(4) continues to apply for iron and steel.

² The small grant portion of the waiver does not apply to iron, steel, and manufactured goods subject to the requirements of 49 U.S.C. 22905(a).

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.

**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

Superseded General Decision Number: WI20240010

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: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.75 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 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

1	02/07/2025
2	02/21/2025
3	05/23/2025
4	06/06/2025
5	06/27/2025
6	07/04/2025
7	07/11/2025
8	07/25/2025

BRWI0001-002 06/03/2024

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPLEAU, AND
VERNON COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 38.86	27.00

BRWI0002-002 06/01/2024

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 46.60	27.01

BRWI0002-005 06/01/2024

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...	\$ 41.62	27.03

BRWI0003-002 06/01/2024

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 38.45	27.41

BRWI0004-002 06/01/2024

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 43.21	27.90

BRWI0006-002 06/01/2024

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE,
ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

Rates	Fringes

BRICKLAYER.....	\$ 38.33	27.53

BRWI0007-002 06/01/2024		
GREEN, LAFAYETTE, AND ROCK COUNTIES		
	Rates	Fringes
BRICKLAYER.....	\$ 39.34	28.15

BRWI0008-002 06/01/2024		
MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES		
	Rates	Fringes
BRICKLAYER.....	\$ 46.16	27.33

BRWI0011-002 06/01/2024		
CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES		
	Rates	Fringes
BRICKLAYER.....	\$ 38.45	27.41

BRWI0019-002 06/01/2024		
BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES		
	Rates	Fringes
BRICKLAYER.....	\$ 38.18	27.68

BRWI0034-002 06/01/2024		
COLUMBIA AND SAUK COUNTIES		
	Rates	Fringes
BRICKLAYER.....	\$ 40.17	27.32

CARP0068-011 05/05/2025		
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.....	\$ 47.57	31.17
PILEDRIVERMAN.....	\$ 47.71	30.98

CARP0231-002 06/01/2025		
KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA COUNTIES		
	Rates	Fringes
CARPENTER.....	\$ 47.73	31.52

CARP0310-002 06/03/2024

ADAMS, ASHLAND, BAYFIELD (Eastern 2/3), FOREST, IRON, JUNEAU,
LANGLADE, LINCOLN, MARATHON, ONEIDA, PORTAGE, PRICE, SHAWANO
(Western Portion of the County), TAYLOR, VILAS, AND WOOD
COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 42.44	28.44
Piledriver.....	\$ 42.44	28.44

CARP0314-001 06/02/2025

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, JEFFERSON,
LAFAYETTE, RICHLAND, ROCK, SAUK, AND WALWORTH COUNTIES

	Rates	Fringes
Carpenter.....	\$ 42.45	28.78
Piledrivermen.....	\$ 44.45	28.78

CARP0361-004 05/05/2025

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 46.82	31.92

CARP0731-002 06/03/2024

CALUMET (Eastern Portion of the County), FOND DU LAC (Eastern
Portion of the County), MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 42.44	28.44
Piledriver.....	\$ 42.44	28.44

CARP0955-002 06/03/2024

CALUMET (Western Portion of the County), FOND DU LAC (Western
Portion of the County), GREEN LAKE, MARQUETTE, OUTAGAMIE,
WAUPACA, WAUSHARA, AND WINNEBAGO

	Rates	Fringes
CARPENTER.....	\$ 42.44	28.44
PILEDRIIVER.....	\$ 42.44	28.44

CARP1056-002 06/01/2024

ADAMS, ASHLAND, BARRON, BAYFIELD , BROWN, BUFFALO, BURNETT
,CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE,
DOOR, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT,
GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU,
KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC,
MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO,
ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwy. 29 & 65), POLK (E.

of Hwy. 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK,
SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX (E. of Hwy. 65),
TAYLOR, TREMPLEALEAU, VERNON, VILAS, WALWORTH, WASHBURN,
WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
MILLWRIGHT.....	\$ 42.00	28.85

CARP1074-002 06/03/2024		

BARRON, BURNETT, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, PEPIN,
PIERCE (E. of Hwy. 29 & 65), POLK (E. of Hwy. 35, 48 & 65),
RUSK, SAWYER, ST. CROIX (E. of Hwy. 65), AND WASHBURN

	Rates	Fringes
CARPENTER.....	\$ 42.44	28.44
PILEDRIIVER.....	\$ 42.44	28.44

CARP1143-002 06/03/2024		

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPLEALEAU AND
VERNON COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 42.44	28.44
PILEDRIIVER.....	\$ 42.44	28.44

CARP1146-002 06/03/2024		

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, MENOMINEE, OCONTO,
AND SHAWANO (Western Portion of the County) COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 42.44	28.44
PILEDRIIVER.....	\$ 42.44	28.44

CARP2337-009 06/03/2024		

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA

	Rates	Fringes
PILEDRIVERMAN.....	\$ 42.21	34.07

ELEC0014-002 05/25/2025		

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, TREMPLEALEAU, VERNON, AND WASHBURN
COUNTIES

	Rates	Fringes
Electricians:.....	\$ 44.29	25.21

* ELEC0014-007 05/25/2025

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT,
CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE,
DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST,
GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON,
JUNEAU, KENOSHA, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE,
LINCOLN, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE,
OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE,
RACINE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN,
ST CROIX, TAYLOR, TREMPLEAU, VERNON, VILAS, WALWORTH,
WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO AND WOOD COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician.....	\$ 31.17	20.08

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 06/01/2023

KENOSHA COUNTY

	Rates	Fringes
Electricians:.....	\$ 46.05	30%+13.15

ELEC0158-002 06/01/2024

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig),
MARINETTE(Wausaukee and area South thereof), OCONTO, MENOMINEE
(East of a line 6 miles West of the West boundary of Oconto
County), SHAWANO (Except Area North of Townships of Aniwa and
Hutchins) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 40.25	29.75%+11.17

ELEC0159-003 05/26/2024

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
ELECTRICIAN.....	\$ 48.55	25.91

ELEC0219-004 06/01/2019

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over \$180,000.....	\$ 33.94	21.80
Electrical contracts under \$180,000.....	\$ 31.75	21.73

ELEC0242-005 06/01/2025		

DOUGLAS COUNTY

	Rates	Fringes
Electricians:.....	\$ 47.46	33.34

ELEC0388-002 06/01/2024		

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:.....	\$ 40.19	26%+12.45

ELEC0430-002 06/01/2024		

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:.....	\$ 48.50	26.25

ELEC0494-005 06/01/2025		

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:.....	\$ 50.86	28.26

ELEC0494-006 06/01/2025		

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:.....	\$ 45.20	25.27

ELEC0494-013 05/26/2024		

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.....	\$ 36.03	18.87
Technician.....	\$ 36.03	18.87

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillon, 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

ELEC0577-003 05/26/2024

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:.....	\$ 40.00	22.69

ELEC0890-003 06/01/2024

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE,
RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:.....	\$ 43.65	25.95%+12.26

ELEC0953-001 06/02/2019

	Rates	Fringes
Line Construction:		
(1) Lineman.....	\$ 47.53	21.43
(2) Heavy Equipment Operator.....	\$ 42.78	19.80
(3) Equipment Operator.....	\$ 38.02	18.40
(4) Heavy Groundman Driver..	\$ 33.27	16.88
(5) Light Groundman Driver..	\$ 30.89	16.11
(6) Groundsman.....	\$ 26.14	14.60

	Rates	Fringes
Power Equipment Operator		
Group 1.....	\$ 48.37	30.30
Group 2.....	\$ 47.87	30.30
Group 3.....	\$ 46.77	30.30
Group 4.....	\$ 46.51	30.30
Group 5.....	\$ 46.22	30.30
Group 6.....	\$ 40.32	30.30

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; bituminous 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, day light machine

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2025

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC,
MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO
COUNTIES:

	Rates	Fringes
IRONWORKER.....	\$ 44.66	33.67

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor
Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2025

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3),
WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 47.52	33.67

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor
Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2025

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.....	\$ 44.00	32.66

IRON0498-005 06/01/2024

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and
WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER.....	\$ 46.59	48.80

IRON0512-008 05/01/2025

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON,
PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPLEAU
COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 46.35	36.86

IRON0512-021 05/01/2025

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA,
PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 42.89	36.86

LAB00113-002 06/02/2025

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 38.81	25.53
Group 2.....	\$ 38.96	25.53
Group 3.....	\$ 39.16	25.53
Group 4.....	\$ 39.31	25.53
Group 5.....	\$ 39.46	25.53
Group 6.....	\$ 35.30	25.53

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 Sawyer 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

LAB00113-003 06/02/2025

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 38.06	25.53
Group 2.....	\$ 38.16	25.53
Group 3.....	\$ 38.21	25.53
Group 4.....	\$ 38.41	25.53
Group 5.....	\$ 38.26	25.53
Group 6.....	\$ 35.15	25.53

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 Sawyer 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

LAB00113-011 06/02/2025

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 37.87	25.53
Group 2.....	\$ 38.02	25.53
Group 3.....	\$ 38.22	25.53
Group 4.....	\$ 38.19	25.53
Group 5.....	\$ 38.52	25.53
Group 6.....	\$ 35.02	25.53

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 Sawyer 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

LAB00140-002 06/02/2025

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, TREMPLEAU, VERNON, VILLAS, WALWORTH, WASHBURN,
WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1.....	\$ 43.77	19.97
Group 2.....	\$ 43.87	19.97
Group 3.....	\$ 43.92	19.97
Group 4.....	\$ 44.12	19.97
Group 5.....	\$ 43.97	19.97
Group 6.....	\$ 40.40	19.97

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; 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 Sawyer 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; Traffic Control

LAB00464-003 06/02/2025

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1.....	\$ 44.05	19.97

Group 2.....	\$ 44.15	19.97
Group 3.....	\$ 44.20	19.97
Group 4.....	\$ 44.40	19.97
Group 5.....	\$ 44.25	19.97
Group 6.....	\$ 40.40	19.97

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 Sawyer 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 05/05/2025

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller.....	\$ 38.17	27.26
Spray, Sandblast, Steel....	\$ 38.77	27.26
Repaint:		
Brush, Roller.....	\$ 36.67	27.26
Spray, Sandblast, Steel....	\$ 37.27	27.26

PAIN0108-002 06/01/2025

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller.....	\$ 43.64	23.35
Spray & Sandblast.....	\$ 44.64	23.35

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, TREMPLEAU, AND
VERNON COUNTIES

	Rates	Fringes
PAINTER.....	\$ 22.03	12.45

PAIN0781-002 06/01/2025

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge.....	\$ 43.19	24.87
Brush.....	\$ 42.44	24.87
Spray & Sandblast.....	\$ 43.19	24.87

PAIN0802-002 06/01/2025

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND,
ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush.....	\$ 37.65	21.17

PREMIUM PAY:
 Structural Steel, Spray, Bridges = \$1.00 additional per
 hour.

PAIN0802-003 06/01/2025

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.....	\$ 37.65	21.17

PAIN0934-001 06/01/2025

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush.....	\$ 40.62	26.37
Spray.....	\$ 41.62	26.37
Structural Steel.....	\$ 40.77	26.37

PAIN1011-002 06/01/2025

FLORENCE COUNTY

	Rates	Fringes
Painters:.....	\$ 31.17	15.92

PLAS0599-002 06/01/2024		

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area A.....	\$ 47.17	30.35
Area B.....	\$ 41.62	26.34
Area C.....	\$ 42.74	25.91
Area D.....	\$ 43.16	25.49
Area E.....	\$ 42.25	26.39
Area F.....	\$ 38.98	29.67

AREA DESCRIPTIONS

AREA A: ASHLAND, BURNETT, BAYFIELD, DOUGLAS, IRON, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA B: ADAMS, BARRON, BROWN, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, 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 C: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE, MONROE, PEPIN, PIERCE, RICHLAND, TREMPLEAU, AND VERNON COUNTIES

AREA D: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA E: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA F: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2025		

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles.....	\$ 39.57	28.70
3 or more Axles; Euclids, Dumpton & Articulated,		
Truck Mechanic.....	\$ 39.72	28.70

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 <https://www.dol.gov/agencies/whd/government-contracts>.

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) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate 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. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the 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. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

----- WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or

by mail 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 an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail 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 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.

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END OF GENERAL DECISION"

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 Schedule of Items

Page 1 of 58

Proposal ID: 20250909006 Project(s): 1060-27-71

Federal ID(s): WISC 2025596

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	201.0105 Clearing	76.000 STA	_____.	_____.
0004	201.0120 Clearing	558.000 ID	_____.	_____.
0006	201.0205 Grubbing	76.000 STA	_____.	_____.
0008	201.0220 Grubbing	558.000 ID	_____.	_____.
0010	203.0220 Removing Structure (structure) 0081. B-40-81	1.000 EACH	_____.	_____.
0012	203.0220 Removing Structure (structure) 0083. B-40-83	1.000 EACH	_____.	_____.
0014	203.0220 Removing Structure (structure) 0085. B-40-85	1.000 EACH	_____.	_____.
0016	203.0220 Removing Structure (structure) 0087. B-40-87	1.000 EACH	_____.	_____.
0018	203.0220 Removing Structure (structure) 0110. N-40-81	1.000 EACH	_____.	_____.
0020	203.0220 Removing Structure (structure) 0111. N-40-80	1.000 EACH	_____.	_____.
0022	203.0220 Removing Structure (structure) 0801. R-40-0026	1.000 EACH	_____.	_____.
0024	203.0220 Removing Structure (structure) 0802. R-40-0088	1.000 EACH	_____.	_____.
0026	203.0220 Removing Structure (structure) 1034. B-40-87	1.000 EACH	_____.	_____.



Proposal Schedule of Items

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Proposal ID: 20250909006 Project(s): 1060-27-71

Federal ID(s): WISC 2025596

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0028	203.0220 Removing Structure (structure) 1035. B-40-86	1.000 EACH	_____.	_____.
0030	203.0220 Removing Structure (structure) 1036. B-40-85	1.000 EACH	_____.	_____.
0032	203.0220 Removing Structure (structure) 1037. B-40-84	1.000 EACH	_____.	_____.
0034	203.0220 Removing Structure (structure) 1038. B-40-83	1.000 EACH	_____.	_____.
0036	203.0220 Removing Structure (structure) 1039. B-40-82	1.000 EACH	_____.	_____.
0038	203.0220 Removing Structure (structure) 1040. B-40-81	1.000 EACH	_____.	_____.
0040	203.0220 Removing Structure (structure) 1041. B-40-81	1.000 EACH	_____.	_____.
0042	203.0330 Debris Containment (structure) 0087. B-40-87	1.000 EACH	_____.	_____.
0044	203.0330 Debris Containment (structure) 1034. B-40-87	1.000 EACH	_____.	_____.
0046	203.0330 Debris Containment (structure) 1035. B-40-86	1.000 EACH	_____.	_____.
0048	204.0100 Removing Concrete Pavement	130,599.000 SY	_____.	_____.
0050	204.0120 Removing Asphaltic Surface Milling	1,334.000 SY	_____.	_____.
0052	204.0150 Removing Curb & Gutter	1,833.000 LF	_____.	_____.



Proposal Schedule of Items

Page 3 of 58

Proposal ID: 20250909006 Project(s): 1060-27-71

Federal ID(s): WISC 2025596

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Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0054	204.0155 Removing Concrete Sidewalk	5,564.000 SY	_____.	_____.
0056	204.0157 Removing Concrete Barrier	15,273.000 LF	_____.	_____.
0058	204.0165 Removing Guardrail	5,003.000 LF	_____.	_____.
0060	204.0170 Removing Fence	8,805.000 LF	_____.	_____.
0062	204.0195 Removing Concrete Bases	177.000 EACH	_____.	_____.
0064	204.0210 Removing Manholes	75.000 EACH	_____.	_____.
0066	204.0220 Removing Inlets	245.000 EACH	_____.	_____.
0068	204.0245 Removing Storm Sewer (size) 0001. 12-Inch	9,609.000 LF	_____.	_____.
0070	204.0245 Removing Storm Sewer (size) 0002. 15-Inch	2,021.000 LF	_____.	_____.
0072	204.0245 Removing Storm Sewer (size) 0003. 18-Inch	1,244.000 LF	_____.	_____.
0074	204.0245 Removing Storm Sewer (size) 0004. 21-Inch	701.000 LF	_____.	_____.
0076	204.0245 Removing Storm Sewer (size) 0005. 24-Inch	314.000 LF	_____.	_____.
0078	204.0245 Removing Storm Sewer (size) 0006. 36-Inch	806.000 LF	_____.	_____.
0080	204.0245 Removing Storm Sewer (size) 0007. 54-Inch	23.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0082	204.0246 Removing Ancillary Structure (structure) 4001. S-40-002	1.000 EACH	_____.	_____.
0084	204.0246 Removing Ancillary Structure (structure) 4002. S-40-443	1.000 EACH	_____.	_____.
0086	204.0246 Removing Ancillary Structure (structure) 4003. S-40-151	1.000 EACH	_____.	_____.
0088	204.0246 Removing Ancillary Structure (structure) 4004. S-40-444	1.000 EACH	_____.	_____.
0090	204.0246 Removing Ancillary Structure (structure) 4005. S-40-994	1.000 EACH	_____.	_____.
0092	204.0246 Removing Ancillary Structure (structure) 4006. S-40-313	1.000 EACH	_____.	_____.
0094	204.0250 Abandoning Manholes	1.000 EACH	_____.	_____.
0096	204.0280 Sealing Pipes	12.000 EACH	_____.	_____.
0098	204.0291.S Abandoning Sewer	71.820 CY	_____.	_____.
0100	204.9001.S Removing Advance Flasher Assemblies Type 1	6.000 EACH	_____.	_____.
0102	204.9060.S Removing (item description) 0001. Steps Railing	15.000 EACH	_____.	_____.
0104	204.9060.S Removing (item description) 0002. Sand Barrel Arrays	1.000 EACH	_____.	_____.
0106	204.9060.S Removing (item description) 1001. Distribution Center	2.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0108	204.9060.S Removing (item description) 1002. Lighting Units	118.000 EACH	_____.	_____.
0110	204.9060.S Removing (item description) 1003. Poles Wood 60-FT	10.000 EACH	_____.	_____.
0112	204.9060.S Removing (item description) 1004. Poles Wood 60-FT and Floodlights	54.000 EACH	_____.	_____.
0114	204.9060.S Removing (item description) 1005. Underdeck Lighting	35.000 EACH	_____.	_____.
0116	204.9060.S Removing (item description) 3001. Traffic Signals W. O'Connor St & 70th St	1.000 EACH	_____.	_____.
0118	204.9060.S Removing (item description) 3002. Traffic Signals W Kearney St & S 70th St	1.000 EACH	_____.	_____.
0120	204.9060.S Removing (item description) 3003. Traffic Signals W O'Connor St & S 68th St	1.000 EACH	_____.	_____.
0122	204.9060.S Removing (item description) 3004. Traffic Signals W Kearney St & S 68th St	1.000 EACH	_____.	_____.
0124	204.9060.S Removing (item description) 3005. Traffic Signals IH 94 Ramps & S Hawley Rd	1.000 EACH	_____.	_____.
0126	205.0100 Excavation Common	193,570.000 CY	_____.	_____.
0128	205.0508.S Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil 0001. Onsite Fill	1,468.000 TON	_____.	_____.
0130	205.0508.S Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil 0002. Daily Cover	2,438.000 TON	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0132	205.0508.S Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil 0003. Direct Bury	987.000 TON	_____.	_____.
0134	206.1001 Excavation for Structures Bridges (structure) 1034. B-40-1034	1.000 EACH	_____.	_____.
0136	206.1001 Excavation for Structures Bridges (structure) 1035. B-40-1035	1.000 EACH	_____.	_____.
0138	206.1001 Excavation for Structures Bridges (structure) 1040. B-40-1040	1.000 EACH	_____.	_____.
0140	206.1001 Excavation for Structures Bridges (structure) 1041. B-40-1041	1.000 EACH	_____.	_____.
0142	206.3001 Excavation for Structures Retaining Walls (structure) 0735. R-40-735	1.000 EACH	_____.	_____.
0144	206.3001 Excavation for Structures Retaining Walls (structure) 0738. R-40-738	1.000 EACH	_____.	_____.
0146	206.3001 Excavation for Structures Retaining Walls (structure) 0743. R-40-743	1.000 EACH	_____.	_____.
0148	206.3001 Excavation for Structures Retaining Walls (structure) 0801. R-40-801	1.000 EACH	_____.	_____.
0150	209.0200.S Backfill Controlled Low Strength	500.000 CY	_____.	_____.
0152	210.1500 Backfill Structure Type A	11,164.000 TON	_____.	_____.
0154	213.0100 Finishing Roadway (project) 0001. 1060-27-71	1.000 EACH	_____.	_____.
0156	305.0120 Base Aggregate Dense 1 1/4-Inch	71,753.000 TON	_____.	_____.



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0158	310.0110 Base Aggregate Open-Graded	2,229.000 TON	_____.	_____.
0160	312.0110 Select Crushed Material	164,486.000 TON	_____.	_____.
0162	312.0115 Select Crushed Material	305.000 CY	_____.	_____.
0164	390.0100 Removing Pavement for Base Patching	150.000 CY	_____.	_____.
0166	390.0405 Base Patching Concrete SHES	150.000 CY	_____.	_____.
0168	405.0200 Coloring Concrete Custom	528.000 CY	_____.	_____.
0170	415.0070 Concrete Pavement 7-Inch	535.000 SY	_____.	_____.
0172	415.0410 Concrete Pavement Approach Slab	2,408.000 SY	_____.	_____.
0174	415.4100 Concrete Pavement Joint Filling	27,506.000 SY	_____.	_____.
0176	416.0610 Drilled Tie Bars	736.000 EACH	_____.	_____.
0178	416.0620 Drilled Dowel Bars	573.000 EACH	_____.	_____.
0180	416.1715 Concrete Pavement Repair SHES	100.000 SY	_____.	_____.
0182	450.1100.S Asphaltic Mixture For Extreme Conditions	125.000 TON	_____.	_____.
0184	455.0605 Tack Coat	5,565.000 GAL	_____.	_____.
0186	460.2000 Incentive Density HMA Pavement	2,750.000 DOL	1.00000	2,750.00
0188	460.6223 HMA Pavement 3 MT 58-28 S	300.000 TON	_____.	_____.



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0190	460.7223 HMA Pavement 3 HT 58-28 S	10,417.000 TON	_____.	_____.
0192	460.7224 HMA Pavement 4 HT 58-28 S	188.000 TON	_____.	_____.
0194	460.7424 HMA Pavement 4 HT 58-28 H	6,454.000 TON	_____.	_____.
0196	465.0105 Asphaltic Surface	19.000 TON	_____.	_____.
0198	465.0120 Asphaltic Surface Driveways and Field Entrances	29.000 TON	_____.	_____.
0200	465.0125 Asphaltic Surface Temporary	250.000 TON	_____.	_____.
0202	495.1000.S Cold Patch	100.000 TON	_____.	_____.
0204	501.1000.S Ice Hot Weather Concreting	142,460.000 LB	_____.	_____.
0206	502.0100 Concrete Masonry Bridges	1,839.000 CY	_____.	_____.
0208	502.0110.S Concrete Masonry Soldier Pile Footings	325.000 CY	_____.	_____.
0210	502.3200 Protective Surface Treatment	11,897.000 SY	_____.	_____.
0212	502.3210 Pigmented Surface Sealer	4,125.000 SY	_____.	_____.
0214	502.4205 Adhesive Anchors No. 5 Bar	64.000 EACH	_____.	_____.
0216	503.0137 Prestressed Girder Type I 36W-Inch	7,398.000 LF	_____.	_____.
0218	504.0500 Concrete Masonry Retaining Walls	5,502.000 CY	_____.	_____.
0220	505.0400 Bar Steel Reinforcement HS Structures	105,710.000 LB	_____.	_____.



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0222	505.0600 Bar Steel Reinforcement HS Coated Structures	1,418,960.000 LB	_____.	_____.
0224	505.0800.S Bar Steel Reinforcement HS Stainless Structures	21,760.000 LB	_____.	_____.
0226	505.0905 Bar Couplers No. 5	42.000 EACH	_____.	_____.
0228	505.0908 Bar Couplers No. 8	180.000 EACH	_____.	_____.
0230	506.0605 Structural Steel HS	125,050.000 LB	_____.	_____.
0232	506.2605 Bearing Pads Elastomeric Non-Laminated	188.000 EACH	_____.	_____.
0234	506.3003 Welded Stud Shear Connectors 5/8x4-Inch	2,974.000 EACH	_____.	_____.
0236	506.3015 Welded Stud Shear Connectors 7/8x6-Inch	670.000 EACH	_____.	_____.
0238	506.4000 Steel Diaphragms (structure) 1034. B-40-1034	24.000 EACH	_____.	_____.
0240	506.4000 Steel Diaphragms (structure) 1035. B-40-1035	24.000 EACH	_____.	_____.
0242	506.4000 Steel Diaphragms (structure) 1036. B-40-1036	20.000 EACH	_____.	_____.
0244	506.4000 Steel Diaphragms (structure) 1037. B-40-1037	20.000 EACH	_____.	_____.
0246	506.4000 Steel Diaphragms (structure) 1038. B-40-1038	8.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0248	506.4000 Steel Diaphragms (structure) 1039. B-40-1039	8.000 EACH	_____.	_____.
0250	506.4000 Steel Diaphragms (structure) 1040. B-40-1040	12.000 EACH	_____.	_____.
0252	506.4000 Steel Diaphragms (structure) 1041. B-40-1041	12.000 EACH	_____.	_____.
0254	509.0310.S Sawing Pavement Deck Preparation Areas	314.000 LF	_____.	_____.
0256	509.0500 Cleaning Decks	557.000 SY	_____.	_____.
0258	511.1100 Temporary Shoring	11,213.000 SF	_____.	_____.
0260	511.1200 Temporary Shoring (structure) 0735. R-40-735	1,530.000 SF	_____.	_____.
0262	511.1200 Temporary Shoring (structure) 0741. R-40-741	816.000 SF	_____.	_____.
0264	511.1200 Temporary Shoring (structure) 0742. R-40-742	530.000 SF	_____.	_____.
0266	511.1200 Temporary Shoring (structure) 0743. R-40-743	250.000 SF	_____.	_____.
0268	511.1200 Temporary Shoring (structure) 0762. R-40-762	933.000 SF	_____.	_____.
0270	511.1200 Temporary Shoring (structure) 0801. R-40-801	575.000 SF	_____.	_____.
0272	511.1200 Temporary Shoring (structure) 1035. B-40-1035	2,800.000 SF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0274	511.1200 Temporary Shoring (structure) 1037. B-40-1037	1,100.000 SF	_____.	_____.
0276	511.1200 Temporary Shoring (structure) 1039. B-40-1039	3,250.000 SF	_____.	_____.
0278	511.1300 Temporary Shoring (location) 0500. 292+05 to 300+00	21,280.000 SF	_____.	_____.
0280	511.1300 Temporary Shoring (location) 0501. 317+50 to 320+00	900.000 SF	_____.	_____.
0282	511.1300 Temporary Shoring (location) 0502. 294+00 to 301+50	6,330.000 SF	_____.	_____.
0284	512.0500 Piling Steel Sheet Permanent Delivered	19,020.000 SF	_____.	_____.
0286	513.2001 Railing Pipe	836.000 LF	_____.	_____.
0288	516.0500 Rubberized Membrane Waterproofing	546.000 SY	_____.	_____.
0290	517.0601 Painting Epoxy System (structure) 0738. R-40-738	1.000 EACH	_____.	_____.
0292	517.0601 Painting Epoxy System (structure) 0801. R-40-801	1.000 EACH	_____.	_____.
0294	517.1010.S Concrete Staining (structure) 0734. R-40-734	11,415.000 SF	_____.	_____.
0296	517.1010.S Concrete Staining (structure) 0735. R-40-735	5,258.000 SF	_____.	_____.
0298	517.1010.S Concrete Staining (structure) 0736. R-40-736	21,280.000 SF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0300	517.1010.S Concrete Staining (structure) 0737. R-40-737	6,432.000 SF	_____.	_____.
0302	517.1010.S Concrete Staining (structure) 0739. R-40-739	10,862.000 SF	_____.	_____.
0304	517.1010.S Concrete Staining (structure) 0740. R-40-740	4,496.000 SF	_____.	_____.
0306	517.1010.S Concrete Staining (structure) 0744. R-40-744	2,557.000 SF	_____.	_____.
0308	517.1010.S Concrete Staining (structure) 1036. B-40-1036	149.000 SF	_____.	_____.
0310	517.1010.S Concrete Staining (structure) 1037. B-40-1037	284.000 SF	_____.	_____.
0312	517.1010.S Concrete Staining (structure) 1039. B-40-1039	282.000 SF	_____.	_____.
0314	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	1.000 EACH	_____.	_____.
0316	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	1.000 EACH	_____.	_____.
0318	531.1100 Concrete Masonry Ancillary Structures Type NS	84.200 CY	_____.	_____.
0320	531.1140 Steel Reinforcement HS Ancillary Structures Type NS	3,710.000 LB	_____.	_____.
0322	531.1160 Steel Reinforcement HS Coated Ancillary Structures Type NS	13,520.000 LB	_____.	_____.
0324	531.2024 Drilling Shaft 24-Inch	60.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0326	531.2030 Drilling Shaft 30-Inch	116.000 LF	_____.	_____.
0328	531.2036 Drilling Shaft 36-Inch	250.000 LF	_____.	_____.
0330	531.2042 Drilling Shaft 42-Inch	529.000 LF	_____.	_____.
0332	531.4050 Foundation Camera Pole 50-FT	2.000 EACH	_____.	_____.
0334	531.5140 Foundation Single-Shaft Type MC-IV (structure) 3115. S-40-3115	1.000 EACH	_____.	_____.
0336	531.5220 Foundation Single-Shaft Type MF-II (structure) 3111. S-40-3111	2.000 EACH	_____.	_____.
0338	531.5220 Foundation Single-Shaft Type MF-II (structure) 3114. S-40-3114	2.000 EACH	_____.	_____.
0340	531.5220 Foundation Single-Shaft Type MF-II (structure) 3120. S-40-3120	2.000 EACH	_____.	_____.
0342	531.5410 Foundation Single-Shaft Type TF-I (structure) 3112. S-40-3112	2.000 EACH	_____.	_____.
0344	531.6010 Foundation Two-Shaft Type FC-I (structure) 3118. S-40-3118	1.000 EACH	_____.	_____.
0346	531.6010 Foundation Two-Shaft Type FC-I (structure) 3176. S-40-3176	1.000 EACH	_____.	_____.
0348	531.6020 Foundation Two-Shaft Type FC-II (structure) 3117. S-40-3117	1.000 EACH	_____.	_____.
0350	531.6020 Foundation Two-Shaft Type FC-II (structure) 3121. S-40-3121	1.000 EACH	_____.	_____.



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0352	531.6120 Foundation Two-Shaft Type FF-II (structure) 0467. S-40-467	1.000 EACH	_____.	_____.
0354	531.6130 Foundation Two-Shaft Type FF-III (structure) 0466. S-40-466	2.000 EACH	_____.	_____.
0356	531.6130 Foundation Two-Shaft Type FF-III (structure) 0467. S-40-467	1.000 EACH	_____.	_____.
0358	531.6130 Foundation Two-Shaft Type FF-III (structure) 3113. S-40-3113	2.000 EACH	_____.	_____.
0360	531.6130 Foundation Two-Shaft Type FF-III (structure) 3116. S-40-3116	2.000 EACH	_____.	_____.
0362	531.6130 Foundation Two-Shaft Type FF-III (structure) 3122. S-40-3122	2.000 EACH	_____.	_____.
0364	531.6140 Foundation Two-Shaft Type FF-IV (structure) 0468. S-40-468	2.000 EACH	_____.	_____.
0366	532.5020 Butterfly 2-Chord NS (structure) 3123. S-40-3123	1.000 EACH	_____.	_____.
0368	532.5140 Monotube Cantilever Type IV (structure) 3115. S-40-3115	1.000 EACH	_____.	_____.
0370	532.5220 Monotube Full Span Type II (structure) 3111. S-40-3111	1.000 EACH	_____.	_____.
0372	532.5220 Monotube Full Span Type II (structure) 3114. S-40-3114	1.000 EACH	_____.	_____.
0374	532.5220 Monotube Full Span Type II (structure) 3120. S-40-3120	1.000 EACH	_____.	_____.
0376	532.5410 Truss Full Span 2-Chord Type I (structure) 3112. S-40-3112	1.000 EACH	_____.	_____.



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0378	532.6010 Truss Cantilever 4-Chord Type I (structure) 3118. S-40-3118	1.000 EACH	_____.	_____.
0380	532.6010 Truss Cantilever 4-Chord Type I (structure) 3119. S-40-3119	1.000 EACH	_____.	_____.
0382	532.6010 Truss Cantilever 4-Chord Type I (structure) 3176. S-40-3176	1.000 EACH	_____.	_____.
0384	532.6020 Truss Cantilever 4-Chord Type II (structure) 3117. S-40-3117	1.000 EACH	_____.	_____.
0386	532.6020 Truss Cantilever 4-Chord Type II (structure) 3121. S-40-3121	1.000 EACH	_____.	_____.
0388	532.6100 Truss Full Span 4-Chord Type NS (structure) 0466. S-40-466	1.000 EACH	_____.	_____.
0390	532.6100 Truss Full Span 4-Chord Type NS (structure) 3122. S-40-3122	1.000 EACH	_____.	_____.
0392	532.6120 Truss Full Span 4-Chord Type II (structure) 0467. S-40-467	1.000 EACH	_____.	_____.
0394	532.6130 Truss Full Span 4-Chord Type III (structure) 3113. S-40-3113	1.000 EACH	_____.	_____.
0396	532.6130 Truss Full Span 4-Chord Type III (structure) 3116. S-40-3116	1.000 EACH	_____.	_____.
0398	532.6140 Truss Full Span 4-Chord Type IV (structure) 0468. S-40-468	1.000 EACH	_____.	_____.
0400	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0110. N-40-110	10,210.000 SF	_____.	_____.
0402	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0111. N-40-111	10,930.000 SF	_____.	_____.



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0404	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0112. N-40-112	7,130.000 SF	_____.	_____.
0406	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0113. N-40-113	3,970.000 SF	_____.	_____.
0408	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0114. N-40-114	2,930.000 SF	_____.	_____.
0410	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0115. N-40-115	7,120.000 SF	_____.	_____.
0412	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0116. N-40-116	22,270.000 SF	_____.	_____.
0414	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0117. N-40-117	26,730.000 SF	_____.	_____.
0416	541.0300.S Noise Barriers Double-Sided Sound Absorptive (structure) 0118. N-40-118	27,970.000 SF	_____.	_____.
0418	550.0500 Pile Points	333.000 EACH	_____.	_____.
0420	550.1120 Piling Steel HP 12-Inch X 53 Lb	9,135.000 LF	_____.	_____.
0422	550.1140 Piling Steel HP 14-Inch X 73 Lb	3,750.000 LF	_____.	_____.
0424	550.2128 Piling CIP Concrete 12 3/4 X 0.50-Inch	14,846.000 LF	_____.	_____.
0426	601.0319 Concrete Curb & Gutter 19-Inch	251.000 LF	_____.	_____.
0428	601.0322 Concrete Curb & Gutter 22-Inch	119.000 LF	_____.	_____.
0430	601.0331 Concrete Curb & Gutter 31-Inch	14,444.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0432	601.0411 Concrete Curb & Gutter 30-Inch Type D	644.000 LF	_____.	_____.
0434	601.0557 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	3,310.000 LF	_____.	_____.
0436	601.0600 Concrete Curb Pedestrian	435.000 LF	_____.	_____.
0438	602.0410 Concrete Sidewalk 5-Inch	101,391.000 SF	_____.	_____.
0440	602.0515 Curb Ramp Detectable Warning Field Natural Patina	827.000 SF	_____.	_____.
0442	602.0615 Curb Ramp Detectable Warning Field Radial Natural Patina	101.000 SF	_____.	_____.
0444	602.0815 Concrete Driveway 7-Inch	319.000 SY	_____.	_____.
0446	602.0865 Concrete Driveway HES 7-Inch	251.000 SY	_____.	_____.
0448	602.1500 Concrete Steps	115.000 SF	_____.	_____.
0450	603.1442 Concrete Barrier Type S42C	1,076.000 LF	_____.	_____.
0452	603.1456 Concrete Barrier Type S56C	1,254.000 LF	_____.	_____.
0454	603.3513 Concrete Barrier Transition Type S32 to S36	1.000 EACH	_____.	_____.
0456	603.3535 Concrete Barrier Transition Type S36 to S42	1.000 EACH	_____.	_____.
0458	603.3559 Concrete Barrier Transition Type S42 to S56	4.000 EACH	_____.	_____.



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0460	603.8000 Concrete Barrier Temporary Precast Delivered	67,344.000 LF	_____.	_____.
0462	603.8125 Concrete Barrier Temporary Precast Installed	103,652.000 LF	_____.	_____.
0464	603.8500 Anchoring Concrete Barrier Temporary Precast	1,632.000 LF	_____.	_____.
0466	604.0400 Slope Paving Concrete	477.000 SY	_____.	_____.
0468	606.0100 Riprap Light	154.000 CY	_____.	_____.
0470	606.0300 Riprap Heavy	26.000 CY	_____.	_____.
0472	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	1,602.000 LF	_____.	_____.
0474	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	1,011.000 LF	_____.	_____.
0476	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	6,896.000 LF	_____.	_____.
0478	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	4,881.000 LF	_____.	_____.
0480	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	529.000 LF	_____.	_____.
0482	608.0336 Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	678.000 LF	_____.	_____.
0484	608.0342 Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	475.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0486	608.0348 Storm Sewer Pipe Reinforced Concrete Class III 48-Inch	460.000 LF	_____.	_____.
0488	608.0354 Storm Sewer Pipe Reinforced Concrete Class III 54-Inch	790.000 LF	_____.	_____.
0490	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	39.000 LF	_____.	_____.
0492	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	791.000 LF	_____.	_____.
0494	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	1,774.000 LF	_____.	_____.
0496	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	804.000 LF	_____.	_____.
0498	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	92.000 LF	_____.	_____.
0500	608.0442 Storm Sewer Pipe Reinforced Concrete Class IV 42-Inch	74.000 LF	_____.	_____.
0502	608.0454 Storm Sewer Pipe Reinforced Concrete Class IV 54-Inch	104.000 LF	_____.	_____.
0504	608.0518 Storm Sewer Pipe Reinforced Concrete Class V 18-Inch	44.000 LF	_____.	_____.
0506	608.0524 Storm Sewer Pipe Reinforced Concrete Class V 24-Inch	89.000 LF	_____.	_____.
0508	608.2329 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch	396.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0510	608.2434 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 34x53-Inch	379.000 LF	_____.	_____.
0512	611.0420 Reconstructing Manholes	11.000 EACH	_____.	_____.
0514	611.0430 Reconstructing Inlets	31.000 EACH	_____.	_____.
0516	611.0530 Manhole Covers Type J	11.000 EACH	_____.	_____.
0518	611.0535 Manhole Covers Type J-Special	28.000 EACH	_____.	_____.
0520	611.0557 Manhole Covers Type Q-Communications	2.000 EACH	_____.	_____.
0522	611.0610 Inlet Covers Type BW	77.000 EACH	_____.	_____.
0524	611.0615 Inlet Covers Type F	3.000 EACH	_____.	_____.
0526	611.0627 Inlet Covers Type HM	4.000 EACH	_____.	_____.
0528	611.0642 Inlet Covers Type MS	14.000 EACH	_____.	_____.
0530	611.0655 Inlet Covers Type V-B	58.000 EACH	_____.	_____.
0532	611.0656 Inlet Covers Type VV-B	54.000 EACH	_____.	_____.
0534	611.0657 Inlet Covers Type W	25.000 EACH	_____.	_____.
0536	611.0666 Inlet Covers Type Z	2.000 EACH	_____.	_____.
0538	611.1003 Catch Basins 3-FT Diameter	9.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0540	611.1004 Catch Basins 4-FT Diameter	78.000 EACH	_____.	_____.
0542	611.1005 Catch Basins 5-FT Diameter	5.000 EACH	_____.	_____.
0544	611.2004 Manholes 4-FT Diameter	51.000 EACH	_____.	_____.
0546	611.2005 Manholes 5-FT Diameter	99.000 EACH	_____.	_____.
0548	611.2006 Manholes 6-FT Diameter	25.000 EACH	_____.	_____.
0550	611.2007 Manholes 7-FT Diameter	8.000 EACH	_____.	_____.
0552	611.2008 Manholes 8-FT Diameter	4.000 EACH	_____.	_____.
0554	611.2009 Manholes 9-FT Diameter	2.000 EACH	_____.	_____.
0556	611.2104 Manholes Communication 4-FT Diameter	2.000 EACH	_____.	_____.
0558	611.3003 Inlets 3-FT Diameter	4.000 EACH	_____.	_____.
0560	611.3004 Inlets 4-FT Diameter	119.000 EACH	_____.	_____.
0562	611.3225 Inlets 2x2.5-FT	23.000 EACH	_____.	_____.
0564	611.3253 Inlets 2.5x3-FT	3.000 EACH	_____.	_____.
0566	611.3901 Inlets Median 1 Grate	10.000 EACH	_____.	_____.
0568	611.3902 Inlets Median 2 Grate	2.000 EACH	_____.	_____.
0570	611.8110 Adjusting Manhole Covers	6.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0572	611.8115 Adjusting Inlet Covers	45.000 EACH	_____.	_____.
0574	611.8120.S Cover Plates Temporary	77.000 EACH	_____.	_____.
0576	611.9850.S Pipe Grates (size) 0001. 18-Inch	1.000 EACH	_____.	_____.
0578	612.0106 Pipe Underdrain 6-Inch	60.000 LF	_____.	_____.
0580	612.0206 Pipe Underdrain Unperforated 6-Inch	608.000 LF	_____.	_____.
0582	612.0406 Pipe Underdrain Wrapped 6-Inch	7,375.000 LF	_____.	_____.
0584	614.0805 Crash Cushions Permanent Low Maintenance	3.000 EACH	_____.	_____.
0586	614.0905 Crash Cushions Temporary	30.000 EACH	_____.	_____.
0588	614.2300 MGS Guardrail 3	2,591.000 LF	_____.	_____.
0590	614.2500 MGS Thrie Beam Transition	360.000 LF	_____.	_____.
0592	614.2610 MGS Guardrail Terminal EAT	3.000 EACH	_____.	_____.
0594	614.2620 MGS Guardrail Terminal Type 2	2.000 EACH	_____.	_____.
0596	616.0204 Fence Chain Link 4-FT	84.000 LF	_____.	_____.
0598	616.0206 Fence Chain Link 6-FT	2,896.000 LF	_____.	_____.
0600	616.0329 Gates Chain Link (width) 0001. 12-FT	2.000 EACH	_____.	_____.
0602	616.0329 Gates Chain Link (width) 0002. 30-FT	1.000 EACH	_____.	_____.



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0604	616.0600.S Fence Temporary	535.000 LF	_____.	_____.
0606	616.0700.S Fence Safety	15,000.000 LF	_____.	_____.
0608	619.1000 Mobilization	1.000 EACH	_____.	_____.
0610	620.0300 Concrete Median Sloped Nose	523.000 SF	_____.	_____.
0612	623.0200 Dust Control Surface Treatment	185,700.000 SY	_____.	_____.
0614	624.0100 Water	811.000 MGAL	_____.	_____.
0616	625.0100 Topsoil	61,283.000 SY	_____.	_____.
0618	628.1104 Erosion Bales	100.000 EACH	_____.	_____.
0620	628.1504 Silt Fence	14,394.000 LF	_____.	_____.
0622	628.1520 Silt Fence Maintenance	8,636.000 LF	_____.	_____.
0624	628.1905 Mobilizations Erosion Control	15.000 EACH	_____.	_____.
0626	628.1910 Mobilizations Emergency Erosion Control	8.000 EACH	_____.	_____.
0628	628.2004 Erosion Mat Class I Type B	74,468.000 SY	_____.	_____.
0630	628.2008 Erosion Mat Urban Class I Type B	3,414.000 SY	_____.	_____.
0632	628.6510 Soil Stabilizer Type B	5.000 ACRE	_____.	_____.
0634	628.7005 Inlet Protection Type A	356.000 EACH	_____.	_____.



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0636	628.7010 Inlet Protection Type B	389.000 EACH	_____.	_____.
0638	628.7015 Inlet Protection Type C	128.000 EACH	_____.	_____.
0640	628.7020 Inlet Protection Type D	116.000 EACH	_____.	_____.
0642	628.7504 Temporary Ditch Checks	450.000 LF	_____.	_____.
0644	628.7555 Culvert Pipe Checks	17.000 EACH	_____.	_____.
0646	628.7560 Tracking Pads	3.000 EACH	_____.	_____.
0648	628.7570 Rock Bags	100.000 EACH	_____.	_____.
0650	629.0210 Fertilizer Type B	47.000 CWT	_____.	_____.
0652	630.0120 Seeding Mixture No. 20	2,154.000 LB	_____.	_____.
0654	630.0130 Seeding Mixture No. 30	113.000 LB	_____.	_____.
0656	630.0175 Seeding Mixture No. 75	42.000 LB	_____.	_____.
0658	630.0200 Seeding Temporary	305.000 LB	_____.	_____.
0660	630.0400 Seeding Nurse Crop	47.000 LB	_____.	_____.
0662	630.0500 Seed Water	1,489.000 MGAL	_____.	_____.
0664	631.0300 Sod Water	264.000 MGAL	_____.	_____.
0666	631.1000 Sod Lawn	9,761.000 SY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0668	633.1000 Delineators Barrier Wall	92.000 EACH	_____.	_____.
0670	634.0618 Posts Wood 4x6-Inch X 18-FT	60.000 EACH	_____.	_____.
0672	634.0622 Posts Wood 4x6-Inch X 22-FT	39.000 EACH	_____.	_____.
0674	634.0808 Posts Tubular Steel 2x2-Inch X 8-FT	4.000 EACH	_____.	_____.
0676	634.0814 Posts Tubular Steel 2x2-Inch X 14-FT	35.000 EACH	_____.	_____.
0678	634.0885 Posts Tubular Steel 2x2-Inch X 8.5-FT	4.000 EACH	_____.	_____.
0680	635.0200 Sign Supports Structural Steel HS	4,552.000 LB	_____.	_____.
0682	637.1220 Signs Type I Reflective SH	2,934.000 SF	_____.	_____.
0684	637.1230 Signs Type I Reflective F	376.880 SF	_____.	_____.
0686	637.2210 Signs Type II Reflective H	2,360.320 SF	_____.	_____.
0688	637.2215 Signs Type II Reflective H Folding	135.940 SF	_____.	_____.
0690	637.2230 Signs Type II Reflective F	631.500 SF	_____.	_____.
0692	638.2101 Moving Signs Type I	3.000 EACH	_____.	_____.
0694	638.2102 Moving Signs Type II	21.000 EACH	_____.	_____.
0696	638.2601 Removing Signs Type I	21.000 EACH	_____.	_____.
0698	638.2602 Removing Signs Type II	288.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0700	638.3000 Removing Small Sign Supports	181.000 EACH	_____.	_____.
0702	638.3100 Removing Structural Steel Sign Supports	24.000 EACH	_____.	_____.
0704	643.0300 Traffic Control Drums	721,795.000 DAY	_____.	_____.
0706	643.0370.S Digital Speed Reduction System (DSRS)	2,000.000 DAY	_____.	_____.
0708	643.0420 Traffic Control Barricades Type III	50,880.000 DAY	_____.	_____.
0710	643.0705 Traffic Control Warning Lights Type A	98,410.000 DAY	_____.	_____.
0712	643.0715 Traffic Control Warning Lights Type C	158,035.000 DAY	_____.	_____.
0714	643.0810.S Connected Arrow Board	2,390.000 DAY	_____.	_____.
0716	643.0900 Traffic Control Signs	1,241,610.000 DAY	_____.	_____.
0718	643.0910 Traffic Control Covering Signs Type I	36.000 EACH	_____.	_____.
0720	643.0920 Traffic Control Covering Signs Type II	14.000 EACH	_____.	_____.
0722	643.1000 Traffic Control Signs Fixed Message	2,625.000 SF	_____.	_____.
0724	643.1050 Traffic Control Signs PCMS	2,350.000 DAY	_____.	_____.
0726	643.1051 Traffic Control Signs PCMS with TMC Communications	2,320.000 DAY	_____.	_____.
0728	643.1055.S Truck or Trailer Mounted Attenuator	100.000 DAY	_____.	_____.



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0730	643.1220.S Connected Work Zone Start and End Location Markers	4,940.000 DAY	_____.	_____.
0732	643.3170 Temporary Marking Line Epoxy 6-Inch	502,907.000 LF	_____.	_____.
0734	643.3175 Temporary Marking Line Black Epoxy 6-Inch	44,070.000 LF	_____.	_____.
0736	643.3270 Temporary Marking Line Epoxy 10-Inch	3,857.000 LF	_____.	_____.
0738	643.3760 Temporary Marking Raised Pavement Marker Type I	1,101.000 EACH	_____.	_____.
0740	643.4100 Traffic Control Interim Lane Closure	500.000 EACH	_____.	_____.
0742	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0744	644.1410 Temporary Pedestrian Surface Asphalt	1,000.000 SF	_____.	_____.
0746	644.1430 Temporary Pedestrian Surface Plate	100.000 SF	_____.	_____.
0748	644.1601 Temporary Pedestrian Curb Ramp	200.000 DAY	_____.	_____.
0750	644.1810 Temporary Pedestrian Barricade	500.000 LF	_____.	_____.
0752	644.1900.S Temporary Audible Message Devices	8,400.000 DAY	_____.	_____.
0754	645.0112 Geotextile Type DF Schedule B	1,009.000 SY	_____.	_____.
0756	645.0140 Geotextile Type SAS	1,154.000 SY	_____.	_____.
0758	645.0220 Geogrid Type SR	14,281.000 SY	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0760	646.1020 Marking Line Epoxy 4-Inch	16,055.000 LF	_____.	_____.
0762	646.2020 Marking Line Epoxy 6-Inch	2,220.000 LF	_____.	_____.
0764	646.2025 Marking Line Grooved Black Epoxy 6-Inch	19,677.000 LF	_____.	_____.
0766	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	74,637.000 LF	_____.	_____.
0768	646.2050 Marking Line Grooved Permanent Tape 6-Inch	13,835.000 LF	_____.	_____.
0770	646.3020 Marking Line Epoxy 8-Inch	2,543.000 LF	_____.	_____.
0772	646.4020 Marking Line Epoxy 10-Inch	3,514.000 LF	_____.	_____.
0774	646.4025 Marking Line Grooved Black Epoxy 10-Inch	3,331.000 LF	_____.	_____.
0776	646.4040 Marking Line Grooved Wet Ref Epoxy 10-Inch	18,337.000 LF	_____.	_____.
0778	646.4050 Marking Line Grooved Permanent Tape 10-Inch	1,804.000 LF	_____.	_____.
0780	646.5020 Marking Arrow Epoxy	117.000 EACH	_____.	_____.
0782	646.5120 Marking Word Epoxy	15.000 EACH	_____.	_____.
0784	646.5220 Marking Symbol Epoxy	58.000 EACH	_____.	_____.
0786	646.6120 Marking Stop Line Epoxy 18-Inch	349.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0788	646.6220 Marking Yield Line Epoxy 18-Inch	20.000 EACH	_____.	_____.
0790	646.7120 Marking Diagonal Epoxy 12-Inch	6,356.000 LF	_____.	_____.
0792	646.7220 Marking Chevron Epoxy 24-Inch	1,863.000 LF	_____.	_____.
0794	646.7320 Marking Chevron Epoxy 12-Inch	170.000 LF	_____.	_____.
0796	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	1,000.000 LF	_____.	_____.
0798	646.8120 Marking Curb Epoxy	168.000 LF	_____.	_____.
0800	646.8220 Marking Island Nose Epoxy	5.000 EACH	_____.	_____.
0802	646.9000 Marking Removal Line 4-Inch	64,930.000 LF	_____.	_____.
0804	646.9050 Marking Removal Line Grooved Permanent Tape 4-Inch	17,293.000 LF	_____.	_____.
0806	652.0125 Conduit Rigid Metallic 2-Inch	377.000 LF	_____.	_____.
0808	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	33,307.000 LF	_____.	_____.
0810	652.0230 Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	742.000 LF	_____.	_____.
0812	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	9,229.000 LF	_____.	_____.
0814	652.0605 Conduit Special 2-Inch	170.000 LF	_____.	_____.
0816	652.0615 Conduit Special 3-Inch	1,540.000 LF	_____.	_____.



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0818	652.0700.S Install Conduit into Existing Item	8.000 EACH	_____.	_____.
0820	652.0800 Conduit Loop Detector	5,840.000 LF	_____.	_____.
0822	653.0135 Pull Boxes Steel 24x36-Inch	24.000 EACH	_____.	_____.
0824	653.0140 Pull Boxes Steel 24x42-Inch	138.000 EACH	_____.	_____.
0826	653.0905 Removing Pull Boxes	72.000 EACH	_____.	_____.
0828	654.0101 Concrete Bases Type 1	24.000 EACH	_____.	_____.
0830	654.0102 Concrete Bases Type 2	9.000 EACH	_____.	_____.
0832	654.0105 Concrete Bases Type 5	67.000 EACH	_____.	_____.
0834	654.0106 Concrete Bases Type 6	1.000 EACH	_____.	_____.
0836	654.0107 Concrete Bases Type 7	2.000 EACH	_____.	_____.
0838	654.0108 Concrete Bases Type 8	3.000 EACH	_____.	_____.
0840	654.0110 Concrete Bases Type 10	11.000 EACH	_____.	_____.
0842	654.0120 Concrete Bases Type 10-Special	5.000 EACH	_____.	_____.
0844	654.0217 Concrete Control Cabinet Bases Type 9 Special	6.000 EACH	_____.	_____.
0846	654.0230 Concrete Control Cabinet Bases Type L30	1.000 EACH	_____.	_____.



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0848	654.1239 Concrete Control Cabinet Bases ITS	1.000 EACH	_____.	_____.
0850	655.0230 Cable Traffic Signal 5-14 AWG	3,716.000 LF	_____.	_____.
0852	655.0240 Cable Traffic Signal 7-14 AWG	3,290.000 LF	_____.	_____.
0854	655.0250 Cable Traffic Signal 9-14 AWG	385.000 LF	_____.	_____.
0856	655.0260 Cable Traffic Signal 12-14 AWG	5,217.000 LF	_____.	_____.
0858	655.0270 Cable Traffic Signal 15-14 AWG	1,004.000 LF	_____.	_____.
0860	655.0320 Cable Type UF 2-10 AWG Grounded	3,195.000 LF	_____.	_____.
0862	655.0510 Electrical Wire Traffic Signals 12 AWG	995.000 LF	_____.	_____.
0864	655.0515 Electrical Wire Traffic Signals 10 AWG	19,333.000 LF	_____.	_____.
0866	655.0610 Electrical Wire Lighting 12 AWG	16,569.000 LF	_____.	_____.
0868	655.0615 Electrical Wire Lighting 10 AWG	1,322.000 LF	_____.	_____.
0870	655.0625 Electrical Wire Lighting 6 AWG	46,300.000 LF	_____.	_____.
0872	655.0630 Electrical Wire Lighting 4 AWG	10,435.000 LF	_____.	_____.
0874	655.0635 Electrical Wire Lighting 2 AWG	2,620.000 LF	_____.	_____.
0876	655.0640 Electrical Wire Lighting 1 AWG	18.000 LF	_____.	_____.
0878	655.0700 Loop Detector Lead In Cable	20,661.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0880	655.0800 Loop Detector Wire	20,844.000 LF	_____.	_____.
0882	655.0900 Traffic Signal EVP Detector Cable	3,788.000 LF	_____.	_____.
0884	656.0201 Electrical Service Meter Breaker Pedestal (location) 2001. (MBDMS4000190)	1.000 EACH	_____.	_____.
0886	656.0201 Electrical Service Meter Breaker Pedestal (location) 2002. (MBDMS400132)	1.000 EACH	_____.	_____.
0888	656.0201 Electrical Service Meter Breaker Pedestal (location) 2003. (MBDMS400042)	1.000 EACH	_____.	_____.
0890	656.0201 Electrical Service Meter Breaker Pedestal (location) 3001. W O'Connor St & S 70th St	1.000 EACH	_____.	_____.
0892	656.0201 Electrical Service Meter Breaker Pedestal (location) 3002. W Kearney St & S 70th St	1.000 EACH	_____.	_____.
0894	656.0201 Electrical Service Meter Breaker Pedestal (location) 3003. W O'Connor Sr & S 68th St	1.000 EACH	_____.	_____.
0896	656.0201 Electrical Service Meter Breaker Pedestal (location) 3004. W Kearney St & S 68th St	1.000 EACH	_____.	_____.
0898	656.0201 Electrical Service Meter Breaker Pedestal (location) 3005. IH 94 WB On Ramp & N Hawley Rd	1.000 EACH	_____.	_____.
0900	656.0201 Electrical Service Meter Breaker Pedestal (location) 3006. IH 94 EB Off Ramp & S Hawley Rd	1.000 EACH	_____.	_____.



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0902	656.0401 Electrical Service Main Lugs Only Meter Pedestal (location) 1001. HL-40-HY	1.000 EACH	_____.	_____.
0904	656.0501 Electrical Service Breaker Disconnect Box (location) 2001. (DMS400019)	1.000 EACH	_____.	_____.
0906	656.0501 Electrical Service Breaker Disconnect Box (location) 2002. (DMS400132)	1.000 EACH	_____.	_____.
0908	656.0501 Electrical Service Breaker Disconnect Box (location) 2003. (RM40007)	1.000 EACH	_____.	_____.
0910	656.0501 Electrical Service Breaker Disconnect Box (location) 2004. (DMS400042)	1.000 EACH	_____.	_____.
0912	656.0501 Electrical Service Breaker Disconnect Box (location) 2005. (CCTV400010)	1.000 EACH	_____.	_____.
0914	657.0100 Pedestal Bases	22.000 EACH	_____.	_____.
0916	657.0210 Transformer Bases Breakaway 15-17 Inch Bolt Circle	32.000 EACH	_____.	_____.
0918	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	80.000 EACH	_____.	_____.
0920	657.0310 Poles Type 3	9.000 EACH	_____.	_____.
0922	657.0322 Poles Type 5-Aluminum	15.000 EACH	_____.	_____.
0924	657.0327 Poles Type 6-Aluminum	1.000 EACH	_____.	_____.
0926	657.0375 Poles Type A	25.000 EACH	_____.	_____.
0928	657.0380 Poles Type E	3.000 EACH	_____.	_____.



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0930	657.0381 Poles Type F	5.000 EACH	_____.	_____.
0932	657.0405 Traffic Signal Standards Aluminum 3.5-FT	1.000 EACH	_____.	_____.
0934	657.0420 Traffic Signal Standards Aluminum 13-FT	11.000 EACH	_____.	_____.
0936	657.0425 Traffic Signal Standards Aluminum 15-FT	6.000 EACH	_____.	_____.
0938	657.0430 Traffic Signal Standards Aluminum 10-FT	4.000 EACH	_____.	_____.
0940	657.0609 Luminaire Arms Single Member 4-Inch Clamp 6-FT	9.000 EACH	_____.	_____.
0942	657.0610 Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	68.000 EACH	_____.	_____.
0944	657.0620 Luminaire Arms Single Member 6-Inch Clamp 4-FT	50.000 EACH	_____.	_____.
0946	657.0625 Luminaire Arms Single Member 6-Inch Clamp 6-FT	3.000 EACH	_____.	_____.
0948	658.0171 Traffic Signal Face 1S 12-Inch	2.000 EACH	_____.	_____.
0950	658.0173 Traffic Signal Face 3S 12-Inch	51.000 EACH	_____.	_____.
0952	658.0174 Traffic Signal Face 4S 12-Inch	12.000 EACH	_____.	_____.
0954	658.0175 Traffic Signal Face 5S 12-Inch	6.000 EACH	_____.	_____.
0956	658.0416 Pedestrian Signal Face 16-Inch	28.000 EACH	_____.	_____.
0958	658.0500 Pedestrian Push Buttons	4.000 EACH	_____.	_____.



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0960	658.5070 Signal Mounting Hardware (location) 3001. W O'Connor St & S 70th St	1.000 EACH	_____.	_____.
0962	658.5070 Signal Mounting Hardware (location) 3002. W Kearney St & S 70th St	1.000 EACH	_____.	_____.
0964	658.5070 Signal Mounting Hardware (location) 3003. W O'Connor St & S 68th St	1.000 EACH	_____.	_____.
0966	658.5070 Signal Mounting Hardware (location) 3004. W Kearney St & S 68th St	1.000 EACH	_____.	_____.
0968	658.5070 Signal Mounting Hardware (location) 3005. IH 94 WB On Ramp & N Hawley Rd	1.000 EACH	_____.	_____.
0970	658.5070 Signal Mounting Hardware (location) 3006. IH 94 EB Off Ramp & S Hawley Rd	1.000 EACH	_____.	_____.
0972	658.5070 Signal Mounting Hardware (location) 3007. Wisconsin and Hawley Rd	1.000 EACH	_____.	_____.
0974	658.5070 Signal Mounting Hardware (location) 3008. W Bluemound and Hawley Rd	1.000 EACH	_____.	_____.
0976	659.0601 Underdeck Lighting (structure) 1001. Underdeck Lighting (B-40-1034)	1.000 EACH	_____.	_____.
0978	659.0601 Underdeck Lighting (structure) 1002. Underdeck Lighting (B-40-1035)	1.000 EACH	_____.	_____.
0980	659.0601 Underdeck Lighting (structure) 1003. Underdeck Lighting (B-40-1036)	1.000 EACH	_____.	_____.
0982	659.0601 Underdeck Lighting (structure) 1004. Underdeck Lighting (B-40-1037)	1.000 EACH	_____.	_____.



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0984	659.0601 Underdeck Lighting (structure) 1005. Underdeck Lighting (B-40-1038)	1.000 EACH	_____.	_____.
0986	659.0601 Underdeck Lighting (structure) 1006. Underdeck Lighting (B-40-1039)	1.000 EACH	_____.	_____.
0988	659.0601 Underdeck Lighting (structure) 1007. Underdeck Lighting (B-40-1040)	1.000 EACH	_____.	_____.
0990	659.0601 Underdeck Lighting (structure) 1008. Underdeck Lighting (B-40-1041)	1.000 EACH	_____.	_____.
0992	659.1125 Luminaires Utility LED C	44.000 EACH	_____.	_____.
0994	659.1130 Luminaires Utility LED D	63.000 EACH	_____.	_____.
0996	659.1215 Luminaires Underdeck LED C	32.000 EACH	_____.	_____.
0998	659.2230 Lighting Control Cabinets 240/480 30-Inch	1.000 EACH	_____.	_____.
1000	659.5000.S Lamp, Ballast, LED, Switch Disposal by Contractor	84.000 EACH	_____.	_____.
1002	661.0201 Temporary Traffic Signals for Intersections (location) 3001. W. Kearney St. & S. 70th St.	1.000 EACH	_____.	_____.
1004	662.1024.S Ramp Closure Gates 24-FT	1.000 EACH	_____.	_____.
1006	662.1030.S Ramp Closure Gates 30-FT	2.000 EACH	_____.	_____.
1008	662.1037.S Ramp Closure Gates 37-FT	1.000 EACH	_____.	_____.
1010	670.0101 Field System Integrator	1.000 EACH	_____.	_____.



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1012	670.0201 ITS Documentation	1.000 EACH	_____.	_____.
1014	671.0142 Conduit HDPE 4-Duct 2-Inch	3,155.000 LF	_____.	_____.
1016	671.0222 Conduit HDPE Directional Bore 2-Duct 2-Inch	215.000 LF	_____.	_____.
1018	671.0242 Conduit HDPE Directional Bore 4-Duct 2-Inch	1,585.000 LF	_____.	_____.
1020	673.0105 Communication Vault Type 1	8.000 EACH	_____.	_____.
1022	673.0200 Tracer Wire Marker Posts	5.000 EACH	_____.	_____.
1024	673.1200.S Install ITS Field Cabinet	1.000 EACH	_____.	_____.
1026	673.1225.S Install Pole Mounted Cabinet	1.000 EACH	_____.	_____.
1028	674.0300 Remove Cable	10,390.000 LF	_____.	_____.
1030	675.0100 Install Controller Ramp Meter Processor Assembly	1.000 EACH	_____.	_____.
1032	675.0300 Install Mounted Controller Microwave Detector Assembly	4.000 EACH	_____.	_____.
1034	677.0150 Install Camera Pole 50-FT	2.000 EACH	_____.	_____.
1036	677.0200 Install Camera Assembly	2.000 EACH	_____.	_____.
1038	677.9051.S Removing 50-FT Camera Pole	2.000 EACH	_____.	_____.
1040	677.9200.S Removing CCTV Camera	2.000 EACH	_____.	_____.



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1042	678.0006 Install Fiber Optic Cable Outdoor Plant 6-CT	5,175.000 LF	_____.	_____.
1044	678.0024 Install Fiber Optic Cable Outdoor Plant 24-CT	763.000 LF	_____.	_____.
1046	678.0072 Install Fiber Optic Cable Outdoor Plant 72-CT	6,864.000 LF	_____.	_____.
1048	678.0100.S Install Overhead Freeway DMS Full Matrix	3.000 EACH	_____.	_____.
1050	678.0300 Fiber Optic Splice	172.000 EACH	_____.	_____.
1052	678.0400 Fiber Optic Termination	54.000 EACH	_____.	_____.
1054	678.0501 Communication System Testing	1.000 EACH	_____.	_____.
1056	678.0600 Install Ethernet Switches	11.000 EACH	_____.	_____.
1058	678.0800 Install Cellular Modems	3.000 EACH	_____.	_____.
1060	690.0150 Sawing Asphalt	1,081.000 LF	_____.	_____.
1062	690.0250 Sawing Concrete	29,492.000 LF	_____.	_____.
1064	715.0502 Incentive Strength Concrete Structures	61,494.000 DOL	1.00000	61,494.00
1066	715.0715 Incentive Flexural Strength Concrete Pavement	36,623.000 DOL	1.00000	36,623.00
1068	740.0440 Incentive IRI Ride	16,600.000 DOL	1.00000	16,600.00



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1070	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	36,000.000 HRS	5.00000	180,000.00
1072	ASP.1T0G On-the-Job Training Graduate at \$5.00/HR	72,000.000 HRS	5.00000	360,000.00
1074	SPV.0035 Special 0001. Roadway Embankment	42,676.000 CY	_____.	_____.
1076	SPV.0035 Special 4000. HPC Masonry Structures	3,847.000 CY	_____.	_____.
1078	SPV.0045 Special 0504. Truck Entering Warning System	2,000.000 DAY	_____.	_____.
1080	SPV.0045 Special 0505. Flashing Beacon Sign (SWZ)	18,170.000 DAY	_____.	_____.
1082	SPV.0045 Special 0506. PCMS with Cellular Communications (SWZ)	30,309.000 DAY	_____.	_____.
1084	SPV.0045 Special 0507. Portable Traffic Sensor (SWZ)	25,899.000 DAY	_____.	_____.
1086	SPV.0060 Special 0001. Baseline CPM Project Schedule	1.000 EACH	_____.	_____.
1088	SPV.0060 Special 0002. Monthly CPM Project Schedule Updates	37.000 EACH	_____.	_____.
1090	SPV.0060 Special 0101. Concrete Barrier Transition Type G1	1.000 EACH	_____.	_____.
1092	SPV.0060 Special 0102. Concrete Barrier Transition Type G2	1.000 EACH	_____.	_____.
1094	SPV.0060 Special 0106. Concrete Barrier Transition Type S42 to S56 Special	32.000 EACH	_____.	_____.



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1096	SPV.0060 Special 0107. Concrete Barrier Transition Type S32C Reverse Footing to S56C Reverse Foot	1.000 EACH	_____.	_____.
1098	SPV.0060 Special 0110. Concrete Barrier Transition Type M1	1.000 EACH	_____.	_____.
1100	SPV.0060 Special 0111. Concrete Barrier Transition Type M2	1.000 EACH	_____.	_____.
1102	SPV.0060 Special 0112. Concrete Barrier Type S42 End Anchor	4.000 EACH	_____.	_____.
1104	SPV.0060 Special 0113. Concrete Barrier Type S56 End Anchor	5.000 EACH	_____.	_____.
1106	SPV.0060 Special 0114. Concrete Barrier Type S42 Special End Anchor	12.000 EACH	_____.	_____.
1108	SPV.0060 Special 0115. Concrete Barrier Type S56 Special End Anchor	10.000 EACH	_____.	_____.
1110	SPV.0060 Special 0116. Concrete Barrier Type S56 Special 34-Inch End Anchor	8.000 EACH	_____.	_____.
1112	SPV.0060 Special 0117. Concrete Barrier Type S32 Special End Anchor	1.000 EACH	_____.	_____.
1114	SPV.0060 Special 0120. Mobilizations Emergency Pavement Repair	20.000 EACH	_____.	_____.
1116	SPV.0060 Special 0123. Salvage Ramp Gate	2.000 EACH	_____.	_____.
1118	SPV.0060 Special 0124. Salvage Wrong Way Driver Detection Equipment	5.000 EACH	_____.	_____.
1120	SPV.0060 Special 0125. Section Corner Monuments Special	2.000 EACH	_____.	_____.



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1122	SPV.0060 Special 0126. Survey Project 1060-27-71	1.000 EACH	_____.	_____.
1124	SPV.0060 Special 0140. Drilled High Performance Dowel Bars	140.000 EACH	_____.	_____.
1126	SPV.0060 Special 0151. Round Aluminum Sign Post System in Soft Surface 10-Foot	33.000 EACH	_____.	_____.
1128	SPV.0060 Special 0152. Round Aluminum Sign Post System in Soft Surface 11-Foot	4.000 EACH	_____.	_____.
1130	SPV.0060 Special 0153. Round Aluminum Sign Post System in Soft Surface 12-Foot	1.000 EACH	_____.	_____.
1132	SPV.0060 Special 0159. Round Aluminum Sign Post in Concrete Surface 10-Foot	14.000 EACH	_____.	_____.
1134	SPV.0060 Special 0170. Exposing Existing Infrastructure Paved Area	15.000 EACH	_____.	_____.
1136	SPV.0060 Special 0171. Exposing Existing Infrastructure Unpaved Area	15.000 EACH	_____.	_____.
1138	SPV.0060 Special 0177. Fire Hydrant Sign Mounting	62.000 EACH	_____.	_____.
1140	SPV.0060 Special 0180. Tree Trimming	5.000 EACH	_____.	_____.
1142	SPV.0060 Special 0554. Emergency Response to Traffic Involving Concrete Barrier Temporary	20.000 EACH	_____.	_____.
1144	SPV.0060 Special 0555. Emergency Response to Traffic Involving Crash Cushion Temporary	20.000 EACH	_____.	_____.
1146	SPV.0060 Special 0556. Emergency Response to Pavement Repair	20.000 EACH	_____.	_____.



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1148	SPV.0060 Special 0557. Fixed Message Sign Portable Support	39.000 EACH	_____.	_____.
1150	SPV.0060 Special 0564. Traffic Control Close-Open Freeway to Freeway System Ramp	500.000 EACH	_____.	_____.
1152	SPV.0060 Special 0565. Traffic Control Close-Open Crash Cushion	1,000.000 EACH	_____.	_____.
1154	SPV.0060 Special 0566. Traffic Control Full Freeway Closure	400.000 EACH	_____.	_____.
1156	SPV.0060 Special 0571. Traffic Control Local Road Lane Closure	300.000 EACH	_____.	_____.
1158	SPV.0060 Special 0572. Thrie Beam Connection to Concrete Barrier Temporary Precast	5.000 EACH	_____.	_____.
1160	SPV.0060 Special 0573. Moving FBS (SWZ)	160.000 EACH	_____.	_____.
1162	SPV.0060 Special 0574. Moving PCMS (SWZ)	278.000 EACH	_____.	_____.
1164	SPV.0060 Special 0575. Moving PTS (SWZ)	232.000 EACH	_____.	_____.
1166	SPV.0060 Special 0576. Mobilizations Emergency Traffic Control	60.000 EACH	_____.	_____.
1168	SPV.0060 Special 0600. Emergency Response to Incident Involving Utility	3.000 EACH	_____.	_____.
1170	SPV.0060 Special 1001. Poles Wood 60-FT	12.000 EACH	_____.	_____.
1172	SPV.0060 Special 1002. Wood Pole Lighting 60-FT	54.000 EACH	_____.	_____.
1174	SPV.0060 Special 1003. Concrete Bases Type B	25.000 EACH	_____.	_____.



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1176	SPV.0060 Special 1004. Luminaires Utility Floodlight	54.000 EACH	_____.	_____.
1178	SPV.0060 Special 1005. Poles Type 30-AL-BD	24.000 EACH	_____.	_____.
1180	SPV.0060 Special 1006. Poles Type 25-AL-BD	19.000 EACH	_____.	_____.
1182	SPV.0060 Special 1013. Inline 5A Fast Acting Fuse with Holder	24.000 EACH	_____.	_____.
1184	SPV.0060 Special 1017. Luminaire Utility 2LED	40.000 EACH	_____.	_____.
1186	SPV.0060 Special 1018. Luminaire Utility 3LED	9.000 EACH	_____.	_____.
1188	SPV.0060 Special 1020. Pull Boxes 17x30x24-Inch	86.000 EACH	_____.	_____.
1190	SPV.0060 Special 1025. Lighting Units Relocated	4.000 EACH	_____.	_____.
1192	SPV.0060 Special 1026. Luminaire Arms Single Member 4-Inch Clamp 4-FT	10.000 EACH	_____.	_____.
1194	SPV.0060 Special 1027. Poles Type 5-Aluminum 20-FT	3.000 EACH	_____.	_____.
1196	SPV.0060 Special 1028. Hydro Excavation	11.000 EACH	_____.	_____.
1198	SPV.0060 Special 1031. Maintenance of Lighting Systems	1.000 EACH	_____.	_____.
1200	SPV.0060 Special 1041. Lighting System Integrator 1060-27-71	1.000 EACH	_____.	_____.
1202	SPV.0060 Special 1051. Lighting System Survey 1060-27-71	1.000 EACH	_____.	_____.



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1204	SPV.0060 Special 2000. Removing Electrical Service Meter Breaker Pedestal	3.000 EACH	_____.	_____.
1206	SPV.0060 Special 2001. Removing Controller Cabinet	5.000 EACH	_____.	_____.
1208	SPV.0060 Special 2002. Removing Controller Cabinet Base	5.000 EACH	_____.	_____.
1210	SPV.0060 Special 2003. Removing Microwave Detector	8.000 EACH	_____.	_____.
1212	SPV.0060 Special 2004. Removing Ramp Control Signal Assembly Sidemount	5.000 EACH	_____.	_____.
1214	SPV.0060 Special 2005. Removing Ramp Control Signal Assembly Overhead	2.000 EACH	_____.	_____.
1216	SPV.0060 Special 2006. Removing Overhead Freeway DMS	2.000 EACH	_____.	_____.
1218	SPV.0060 Special 2007. Removing Pole	4.000 EACH	_____.	_____.
1220	SPV.0060 Special 2008. Salvaging Pole Mounted Cabinet	2.000 EACH	_____.	_____.
1222	SPV.0060 Special 2009. Temporary Vehicle Detector Assembly	1.000 EACH	_____.	_____.
1224	SPV.0060 Special 2010. Relocating Temporary Vehicle Detector Assembly	5.000 EACH	_____.	_____.
1226	SPV.0060 Special 2011. Removing Temporary Vehicle Detector Assembly	1.000 EACH	_____.	_____.
1228	SPV.0060 Special 2012. Temporary Traffic Camera Assembly	2.000 EACH	_____.	_____.



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1230	SPV.0060 Special 2013. Relocating Temporary Traffic Camera Assembly	10.000 EACH	_____.	_____.
1232	SPV.0060 Special 2014. Removing Temporary Traffic Camera Assembly	2.000 EACH	_____.	_____.
1234	SPV.0060 Special 2050. Enter Existing Splice Enclosure	1.000 EACH	_____.	_____.
1236	SPV.0060 Special 2051. Loop Detector Protection	6.000 EACH	_____.	_____.
1238	SPV.0060 Special 2052. Refocus Vehicle Detector Assembly	63.000 EACH	_____.	_____.
1240	SPV.0060 Special 2053. Signal Assembly Advance Flasher Type 1	5.000 EACH	_____.	_____.
1242	SPV.0060 Special 2054. Signal Assembly Ramp Control Overhead	3.000 EACH	_____.	_____.
1244	SPV.0060 Special 2055. Ground Rod	4.000 EACH	_____.	_____.
1246	SPV.0060 Special 2056. Install Structure Mounted Cabinet	3.000 EACH	_____.	_____.
1248	SPV.0060 Special 3002. Install Poles Type 10	11.000 EACH	_____.	_____.
1250	SPV.0060 Special 3003. Install Poles Type 9-Special	3.000 EACH	_____.	_____.
1252	SPV.0060 Special 3004. Install Poles Type 10-Special	2.000 EACH	_____.	_____.
1254	SPV.0060 Special 3007. Install Monotube Arms 15-FT	1.000 EACH	_____.	_____.



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1256	SPV.0060 Special 3008. Install Monotube Arms 20-FT	1.000 EACH	_____.	_____.
1258	SPV.0060 Special 3009. Install Monotube Arms 25-FT	4.000 EACH	_____.	_____.
1260	SPV.0060 Special 3010. Install Monotube Arms 30-FT	5.000 EACH	_____.	_____.
1262	SPV.0060 Special 3011. Install Monotube Arms 35-FT-Special	2.000 EACH	_____.	_____.
1264	SPV.0060 Special 3013. Install Monotube Arms 45-FT-Special	3.000 EACH	_____.	_____.
1266	SPV.0060 Special 3017. Install Luminaire Arms Steel 15-FT	17.000 EACH	_____.	_____.
1268	SPV.0060 Special 3029. Trnspt Traffic Signal & Inter Lighting Materials w O'Connor St & S 70th St	1.000 EACH	_____.	_____.
1270	SPV.0060 Special 3030. Trnspt Traffic Signal & Inter Lighting Materials w Kearney St & S 70th St	1.000 EACH	_____.	_____.
1272	SPV.0060 Special 3031. Trnspt Traffic Signal & Inter Lighting Materials O'Connor St & S 68th St	1.000 EACH	_____.	_____.
1274	SPV.0060 Special 3032. Trnspt Traffic Signal & Inter Lighting Materials W Kearney St & S 68th St	1.000 EACH	_____.	_____.
1276	SPV.0060 Special 3033. Trnspt Signal & Inter Lighting Materials IH 94 WB On Ramp & N Hawley RD	1.000 EACH	_____.	_____.



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1278	SPV.0060 Special 3034. Trnspt Signal & Inter Lighting Materials IH 94 EB Off Ramp & S Hawley RD.	1.000 EACH	_____.	_____.
1280	SPV.0060 Special 3043. Backplates With Reflective Border 3 Section 12-Inch	12.000 EACH	_____.	_____.
1282	SPV.0060 Special 3046. Trnspt & Install State Furn Traffic Signal Cabinet W O'Connor St & S 70th	1.000 EACH	_____.	_____.
1284	SPV.0060 Special 3047. Trnspt & Install State Furn Traffic Signal Cabinet W Kearney St & S 70th	1.000 EACH	_____.	_____.
1286	SPV.0060 Special 3048. Trnspt & Install State Furn Traffic Signal Cabinet W O'Connor St & S 68th	1.000 EACH	_____.	_____.
1288	SPV.0060 Special 3049. Trnspt & Install State Furn Traffic Signal Cabinet W Kearney St & S 68th	1.000 EACH	_____.	_____.
1290	SPV.0060 Special 3050. Trnspt & Install State Furn Traffic Signal Cabinet IH 94 WB On Ramp & N Ha	1.000 EACH	_____.	_____.
1292	SPV.0060 Special 3051. Trnspt & Install State Furn Traffic Signal Cabinet IH 94 EB Off Ramp & S H	1.000 EACH	_____.	_____.
1294	SPV.0060 Special 3052. Trnspt & Install State Furn APS Push Button System W O'Connor St & S 70th	1.000 EACH	_____.	_____.
1296	SPV.0060 Special 3053. Trnspt & Install State Furn APS Push Button System W Kearney St & S 70th	1.000 EACH	_____.	_____.



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1298	SPV.0060 Special 3054. Trnspt & Install State Furn APS Push Button System W O'Connor St & S 68th	1.000 EACH	_____.	_____.
1300	SPV.0060 Special 3055. Trnspt & Install State Furn APS Push Button System W Kearney St & S 68th	1.000 EACH	_____.	_____.
1302	SPV.0060 Special 3056. Trnspt & Install State Furn APS Push Button Sys IH94 WB On Ramp & N Hawley	1.000 EACH	_____.	_____.
1304	SPV.0060 Special 3057. Trnspt & Install State Furn APS Push Button Sys IH94 EB Off Ramp & S Hawley	1.000 EACH	_____.	_____.
1306	SPV.0060 Special 3058. Trnspt & Instl State Furn EVP Heads with Confirm Lights W O'Connor & 70th	1.000 EACH	_____.	_____.
1308	SPV.0060 Special 3059. Trnspt & Install State Furn EVP Heads With Confirm Lights W Kearney & 70th	1.000 EACH	_____.	_____.
1310	SPV.0060 Special 3060. Trnspt & Instl State Furn EVP Heads with Confirm Lights W O'Connor & 68th	1.000 EACH	_____.	_____.
1312	SPV.0060 Special 3061. Trnspt & Install State Furn EVP Heads with Confirm Lights W Kearney & 68th	1.000 EACH	_____.	_____.
1314	SPV.0060 Special 3062. Trnspt & Install State Furn EVP Heads with Confirmation Lights IH 94 WB On	1.000 EACH	_____.	_____.
1316	SPV.0060 Special 3063. Trnspt & Install State Furn EVP Heads with Confirmation Lights IH 94 EB Of	1.000 EACH	_____.	_____.



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1318	SPV.0060 Special 3064. Temporary EVP System W Kearney St & S 70th St	1.000 EACH	_____.	_____.
1320	SPV.0060 Special 3065. Remove Traffic Signal Equipment	3.000 EACH	_____.	_____.
1322	SPV.0060 Special 3066. Relocate Pedestrian Push Button (APS)	3.000 EACH	_____.	_____.
1324	SPV.0060 Special 3067. Relocate Pedestrian Head	3.000 EACH	_____.	_____.
1326	SPV.0060 Special 3068. Temporary Overhead Cable w Wisconsin Ave & N Hawley Rd	1.000 EACH	_____.	_____.
1328	SPV.0060 Special 3069. Trnsprt and Install S-F FO Cable Pigtail 8-CT W O'Connor St & S 68th St	1.000 EACH	_____.	_____.
1330	SPV.0060 Special 3070. Trnsprt and Install S-F FO Cable Pigtail 8-CT W Kearney St & S 68th St	1.000 EACH	_____.	_____.
1332	SPV.0060 Special 3071. Trnsprt and Install S-F FO Cable Pigtail 8-CT IH 94 WB On Ramp & N Hawley	1.000 EACH	_____.	_____.
1334	SPV.0060 Special 3072. Trnsprt and Install S-F FO Cable Pigtail 8-CT IH 94 EB Off Ramp & S Hawley	1.000 EACH	_____.	_____.
1336	SPV.0060 Special 4083. Temporary Bridge Widening B-40-83	1.000 EACH	_____.	_____.
1338	SPV.0060 Special 4085. Temporary Bridge Widening B-40-85	1.000 EACH	_____.	_____.
1340	SPV.0060 Special 4087. Temporary Bridge Widening B-40-87	1.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1342	SPV.0060 Special 4200. Anchor Assemblies Noise Barrier Structures	386.000 EACH	_____.	_____.
1344	SPV.0060 Special 4383. Temporary Pier Support B-40-83	2.000 EACH	_____.	_____.
1346	SPV.0060 Special 4385. Temporary Pier Support B-40-85	6.000 EACH	_____.	_____.
1348	SPV.0060 Special 4400. Cored Holes 4-Inch	8.000 EACH	_____.	_____.
1350	SPV.0060 Special 5001. Permanent Connection to Existing 36-Inch Water Main	2.000 EACH	_____.	_____.
1352	SPV.0060 Special 5002. Permanent Connection to Existing 48-Inch Water Main	1.000 EACH	_____.	_____.
1354	SPV.0060 Special 5003. Adjusting Water Valve Boxes	26.000 EACH	_____.	_____.
1356	SPV.0060 Special 5004. Adjusting Water Manhole	8.000 EACH	_____.	_____.
1358	SPV.0060 Special 5005. Installing Hydrant-Alteration	6.000 EACH	_____.	_____.
1360	SPV.0060 Special 5006. Blowoff Manhole	4.000 EACH	_____.	_____.
1362	SPV.0060 Special 5007. Inspection Manhole	1.000 EACH	_____.	_____.
1364	SPV.0060 Special 5008. Removing Hydrant/Minor	1.000 EACH	_____.	_____.
1366	SPV.0060 Special 5009. Installing Hydrant	1.000 EACH	_____.	_____.
1368	SPV.0060 Special 5100. Adjusting Sanitary Manhole	12.000 EACH	_____.	_____.



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1370	SPV.0060 Special 5101. Internal Sanitary Manhole Seals	12.000 EACH	_____.	_____.
1372	SPV.0060 Special 5200. Manholes Type TES 4-FT Diameter	6.000 EACH	_____.	_____.
1374	SPV.0060 Special 5201. Manholes Type TES Doghouse 4-FT Diameter	2.000 EACH	_____.	_____.
1376	SPV.0060 Special 5203. Manholes Type TES Doghouse 4-FT Diameter Installed Over Conduit	2.000 EACH	_____.	_____.
1378	SPV.0060 Special 5204. Removing CUC Manhole	2.000 EACH	_____.	_____.
1380	SPV.0060 Special 8000. Hawley Road Pond Outlet Storm Sewer Structure	1.000 EACH	_____.	_____.
1382	SPV.0060 Special 8001. Temporary Storm Sewer Plug	37.000 EACH	_____.	_____.
1384	SPV.0060 Special 8002. Detention Pond Anti-Seep Collar	1.000 EACH	_____.	_____.
1386	SPV.0060 Special 8003. Reconnect Storm Sewer	127.000 EACH	_____.	_____.
1388	SPV.0060 Special 8004. Fastening Sewer Access Covers	25.000 EACH	_____.	_____.
1390	SPV.0060 Special 8005. Sealing Storm Structure	5.000 EACH	_____.	_____.
1392	SPV.0060 Special 8006. Control of Water Storm Sewer	1.000 EACH	_____.	_____.
1394	SPV.0060 Special 8007. Cover Plates Left in Place	20.000 EACH	_____.	_____.



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1396	SPV.0060 Special 8008. Inlet Covers Type Beehive A	3.000 EACH	_____.	_____.
1398	SPV.0060 Special 8009. Manhole Covers Type 58-A	32.000 EACH	_____.	_____.
1400	SPV.0060 Special 8010. Inlet Covers Type MS 57	87.000 EACH	_____.	_____.
1402	SPV.0060 Special 8012. Inlet Cover Type 55	6.000 EACH	_____.	_____.
1404	SPV.0075 Special 0200. Pavement Cleanup Project 1060-27-71	2,000.000 HRS	_____.	_____.
1406	SPV.0075 Special 4010. Obstructions Foundation Drilling	40.000 HRS	_____.	_____.
1408	SPV.0075 Special 4020. Obstructions Piling Steel Sheet Permanent Installed	17.000 HRS	_____.	_____.
1410	SPV.0090 Special 0250. Concrete Curb & Gutter 55-Inch	188.000 LF	_____.	_____.
1412	SPV.0090 Special 0251. Concrete Curb & Gutter 4-Inch Sloped 60-Inch Type A	1,038.000 LF	_____.	_____.
1414	SPV.0090 Special 0252. Concrete Barrier Type S56 Special 34-Inch	503.000 LF	_____.	_____.
1416	SPV.0090 Special 0253. Concrete Barrier Type S56 Special Light Pole Base	24.000 LF	_____.	_____.
1418	SPV.0090 Special 0254. Concrete Barrier Type S56 Special Vertical Back	657.000 LF	_____.	_____.
1420	SPV.0090 Special 0255. Concrete Barrier Type S42 Special	8,360.000 LF	_____.	_____.



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1422	SPV.0090 Special 0256. Concrete Barrier Type S56 Special	3,384.000 LF	_____.	_____.
1424	SPV.0090 Special 0257. Concrete Barrier Type S42C Special	1,378.000 LF	_____.	_____.
1426	SPV.0090 Special 0258. Concrete Barrier Type S56C Special	1,350.000 LF	_____.	_____.
1428	SPV.0090 Special 0259. Concrete Barrier Type S32 Special	90.000 LF	_____.	_____.
1430	SPV.0090 Special 0261. Pipe Underdrain 6-Inch Special	27,179.000 LF	_____.	_____.
1432	SPV.0090 Special 0265. Concrete Barrier Type S32C Reverse Footing	557.000 LF	_____.	_____.
1434	SPV.0090 Special 0266. Concrete Barrier Type S56C Reverse Footing	579.000 LF	_____.	_____.
1436	SPV.0090 Special 0270. Marking Stop Line Epoxy 24-Inch	410.000 LF	_____.	_____.
1438	SPV.0090 Special 0271. Marking Crosswalk Epoxy Transverse Line 12-Inch	862.000 LF	_____.	_____.
1440	SPV.0090 Special 0272. Marking Crosswalk Epoxy Block Style 12-Inch	3,006.000 LF	_____.	_____.
1442	SPV.0090 Special 0702. Concrete Barrier Temporary Precast Left in Place	1,071.000 LF	_____.	_____.
1444	SPV.0090 Special 0703. Fence Temporary 6-FT	2,000.000 LF	_____.	_____.
1446	SPV.0090 Special 0704. Glare Screens Temporary	4,418.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1448	SPV.0090 Special 0705. Glare Screen Temporary Left in Place	1,952.000 LF	_____.	_____.
1450	SPV.0090 Special 0711. Removing Concrete Barrier Precast	512.000 LF	_____.	_____.
1452	SPV.0090 Special 1001. Cable Aerial Aluminum 6 AWG Triplex	23,805.000 LF	_____.	_____.
1454	SPV.0090 Special 1002. Cable Aerial Aluminum 4 AWG Triplex	1,365.000 LF	_____.	_____.
1456	SPV.0090 Special 1004. Conduit 3-Inch HDPE Schedule 40	1,170.000 LF	_____.	_____.
1458	SPV.0090 Special 1008. Electrical Cable Type 3#12 UF with Ground	6,381.000 LF	_____.	_____.
1460	SPV.0090 Special 1009. Electrical Cable Type 4#8/1#1 XLP	2,880.000 LF	_____.	_____.
1462	SPV.0090 Special 1010. Electrical Cable Type 4#6/1#8 XLP	60.000 LF	_____.	_____.
1464	SPV.0090 Special 1011. Electrical Cable Type 4#4/1#8 XLP	37,320.000 LF	_____.	_____.
1466	SPV.0090 Special 2000. Outdoor Rated Network Cable	5,360.000 LF	_____.	_____.
1468	SPV.0090 Special 4000. Removing Existing Timber Piling	1,205.000 LF	_____.	_____.
1470	SPV.0090 Special 4020. Foundation Drilling 36-Inch Diameter	1,240.000 LF	_____.	_____.
1472	SPV.0090 Special 5001. Steel Casing W/ Ductile Iron 36-Inch Carrier	25.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1474	SPV.0090 Special 5002. Ductile Iron Water Main 36-Inch	200.000 LF	_____.	_____.
1476	SPV.0090 Special 5003. Ductile Iron Water Main 48-Inch	762.000 LF	_____.	_____.
1478	SPV.0090 Special 5004. Abandon Existing 36-Inch Water Main	120.000 LF	_____.	_____.
1480	SPV.0090 Special 5005. Abandon Existing 48-Inch Water Main	720.000 LF	_____.	_____.
1482	SPV.0090 Special 5006. Removing Water Main	30.000 LF	_____.	_____.
1484	SPV.0090 Special 5007. Ductile Iron Water Main 12-Inch	21.000 LF	_____.	_____.
1486	SPV.0090 Special 5008. Ductile Iron Hydrant Branch 6-Inch	23.000 LF	_____.	_____.
1488	SPV.0090 Special 5120. Sewer Exams by CCTV Post Construction	7,037.000 LF	_____.	_____.
1490	SPV.0090 Special 5201. 4-Duct Conduit Cement Encased 4-Inch Conduit	2,579.000 LF	_____.	_____.
1492	SPV.0090 Special 5210. Conduit Subduct 1-Inch	1,207.000 LF	_____.	_____.
1494	SPV.0090 Special 5211. Furnish Municipal Fiber Optic Cable 72 Count	1,387.000 LF	_____.	_____.
1496	SPV.0090 Special 8000. Drain Slotted Vane Temporary	1,437.000 LF	_____.	_____.
1498	SPV.0090 Special 8001. Pipe Underdrain Exploration	500.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1500	SPV.0090 Special 8002. Drain Slotted Vane Permanent	1,787.000 LF	_____.	_____.
1502	SPV.0110 Special 4000. Timber Lagging	15.000 MBM	_____.	_____.
1504	SPV.0135 Special 0301. Vibration Monitoring	40.000 MON	_____.	_____.
1506	SPV.0165 Special 0400. Tactile Directional Indicators	4,631.000 SF	_____.	_____.
1508	SPV.0165 Special 0401. High Friction Traffic Marking Green Bike Lane Panel	2,222.000 SF	_____.	_____.
1510	SPV.0165 Special 4000. Longitudinal Grooving Bridge Deck	82,584.000 SF	_____.	_____.
1512	SPV.0165 Special 4100. Geocomposite Drain Board	4,970.000 SF	_____.	_____.
1514	SPV.0165 Special 4500. Piling Steel Sheet Permanent Installed R-40-801	19,020.000 SF	_____.	_____.
1516	SPV.0165 Special 4600. Screening Fence Structure Mounted	6,280.000 SF	_____.	_____.
1518	SPV.0165 Special 4610. Screening Fence Ground Mounted	10,150.000 SF	_____.	_____.
1520	SPV.0165 Special 4700. Temporary Wall Wire Faced Mechanically Stabilized Earth	10,283.000 SF	_____.	_____.
1522	SPV.0165 Special 4734. Wall Concrete Panel Mechanically Stabilized Earth R-40-734	10,700.000 SF	_____.	_____.
1524	SPV.0165 Special 4735. Wall Concrete Panel Mechanically Stabilized Earth R-40-735	11,600.000 SF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
1526	SPV.0165 Special 4736. Wall Concrete Panel Mechanically Stabilized Earth R-40-736	18,526.000 SF	_____.	_____.
1528	SPV.0165 Special 4737. Wall Concrete Panel Mechanically Stabilized Earth R-40-737	15,087.000 SF	_____.	_____.
1530	SPV.0165 Special 4739. Wall Concrete Panel Mechanically Stabilized Earth R-40-739	10,135.000 SF	_____.	_____.
1532	SPV.0165 Special 4740. Wall Concrete Panel Mechanically Stabilized Earth R-40-740	5,987.000 SF	_____.	_____.
1534	SPV.0165 Special 4741. Wall Concrete Panel Mechanically Stabilized Earth R-40-741	7,720.000 SF	_____.	_____.
1536	SPV.0165 Special 4742. Wall Concrete Panel Mechanically Stabilized Earth R-40-742	3,620.000 SF	_____.	_____.
1538	SPV.0165 Special 4744. Wall Concrete Panel Mechanically Stabilized Earth R-40-744	1,486.000 SF	_____.	_____.
1540	SPV.0165 Special 4762. Wall Concrete Panel Mechanically Stabilized Earth R-40-762	2,830.000 SF	_____.	_____.
1542	SPV.0180 Special 0420. Asphaltic Material Binder	1,091.000 SY	_____.	_____.
1544	SPV.0180 Special 0421. HPC Pavement 9-Inch	35,541.000 SY	_____.	_____.
1546	SPV.0180 Special 0422. HPC Pavement HES 9-Inch	758.000 SY	_____.	_____.
1548	SPV.0180 Special 0423. HPC Pavement 12-Inch	82,658.000 SY	_____.	_____.
1550	SPV.0195 Special 0443. HMA Longitudinal Joint Repair	100.000 TON	_____.	_____.



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1552	SPV.0195 Special 0444. HMA Transverse Joint Repair	100.000 TON	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.

PLEASE ATTACH ADDENDA HERE