

HIGHWAY WORK PROPOSAL

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

Proposal Number: **002**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Milwaukee	1000-13-71	N/A	Se Region - Milwaukee County; Hwy Lighting 2019	VAR HWY

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

Proposal Guaranty Required: \$75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: June 11, 2019 Time (Local Time): 9:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time 120 Working Days	SAMPLE NOT FOR BIDDING PURPOSES This contract is exempt from federal oversight.
Assigned Disadvantaged Business Enterprise Goal 0%	

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

Type of Work: Street Lighting	For Department Use Only	
	Notice of Award Dated	Date Guaranty Returned

**PLEASE ATTACH
PROPOSAL GUARANTY HERE**

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

- (1) Obtain bidding proposals as specified in section 102 of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:
 1. Electronic bid on the internet.
 2. Electronic bid on a printout with accompanying diskette or CD ROM.
 3. Paper bid under a waiver of the electronic submittal requirements.

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

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

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

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

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

- (5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.
- (6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>

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

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

B Submitting Electronic Bids

B.1 On the Internet

- (1) Do the following before submitting the bid:
 1. Have a properly executed annual bid bond on file with the department.

2. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.
- (2) In lieu of preparing, delivering, and submitting the proposal as specified in 102.6 and 102.9 of the standard specifications, submit the proposal on the internet as follows:
 1. Download the latest schedule of items reflecting all addenda from the Bid Express™ web site.
 2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
 3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
 4. Submit the bid before the hour and date the Notice to Contractors designates.
 5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.
- (3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

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

- (1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at:
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>
Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.
- (2) Staple an 8 1/2 by 11 inch printout of the Expedite™ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal, not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

- (3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.
- (4) The bidder-submitted printout of the Expedite™ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.
- (5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
 1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
 2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.

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

C Waiver of Electronic Submittal

- (1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.
- (2) Submit a schedule of items on paper conforming to section 102 of the standard specifications. The department charges the bidder a \$75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."
- (3) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
 1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
 2. The bidder fails to pay the \$75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the \$75.
 3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.
- (4) In addition to the reasons specified in section 102 of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

PROPOSAL BID BOND

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)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

NOTARY FOR SURETY

(Date)

(Date)

State of Wisconsin)
) ss.
_____ County)

State of Wisconsin)
) ss.
_____ County)

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

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

(Signature, Notary Public, State of Wisconsin)

(Signature, Notary Public, State of Wisconsin)

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

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

(Date Commission Expires)

(Date Commission Expires)

Notary Seal

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)

DECEMBER 2000

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

Instructions for Certification

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

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

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

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

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

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STSP'S Revised November 19, 2018

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1000-13-71 SE Region Milwaukee County, Highway Lighting 2019, Various Highways; 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, 2019 Edition, as published by the department, and these special provisions.

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

100-005 (20181119)

2. Scope of Work.

The work under this contract shall consist of luminaire retrofitting, maintenance/replacement, highway lighting distribution center preventive maintenance, undistributed lighting repairs, traffic control and related work and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

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

Provide the time frame for construction of the project within the 2019 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

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

Comply with all local ordinances that apply to contract operations, including those that pertain to nighttime work. Furnish to the engineer any ordinance variation by the municipality or required permits, before performing such work.

A week in advance, provide to the engineer a schedule of day-to-day operations by location. Adhere to this schedule unless the engineer agrees in advance to a change. The department reserves the right to alter the sequence of luminaire maintenance operations for reasons of directing the contractor to areas of greatest priority, as determined by the engineer. In these cases, the contractor will be allowed two calendar weeks to respond to the priorities given to him.

Northern Long-eared Bat (*Myotis septentrionalis*)

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

If additional construction activities beyond what was originally specified are required to complete the work, approval from the engineer, following coordination with WisDOT REC, is required prior to initiating these activities.

Schedule of Operations

Upon placement of the high mast foundation project 1000-20-71 stage 1 (work by others), install conduit, pull boxes and all the necessary underground electrical component as part of stage 2 under project 1000-20-71.

Upon completion of stage 3 (erection of high mast lighting tower) project 1000-20-71 (work by others), complete wiring, electrical connection, luminaires high mast lighting LED installation, testing and energizing the new high mast lighting units as part of stage 4 under project 1000-20-71.

Contractor Coordination

Arrange and conduct a meeting between the department, utilities and other local officials to discuss the project schedule and sequence of operations during construction operations. Discuss near term schedule activities, address any long-term schedule issues, and discuss any relevant technical issues. Develop a rolling three-week schedule identifying the previous week worked and a two week "look ahead". Provide sufficient detail to include actual and planned activities and all the subcontractors for offsite and construction activities, addressing all activities including ramp and lane closure schedules to be performed and identifying issues requiring engineering action or input. Hold the first meeting prior to the start of work under this contract and hold two meetings per month thereafter.

Work Zone Ingress/Egress

Any initial set-up and/or changes to the Work Zone Ingress – Egress construction detail in the plan or location(s) should be submitted a minimum of 10 working days before use and are subject to approval by the engineer and the Southeast Region Work Zone Engineer.

ser-643-005 (20180131)

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.

4. Traffic.

Work on the traveled way, shoulders, and within the clear zones, or any work requiring workers and equipment to access the sites from the main line, shall be allowed only during the hours and under the restrictions of the articles to follow. Perform all such work using short-term closures only, with no full-time traffic control set up. Do not store any equipment or materials within the clear zones past the time that a short-term closure expires.

The engineer may grant exceptions on a case-by-case basis. Under these cases, additional traffic control measures may be required, as directed by the engineer, for no increase in compensation.

The contractor is advised that his request for lane, ramp or shoulder closures, or his request for moving operations, may be denied on the basis of scheduled work (by the same contractor and/or by others) in the same or adjacent segments, or a conflict between inside lane and outside lane work in the same segment, or for other reasons such as unusual traffic patterns, special events, or bad weather.

Do not close two consecutives on or off ramps at the same time, whether through this contract or in conjunction with work by others.

Post any service ramp closure a minimum of three business days in advance.

Post any system ramp closure a minimum of seven calendar days in advance.

To the extent possible, work median lighting in the direction approaching, not departing from, major interchanges such as the Zoo, Stadium, and Mitchell Interchanges.

Installing and removing median light poles will require:

- One lane closure, and one shoulder closure (in the opposite direction), where median shoulders exist.
- Double lane closure, and single lane closure (in the opposite direction), where there are no median shoulders.

Work outside of the clear zones that can be performed by workers and equipment accessing the site from the property side is not restricted by the hours in the articles labeled Traffic Operations.

Work vehicles shall yield to moving traffic, and shall enter and leave live lanes moving only in the direction of traffic.

Wisconsin Lane Closure System Advance Notification

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

Table 108-1CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction <16')	MINIMUM NOTIFICATION
Lane and shoulder closures	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')	MINIMUM NOTIFICATION
Lane and shoulder closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

stp-108-057 (20161130)

5. Traffic Operations.

This article covers any operation that will close a freeway lane, a freeway off-ramp, a freeway on-ramp, or a system-to-system ramp, for any amount of time.

Maintain all lanes in all directions and ensure that roadways are entirely clear for traffic during peak hours. A single shoulder closure is allowed between 9:00 AM and 3:00 PM, except on I-43 from Bender Road to County Line Road. A single lane closure is allowed during off-peak hours. During night time hours, maintain a minimum of one lane in each direction of the roadway.

Peak, off peak, and night time closure hours are as follows:

Milwaukee County:

Weekday Peak Hours

- 5:30 AM – 9:00AM Monday, Tuesday, Wednesday, Thursday, and Friday
- 2:00 PM – 7:00 PM Monday, Tuesday, Wednesday, Thursday, and Friday
- 5:30 AM – 7:00 PM I-43 from Bender Road to County Line Road; Monday, Tuesday, Wednesday, Thursday, and Friday

Weekend Peak Hours

- 11:00AM – 7:00 PM I-43 SB from County Line Road to Bender road; Saturday, Sunday

Weekday Midday Hours

- 9:00 AM – 2:00PM Monday, Tuesday, Wednesday, Thursday, and Friday

Weekday Off-Peak Hours

- 7:00 PM – 11:00 PM Monday, Tuesday, Wednesday, Thursday, Friday

Weekend Peak Hours

- 11:00 AM – 7:00 PM Saturday and Sunday

Weekend Off-Peak Hours

- 7:00 AM – 11:00 AM Saturday, Sunday
- 7:00 PM – 11:00 PM Saturday
- 7:00 PM – 11:00 PM Sunday

Night Time Hours

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

Full Freeway Closure/ Full 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

6. Holiday Work Restrictions and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highways carrying traffic and entirely clear the traveled way and shoulders of such portions of the highways of equipment, barricades, signs, lights or any other material which might impede the free flow of traffic during the following periods:

- From noon, Wednesday, July 3, 2019 until 6:00 AM Friday, July 5, 2019 for Independence Day;
- From noon, Friday, August 30, 2019 until noon, Tuesday, September 3, 2019 for Labor Day;
- From 12:01 AM Wednesday, November 27, 2019 until 6:00 AM Monday, December 2, 2019 for Thanksgiving;
- From 12:01 AM Friday December 13, 2019 until 6:00 AM Thursday, January 2, 2020 for Christmas and New Year's Day;
- Sundays except where night / weekend work is specifically required.

In Milwaukee County, the following restrictions shall apply:

- For Milwaukee Brewer home games, no lane, shoulder, or ramp closures will be permitted three hours prior to start of game until two hours after completion.
- For Wisconsin Badger Football games at Camp Randall, no lane closure is permitted on westbound IH-94 from four hours prior to the kickoff, and no lane closures are permitted on eastbound IH-94 from the time the game ends until four hours following.
- During Summerfest, no lane, shoulder or ramp closure will be permitted.
- During Wisconsin State Fair, no lane, shoulder or ramp closure will be permitted.

7. Utilities.

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

stp-107-066 (20080501)

There are underground and overhead utility facilities located within the project limits. Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground and overhead facilities.

Bidders are advised to contact each utility company listed in the plans prior to preparing their bids, to obtain current information on the status of any utility within the project work limits.

Known utilities on the project are as follows:

AT&T Legacy – Communication Line has facilities within the project area. There are no conflicts anticipated.

The AT&T Legacy – Communication Line contact is Kenneth Colwell at (312) 734-2223 or kc1298@ATT.COM

AT&T Mobility – Communication Line has no facilities within the project area. There are no conflicts anticipated.

The AT&T Wisconsin – Communication Line contact is Ifey Onua at (847) 330-3471 or io1826@ATT.COM

AT&T Wisconsin – Communication Line has not submitted the DT2236 worksheet for this project. Reminders have been sent and coordination is continuing. Anticipate completion of coordination by 3/29/2019.

The AT&T Wisconsin – Communication Line contact is Matt Dinnauer at (262) 896-7690 or MD9542@ATT.COM

ATC Management, Inc. has transmission facilities within the project area. There are no conflicts anticipated.

Maintain a safe working distance to the 138kV and 230kV conductors at all times based on the latest OSHA requirements.

The ATC Management, Inc. contact is Mike Olsen at (920) 338-6582 or molsen@atcllc.com

Charter Communications has facilities within the project area. There are no conflicts anticipated.

The Charter Communications contact is Pete Kruzela at (414) 908-1339 or wis.engineering@charter.com.

City of Greenfield – Road Facility has no facilities within the project area. There are no conflicts anticipated.

The City of Greenfield – Road Facility contact is Jeff Katz at (414) 329-5325 or jeffk@greenfieldwi.us

City of Greenfield – Sewer has no facilities within the project area. There are no conflicts anticipated.

The City of Greenfield – Sewer contact is Jeff Katz at (414) 329-5325 or jeffk@greenfieldwi.us

City of Greenfield – Water has not submitted the DT2236 worksheet for this project. Reminders have been sent and coordination is continuing. Anticipate completion of coordination by 3/29/2019.

The City of Greenfield – Water contact is Jeff Katz at (414) 329-5325 or jeffk@greenfieldwi.us

City of Milwaukee – Electricity has facilities within the project area. There are no conflicts anticipated.

The City of Milwaukee – Electricity contact is Samir Amin at (414) 286-3301 or samin@milwaukee.gov

City of Milwaukee – Water has no facilities within the project area. There are no conflicts anticipated.

The City of Milwaukee – Water contact is Samir Amin at (414) 286-3301 or samin@milwaukee.gov

Midwest Fiber Networks LLC – Communication Line has facilities within the project area. There are no conflicts anticipated.

The Midwest Fiber Networks LLC – Communication Line contact is Richard Trgovec at (414) 257-5942 or rtrgovec@midwestfibernetworks.com.

Milwaukee County Department of Public Works – Road Facility has no facilities within the project area. There are no conflicts anticipated.

Milwaukee County Department of Public Works – Road Facility contact is Daniel Murphy at (414) 459-3554 or Daniel.Murphy@milwaukeecountywi.gov.

Milwaukee Metropolitan Sewerage District – Sewer has no facilities within the project area. There are no conflicts anticipated.

Milwaukee Metropolitan Sewerage District – Sewer contact is Micki Klappa-Sullivan at (414) 225-2178 or MKlappaSullivan@mmsd.com.

TDS Metrocom LLC – Communication Line has no facilities within the project area. There are no conflicts anticipated.

The TDS Metrocom LLC – Communication Line contact is Matthew Schulte at (262) 754-3063 or matt.schulte@tdstelecom.com.

We Energies – Electric has facilities within the project area. There are no conflicts anticipated.

The We Energies – Electric contact is Nicole Smullen at (414) 221-5617 or nicole.smullen@wecenergygroup.com.

We Energies – Gas/Petroleum has facilities within the project area. There are no conflicts anticipated.

The We Energies – Electric contact is Nicole Smullen at (414) 221-5617 or nicole.smullen@wecenergygroup.com.

WisDOT ATR Pull Boxes - Electricity has no facilities within the project area. There are no conflicts anticipated.

The WisDOT ATR Pull Boxes - Electricity contact is Chad Bigler at (608) 535-7413 or chad.bigler@dot.wi.gov.

WisDOT Communications has facilities within the project area. There are no conflicts anticipated.

The WisDOT Communications contact is Jeffrey Madson at (414) 225-3723 or jeffrey.madson@dot.wi.gov.

WisDOT Lighting has underground and above ground facilities within the project area. The work associated with these facilities is included in this plan and special provisions.

The WisDOT Lighting contact is Eric Perea at (262) 574-5422 or eric.perea@dot.wi.gov.

WisDOT Signals has no facilities within the project area. There are no conflicts anticipated.

Field Contact: WisDOT Electrical Unit, 935 S. 60th St, West Allis, WI 53214; Work: (414) 266-1170, Mobile: (414) 750-1443.

WisDOT RWIS Program – Communication Tower has facilities within the project area. There are no conflicts anticipated.

WisDOT RWIS Program – Communication Tower contact is Michael Adams at (608) 266-5004 or michael.adams@dot.wi.gov.

8. Railroad Insurance and Coordination.

A Description

Comply with standard spec 107.17 for all work affecting Union Pacific Railroad Company 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 Union Pacific Railroad Company.

Notify evidence of the required coverage, and duration to Chrjs Keckeisen, Engineer – Public Project, 101 North Wacker Drive, Suite 1920, Chicago, IL 60606, telephone (402) 544-5131, email Chris T. Keckeisen (CTKECKEI@UP.COM) Include the following information on the insurance document:

Project ID: 1000-13-71

- Project Location: Milwaukee, WI
- Route Name: STH 145, Fond du Lac Freeway
- Crossing ID: 178 874X
- Railroad Subdivision: Shoreline
- Railroad Milepost: 98.68
- Work Performed: Roadway project will be retrofitting existing street lights to LED lighting

A.2 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.3 Names and addresses of Railroad Representatives for Consultation and Coordination

Contact: Chris T. Keckeisen – Industry & Public Projects Engineering Department, 101 North Wacker Drive, Suite 1920, Chicago, IL 60606, telephone (312) 777-2043, email Chris T. Keckeisen (CTKECKEI@UP.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.

A.4 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 several weeks 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.

A.5 Train Operation

Approximately 4 through freight trains operate daily through the construction site. Through freight trains operate at 30 mph. In addition to through movements there are switching movements at slower speed.

9. Work by Others.

Conflicts between work required under this contract, and work by others, will be resolved on a priority basis by the engineer in consultation with the Statewide Traffic Operations Center. Work by others will include routine maintenance and scheduled construction projects on various highways. On this project work by other will also include furnishing and storing high mast tower, anchor bolts and templates under project 1000-20-91, and high mast lighting foundation under project 1000-20-71.

10. 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.

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.

Project 1000-20-71

Sign Bridge Repair and Replacement Maintenance 2019, Various Highways, SE Region Wide.

WisDOT Contact: Frank Pritzlaff; (262) 548-5683; Frank.Pritzlaff@dot.wi.gov

Project 1060-52-70

IH 894, 84th Street to National Avenue.

WisDOT Contact: Paul Jacobson; (414) 750-3287; Paul.Jacobson@dot.wi.gov

Project 1090-31-71

Airport Freeway IH 894, 68th Street Overpass.

WisDOT Contact: Josh LeVeque; (414) 750-1468; Josh.Leveque@dot.wi.gov

11. Erosion Control.

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

Provide the ECIP 14 calendar days prior to the pre-construction conference. Provide one copy of the ECIP to WisDOT and one copy of the ECIP to the WDNR Liaison, Ms. Kristina Betzold, (414) 263-8517, Kristina.Betzold@wisconsin.gov, 2300 N Martin Luther King Dr, Milwaukee, WI 53212. Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-topsoiling to minimize the period of exposure to possible erosion. Do not implement the ECIP until it has been approved by the department.

Erosion control devices shall be specified on the construction plans for any areas of ground disturbance, grading or filling. The contractor's ECIP shall detail how these devices will be implemented for any disturbed areas. Additional devices may be needed based on field conditions and as directed by DNR and engineer.

All disturbed areas shall be adequately protected and restored as soon as feasible. Any disturbed area that will not be 're-worked' for 14 days or more shall be temporary seeded or matted to prevent erosion into adjacent waterways or wetlands. Any 'release' of sediment-laden water from the work site that enters a wetland or waterway should be reported to the DNR liaison within 24 hours.

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

All temporary stock piles must be in an upland location and protected with erosion control measures (e.g. silt fence, rock filter-bag berm, etc.). Proposed stockpile locations should be included in the ECIP. Do not stockpile fill or other construction materials in or adjacent to wetlands, waterways or floodplain.

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 hazardous material should occur on the worksite, it is the responsibility of the contractor 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.

12. Short-Term Shoulder Work or Short Term Sequential Moving Operations.

A single shoulder closure is allowed between 9:00 AM and 3:00 PM.

Shoulder work generally means the parking of vehicles and equipment on the shoulders for short-term operations such as unloading materials or work equipment or work off the shoulder within the clear zone.

Sequential moving operations include luminaire maintenance, on segments where these operations can be accomplished without lane closures, off-ramp closures, or system-to-system ramp closures.

A sequential moving operation means moving in the direction of traffic along a paved shoulder and setting up equipment and outriggers beyond the traveled way. Brief entrances onto the traveled way, such as moving in the direction of traffic from light pole to light pole via the traveled lanes where necessary, will be allowed.

Only vehicles directly involved in the work may be allowed on the freeways under the time envelopes granted under this article. Personal vehicles of contractor personnel will be prohibited.

A truck-mounted attenuator, paid separately, shall trail sequential moving operations. Shoulder work may require a truck-mounted attenuator, paid separately, as directed by the engineer based on his judgment of the geometrics and traffic conditions of the given segment.

13. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

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

stp-107-001 (20060512)

14. Material and Equipment Staging.

Submit a map showing all proposed material stockpile or equipment storage locations to the engineer 14 days prior to either preconstruction or proposed use, whichever comes first.

Identify the specific purposes for the location. Obtain written permits from the property owner and submit two copies to the engineer before use. Do not stockpile or store materials or equipment on wetlands.

SEF Rev. 13_0204

15. Personnel Qualifications.

Add the following to standard spec 651.3.2:

Each luminaire maintenance crew shall include at least one person stated as qualified to perform electrical work per standard spec 651.3(1).

16. Group Luminaire Maintenance Quantities.

Group luminaire maintenance quantities are based on nominal mounting heights typical for the type of pole. Actual mounting heights vary, along with other conditions that will reflect in the labor and equipment costs. These pay items cannot possibly take into account the range of conditions in the field. The contractor shall prepare the estimate accordingly.

The plan quantities of luminaires are approximate. The engineer may delete reasonable quantities of luminaires that have been serviced by others in the months leading up to the start of work. The engineer may add reasonable quantities of work, provided that the increased work will not materially affect the contractor's expenses in traffic control, down time, or travel expenses. For the purposes of standard spec 104.2.2.4, all the Luminaire Maintenance items taken as an aggregate shall be considered a major item.

Due to changing department practice, 100-watt, 200-watt, and 310-watt utility luminaires are being changed out in favor of 150-watt, 250-watt, and 400-watt luminaires respectively. Changes in the field are not necessarily reflected in records that will be conveyed to the contractor. Contractor is directed to stock extra 150-watt, 250-watt, and 400-watt lamps, compared to plan quantities, and he will be directed to read the NEMA lamp label at each location. Payment will be made on the basis of the lamp sized actually used.

17. Inspection.

Inspection of existing light poles that is required and is incidental to paid items under this contract does not transfer responsibility for their condition from the department to the contractor. The contractor will not be held responsible for the condition of any existing light pole or associated installation, or for the consequences of a failure.

18. Removing Distribution Center, Item 204.9060.S.01.

A Description

This special provision describes removing an existing highway lighting distribution center and electrical service pedestal as shown on the plans, according 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 by each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Distribution Center	EACH

Payment is full compensation for removal of the distribution center, electrical service pedestal, and for utility coordination for the services.

SER-204.18 (20170407)

**19. Removing Luminaires High Mast Lighting, Item 204.9060.S.02;
Removing Luminaires Utility, Item 204.9060.S.03;
Removing Luminaires Underdeck Lighting, Item 204.9060.S.04.**

A Description

This special provision describes removing existing luminaires and lamps from high mast lighting tower, light poles, and bridge decks as shown on the plans, according to the pertinent provisions of standard spec 204, and as hereinafter provided. High mast lighting towers, light poles and bridge deck shall remain in service.

B Material

Removed luminaires and lamps become the property of the contractor and shall be disposed off the project site. Luminaire lamps, which are considered a hazardous material, shall be disposed of in an environmentally sound manner.

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.

D Measurement

The department will measure Removing Luminaires (type) by each individual unit, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.02	Removing Luminaires High Mast Lighting	EACH
204.9060.S.03	Removing Luminaires Utility	EACH
204.9060.S.04	Removing Luminaires Underdeck Lighting	EACH

SER-204.11 (20171021)

20. Removing Underdeck Lighting, Item 204.9060.S.05.

A Description

This special provision describes removing underdeck lighting according to the pertinent provisions of standard spec 204, 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 according to pertinent requirements of standard spec 203.3.4. Luminaire lamps, which are considered a hazardous material, shall be disposed of in an environmentally sound manner.

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 unit removed and disposed of off the project site including associated materials, 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
204.9060.S.05	Removing Underdeck Lighting	EACH

Payment is full compensation for removing and disposing of luminaires, attached conduits, attached junction boxes, and hardware.

SER-204.19 (20170516)

21. Traffic Control.

Append standard spec 643 as follows:

Aerial Service Vehicles

Equip lift trucks and similar electrical construction vehicles with two or more high-intensity yellow rotating beacons clearly visible to the rear and sides, but not to the front of the vehicle (exception: surface highways with traffic approaching the truck from the front). Mount these beacons as high on the truck as possible. In lieu of rotating beams, the contractor may, subject to the approval of the engineer, use fixed flashing beams of equivalent visual impact as the rotating beams.

Channelization Devices

For daytime work only, the contractor may use 36-inch traffic cones of fluorescent orange color instead of traffic control drums. Such cones shall have a weighted base designed and manufactured specifically for the cones furnished. Cones will not be measured for payment but shall be considered an incidental item paid as electrical or traffic control work.

22. 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.

643-015 (20140630)

23. Roadway Lighting Systems.

Add the following to standard spec 651, 652, 653, 654, 655, 656, 657 and 659:

All the work necessary to comply with revisions to standards specs mentioned as follows 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 spec 651.2:

Materials indicated to be returned to the department shall be transported to one of the following two locations:

- State Electrical Shop at 935 South 60th street, West Allis, as directed by Miss. Bree Johns-Konkol, (414) 266-1170
- Milwaukee County Grounds, 10191 West Watertown Plank Road, Wauwatosa, as directed by Mr. Pat Stoetzel, (414) 750-5306

Arrange pickups and deliveries a minimum 3 days in advance and during regular business hours (Monday – Thursday 7:00 AM to 3:45 PM).

Add the following to standard spec 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 and will not employ a load dispatcher. 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 account for these costs in the various paid items for removals and installations.

Replace all existing slotted junction box cover screws with stainless hex head cover screws at each location where it is required to open the cover of an existing lighting junction box. The stainless hex head cover screw is incidental to the contract.

Add the following to standard spec 651.5:

Work to disconnect and connect conductors will be incidental to the paid measurement of footage.

Work to disconnect and connect electrical system, splice through, or to connect conductors is incidental to the installation or removal of the freeway lighting pay items included in this contract.

The department will not measure and pay conductors or conduits that have been abandoned in place or removed for scrap unless covered in the contract bid items. The department will allow, at the contractor's discretion, for the salvaging of conductors to be abandoned.

Add the following to standard spec 652.3.1:

Install minimum 3-inch diameter PVC conduit elbows in a ground mounted concrete bases to accommodate Cable in Duct (CID) type cable.

Add the following to standard spec 652.3.1.2:

Furnish and install an UL-listed liquid tight flexible metallic conduit transition wherever a conduit exits from below grade.

Furnish a UL-listed fitting appropriate for the purpose at each transition from one type of conduit to another type. Couplings will not be individually measured for payment.

Add the following to standard spec 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 spec 653.3(1):

This provision modifies the standard detail drawing for 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 spec 655.3.1:

Wet location splices are not shown on the plans and not anticipated on this project. 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.

Add the following to standard spec 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 spec 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 are incidental to the contract.

Add the following to standard spec 657.3.1 and 657.3.5:

Corrosion protection measures described in standard spec 657.3.1 and 657.3.5 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 5 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 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 (262) 574-5422 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.

Add the following to standard spec 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.

High mast tower luminaires shall be 1000 Watts, High Pressure Sodium, M-C-II type distribution or LED equivalent.

Add the following to standard spec 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.

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24. Pole Wire and Fusing.

Fused connections shall utilize Fuse Type FNQ time delay and shall be incidental to the new luminaire utility LED and or new pole wire, paid as Electrical Wire Lighting 12 AWG. The contract also includes fusing items for maintenance of existing light poles.

25. Luminaires Utility LED.

Add the following to standard spec 659.3.3:

LED A will replace 100 – 150watt HPS at roundabouts only

LED C will replace 100 – 250watt HPS on freeway/ interstate, signals, and ramps

LED C will replace 250watt HPS at roundabouts

LED D will replace 310 – 400watt HPS at all locations

26. Distribution Center Preventive Maintenance, Item SPV.0060.01.

A Description

This special provision describes maintaining lighting cabinets and the site, including inspecting, cleaning, testing, adjusting, and keeping records. Major repairs or component replacement will not be included.

B Materials

Furnish materials such as primer, paint, lubrication, anti-seize, electrical cleaning solvents, incandescent lamps, warning decals, small parts, and connectors. All items shall be suitable for electrical maintenance, as approved by the engineer. The department will furnish padlocks and WisDOT decals.

C Construction

Perform the following tasks:

- Apply state-furnished WisDOT decals as needed to cabinets and to remote meters.
- Apply standard ANSI voltage warning decals (text varies by location; in most cases, "Warning 480 Volts") where needed to cabinets and to remote meters. These will be measured separately as Plaques Sequence Identification, generally 2 units per cabinet.
- Apply cabinet plaques where needed. These will be measured separately as Plaques Sequence Identification, generally 2 or 3 units per cabinet. Engineer to supply text.
- Spot prime and spot paint inside and out as needed, in colors to match the existing surfaces.
- Test the photo control circuit and other 120 VAC apparatus for proper function.
- Replace the incandescent lamp as necessary.
- Inspect all electrical components, including conductors. Inform the engineer of all reportable conditions.
- Tighten and otherwise make good all electrical connections, including grounding connections.
- Remove debris, animal nests, the accumulation of dirt, etc., from inside and near the cabinet.
- Trim weeds, saplings, and brush a reasonable distance around, including a sufficient distance to ensure access to the meter, the fence gate, the cabinet door, We Energies transformer (hot stick side) and the first pull box off the cabinet.
- Inspect the fence gate and its padlocks. Trim saplings that interfere with gate function.
- Wipe the photocell clean.
- In general, short of replacing any component or making any repair beyond these requirements, leave behind a clean, orderly and functioning cabinet, fence gate and site.

D Measurement

The department will measure Distribution Center Preventive Maintenance by the unit, completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Distribution Center Preventive Maintenance	EACH

Payment is full compensation for the required maintenance and adjustment of the distribution center, as well as recording and forwarding all reportable conditions.

27. **Group Luminaire Maintenance Sign Light 175W MV, Item SPV.0060.02; Group Luminaire Maintenance Sign Light 250W MV, Item SPV.0060.03.**

A Description

This special provision describes luminaire maintenance, generally on a sequential basis. At the same locations, inspect light poles and troubleshoot nonfunctioning luminaires. Report problems to the engineer, or repair for payment under separate items of work, as directed by the engineer. Perform work according to standard spec 659.

B Materials

Add the following to standard spec 659.2.1.1(2):

175 and 250-watt mercury vapor lamps shall be deluxe white

C Construction

Add the following to standard spec 659.3:

C.1 Location Plans

At the preconstruction conference, the department will furnish detailed location maps illustrating the location, lamp type and wattage, pole height, and other information regarding the work under this item.

C.2 Inspection, Limited Testing and Troubleshooting

Record any obvious pole damage, structural weakness, electrical malfunction, electrical hazards, and other potential problems with the existing installation that are encountered, and convey such information to the engineer at the end of the work day. Replace blown fuses for separate payment. Replace nonfunctioning luminaires with state-furnished materials, for separate payment, and furnish and install a lamp. When outages for which the repair is beyond the scope of this contract are encountered, convey this information in writing to the engineer. This will complete the contractor's work for inspection and troubleshooting at that location. Thereafter, the lamp (only) will be required to operate for 20 consecutive nights without failure. Replace each lamp that fails; that lamp shall again be subjected to a 20 consecutive night test.

Exception: At his option, the engineer may waive the 20-day prove-in period, location-by-location, in cases where he does not wish to pay the cost of traffic control, or where he judges that the public inconvenience of closed lanes or ramps would not be justified.

C.3 Lamp Identification

Some luminaires lack NEMA lamp identification stickers. Instead, a color patch on the sequence plaque on the pole shaft identifies the lamp types and wattages. Pole plaques are in many cases outdated and inaccurate. The color patch code is shown in the plans. Where the NEMA label and the pole plaque conflict, follow the NEMA label.

C.4 Sign Bridge Lighting

Access to most overhead sign lighting installations can be accomplished without closing freeway lanes, since these overhead sign structures span the mainline freeway roadways and can be serviced from aerial walkways. Median mounted signs on single pole sign supports in some cases are not accessible for servicing without lane closures. Lane closures for these locations shall conform to the bid items for Traffic Control in these special provisions, except the use of standard traffic delineation and a standard sign is required in addition to the use of the arrow flasher board.

C.5 Cleaning and Re-lamping – Other Incidental Work

Level and aim each luminaire that is of a type that can be leveled or aimed. Clean the optical surfaces, consisting of the reflector and both sides of the lens or refractor, with a detergent solution and two rinses. Lightly wipe with a damp chamois to remove dirt film, and polish with a non-abrasive compound free of wax or silicone, leaving the reflector bright.

In lieu of the manual cleaning process, an automatic washer designed specifically for the cleaning of refractors or lenses may be used, provided that, in the judgment of the engineer, it produces a final cleaning result equal to the washing process described above.

Throughout the cleaning process, keep the gasket dry.

D Measurement

The department will measure Group Luminaire Maintenance (Various) by each individual unit, acceptably completed. Two units of work will be measured on twin lighting units.

E Payment

The department will pay for the measured quantities under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Group Luminaire Maintenance Sign Light 175W MV	EACH
SPV.0060.03	Group Luminaire Maintenance Sign Light 250W MV	EACH

Payment is full compensation for cleaning and re-lamping; making for incidental repairs; inspecting and troubleshooting; properly disposing of HPS light bulbs according to all environmental regulations; and for conformance to the limited 20-night prove-in period as described above.

28. Luminaires Probeam LED, Item SPV.0060.04.

A Description

The work under this item consists of installing Luminaire Probeam LED luminaires at locations specified in plans, according to plan details, the applicable portions of standard spec 659, and as hereinafter provided.

B Materials

Probeam LED luminaires shall be outdoor lighting suitable for wet locations up to 40°C ambient temperature. Electrical housing shall be IP65 rated. All hardware shall be stainless steel. Units shall be UL listed for WET LOCATIONS. Die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Units shall be utility gray in color.

Example luminaire shall be available for evaluation for up to two weeks' time. Furnish the following list of specific documentation detailing the characteristics of the LED luminaire:

- Fixture IES files (.ies format) for illumination modeling
- Cut sheets, warranty information and parts list for all equipment.
- Luminaire heat dissipation techniques.
- Energy usage information.
- Color spectrum with HID lamp comparison.
- Optical design features.

Do not order materials until the engineer approves the list.

B.2 Luminaire

Furnish LED luminaires with a slim, low profile design that minimizes wind loading. Luminaires shall be constructed of rugged cast and extruded aluminum with integral, weather-tight LED driver components with high performance aluminum heat-sinks. Each luminaire shall use a terminal block for power input suitable for #2 to #14 AWG wire. Luminaires shall be installed and mounted on the existing mast arm mounting plate as shown in the plans.

B.2.1 Electronic Components

Luminaire shall accommodate varied lighting output from high brightness, 4000K (+/- 500K per full unit), minimum 70 CRI, long life LED sources. Drivers shall operate across 120-277V, 50/60 Hertz as standard. LED drivers shall have a power factor greater than 90% and THD less than 20% of full load. All luminaires shall come equipped with an integral surge suppression protection standard.

B.2.2 Optical / Illumination Performance

Luminaire shall conform to the following:

- Luminaire tested and certified by an independent test laboratory to meet the photometric performance criteria established by IESNA LM-79.
- Luminaire shall deliver approximately 12,000 lumens and be rated to consume no more than 175 watts (+/- 15%) while operating for a minimum of 70,000 hours (+/- 10%).
- Luminaire shall have 6 x 6 or 6 x 7 light distribution.

B.2.3 Finish

The luminaire fixture finish shall feature an epoxy primer with an ultra-durable silver powder topcoat, providing resistance to corrosion, ultraviolet degradation and abrasion. Alternative equivalent finishes shall be approved by the engineer.

B.2.4 Ratings / Certifications

Luminaires shall be rated and/or certified as follows:

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

C Construction

Conform to the applicable requirements of standard spec 659.3.

D Measurement

The department will measure Luminaire Probeam LED 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.0060.04	Luminaires Probeam LED	EACH

Payment is full compensation for furnishing and installing all materials including the luminaires, wiring, and fusing.

29. Luminaires Utility 480V LED C, Item SPV.0060.05; Luminaires Utility 480V LED D, Item SPV.0060.06; Luminaires Underdeck 480V LED B, Item SPV.0060.07.

A Description

This special provision describes furnishing and installing Luminaires LED with a driver equipped with voltage sensing to accommodate 480V input power according to standard spec 659 and hereinafter provided.

B Materials

Conform to standard spec 659.2.

C Construction

Conform to standard spec 659.3.

D Measurement

The department will measure Luminaires Utility LED C 480V, Luminaires Utility LED D 480V and Luminaires Underdeck LED B 480V as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Luminaires Utility 480V LED C	EACH
SPV.0060.06	Luminaires Utility 480V LED D	EACH
SPV.0060.07	Luminaires Underdeck 480V LED B	EACH

Basis of payment will be standard spec 659.5(2) and 659.5(3).

30. Install State-Furnished Luminaires High Mast Lighting LED, Item SPV.0060.08.

A Description

This special provision describes installing state furnished LED luminaires for high mast lighting. All luminaires shall be picked up and installed by the contractor.

B Materials

Pick up the department furnished materials at the department’s electrical shop located at 935 S. 60th Street, West Allis. Notify the department’s Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the furnished materials 3 working days in advance and during regular business hours (Monday – Thursday 7:00AM to 3:45PM).

C Construction

Install luminaires high mast lighting LED according to standard spec 659.3.3 and 659.3.4.

D Measurement

The department will measure Install State-Furnished Luminaires High Mast Lighting LED as each individual unit installed, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.08	Install State-Furnished Luminaires High Mast Lighting LED	EACH

Payment is full compensation for hauling and installing the luminaires high mast lighting LED.

31. Plaques Sequence Identification, Item SPV.0060.09.

A Description

This special provision describes the replacement of plaque sequence identification on existing freeway lighting poles. This work shall be according to the latest edition of the Standard Detail Drawing S.D.D.10 A 2.

B Materials

Materials shall confirm pertinent requirements of the latest edition of the Standard Detail Drawing S.D.D.10 A 2.

C Construction

Use construction methods in conformance to the above referenced standard detail drawing. Remove any existing plaque material that loose, bubbling or interferes with the adherence of the new plaques. Do not damage the pole.

D Materials

The department will measure Plaques Sequence Identification by each complete accepted replacement (alpha-numeric pole identification along with the luminaire type identification) plaque ID on a pole. Replacement of the plaques for both luminaires on a twin pole constitutes two plaques replaced.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Plaques Sequence Identification	EACH

Payment is full compensation for furnishing and installing the materials.

32. Light Tower Rat Screens, Item SPV.0060.10.

A Description

This special provision describes furnishing and installing light tower rat screens as shown on the plans and as hereinafter provided.

B Materials

Construct rat screens from approved steel wire cloth with zinc coating after weaving. Secure to the base plate with stainless banding, additionally secured with stainless screws into the base plate.

C Construction

Remove any existing rat screens and dispose of them off the site. Clean the base area of any foreign material or debris prior to installing the new rat screen.

D Measurement

The department will measure Light Tower Rat Screens 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.0060.10	Light Tower Rat Screens	EACH

Payment is full compensation for furnishing and installing rat screens; cleaning the site; and properly disposing of all materials.

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33. Fuse Holders, Item SPV.0060.11; Fuses Type FNQ, Item SPV.0060.12.

A Description

This special provision describes replacing Fuse Holders or Fuses Type FNQ fast acting with Fuses Type FNQ time delay for the existing luminaires utility LED during luminaire maintenance, according to pertinent standard spec 659, and as hereinafter provided. Fuses and fuse holders that are installed as a part of the bid item for luminaires utility LED and pole wire, which is Electrical Wire Lighting 12 AWG will be paid under that item.

B Materials

Materials shall confirm pertinent requirements of standard spec 659.2.

C Construction

Use construction methods in conformance to standard spec 659.3.2.

D Materials

The department will measure Fuse Holders and Fuses Type FNQ time delay 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.0060.11	Fuse Holders	EACH
SPV.0060.12	Fuses Type FNQ	EACH

Payment is full compensation for furnishing and installing the materials; troubleshooting or inspecting to determine if replacing fuses or fuse holders are necessary.

34. Plumbing Light Poles, Item SPV.0060.13.

A Description

Shim and plumb light poles. Do this work in conjunction with luminaire maintenance activities at the same locations.

B Materials

Use shims approved by the engineer.

C Construction

Perform the work according to standard spec 657.3.1.

D Measurement

The department will measure Plumbing Light Poles by the 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.0060.13	Plumbing Light Poles	EACH

Payment is full compensation for inspecting for plumb as a part of luminaire maintenance activity; plumbing as needed.

**35. Luminaires Tunnel Lighting LED (Daytime), Item SPV.0060.14;
Luminaires Tunnel Lighting LED (Nighttime), Item SPV.0060.15.**

A Description

This special provision describes furnishing and installing dimmable LED tunnel luminaires at the positions shown in the plan for tunnel B-40-821.

B Materials

B.1 Luminance and Illuminance Requirements

B.1.1 Tunnel B-40-821

- Tunnel length = 645'
- 50 MPH
- SSSD = 425'
- Greater than 51,800 ADT
- No bicyclists
- Poor daylight penetration
- Poor wall reflectance
- Ceiling reflectance will be minimal due to 36" bridge girders
- Adjustment factor Table 2 of RP-22-11 = 50%
- Driver faces West
- Table 3 of RP-22-11 = 240 cd/sq m
- Minimum luminance = 240 x 50% = 120 cd/sq m
- Circuit NT1, NT2, EM1 and EM2 of lighting control cabinet HL-40-TZ are the designated circuit for night lighting. The four luminaires on this circuit shall provide illuminance of less than 0.6 Ave maintained FC at the minimum dimming setting and greater than 2.0 Ave maintained FC at full brightness.
- Luminaires are to be wall mounted on both sides of the wall as shown in the plan.

B.1.2 Photometric Evaluation

Photometric layout files will be available from the DOT when plans are made available. Contact Eric Perea at (262) 574-5422. Photometric layout files are based upon AGI32 version 15.3.17. The results of the photometric analysis are a required shop drawing as both an AGI file and in a PDF format.

B.2 Material Qualifications

Furnish a complete list of documentation in accordance to standard spec 651.2.

One example luminaire matching what is proposed for use on the project. Example luminaire shall be available for evaluation for up to two weeks. Furnish the following list of specific documentation detailing the characteristics of the LED luminaire:

- Fixture IES files (.ies format) for illumination modeling.
- Cut sheets, warranty information and parts list for all equipment.
- Luminaire heat dissipation techniques.
- Energy usage information.
- Color spectrum with HID lamp comparison.
- Optical design features.
- Two references from municipalities currently using the same luminaires.

Do not order materials until the engineer approves the list.

B.3 Luminaire

Tunnel Luminaire shall be specifically manufactured and tested for tunnel type applications. Luminaire housing shall be die cast from low copper content A360 aluminum with integral heat fins to optimize thermal management through convective and conductive cooling. Housing shall be designed for either wall or ceiling mounting using heavy duty stainless steel brackets. Housing shall have three ¾" NPT threaded entries for connecting with conduit raceway.

Luminaire door shall be completely sealed using a silicone gasket and secured by minimum 6 stainless steel latches or Alloy 410 stainless steel bolts with captive zinc-plated fasteners. Housing door shall be equipped with two internal hinges for easy access to internal components including drivers, surge protection, LED arrays, quick disconnect plugs and high and low voltage terminal blocks. Luminaire door shall encase prismatic borosilicate glass lens.

Complete assembly shall be tested to withstand 3G vibration per ANSI C136.31-2001 and shall be rated IP66 per IEC60529. Additionally, luminaire shall pass a High Pressure Water Spray Test where the spray apparatus consists of four spraying nozzles each providing a minimum of 12 gallons per minute at 100 PSI at the nozzle, in a 90-degree cone. Spray shall be applied for 30 minute intervals on surface containing photometric nadir and directly at electrical entry or access points. The test data and results shall be completed in writing and shall be submitted to the engineer for review and acceptance.

B.4 Electronic Components

Class 1 Drivers shall be rated for 100,000 hours life and shall be dimming type for 0-10v control signal. Dimming output shall be controllable between 10-100% of nominal. Low voltage terminal block shall provide for landing incoming as well as outgoing signal cable. Driver power factor shall be minimum 90% and maximum total harmonic distortion shall be 20%. Supply power voltage will be 277V.

Surge Protection shall meet 10KV\5KA per ANSI IEEE\C62.41.

The luminaire shall have an approximate physical size of 2'-0" W X 1'-6" D. Other sizes would be allowed if it can be demonstrated that all luminaires can be mounted per the above physical constraints.

B.5 Optical / Illumination Performance

Luminaire shall conform to the following:

- Luminaire tested and certified by an independent test laboratory to meet the photometric performance criteria established by IESNA LM-79-08.
- Luminaire shall deliver approximately 30,200 lumens minimum and be rated to consume no more than 370 watts maximum while operating for a minimum (L70) of 100,000 hours (+/- 10%).
- Maximum nominal drive current of 1050 Ma. Daytime fixture, 435W LED. Nighttime fixture 125W LED.
- Daytime fixture, 435W LED.

B.6 Finish

Luminaire housing shall be anodized and then finish with powder coating in gray color. Finish shall exceed 5000 hour salt fog test per ASTM B117 and D1654. Alternative equivalent finishes shall be approved by the engineer.

B.7 Ratings / Certifications

Luminaires shall be rated and/or certified as follows:

- IP-65 minimum weather fastness rating
- IDA dark sky full cutoff compliant
- IEC 61000 - Electromagnetic Compatibility Test (EMC)
- FCC Title 47 CFR Part 18 – Federal Communication Commission
- ANS\IEEE\C62.41
- IEEE 519 – Harmonic Control in Electrical Power Systems
- ANSI C82.77:2002 Harmonic Distortion
- ANSI C136.31:2001 – Luminaire Vibration
- ASTM B 117:2003 – Salt Spray Test
- IEC 60529 – Degrees of protection provided by enclosure
- UL 1598 – UL Wet Location @ 40C
- ROHS compliance for key components

B.8 Dimming

Luminaires shall be capable of being dimmed from 100% output down to 10% output with wireless dimming control. Dimming control shall be coordinated with the lighting control cabinets HL-40-TZ for tunnel #3, HL-40-TY for Tunnel #2 and cabinet HL-40-TX for tunnel #1.

C Construction

Install Luminaires Tunnel Lighting LED in accordance to the pertinent provisions of standard spec 659 and as the manufacturer directs.

D Measurement

The department will measure Luminaires Tunnel Lighting LED (type) as each individually installed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.14	Luminaires Tunnel Lighting LED (Daytime)	EACH
SPV.0060.15	Luminaires Tunnel Lighting LED (Nighttime)	EACH

Payment is full compensation for furnishing all materials; and installing a complete luminaire.

36. Junction Boxes Steel 18x12x6-Inch Coated, Item SPV.0060.16; Junction Boxes Steel 6x6x4-Inch Coated, Item SPV.0060.17.

A Description

This special provision describes junction boxes according to standard spec 653 and as hereinafter modified.

B Material

The material shall be according to standard bid item 653.0222 and the qualified product list with the exception of the additional items. The unit shall include an epoxy powder coat, anti-corrosive or corrosion free coating for junction box and protective cover and a solid copper ground rod, with a stranded bare copper for equipment grounding electrode conductor.

C Construction

Drive a 5/8-inch x 8-foot copper grounding electrode adjacent to the junction box. Bond the equipment grounding conductor and the enclosure to the grounding electrode with #4 AWG and connect to the ground rod with an exothermic weld. The anti-corrosive coating shall be factory applied.

D Measurement

The department will measure Junction Boxes Steel 18x12x6-Inch Coated and Junction Boxes Steel 6x6x4-Inch according to standard spec 653.4, 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.0060.16	Junction Boxes Steel 18x12x6-Inch Coated	EACH
SPV.0060.17	Junction Boxes Steel 6x6x4-Inch Coated	EACH

Payment is full compensation according to standard spec 653.5.

37. Liquid Tight Flexible Metallic Conduit 3/4-Inch, Item SPV.0090.01.

A Description

This special provision describes furnishing and installing liquid tight flexible metallic conduit between wireways utilized for tunnel lighting and the tunnel luminaires.

B Materials

The flexible metallic conduit shall be liquid tight with a moisture, oil, and sunlight resistant polyvinyl chloride (PVC) jacket applied directly over the flexible metal conduit with wall thickness according to UL 360.

The flexible metallic conduit shall be UL listed for between -67° F and +221 ° F.

According to UL 360, the flexible metallic conduit shall meet all of the following performance tests:

- Resistance and High Current
- Fault Current
- Impact
- Tension
- Crushing
- Pipe Stiffness
- Flexibility
- Low Temperature Flexibility
- Zinc Coating
- Vertical Flame
- Physical Properties
- Deformation
- Mechanical Water Absorption
- Moisture Penetration
- Sunlight Resistance
- Test for Secureness of Fittings
- The fittings and adapters shall be of the same manufacturer as the conduit.

C Construction

Install the fittings, adapters, and conduit between the wireways used in conjunction with tunnel lighting and the tunnel lighting. Install per the manufacturer's instructions and as shown on the plans.

D Measurement

The department will measure Liquid tight Flexible Metallic Conduit 3/4-Inch by the linear foot of conduit installed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Liquid tight Flexible Metallic Conduit 3/4-Inch	LF

Payment is full compensation for furnishing and installing the conduit, including the connectors.

38. Rigid Galvanized Steel Conduit 1-Inch Coated, Item SPV.0090.02; Rigid Galvanized Steel Conduit 1 1/4-Inch Coated, Item SPV.0090.03

A Description

This special provision describes providing and installing Rigid Galvanized Steel Conduit 1-Inch Coated and Rigid Galvanized Steel Conduit 1 1/4-Inch Coated according to standard spec 652 and as shown on the plans.

B Materials

Polyolefin Coated Galvanized Steel Conduit: Polyolefin coated rigid steel conduit shall meet UL Standard 6 AND NEMA RN-1. Coating shall be performed over the UL listed product and shall not disturb initial zinc coating.

Exterior polyolefin coating shall be minimum 40 mil.

Conduit interior shall have thermoset polymer coating of minimum 2 mil.

Conduit coating shall be environmentally safe and produce no Halogens or VOCs.

All conduit fittings, couplings, channel supports, and clamps shall be polyolefin coated. All other mounting hardware and appurtenances shall be stainless steel.

Conduit supports shall be galvanized or stainless steel.

C Construction

The contractor is advised that all of this type of conduit is installed attached to the structure of the freeway.

All nuts on supports shall be double nutted.

D Measurement

The department will measure Conduit Reinforced Thermosetting Resin 3/4-Inch by the linear foot, acceptably completed, measured along the conduit centerline from the centerline of fittings or, where there are no fittings, from the free ends of the 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.0090.02	Rigid Galvanized Steel Conduit 1-Inch Coated	LF
SPV.0090.03	Rigid Galvanized Steel Conduit 1 1/4-Inch Coated	LF

Payment 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 disposing of surplus materials; and for making inspections.

39. Maintenance of Lighting Systems, Item SPV.0105.01.

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.

Maintenance of the lighting system includes but not limited to lighting control cabinets: HL-40-CO, HL-40-RT, HL-40-EH and HL-40-TZ.

The following lighting control cabinet will be utilized for temporary lighting and then be removed when the existing high mast lighting is removed: HL-40-RT.

The following lighting control cabinet is new and will be used when the final lighting is operational: HL-40-RT.

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

1. **Serve Response Time:** The amount of time from the initial notification to the contractor until a patrolman physically arrives at the location.
2. **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.)
3. **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 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 as a single lump sum unit of work, per contract, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Maintenance of Lighting Systems	LS

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. No payment will be considered for damage or repairs due to contractor operations.

40. Control System Preventive and Maintenance (HL-40-TZ), Item SPV.0105.02.

A Description

This special provision describes control system preventive care and maintenance to ensure the tunnel lighting system functions at the intended level, and in accordance with design standard after removing and replacing existing HPS luminaires with LEDs.

B (Vacant)

C Construction

Perform the following tasks:

- Interface with NYX Hemera Technologies (existing control system) personnel to determine how the removal and replacement of the existing HPS luminaire with LED might affect operation of the system.
- Work with NYX Hemera Technologies and conduct functional testing each time one side of the wall is completed before continuing to the next side for full functioning system.
- Test and replace any damaged or bad contactor.
- Test and reprogram the NYX Hemera controller and Nexlight control panel to ensure the system is functioning properly.
- Upon completion of the luminaire tunnel removal and replacement, conduct a final functional testing to demonstrate all features and functionalities of the Tunnel Lighting Addressable Control System (TLAC) and ensure that the system is fully operational.

D Measurement

The department will measure Control System Preventive and Maintenance (HL-40-TZ) as a single lump sum unit of work, 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.0105.02	Control System Preventive and Maintenance (HL-40-TZ)	LS

Payment is full compensation for Control System Preventive and Maintenance HL-40-TZ, adjustment of the distribution center, recording and forwarding all reportable conditions, providing specified expertise, assistance and documents and personnel costs.

41. Lighting System Integrator, Item SPV.0105.03.

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 Personnel Qualifications

Assign personnel experienced in underground utility construction and department lighting specifications and practices.

C Construction

At any one time during the project, the contractor shall assign one individual person as the freeway lighting integrator.

The freeway lighting integrator shall:

1. Familiarize himself 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 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 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 .dgn 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 as a single lump sum unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Lighting System Integrator	LS

Payment will be full compensation for providing specified expertise, assistance and documents, and personnel costs.

SER-670.1 (20170407)

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

107.14 Contractor's Responsibility for Work

Replace the entire text with the following effective with the June 2019 letting:

- (1) Within 107.14, the term "work" is redefined to mean "the work product that is completed in its final position and is incorporated in the project."
 - (2) The contractor shall maintain charge and care of the work until the engineer accepts the work as specified in 105.11. Protect the work against injury or damage caused by public traffic, the action of the elements, or from other causes, whether arising from the execution or non-execution of the work. Rebuild, repair, restore, and make good injuries or damages to work caused by the above at no additional cost to the department.
 - (3) The department will assume responsibility for the work as follows:
 1. Costs the department assumes under 104.6.
 2. Costs to repair bridge damage attributed to public traffic, if the engineer determines that damage was beyond the control of and without the fault of the contractor.
 - (4) The contractor shall not bear the expense for damage to the work caused by abnormal and unforeseeable occurrences beyond the control of, and without the fault or negligence of, the contractor. These abnormal and unforeseeable occurrences include but are not limited to the following:
 1. Cataclysmic phenomena of nature.
 2. Acts of the public enemy.
 3. Acts of government authorities.
 - (5) Before suspending the work, take the necessary precautions to prevent damage to the project, prevent traffic accidents, and provide for normal drainage. Erect necessary temporary barrier, barricades, signs, or other facilities at no expense to the department except as specified in 104.6.
 - (6) The contractor is responsible for all damages to equipment and supplies regardless of the circumstances.
-

107.17.1 General

Replace paragraph seven with the following effective with the December 2018 letting:

- (7) Have a professional engineer registered in the state of Wisconsin sign and seal the shop drawings. At least 30 calendar days before starting falsework, form, or shoring construction; submit a PDF file of shop drawings to the railroad's chief engineering officer and to the engineer. The engineer and the railroad may review the shop drawings. If the engineer or the railroad finds the shop drawings unsatisfactory, the contractor shall make the required changes. A satisfactory shop drawing review does not relieve the contractor of responsibility and liability for the structural integrity and proper functioning of the falsework, forms, or shoring.
-

109.1.1 General

Replace the entire text with the following effective with the January 2019 letting:

- (1) The engineer will use the US standard system to measure all work completed under the contract. The engineer will determine quantities of materials the contractor furnishes and work the contractor performs using measurement methods and computations conforming to standard engineering practice, modified to meet department requirements. The engineer will document these measurements using department procedures.
- (2) The engineer will measure the work as the contract measurement subsection for individual items specifies. The department will measure the actual quantities of work the contractor acceptably completes and make final payment based on those actual measured quantities except as follows:
 1. If the measurement subsection for a bid item specifically restricts the quantity measured for payment or allows for use of conversion factors.

2. If the engineer executes a contract change order modifying the method of measurement for specific bid items, the engineer will measure the quantities of applicable bid items for payment using the change order methods.
 3. If the engineer, under 105.3.1(2), approves a contractor-requested plan dimension change between US standard and SI metric dimensions, the engineer will measure whichever of the following is less:
 - Actual quantities constructed.
 - Quantities derived from the original plan dimensions.
 4. For substitutions made under 106.2.3 between US standard and SI metric products, the engineer will measure the actual quantities of the substitute products using the original contract measuring system.
-

205.5.2 Excavation

Replace the entire text with the following effective with the April 2019 letting:

205.5.2.1 General

- (1) Payment for the Excavation bid items under this section is full compensation for work specified for those excavation classes under 205 with no separate contract bid items; for hauling; and for constructing and removing temporary drainage installations as specified under 205.3.3.
- (2) Payment also includes removing walls, foundations, etc. with no separate contract bid items; for disposal of resulting material; and for backfilling basements or openings resulting from removing walls, foundations, etc.

205.5.2.2 Associated Work

- (1) The department will pay separately for removing concrete structures under the 203 and 204 bid items.
- (2) The department will pay separately for granular backfill the contract or engineer requires under the Backfill Granular bid items.
- (3) The department will pay separately for erosion control, fertilizing, and seeding of material disposal sites as specified for material disposal sites in 628.5.1.
- (4) If the contract does not include the Excavation Rock bid item, the department will pay 5 times the contract bid price of the Excavation Common bid item to remove boulders having volumes of one cubic yard or more. The department will pay for these boulder removals under the Removing Large Boulders administrative item.

205.5.2.3 Excavation Below Subgrade

205.5.2.3.1 General

- (1) The department will only pay for engineer-approved EBS to correct problems beyond the contractor's control.

205.5.2.3.2 Quantity Overruns

- (1) The department will provide additional compensation for EBS quantity overruns if the following conditions are met:
 - The quantity of engineer-approved EBS, calculated exclusive of work covered under 205.5.2.3.3 or 301.5, exceeds the total contract EBS quantity the earthwork summary sheet shows by more than 25 percent.
 - The material exceeding that 25 percent threshold cannot be disposed of within the project right-of-way.
- (2) The department will pay 2 times the contract unit price, up to \$25,000, for the quantity of EBS meeting the above conditions. After exceeding \$25,000 per contract, the department will pay for additional EBS as determined under 109.4.

205.5.2.3.3 Subgrade Correction

- (1) Work performed under 105.3 to correct unacceptable work is the contractor's responsibility. For EBS work performed where the engineer did not approve the subgrade for subsequent operations, the department will pay for EBS at the contract price under the pertinent excavation and backfill bid items, or absent those bid items as extra work. For EBS work performed where the engineer approved the underlying layers for subsequent operations, the department will pay for EBS as follows:
 1. Up to a maximum of \$25,000 per contract, the department will pay as follows:
 - 1.1 For excavation: 3 times the contract unit price for the Excavation Common bid item under the EBS Post Grading administrative item.

- 1.2 For backfill with the materials the engineer directs: at the contract unit price for the bid items of each material used to fill the excavation.
 - 1.3 For excavation or backfill without contract bid items: as extra work.
 2. After exceeding \$25,000 per contract, the department will pay for additional EBS in engineer-approved areas as determined under 109.4.
-

305.2.1 General

Replace paragraph two with the following effective with the December 2018 letting:

- (2) Where the contract specifies or allows 1 1/4-inch base, do not place reclaimed asphalt, reprocessed material, or blended materials below virgin aggregate materials unless the contract specifies or the engineer allows in writing. The department will allow virgin aggregate above reclaimed asphalt, reprocessed material, or blended materials in shoulder areas adjacent to concrete pavement.
-

420.3.2.1 General

Replace paragraph one with the following effective with the December 2018 letting:

- (1) Use self-propelled grinding machines with depth, grade, and slope controls designed for grinding and texturing concrete. Equip grinding machines with diamond blades and a vacuuming system capable of removing liquid and solid residue from the ground surface. Shroud the machine to prevent discharging loosened material into adjacent work areas or live traffic lanes. Provide the specified effective wheelbase, defined as the center of the front to center of the rear main support wheels.
-

420.3.2.2 Continuous Grinding

Replace paragraph one with the following effective with the December 2018 letting:

- (1) Under the Continuous Diamond Grinding Concrete Pavement bid item, ensure that the grinding machine, including the grinding head, weighs 35,000 pounds or more, will grind a strip at least 4 feet wide, and has an effective wheel base of 25 feet or more. For pavements with a design speed less than 40 miles per hour and areas difficult to access, the contractor may use equipment with an effective wheel base of 12 feet or more.
-

450.3.2.8 Jointing

Replace paragraphs three through five with the following effective with the December 2018 letting:

- (3) Construct notched wedge longitudinal joints for mainline paving if the pavement thickness conforms to the minimums specified in 460.3.2, unless the engineer directs or allows an alternate joint. Construct the wedge using a slope no steeper than 3:1. Extend the wedge 12 inches beyond the normal lane width, or as the engineer directs. Ensure that the wedge for all layers directly overlaps and slopes in the same direction.
 - (4) Locate the joint at the pavement centerline for 2-lane roadways, or at lane lines if the roadway has more than 2 lanes. Construct a vertical notch 1/2-inch to 3/4-inch high on the centerline or lane line at the top of each wedge. Place a 1/2-inch to 3/4-inch notch at the outside bottom edge of the wedge after compacting each layer. Align the finished longitudinal joint line of the upper layer with the centerline or lane line.
 - (5) Construct the wedge for each layer using an engineer-approved strike-off device that will provide a uniform slope and will not restrict the main screed. Shape and compact the wedge with a weighted steel side roller wheel the same width as the wedge. Apply a tack coat to the wedge surface and both notches before placing the adjacent lane.
-

455.2.4.3 Emulsified Asphalts

Replace paragraph two with the following effective with the December 2018 letting:

- (2) The bill of lading for emulsified asphalts shall indicate the asphalt content of the original emulsion and dilution rate of the additional water added to the original emulsion. If undiluted samples are not available, test the diluted material and modify AASHTO M140, M208, or M316 to reflect properties resulting from dilution of the asphalt.

460.2.8.3.1.4 Department Verification Testing Requirements

Replace paragraph three with the following effective with the December 2018 letting:

- (3) The department will perform testing conforming to the following standards:
 - Bulk specific gravity (G_{mb}) of the compacted mixture according to AASHTO T166.
 - Maximum specific gravity (G_{mm}) according to AASHTO T209.
 - Air voids (V_a) by calculation according to AASHTO T269.
 - VMA by calculation according to AASHTO R35.
 - Asphalt content by ignition oven according to AASHTO T308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T-164, or Asphalt Analyzer™ according to manufacturer recommendations.

460.2.8.3.1.6 Acceptable Verification Parameters

Replace paragraph one with the following effective with the December 2018 letting:

- (1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:
 - V_a is within a range of 2.0 to 4.3 percent. For SMA, V_a is within a range of 2.7 to 5.3 percent.
 - VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.
 - Asphalt content is within minus 0.3 percent of the JMF.

460.2.8.3.1.7 Dispute Resolution

Replace paragraph one with the following effective with the December 2018 letting:

- (1) When QV test results do not meet the specified limits for 100 percent pay, the bureau's AASHTO accredited laboratory and certified personnel will referee test the retained portion of the QV sample and the retained portion of the required forward and backward QC retained samples according to CMM 8-36.

460.5.2.1 General

Replace paragraphs five and six with the following effective with the December 2018 letting:

- (5) The department will reduce pay for nonconforming QMP HMA mixtures as specified in 460.2.8.2.1.7, starting from the stop point to the point when the running average of 4 is back inside the warning limits. The engineer will determine the quantity of material subject to pay reduction based on the testing data and an inspection of the completed pavement. The department will reduce pay as follows:

PAYMENT FOR MIXTURE^{[1] [2] [3]}

ITEM	PRODUCED WITHIN WARNING BANDS	PRODUCED OUTSIDE JMF LIMITS
Gradation	90%	75%
Asphalt Content ^[4]	—	—
Air Voids	70%	50%
VMA	90%	75%

^[1] For projects or plants where the total production of each mixture design requires less than 4 tests refer to CMM 8-36.

^[2] Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. If the quantity of material subject to pay adjustment based on the running average of 4 is also subject to pay adjustment resulting from dispute resolution in accordance with 460.2.8.3.1.7, the department will apply the single pay adjustment resulting in the lowest percent pay.

^[3] In addition to any pay adjustment listed in the table above, the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item. The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

^[4] The department will not adjust pay based on a running average of 4 asphalt content tests; however, corrective action will be applied to nonconforming material according to 460.2.8.2.1.7.

- (6) If during a QV dispute resolution investigation the department discovers unacceptable mixture defined by one or more of the following:
 - Va greater than 5.0 or less than 1.5.
 - VMA more than 1.0 below the minimum allowed in table 460-1.
 - AC more than 0.5 % below the JMF target.

Remove and replace the material, or if the engineer allows the mixture to remain in place, the department will pay for the quantity of affected material at 50 percent of the contract price.

501.3.8.2.1 General

Replace paragraph two with the following effective with the April 2019 letting:

- (2) If the concrete temperature at the point of placement exceeds 90 F, do not place concrete under the following structure and concrete barrier bid items:

Concrete Masonry Bridges	Concrete Masonry Retaining Walls
Concrete Masonry Bridges HES	Concrete Masonry Retaining Walls HES
Concrete Masonry Culverts	Concrete Masonry Endwalls
Concrete Masonry Culverts HES	Concrete Masonry Overlay Decks
Concrete Barrier Single-Faced 32-Inch	Concrete Barrier (type)
Concrete Barrier Double-Faced 32-Inch	Concrete Barrier Fixed Object Protection (type)
Concrete Barrier Transition Section 32-Inch	Concrete Barrier Transition (type)

506.3.2 Shop Drawings

Replace paragraph four with the following effective with the December 2018 letting:

- (4) Ensure that the fabricator submits a PDF file of shop drawings for railroad structures to the railroad company's chief engineering officer upon contract completion.

603.3.1.1 General

Replace paragraph three with the following effective with the April 2019 letting:

- (3) Cast permanent barrier and transitions in place. Use construction methods conforming to 502 and conform to the hot weather placement requirements of 501.3.8.2. Use forms or engineer-approved slip form methods for barrier. Use forms for transitions. Construct barrier on horizontal curves as a series of 12-foot or shorter chords.

646.3.1.2 Liquid Marking

Replace paragraph five with the following effective with the June 2019 letting:

- (5) Apply liquid marking and glass beads across the line at or exceeding the following:

LIQUID MARKING	PAVEMENT TYPE	THICKNESS (mils)	BEAD APPLICATION (pounds per gallon)
Paint	all	16	8
Epoxy	SMA, seal coats, and polymer overlays	25	25
Epoxy	all other	20	22.5
Wet Reflective Epoxy	all	20	^[1]

^[1] Use the product specific bead application rate for wet reflective epoxy specified on the department's APL.

646.3.2.3.2 Wet Reflective Epoxy

Replace paragraph one with the following effective with the June 2019 letting:

- (1) Apply wet reflective epoxy binder in a grooved slot. and provide a double drop bead system as follows:
 1. Wet reflective/recoverable elements at the application rate specified in the department's APL.
 2. Glass beads conforming to 646.2.2 at the application rate specified in the department's APL.

650.3.1 General

Replace the entire text with the following effective with the December 2018 letting:

- (1) Department and contractor responsibilities for construction staking are specified in 105.6. Conform to 105.6 and the additional requirements specified here in 650.3 for the individual contractor-staking bid items the contract includes.
- (2) Protect and preserve known property and survey marks and land monuments as specified in 107.11.3. The contract may require related work under the 621 bid items.
- (3) Obtain or calculate benchmark data, grades, and alignment from plan information. The engineer will furnish data for the horizontal and vertical control points, control point ties, horizontal alignments, profiles, and elevations. Reestablish, set additional, and maintain the horizontal and vertical control points and control point ties, as needed for bid items.
- (4) Check horizontal and vertical information including but not limited to alignments, locations, elevations, and dimensions, that either the plans show or the engineer provides, for compatibility with existing field conditions. Conduct similar compatibility checks and accuracy checks of horizontal and vertical positions either the department or the contractor establishes in the field.
- (5) Perform survey work using conventional methods, or AMG methods capable of achieving the lines and grades the plans show for the work in question. Establish additional benchmarks and control points as necessary to support the method of operation.

650.3.1.1 Staking

- (1) Furnish, set, reference, and maintain stakes and markings necessary to establish the alignment, location, benchmarks, elevations, and continuous profile-grades for road and structure work as needed for bid items. Supervise and coordinate construction staking.
- (2) Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. Make the survey notes and computations available to the engineer within 24 hours, upon request, as the work progresses.
- (3) Furnish surveying equipment, stakes, flags, pins, lath, whiskers, and other materials necessary to perform this work, subject to the engineer's approval.

650.3.1.2 Automated Machine Guidance**650.3.1.2.1 General**

- (1) The contractor may substitute AMG for conventional staking on all or part of the work under the individual staking bid items. Coordinate with the engineer throughout the course of construction to ensure that work performed using AMG conforms to the contract tolerances and that the methods employed conform to the contractor's AMG work plan and accepted industry standards. Revert to conventional staking methods for all or part of the work at any point during construction if AMG is producing unacceptable results.

650.3.1.2.2 AMG Work Plan

- (1) Submit a comprehensive written AMG work plan for department review at least 5 business days before the preconstruction conference. In that plan discuss how AMG technology will be integrated into other technologies employed on the project. List the staking bid items that will have work performed using AMG and, for each bid item listed, include the following:
 1. Designate which portions of the contract will be done using AMG and which portions will be done using conventional staking.
 2. Designate a single staff person as the primary contact for AMG technology issues.
 3. List and map the primary and secondary control points required under 105.6.2 enveloping the site.
 4. Describe the contractor's quality control procedures. Include the frequency and type of checks performed to ensure that the work conforms to the contract plans.
- (2) The engineer will review the plan to determine if it conforms to the contract. Do not perform AMG work until the engineer approves the governing portion of the AMG workplan. Perform the work as the contractor's AMG work plan provides. Update the plan as necessary.

650.3.1.2.3 Geometric and Surface Information**650.3.1.2.3.1 Department Responsibilities**

- (1) At any time after the contract is awarded the contractor may request the contractor data packet. The department will provide the packet within 5 business days of receiving the contractor's request.

650.3.1.2.3.2 Contractor Responsibilities

- (1) Develop and maintain a contractor construction model for areas of the project employing AMG. Confirm that the resulting model agrees with the contract plans.
- (2) If the engineer requests, provide the construction model to the department in LandXML or other engineer-approved format.

650.3.1.2.4 Managing and Updating Information

- (1) Notify the department of any errors or discrepancies in department-provided information. The department will determine what revisions may be required. The department will revise the contract plans, if necessary, to address errors or discrepancies that the contractor identifies. The department will provide the best available information related to those contract plan revisions.
- (2) Revise the construction model as required to support construction operations and to reflect any contract plan revisions the department makes. Perform checks to confirm that the revised construction model agrees with the contract plan revisions. If the engineer requests, provide construction model updates to the engineer. The department will pay for costs incurred to incorporate contract plan revisions as extra work.

650.3.1.2.5 Construction Checks

- (1) Check the work against the plan elevation at randomly selected points on cross-sections located at stations evenly divisible by 100 at the frequency the engineer approved as a part of the AMG work plan. Submit the results of these random checks to the engineer daily. Notify the engineer immediately if a check exceeds the tolerances specified in 650.3.1.2.6 below.
- (2) Check the work at additional points as the engineer directs. The department may conduct periodic independent checks.

650.3.1.2.6 Construction Tolerances

- (1) Ensure that the finished work vertically matches existing or other completed features. Ensure that the work conforms to revised plan elevations as follows:
 - Subgrade : +/- 0.10 feet.
 - Base : within the tolerance specified in 301.3.4.1(2).

650.3.3 Subgrade

Retitle and replace the entire text with the following effective with the December 2018 letting:

650.3.3 Subgrade Staking

- (1) Set construction stakes or marks at intervals of 100 feet, or more frequently, for rural sections and at intervals of 50 feet, or more frequently, for urban sections. Include additional stakes at each cross-section as necessary to match the plan cross-section, achieve the required accuracy, and to support construction operations. Also set and maintain stakes as necessary to establish the horizontal and vertical positions of intersecting road radii, auxiliary lanes, horizontal and vertical curves, and curve transitions. Locate stakes to within 0.25 feet horizontally and establish the grade elevation to within 0.03 feet vertically.

Errata

520.3.3 Laying Pipe

Correct errata by replacing "sections" with "joints" to clarify the intent that the last 3 joints need ties.

- (5) Provide joint ties on the upstream and downstream ends of circular and horizontal elliptical concrete culvert and concrete cattle pass installations. Tie the next 3 pipe joints or, if using apron endwalls, the endwall joint and the last 2 pipe joints. Ties are not required on culverts with masonry endwalls unless the plans show otherwise.
-

608.3.3 Laying Pipe

Correct errata by replacing "sections" with "joints" to clarify the intent that the last 3 joints need ties.

- (5) Provide joint ties on concrete storm sewer system infall and outfall pipes. Tie the last 3 pipe joints or, if using apron endwalls, the endwall joint and the next 2 pipe joints. Ties are not required on installations with masonry endwalls unless the plans show otherwise.

ADDITIONAL SPECIAL PROVISION 7

- A. Reporting 1st Tier and DBE Payments During Construction
1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
 2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
 3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
 4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
 5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
 6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.
- B. Costs for conforming to this special provision are incidental to the contract.

NOTE: CRCS Prime Contractor payment is currently not automated and will need to be manually loaded into the Civil Rights Compliance System. Copies of prime contractor payments received (check or ACH) will have to be forwarded to paul.ndon@dot.wi.gov within 5 days of payment receipt to be logged manually.

***Additionally, for information on Subcontractor Sublet assignments, Subcontractor Payments and Payment Tracking, please refer to the CRCS Payment and Sublets manual at:

<https://wisconsin.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) to electronically submit certified payroll reports for contracts with federal funds and labor data for contracts with state funds only. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

<https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx>

(2) Ensure that all tiers of subcontractors, including all trucking firms, either submit their weekly certified payroll reports (contracts with federal funds) or labor data (contracts with state funds only) electronically through CRCS. These payrolls or labor data are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin their submittals. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Paul Ndon at (414) 438-4584 to schedule the training.

(4) The department will reject all paper submittals for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll/labor data from their computer system into CRCS should have their payroll coordinator contact Paul Ndon at paul.ndon@dot.wi.gov. Not every contractor's payroll system is capable of producing export files. For details, see Section 4.8 CPR Auto Submit (Data Mapping) on pages 49-50; 66-71 of the CRCS Payroll Manual at:

<https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf>

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).

Effective August 2015 letting

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or \$2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this "Buy America" provision.

<https://wisconsin.gov/rdwy/cmm/cm-02-28.pdf>

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

<https://wisconsin.gov/hcciDocs/contracting-info/ws4567.doc>



Proposal Schedule of Items

Proposal ID: 20190611002 Project(s): 1000-13-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	204.0195 Removing Concrete Bases	1.000 EACH	_____.	_____.
0004	204.9060.S Removing (item description) 01. Distribution Center	1.000 EACH	_____.	_____.
0006	204.9060.S Removing (item description) 02. Luminaires High Mast Lighting	36.000 EACH	_____.	_____.
0008	204.9060.S Removing (item description) 03. Luminaires Utility	800.000 EACH	_____.	_____.
0010	204.9060.S Removing (item description) 04. Luminaires Underdeck Lighting	20.000 EACH	_____.	_____.
0012	204.9060.S Removing (item description) 05. Underdeck Lighting	13.000 EACH	_____.	_____.
0014	619.1000 Mobilization	1.000 EACH	_____.	_____.
0016	643.0300 Traffic Control Drums	1,000.000 DAY	_____.	_____.
0018	643.0420 Traffic Control Barricades Type III	120.000 DAY	_____.	_____.
0020	643.0705 Traffic Control Warning Lights Type A	90.000 DAY	_____.	_____.
0022	643.0715 Traffic Control Warning Lights Type C	90.000 DAY	_____.	_____.
0024	643.0800 Traffic Control Arrow Boards	300.000 DAY	_____.	_____.
0026	643.0900 Traffic Control Signs	600.000 DAY	_____.	_____.
0028	643.1050 Traffic Control Signs PCMS	90.000 DAY	_____.	_____.
0030	643.1055.S Truck or Trailer Mounted Attenuator	270.000 DAY	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20190611002 Project(s): 1000-13-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0034	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	2,700.000 LF	_____.	_____.
0036	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	950.000 LF	_____.	_____.
0038	652.0615 Conduit Special 3-Inch	3,600.000 LF	_____.	_____.
0040	653.0164 Pull Boxes Non-Conductive 24x42-Inch	12.000 EACH	_____.	_____.
0042	653.0905 Removing Pull Boxes	10.000 EACH	_____.	_____.
0044	654.0230 Concrete Control Cabinet Bases Type L30	1.000 EACH	_____.	_____.
0046	655.0610 Electrical Wire Lighting 12 AWG	8,000.000 LF	_____.	_____.
0048	655.0615 Electrical Wire Lighting 10 AWG	44,350.000 LF	_____.	_____.
0050	655.0620 Electrical Wire Lighting 8 AWG	7,860.000 LF	_____.	_____.
0052	655.0625 Electrical Wire Lighting 6 AWG	11,340.000 LF	_____.	_____.
0054	655.0630 Electrical Wire Lighting 4 AWG	12,240.000 LF	_____.	_____.
0056	655.0635 Electrical Wire Lighting 2 AWG	3,300.000 LF	_____.	_____.
0058	655.0640 Electrical Wire Lighting 1 AWG	18.000 LF	_____.	_____.
0060	655.0645 Electrical Wire Lighting 1/0 AWG	500.000 LF	_____.	_____.
0062	656.0400 Electrical Service Main Lugs Only Meter Pedestal (location) 01. HL-40-RT	LS	LUMP SUM	_____.



Proposal Schedule of Items

Proposal ID: 20190611002 Project(s): 1000-13-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0064	659.0400 Luminaires High Mast Lighting LED	24.000 EACH	_____.	_____.
0066	659.0600 Underdeck Lighting (location) 01. Hampton Avenue / IH 41	LS	LUMP SUM	_____.
0068	659.0600 Underdeck Lighting (location) 02. IH 41 SB / Silver Spring Drive	LS	LUMP SUM	_____.
0070	659.0600 Underdeck Lighting (location) 03. IH 41 NB / Silver Spring Drive	LS	LUMP SUM	_____.
0072	659.0600 Underdeck Lighting (location) 04. Florist Avenue / IH 41	LS	LUMP SUM	_____.
0074	659.0600 Underdeck Lighting (location) 05. 76th Street WB / IH 145	LS	LUMP SUM	_____.
0076	659.0600 Underdeck Lighting (location) 06. 76th Street EB / IH 145	LS	LUMP SUM	_____.
0078	659.0600 Underdeck Lighting (location) 07. Grantosa Drive EB / STH 145	LS	LUMP SUM	_____.
0080	659.0600 Underdeck Lighting (location) 08. Grantosa Drive WB / STH 145	LS	LUMP SUM	_____.
0082	659.0600 Underdeck Lighting (location) 09. Silver Spring Drive EB / STH 145	LS	LUMP SUM	_____.
0084	659.0600 Underdeck Lighting (location) 10. Silver Spring Drive WB / STH 145	LS	LUMP SUM	_____.
0086	659.0600 Underdeck Lighting (location) 11. 107th Street / STH 145	LS	LUMP SUM	_____.
0088	659.0600 Underdeck Lighting (location) 12. Good Hope Road EB / STH 145	LS	LUMP SUM	_____.



Proposal Schedule of Items

Proposal ID: 20190611002 Project(s): 1000-13-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0090	659.0600 Underdeck Lighting (location) 13. Good Hope Road WB / STH 145	LS	LUMP SUM	_____.
0092	659.1115 Luminaires Utility LED A	10.000 EACH	_____.	_____.
0094	659.1125 Luminaires Utility LED C	241.000 EACH	_____.	_____.
0096	659.1130 Luminaires Utility LED D	330.000 EACH	_____.	_____.
0098	659.1210 Luminaires Underdeck LED B	54.000 EACH	_____.	_____.
0100	659.2230 Lighting Control Cabinets 240/480 30-Inch	1.000 EACH	_____.	_____.
0102	SPV.0060 Special 01. Distribution Center Preventative Maintenance	20.000 EACH	_____.	_____.
0104	SPV.0060 Special 02. Group Luminaire Maintenance Sign Light 175W MV	5.000 EACH	_____.	_____.
0106	SPV.0060 Special 03. Group Luminaire Maintenance Sign Light 250W MV	22.000 EACH	_____.	_____.
0108	SPV.0060 Special 04. Luminaires Probeam LED	12.000 EACH	_____.	_____.
0110	SPV.0060 Special 05. Luminaire Utility 480V LED C	57.000 EACH	_____.	_____.
0112	SPV.0060 Special 06. Luminaire Utility 480V LED D	106.000 EACH	_____.	_____.
0114	SPV.0060 Special 07. Luminaire Underdeck 480V LED B	6.000 EACH	_____.	_____.
0116	SPV.0060 Special 08. Install State Furnished Luminaires Highmast Lighting LED	42.000 EACH	_____.	_____.
0118	SPV.0060 Special 09. Plaques Sequence Identification	190.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20190611002 Project(s): 1000-13-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0120	SPV.0060 Special 10. Light Tower Rat Screen	19.000 EACH	_____.	_____.
0122	SPV.0060 Special 11. Fuse Holders	19.000 EACH	_____.	_____.
0124	SPV.0060 Special 12. Fuse Type FNQ	19.000 EACH	_____.	_____.
0126	SPV.0060 Special 13. Plumbing Light Poles	38.000 EACH	_____.	_____.
0128	SPV.0060 Special 14. Luminaire Tunnel Lighting LED (Daytime)	328.000 EACH	_____.	_____.
0130	SPV.0060 Special 15. Luminaire Tunnel Lighting LED (Nighttime)	22.000 EACH	_____.	_____.
0132	SPV.0060 Special 16. Junction Boxes Steel 18x12x6 - Inch Coated	220.000 EACH	_____.	_____.
0134	SPV.0060 Special 17. Junction Boxes Steel 6x6x4 - Inch Coated	22.000 EACH	_____.	_____.
0136	SPV.0090 Special 01. Liquid Tight Flexible Metallic Conduit 3/4 - Inch	2,100.000 LF	_____.	_____.
0138	SPV.0090 Special 02. Rigid Galvanized Steel Conduit 1-Inch Coated	2,580.000 LF	_____.	_____.
0140	SPV.0090 Special 03. Rigid Galvanized Steel Conduit 1-1/4 - Inch Coated	2,580.000 LF	_____.	_____.
0142	SPV.0105 Special 01. Maintenance of Lighting Systems	LS	LUMP SUM	_____.
0144	SPV.0105 Special 02. Control System Preventative and Maintenance (HL-40-TZ)	LS	LUMP SUM	_____.
0146	SPV.0105 Special 03. Lighting System Integrator	LS	LUMP SUM	_____.
Section: 0001			Total:	_____.

Total Bid: _____.

PLEASE ATTACH SCHEDULE OF ITEMS HERE