HIGHWAY WORK PROPOSAL

Proposal Number: 2 7

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Brown	9210-17-60		Mason Street, City of Green Bay Mason Street Bridge	STH 54

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

Proposal Guaranty Required, $ 75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: May 10, 2016 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time April 1, 2017	
Assigned Disadvantaged Business Enterprise Goal 0%	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Concrete surface repair, girder repair, expansion joint neoprene strip seal replacement, center lock repair, miscellaneous drive machinery repair, rear live load shoe repair, miscellaneous control house repairs, slip-resistant metal sidewalk panels construction, traffic control.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 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:
http://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 P.M. local time on the Thursday before the letting. Check the department's web site after 5:00 P.M. local time on the Thursday before the letting to ensure all addenda have been accounted for before preparing the bid. When bidding using methods 1 and 2 above, check the Bid Express™ on-line bidding exchange at http://www.bidx.com/ after 5:00 P.M. local time on the Thursday before the letting to ensure that the latest schedule of items Expedite file (*.ebs or *.00x) is used to submit the final bid.

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

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

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

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:
http://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, Room 601, 4802 Sheboygan Avenue, 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:

http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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

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

Bidder

Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.
3. The diskette or CD ROM is not submitted at the time and place the department designates.

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

Table of Contents

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 9210-17-60, Mason Street, City of Green Bay, Mason Street Bridge, STH 54, Brown 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, 2016 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 (20150630)

2. Scope of Work.

The work under this contract shall consist of concrete surface repair, girder repair, expansion joint neoprene strip seal replacement, center lock repair, miscellaneous drive machinery repair, rear live load shoe repair, miscellaneous control house repairs, slip-resistant metal sidewalk panels construction, traffic control, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

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

Migratory Birds
Swallow and other migratory birds' nests have been observed on or under the existing bridge. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

The nesting season for swallows and other birds is usually between May 1 and August 30. Either prevent active nests from becoming established, or apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds, or clearing nests from all structures before the nests become active in early spring. As a last resort, prevent birds from nesting by installing a suitable netting device on the remaining structure prior to nesting activity. The cost for preventing nesting is incidental to the contract work.

U.S. Coast Guard Coordination

For all bridges in this contract, any impact or deviation from permanent bridge opening requirements or any impacts to navigation, are authorized by the U.S. Coast Guard.

Coordinate with the U.S. Coast Guard at least 30 calendar days prior to the start of any work that temporarily alters the navigational clearances, places equipment in the waterway, or could potentially affect navigation during the project at any of the bridge sites. The U.S. Coast Guard contact is as follows:

Mr. Lee Soule
Commander (DPB)
Ninth Coast Guard District
1240 East 9th Street
Cleveland, OH 44199-2060
Lee.D.Soule@uscg.mil
Office: (216) 902-6085
Fax: (216) 902-6088

Keep the Coast Guard District informed of the schedule of work and provide any notifications prior to any change to the schedule. In addition, the name of the person who may be contacted on a 24-hour basis to respond to an emergency at the work site shall be provided.

Full closure of the lift bridges to navigational vessels will only be allowed during the non-navigation season between January 1 and March 15 or as allowed by the U.S. Coast Guard.

Fish Spawning

There shall be no instream disturbance of the Fox River as a result of construction activity under or for this contract, from February 29 to June 16 both dates inclusive, in order to avoid adverse impacts upon the spawning of fish species.

Any change to this limitation will require submitting a written request by the contractor to the engineer, subsequent review and concurrence by the Department of Natural Resources in the request, and final approval by the engineer. The approval will include all conditions to the request as mutually agreed upon by WisDOT and DNR.

4. Traffic.

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

Do not park or store equipment, vehicles or construction materials within the clear zone on any roadway carrying traffic during non-working hours except at locations and periods of time approved by the engineer.

If any bridge work will require the use of work barge and or falsework that will be in potential hazard to public navigation, appropriate safety signing, marking and lighting must be used according to U.S. Coast Guard standards and per the requirements of article "Construction Over or Adjacent to Navigable Waterway."

Allowed Lane Closures
Maintain through traffic on STH 54 at all times. Sidewalk closures will be permitted for replacing sidewalk panels, pedestrian gates, and fences as well as for materials delivery. Single lane closures will be permitted for removing and replacing the steel sidewalk panels, for outside work on the operator house, and as permitted by the engineer. Single- and double-lane nighttime closures will be permitted for expansion joint work. Full closure of STH 54 will be permitted for testing the movable bridge operations as directed by the engineer. Lane closures will only be permitted when work is commencing. Avoid unnecessary lane closures for extended periods of time.

Coordinate with engineer 14 days prior to any closure.

STH 54/Mason Street
Dual lane closures are allowed between 8:00 PM Monday through Friday to 7:00 AM the following day.

Single Lane Closures are allowed between 6:00 PM Monday through Friday to 7:00 AM the following day for delivery and removal of materials and equipment. Minimize impacts to traffic as much as possible. Open lanes immediately after completion of material deliveries/removals.

Full closures of a maximum of 30 minutes are allowed for testing between 10:00 PM Monday through Friday to 5:00 AM the following day.

Traffic Control Contingency Plan
Submit a contingency plan to the engineer at the preconstruction meeting which addresses roadway traffic management and traffic control in the event of a bridge closure failure during a testing period or any other project work which may prevent roadway traffic from using the bridge longer for a period of longer than 30 minutes at each bridge location.

If a bridge cannot be open during the equipment testing by 5:00 AM, coordinate with the engineer the closures of the below roadways. The contractor shall have sufficient traffic

control devices on site, during equipment testing, to close the following roadways according to the standard detail drawings:

STH 54/Mason Street (B-05-0134)

- STH 54 eastbound at 12th Avenue
- STH 54 eastbound at 11th Avenue
- STH 54 eastbound at 10th Avenue
- STH 54 eastbound on-ramp from South Ashland Avenue
- STH 54 eastbound on-ramp from South Broadway Street
- STH 54 westbound at South Webster Avenue
- STH 54 westbound on-ramp from Chicago/South Quincy Streets
- STH 54 westbound on-ramp from Chicago/South Jefferson Streets
- STH 54 westbound at 10th Avenue
- STH 54 westbound at 11th Avenue
- STH 54 westbound at 12th Avenue

Portable Changeable Message Signs – Message Prior Approval

After coordinating with department construction field staff, notify the Northeast Region Traffic Section at (920) 492-5641 (secondary contact number is (920) 492-7719) three business days prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Region Traffic Unit will review the proposed message and either approve the message or make necessary changes.

Wisconsin Lane Closure System Advance Notification

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

TABLE 108-1 CLOSURE 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	14 calendar days
Full roadway closures	14 calendar days
System and service ramp closures	14 calendar days
Full system and service ramp closures	14 calendar days
Detours	14 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
System and service 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.
108-057 (20150630)

5. Lane Rental Fee Assessment for Not Opening Lanes.

This special provisions describes Lane Rental Fee Assessments associated with not opening roadways in the allotted time stated in the article for Traffic and prohibiting navigational traffic requested openings. These fees will be assessed in additional to all other damages stated in the contract.

Lane Rental Fee Assessment
Not including the maximum of two nights of full closure allowed on STH 54/Mason Street outside of 10:00 PM Monday through Friday to 5:00 AM the following day.

There cannot be any single lane closures on STH 54/Mason Street outside of 6:00 PM Monday through Friday to 7:00 AM the following day.

There cannot be any dual lane closures on STH 54/Mason Street outside of 8:00 PM Monday through Friday to 7:00 AM the following day.

If a full closure of a roadway is greater than 30 minutes, the contractor will be subject to Lane Rental Fee Assessments.

If a single lane closure for material delivery/removal or full closure for testing or start up occurs outside the allowed timeframes or a navigational traffic request is not accommodated outside of the non-navigation season, the contractor will be subject to Lane Rental Fee Assessments. If a lane is obstructed at any time due to contractors operations, it is considered a closure.

The Lane Rental Fee Assessments will be measured by 15-minute increments. All lane and roadway closure events increments less than 15 minutes will be assessed as 15 minute increments.

The Lane Rental Fee Assessment incurred for each single lane closure, each full closure of a roadway, and each navigational traffic request not accommodated per direction of travel is: $1,000 per 15 minutes.

Lane Rental Fee Assessments will be made based on the applicable rate for any and all closures whether work is being performed or not. The engineer, or designated representative, will be the sole authority in determining time period length for the Lane Rental Fee Assessment.

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

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

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance.

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 54 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, July 1, 2016 to 6:00 AM Tuesday, July 5, 2016 for Independence Day;
- From noon Friday, September 2, 2016 to 6:00 AM Tuesday, September 6, 2016 for Labor Day;
- From noon Wednesday, November 23, 2016 to 6:00 AM Monday, November 28, 2016 for Thanksgiving;
- From noon Friday, December 23, 2016 to 6:00 AM Tuesday, December 27, 2016 for Christmas;
- From noon Friday, December 30, 2016 to 6:00 AM Tuesday, January 3, 2017 for New Year's Day;
- From noon Friday, May 26, 2017 to 6:00 AM Tuesday, May 30, 2017 for Memorial Day;
- Lambeau Field Events with expected attendance over 30,000: From five hours prior to game until five hours after the game for STH 54 in all directions.

107-005 (20050502)

7. Railroad Insurance and Coordination.

A Description
Comply with standard spec 107.17 for all work affecting Wisconsin Central Ltd. (d/b/a Canadian National) 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 Wisconsin Central Ltd. and its parents.

Notify evidence of the required coverage, and duration to Jackie Macewicz, Manager Public Works at 1625 Depot St., Stevens Point, WI, 54481; TELEPHONE

(715) 345-2503; FAX (715) 345-2507; email jackie.macewicz@cn.ca. Include the following information on the insurance document:

Project: 9210-17-60
Route Name: STH 54, Mason Street Bridge, City of Green Bay, Brown County
Crossing ID: 181291P
Railroad Subdivision: Fox River
Railroad Milepost: 242.2

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 Jackie Macewicz, Manager Public Works, 1625 Depot St., Stevens Point, WI, 54481; TELEPHONE (715) 345-2503; FAX (715) 345-2507; email jackie.macewicz@cn.ca for consultation on railroad requirements during construction.

Contact Mary Ellen Carmody, Audit Officer, Administration Service Center, 24002 Vreeland Road, Flat Rock, MI, 48134; TELEPHONE (734) 783-4533 (no FAX number); email maryellen.carmody@cn.ca for flagging arrangements. Advise Ms. Carmody that the flagging services are to be billed at the rate for a public highway project.

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 8 through freight trains operate daily through the construction site. Through freight trains operate at up to 20 mph. In addition to through movements, there are switching movements at slower speeds.

8. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, “Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters”, details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels prior to being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf for disinfection:

1. Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
    a. Washing with ~212º F water (steam clean), or
    b. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
    c. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
107-055 (20130615)

9. Environmental Protection, Decontamination of Construction Equipment.

Exotic invasive organisms such as zebra mussels, purple loosestrife and Eurasian water milfoil, are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.715, “Placement of Boats, Trailers, and Equipment in Navigable Waters”, details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters. The cleaning procedures outlined below must be followed for equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

All equipment that has come into contact with potentially infested material must be thoroughly disinfected before use in this project. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources) for disinfection:

- Wash machinery so that it is free of soils, etc. that could possibly contain exotic invasive species prior to leaving the contaminated site;
- Drain all water from boats, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or infested waters; and

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
(NER11-0608)

10. Construction Over or Adjacent to Navigable Waters.

Add the following to standard spec 107.19:

The Fox River is classified as a navigable waterway.
107-060 (20150630)

Submit a contingency plan to the engineer prior to the start of construction. Include the names and telephone numbers of personnel and a list of equipment that will be available to correct any navigation problems that may arise during non-working hours.

Provide industry accepted measures and precautions to prevent accidental dropping of debris, sparks, flames, lighted or other damaging objects onto boats and water users passing beneath the bridge.

Ensure the rights and safety of the navigating public. Place appropriate warning signs and buoys upstream and downstream of the project site. In accordance to the U.S. Coast Guard Standards, place marker lights on all watercraft and equipment that will remain moored, anchored, or otherwise floating on the waterway between dusk and dawn. Sign, mark, or light all other potential navigation hazards associated with the project including, but not limited to, construction machinery, rigging, and temporary structures. Provide water space with horizontal and vertical clearances to allow for safe public navigation through the construction site at all times. Payment for this accommodation is considered incidental to the contract work.

11. Utilities.

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

The following utility companies have facilities within the project area; however, no adjustments are anticipated:

- AT&T Wisconsin: Joe Kassab, 205 S. Jefferson St., Green Bay, WI 54301, telephone (920) 433-4200, email jk572k@att.com.

- ATC Management, Inc.: Doug Vosberg, 5303 Fen Oak Drive, Madison, WI 53718, telephone (608) 877-7650, email dvosberg@atcllc.com.

- Charter Communications: Nick Frase, 3315 Lincoln Ave., Two Rivers, WI 54241, telephone (920) 793-2216, email nicholas.frase@chartercom.com.

- City of Green Bay (Sewer): Matthew Heckenlaible, 100 N. Jefferson, Room 300, Green Bay, WI 54301, telephone (920) 448-3100, email matthe@greenbaywi.gov.

- West Shore Pipe Line Company: Casey Schwandt, 2119 N. Quincy St., Green Bay, WI 54302, telephone (920) 432-3223, mobile (920) 655-1428, email cschwandt@buckeye.com.

- Windstream KDL, Inc.: Dennis Ruess, 13935 Bishops Drive, Brookfield, WI 53005, telephone (812) 456-1249, mobile (608) 512-5587, email dennis.ruess@windstream.com.

- Windstream NTI: Dennis Ruess, 13935 Bishops Drive, Brookfield, WI 53005, telephone (812) 456-1249, mobile (608) 512-5587, email dennis.ruess@windstream.com.

- Wisconsin Public Service Corporation (Electric): Randy Steier, 2850 S. Ashland Ave., P.O. Box 19001, Green Bay, WI 54307-9001, telephone (920) 617-5167, mobile (920) 655-1596, rdsteier@wisconsinpublicservice.com.

- Wisconsin Public Service Corporation (Gas/Petroleum): Jerry Peot, 700 N. Adams St. PO Box 19001, Green Bay, WI 54307-9001, telephone (920) 794-3215, email gpeot@wpsr.com.

12. Other Contracts.

The following projects will be under construction concurrently with the work under this contract:

Project 4987-07-71 and Project 4987-07-72, City of Green Bay; Green Bay Lift Structures, which includes rehabilitation of Structure B-05-0134, Structure B-05-0269, and Structure B-05-0311 including bridge electrical work and bridge CCTV systems under a separate department. Work is scheduled for 2016 and spring of 2017. For more information, the department contact is Andrew Fulcer, (920) 362-6126.

13. Notice to Contractor, Asbestos Containing Materials on Structure.

John Roelke, Nathan Braun, License Number AII-119523, AII-206950, inspected Structure B-5-134 for asbestos on March 5, 2015. Regulated Asbestos Containing Material (RACM) was found on this structure in the following locations and quantities: The gaskets located under the railing attachment brackets, the caulk in the parapet expansion joints, the caulk in the abutment joints, and the caulk around the light pole base.

A copy of the inspection report is available from: Andrew Fulcer, (920) 492-5664.. Locations of asbestos containing material are noted on the plan set. Do not disturb any asbestos containing material. Should asbestos containing material be disturbed, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at 608-266-1476 for an emergency response in accordance to standard spec 107.24. Keep material wet until it is abated.
107-120 (20120615)

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

John Roelke, License Number AII-119523, and Nathan Braun, License Number AII-206950, inspected Structure B-5-134 **(operator house)** for asbestos on March 5, 2015. No regulated Asbestos Containing Material (RACM) was found on this structure **(operator house)**. A copy of the inspection report is available from: Andrew Fulcer, (920) 492-5664.

In accordance with NR447 and DHS159 , ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Mike Helmrick, (920) 492-7738 and DOT BTS-ESS attn: Hazardous Materials Specialist PO Box 7965, Madison, WI. 53707-7965. In addition, comply with all local or municipal asbestos requirements.
Use the following information to complete WisDNR form 4500-113 :

- Site Name: Structure B-5-134, STH 54-MASON ST over FOX RIVER
- Site Address: 44°30'31.92" Latitude, 88°01'20.68" Longitude
- Section 36 Town 24N Range 20E, City of Green Bay
- Ownership Information: WisDOT Northeast Region, 944 Vanderperren Way, Green Bay, WI 54304
- Contact: Andrew Fulcer
- Phone: (920) 492-5664
- Age: 43 years old. This structure was constructed in 1973.
- Area: 521,192 SF of deck

Insert the following paragraph in Section 6.g.:

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

107-125 (20120615)

15. Structure Repainting General.

A General

A.1 Inspection

On all structures in this contract, notify the engineer of any missing or broken bolts or nuts, any missing or broken rivets, or of any cracks or flaws in the steel members while cleaning or painting.

A.3 Graffiti Removal

Remove any graffiti on concrete abutments, piers, pier caps, parapet railings, slope paving or any other location at the direction of the engineer. Use a brush sandblast to remove graffiti.

The above work will not be measured and paid for separately, but will be considered incidental to other items in the contract.

B (Vacant)

C Construction

C.1 Repainting Methods

Do not perform blasting, cleaning and painting on days of high winds. Prevailing winds in excess of 15 mph (25 km/hr) shall be considered high winds.

Place the final field coat of paint on the exterior of the exterior beams as a continuous painting operation. Stop at splices, vertical stiffeners or other appropriate locations so that lap marks are not evident or noticeable.

Completely clean and remove spent abrasive and other waste materials resulting from the contractor's operation from bridge deck surfaces, gutter lines, drains, curbs, bridge seats, pier caps, slope paving, roadway below, and all structural members and assemblies.

C.2 Inspection
Add the following to standard spec 105.9:

Furnish, erect and move scaffolding and other appropriate equipment to permit the inspector the opportunity to closely observe all affected surfaces. The scaffolding, with appropriate safety devices, shall meet the approval of the engineer.
517-005 (20150630)

16. Structure Overcoating Cleaning and Priming B-5-134, Item 517.3000.S.01.

A Description
This special provision describes cleaning and painting with two or three coats of paint the metal surfaces as hereinafter provided.

A.1 Areas to be Cleaned and Painted
Structure B-5-134
1. Two Coat Area: 0 SF with SP 1 cleaning.
2. Three Coat Area:
   1,084 SF with SP 2 or SP 3 cleaning.

B (Vacant)

C Construction
C.1 Surface Preparation
Prior to overcoating or hand tool cleaning, solvent clean all surfaces to be coated according to SSPC-SP1. A SSPC-SP 2 hand Tool Cleaning or a SSPC-SP 3 power Tool Cleaning according to Steel Structures Painting Council Specification 2 and 3 will be required on all metal surfaces to be painted with a three-coat system. Prime the same day, or re-clean before application, all metal surfaces receiving a No. 2 or 3 cleaning.

Remove all abrasive or paint residue from steel surfaces with a High Efficiency Particulate Abatement (HEPA-VAC) vacuum cleaner equipped with a brush-type cleaning tool, or by double blowing. If the double blowing method is used, vacuum the exposed top surfaces of all structural steel, including flanges, longitudinal stiffeners, splices, plates, and hangers, after the double blowing operations are completed. The air line used for blowing the steel clean shall have an inline water trap and the air shall be free of oil and water as it leaves the air line.

Take care to protect freshly coated surfaces from subsequent cleaning operations. Thoroughly wire brush damaged primed surfaces with a non-rusting tool. Clean and re-prime the brushed surfaces within the time recommended by the manufacturer.

C.2 Painting
Paint by applying two or three coats of an approved coating system as specified herein to the surfaces as described in A.1 from the department's approved products list.

C.3 Coating Application
Apply paint in a neat, workmanlike manner. The resultant paint film shall be smooth and uniform without skips or areas of excessive paint. Apply coating according to the manufacturer's recommendations.

Prior to applying the prime coat, coat with primer all edges, rivet and bolt heads, nuts and washers by using either a brush, roller, or spray application.

Dry Film Thickness per coat shall be a minimum of 3-mil. The dry film thickness shall be determined by use of a magnetic film thickness gage. The gage shall be calibrated for dry film thickness measurement according to SSPC-PA 2.

During surface preparation and coating application, the ambient and steel temperature shall be between 39 and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature, and the relative humidity shall not exceed 85%.

For machinery room doors: clean, lubricate, and protect hinges and latches during and after painting as necessary to ensure that the doors close and latch easily.

D Measurement
The department will measure Structure Overcoating Cleaning and Priming (Structure), completed according to the contract and accepted, as a single complete unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
517.3000.S.01	Structure Overcoating Cleaning and Priming B-5-134	LS

Payment is full compensation for preparing and cleaning the designated surfaces; and for furnishing and applying the paint.

17. Containment and Collection of Waste Materials B-5-134, Item 517.4000.S.01.

A Description
This special provision describes furnishing and erecting tarpaulins to contain, collect and store the spent material from surface preparation of steel surfaces, collecting such spent material, and labeling and storing the spent material in waste containers according to the contract and as hereinafter provided.

B Materials
Provide 5-gallon lidded plastic containers for containing the spent material.

C Construction
Erect tarpaulins or other materials to collect all of the spent material from hand tool or power tool cleaning. Consider and treat all spent material as hazardous waste because it contains lead.

Collect and store all waste material collected by this operation at the bridge site for disposal. Collect and store all waste materials at the end of each workday or more often if needed. Store materials in 5-gallon lidded plastic containers.

Label each container with the date the first waste was placed in the container and the words "Hazardous Waste – EPA Waste Code D008." Lock and secure all containers at the end of each workday. Keep the containers covered at all times except to add or remove waste material. Store the containers in an accessible and secured area, not located in a storm water runoff course, flood plain or exposed to standing water.

Collect the spent debris by vacuuming, shoveling, sweeping, or by channeling it directly to disposal containers. The enclosure shall be thoroughly cleaned at the end of each work day.

D Measurement
The department will measure Containment and Collection of Waste Materials (Structure), completed according to the contract and accepted, as a single complete unit of work for each structure designated in the contract.

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

ITEM NUMBER	DESCRIPTION	UNIT
517.4000.S.01	Containment and Collection of Waste Materials B-5-134	LS

Payment is full compensation for designing, erecting, operating, maintaining and disassembling the containment devices; collecting, labeling and storing spent materials in appropriate containers.
517-037 (20080902)

18. Labeling and Disposal of Waste Material.

The EPA ID number for Structure B-5-134 is WIR000051961.

Presently, the state has an exclusive mandatory use contract with a private waste management contractor to transport and dispose of hazardous waste.

The state's waste management contractor shall furnish and deliver appropriate hazardous waste containers and site-specific labels to each bridge site. The provided containers shall be placed at pre-selected drop-off and pick-up points at each bridge site, and these locations shall be determined at the preconstruction conference. The custody of the containers and labels shall be the responsibility of the painting contractor while they are at the job site.

Report all reportable spills and discharges according to the contingency plan.

Labels are site-specific. Check the labels to ensure that the project ID, structure number, and EPA ID match the structure generating the waste. Apply a label to each drum when it is opened for the first time. Fill in the date on the label the first day material is accumulated in the drum. The following page is an example of a properly filled-in label.

During paint removal operations, continuously monitor and notify the project inspector of the status of waste generation and quantity stored so that timely disposal can be arranged.
517-055 (20100709)

19. Fence Chain Link 8-FT.

Supplement standard spec 616.3.3.2 (5) to include the following:

Place the posts on the existing mounting brackets. Use the existing anchor bolts to fasten the support strap around the post and evenly tighten the support strap against the post until no lateral movement occurs. Use care when installing the posts to avoid damaging the existing mounting brackets, anchors, and associated hardware. Replace the existing mounting U-bolts with new galvanized ASTM A 307 U-bolts (2 per post location) according to standard spec 506. At bridge expansion joint provide a mechanism to accommodate expansion of the fence system.

20. Traffic Control.

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

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

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

Supply the name and telephone number of a local contact person for traffic control repair before starting work.

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

The turning of traffic control devices when not in use to obscure the message will not be allowed under this contract.

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

Cover existing signs which conflict with traffic control as directed by the engineer.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on the roadways. This includes the following:

a. Do not park or store any vehicle, piece of equipment, or construction materials on the right-of-way without approval of the engineer.

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

c. Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.
(NER09-1119)

21. Strip Seal Gland Replacement, Item SPV.0060.01.

A Description
This special provision describes removing and replacing the expansion joint strip seal gland according to standard spec 502, as shown on the plans, and as hereinafter provided.

B Materials
Determine the correct seal manufacturer from field inspection, remove a small portion of the seal if necessary. Shop fabricate the gland to conform to the contour of the bridge deck and the field measured dimensions of the joints.

The minimum thickness of the polychloroprene strip seal shall be ¼-inch for non-reinforced elastomeric glands and 1/8-inch for reinforced glands. Furnish the strip seal gland in lengths suitable for a continuous one-piece installation at each individual expansion joint location. Provide preformed polychloroprene strip seals that conform to the requirements ASTM D3542, and have the following physical properties:

Property Requirements	Value	Test Method
Tensile Strength, min.	2000 psi	ASTM D412
Elongation @ Break, min	250%	ASTM D412
Hardness, Type A, Durometer	60 ± 5 pts.	ASTM D2240
Compression Set, 70 hours @212˚F, max.	35%	D395 Method B Modified
Ozone Resistance, after 70 hrs. at 100˚F under 20% Strain with 100 pphm ozone	No Cracks	ASTM D1149 Method A
Mass Change in Oil 3 after 70 hr. 212˚F Mass Change, max.	45%	ASTM D471

The manufacturer and model number shall be one of the following approved strip seal expansion device products and shall be compatible with existing extrusion:

	Model Number Strip Seal Gland Size*		
Manufacturer	**4-Inch**	**5-Inch**	**6-Inch**
D.S. Brown	SSA2-A2R-400	SSA2-A2R-XTRA	SSA2-A2R-XTRA
R.J. Watson	RJA-RJ400	RJA-RJ500	RJA-RJ600
Watson Bowman Acme	A-SE400	A-SE500	A-SE800
Commercial Fabricators	A-AS400	-----	-----

*Expansion device strip seal gland size shall match existing.

Furnish manufacturer's certification for production of polychloroprene represented showing test results for the cured material supplied, and certifying that it meets all specified requirements.
Manufacturer's certifications for adhesive shall attest that the materials meet the specification requirements.

C Construction
Remove the existing gland. Clean the exposed structural steel expansion joint device according to SSPC-SP2, Hand Tool Cleaning.

Install the elastomeric strip seal gland with tools recommended by the manufacturer, and with a lubricant adhesive conforming to the requirements of ASTM D4070.

Apply sealant where gland butts against existing compression joint.

D Measurement
The department will measure Strip Seal Gland Replacement by the unit for each strip seal gland, replaced.

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	Strip Seal Gland Replacement	Each

Payment is full compensation for verifying strip seal type; removing and replacing the strip seal gland; for furnishing all cleaning.

22. Girder Surface Repair, Item SPV.0060.02.

A Description

This special provision describes removing deteriorated concrete from surfaces of concrete girders at girder end and mid-span locations designated in the plans and as designated by the engineer and replacing it with a polymer modified Portland cement mortar.

B Materials

Provide a polymer modified Portland cement mortar meeting the following requirements:

- Have a corrosion inhibitor additive.
- A workable mix capable of bonding and holding its own plastic weight, when mixed and placed according to manufacturer instructions, on vertical and overhead surfaces.
- A minimum compressive strength of 1,500 psi at 24 hours, 3,500 psi at 3 days, and 5,000 psi at 28 days; according to ASTM C 109.
- Have a minimum bond strength of 2,000 psi at 28 days.
- Have a water soluble chloride ion content of less than 0.40 lb/cu yd. The test shall be performed according to ASTM C 1218, and the mortar shall have an age of 28 to 42 days at the time of test. The ASTM C 1218 test shall be performed by an independent lab a minimum of once every two years, and the test results shall be provided to the department.

C Construction

Perform the work according to the requirements of standard spec 509.3.7 and as specified herein. Remove all deteriorated concrete to sound material. The repair depth shall be a minimum of 3/8 inches. Take necessary precautions while removing deteriorated concrete to preserve all existing reinforcing steel and prestressing strands. At locations where reinforcing steel is exposed due to deteriorated and/or spalled concrete, remove concrete to a minimum depth of 1/2” inch behind the steel. Do not remove concrete behind prestressing strands except if it is heavily deteriorated.

Abrasive blast clean concrete and exposed steel reinforcement and prestressing strands against which repair mortar will be placed.

Use chipping hammers for removing concrete that are a light-duty pneumatic or electric tool with a 15 pound class or less. Use blast cleaning equipment for concrete surface preparation of the abrasive type with equipment having oil traps.

Power wash using water pressure between 1,200 psi to 2,000 psi to remove all chlorides, dust and loose materials, and any bond-inhibiting materials from the prepared surface.

After power washing, coat the blast cleaned surfaces of steel reinforcement and prestressing strands with zinc rich paint.

Just prior to mortar placement, saturate the repair surface with water to a saturated surface-dry condition.

Mix and place the polymer modified Portland cement mortar according to the manufacturer's instructions. Place and finish mortar to the contours of the member, as originally constructed. Do not place the mortar when the air temperature is below 45° F and falling or below 40° F. Do not place mortar when the surface temperature of the repair area is less than 40° F. Do not place mortar when the air temperature is greater than 90° F. Ensure mortar has a minimum temperature of 50°F and a maximum temperature of 90° F.

Apply cotton mats for curing the exposed layer of mortar within 10 minutes after finishing and begin wet curing immediately. Maintain curing for a minimum of 3 days. If temperatures below 45° F are forecast during the curing period, provide protection methods during the curing period.

Provide ladders or other appropriate equipment for the engineer to inspect repaired areas. After curing but no sooner than 28 days after placement of the mortar, examine the repair in the presence of the engineer for conformance with original dimensions, cracks, and delaminations. Perform sounding for delaminations with a hammer or by other methods determined by the engineer. Remove and replace repaired areas of mortar as determined by the engineer for delaminations or surface cracks greater than 0.01 inches in width.

D Measurement
The department will measure Girder Surface Repair by each unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Girder Surface Repair	Each

Payment is full compensation for completing all work including saw cutting, removing concrete; abrasive blasting, preparing surfaces; furnishing, applying and curing the repair mortar; and cleanup.

23. Remove Steel Plate, Item SPV.0060.03.

A Description
This special provision describes removing existing steel plate "stay-in-place forms" mounted to piers as shown in the plans, as directed by the engineer, and as specified herein.

B (Vacant)

C Construction

Remove the structural steel plate as shown in the plans, or directed by the engineer, from the existing bridge piers. Ensure all steel plate masonry anchors and any other parts are either removed completely or embedded to a 2 inch clear cover in the concrete.

Repair the area of concrete surface exposed by the steel plate removal according to standard spec 509, Concrete Surface Repair.

D Measurement

The department will measure Remove Steel Plate as each individual steel plate, acceptably completed, including all attached parts and connections.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Remove Steel Plate	Each

Payment is full compensation for removing and disposing of the steel plate, any attached parts or connections. Repair of the concrete surface will be paid separately under the Concrete Surface Repair bid item.

24. Control House Windows, Soffits, and Doors, Item SPV.0105.01.

A Description

This special provision describes removing, furnishing and installing the exterior doors, windows, and soffits for the control house as hereinafter described and/or shown on the plans.

B Materials

B.1 General

Provide all products and workmanship of the highest commercial or industrial quality available. Lesser quality products, such as "economy" grade, will not be acceptable. The engineer will reject any product or work that is inferior in his judgment.

Interpret specific reference in these specifications to any article, device, product, material, fixture, form or type of construction, etc., by name, make or catalog number as establishing a standard of quality. Do not construe specific references as limiting competition. Use any article, device, product or material, fixtures, form, or type of construction, which in the judgment of the engineer is equal to that named in the special provisions or shown on the plans.

B.2 Windows

B.2.1 Features

Provide fixed frame windows for all existing window locations. Provide operable windows with screens for existing louver locations. Operable sashes shall be tilt in type that pivot

from the bottom. Provide operable sashes with 4 bar friction hinges made of stainless steel with a nylon friction block in sliding brass shoes opening to approximately 45 degrees and cam locks made of white bronze. Provide all fixed frame, operating vent, and receiver sections extruded from 6063-T5 aluminum alloy with an ultimate tensile strength of 22,000 psi. Provide extrusions with a barrier chamber and bridges as one piece. A two part chemically curing, high strength, polyurethane resin is to be poured into the barrier chamber and the aluminum bridge shall be removed, affording a continuous thermal break. Provide all frames and sashes with a nominal wall thickness of 0.125 inches. All window sashes must tilt inward and close flush with the interior and exterior of frame sections. Provide all sashes with two rows of dual durometer compression type EPDM alloy weather stripping.

Furnish all windows with insulating glass composed of two panes of ¼ inch thick, float glass, separated by a ½ inch thick dehydrated, captive air space which is hermetically sealed with a metal-to-glass band (1 inch overall thickness) and of the sizes required to fit the windows. The windows shall have a clear inner pane and a solar gray outer pane. The glazing shall be as recommended by the window manufacturer and shall be according to the FGMA Glazing Manual for the window type. Store, install, clean, and etc. glass according to the requirements of the Flat Glass Jobbers Association and with the recommendations of the window manufacturer.

Provide screens at all operable sashes. Provide inside removable screen frames of extruded aluminum sections with corners mitered and mechanically attached. Provide 18 x 16 fiber mesh screening fabric, colored black, and retained in screen frames with vinyl splines which permit easy replacement. Secure screen frames to window frames with aluminum lift off clips. Match screen frame color to the windows.

Submit to the engineer the window manufacturer's maintenance manual describing proper job site storage, handling, post-installation cleaning, and care of aluminum windows and hardware. The manual may be submitted electronically at the discretion of the engineer.

B.2.2 Design Criteria

Comply with design criteria as recommended by current ANSI, AAMA, AA, and ASTM publications for all window units and components. Substantiate actual compliance by tests on a window of similar type, size, and construction, and certify the testing results by an independent testing laboratory. Submit to the engineer certified test reports for air infiltration, water penetration, deflection, and structural failure as described below:

B.2.2.1 Air Infiltration

When tested according to ASTM E283, the allowable air infiltration shall not exceed 0.10 cubic feet per minute of fixed lite when subjected to a static pressure of 6.24 psf, (25 mph). When tested according to ASTM E283, the allowable air infiltration of operating vents shall not exceed 0.10 cubic feet per minute per foot of crack length when subjected to a static pressure of 6.24 psf, (50 mph).

B.2.2.2 Water Penetration
When tested according to ASTM E331, there shall be no uncontrolled water penetration at a static pressure of 10 psf, with a water spray of 5 gallons per square foot of exterior surface per hour.

After installation, perform in the presence of the engineer a high pressure hose spray test by applying a steady jet stream of water around the perimeter of each window and the joints between frames and operator house structure using the full pressure available from the water spigot of the operator house. Perform this test on each window for a continuous period of three minutes, confirming no leakage into the operator house.

B.2.2.3 Deflection
B.2.2.3.1 Wind Load
Furnish structural calculations for window member deflection, and provide test reports according to ASTM E330 guidelines. Determine deflections for members when subjected to a wind load of 30 psf. Limit deflection normal to wall plane of intermediate vertical and horizontal members to 1/175 of unsupported span, 0.75 inches maximum. Limit deflection at sealant joints occurring between window frame members and building elements to ½ of joint width. Limit deflection of anchors to 0.062 inches. Provide sufficient aluminum or steel reinforcing where required to meet the criteria.

B.2.2.3.2 Glass Load
Limit fixed frame glass carrying members to a deflection parallel to wall plane of 1/300 of unsupported span without reducing glass bite more than 25 percent, 0.125 inches maximum. Provide aluminum or steel reinforcing when required.

B.2.2.4 Structural Failure
Furnish structural calculations for window member stress, and provide test reports according to ASTM E330 guidelines. Stress limits for aluminum and steel components shall be as set forth by the current AAMA and AISC guidelines, respectively. All window members shall be of proper aluminum alloy and temper to provide a minimum ultimate tensile strength of 28,000 psi. There shall be no over-stress of any window member, anchor, or other component when unit is subjected to a Structural Test Pressure equal to 1.5 times the design pressure.

B.2.3 Finish
Provide a finish by caustic etch and anodic treatment according to Aluminum Association Standard Architectural Class 1 coating of 0.7 mils minimum thickness for all exposed aluminum surfaces. Provide a finish having the color as directed by the engineer.

B.2.4 Sealant
Furnish and install caulking at all joints between dissimilar materials, on the exterior and interior faces of openings between the masonry and the window frames, along the edges of metal work built into or abutting masonry, at the corners in the rigid insulation, and all other locations as shown on the plans and as directed by the engineer.

Furnish and install exterior caulk that is one part polyurethane sealant meeting the requirements of ASTM C920, (Type M, Grade NS, Class 25 Type 2 Class A) and interior caulk that is acrylic latex sealant meeting the requirements of ASTM C834. Provide interior and exterior caulking of colors approved by the engineer to match or complement colors of materials on either side of the joint.

Provide non staining sealant backer rods and/or bond breakers, as recommended by the sealant manufacturer, which are compatible with joint substrates, sealant, primers, and other joint fillers.

B. 2.5 Fasteners

Nails: Aluminum or hot-dip galvanized.
Screws: Hot-dip galvanized or stainless steel.
Concrete anchors: All anchor bolts and self-tapping screws shall be stainless steel.

B.3 Soffits

Provide 1/8 inch thick metal aluminum plate for operator level exterior catwalk and roof soffits in conformance with ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate. Provide all miscellaneous materials and hardware required to replace the soffits in kind.

B.4 Doors and Door Frames

B.4.1 Metal Door Frames

Provide door frames fabricated from 16 gauge steel with a 2-inch face, ½-inch integral stops. The dimensions of the door shall match the existing doors being replaced and be determined by field measurement to be verified by the engineer prior to installation. Provide frames that are set-up, with corners mitered and internally welded. Coat frames after corners are mitered and welded with an electrolytic zinc coating. Mortise hinge jambs for hinges and prepare lock jambs for lock strike as required for hardware specified below. Provide all door frames with adjustable floor anchors. Adjustments shall be in increments of 1/16 inch with a permanent locking feature. Furnish three rubber door silencers for strike jambs except where weather stripping eliminates this need. Provide adjustable anchors at each jamb compatible with abutting walls. Provide a 14 gauge bent reinforcing plate in head of all metal frames occurring in masonry walls. Trim shall be flush with both sides of door. Bonderize and paint frames with one coat rust inhibitive quality primer, oven dried and tested to ASTM Specifications D-714 and B-117 for humidity cabinet and salt spray tests. Apply shop coat to all surfaces, including those inaccessible after installation.

B.4.2 Exterior Doors

Provide doors of flush panel design, 1¾ inch thick, as shown on the plans. Fabricate doors from electro-zinc coated 16 gauge steel face panels with a core of foamed-in-place poly-urethane (2.0 to 2.5 pcf density). Provide doors with smooth hemmed edges, seamless face sheets, 16 gauge steel top and bottom channels positioned flush with face sheets, and 7 gauge steel hinge reinforcing. Reinforce the fender access doors to provide adequate

support for the attached grab rail. Drill any holes necessary for the grab rail mounting hardware at the time of door fabrication.

B.4.3 Paint

Bonderize frames and doors if necessary to ensure the proper adhesion of the shop prime coat to the substrate. Touch-up areas where the zinc coating has been damaged by the fabrication process with a zinc-rich paint before priming. Use a gray alkyd resin-iron oxide paint having high chromate content for the shop prime coat. It shall be oven dried and tested to ASTM Specifications D-714 and B-117 for humidity cabinet and salt spray tests. The paint should have good adhesion, high flexibility, the ability to resist scuffing and scratching during transit and installation. Ensure that the shop paint is compatible with the field applied intermediate and finish coats. Shop coat includes all surfaces, including those inaccessible after installation.

B.4.4 Locks

Provide all door locks keyed alike.

B.4.5 Hardware.

Provide hardware sets for doors as described below. Provide all hardware brushed stainless steel unless noted otherwise.

Furnish the door and frame manufacturer with all templates and necessary information relative to cutting out and reinforcing for the installation of locksets, butts, etc. Determine need and location of door stops, etc., subject to the approval of the engineer.

Provide all hinges of five knuckle, flush ball bearing design, with wide spaced bearings. Bearing assemblies are to be thoroughly lubricated. Ball bearings are to be of chrome alloy material, through hardened. All full mortise hinges to have a hole in the bottom tip for easy pin removal except for non-removable pin.

Furnish and install mechanical mortise locks for the bridge and operator level entry door. Provide locks with cases constructed of zinc dichromate plated wrought steel, ¾-inch throw latch bolts with stainless steel, two-piece anti-friction camming action, and solid steel, heat treated hubs. Locksets must have heavy cold forged, reinforced knobs and cold forged, reinforced roses. Locksets must be reversible for both right hand or left hand doors and be easily installed without the use of any special tools. Locksets must conform to ANSI A115.1, ANSI A115.11, and ANSI A156.13, Series 1000, Operational Grade 1. Provide a bronze knob and trim with Physical Vapor Deposition (PVD) finish for the entry door and fender access door.

Furnish and install cylindrical locksets for interior doors in CMU walls. The lockset mechanism must be constructed of heavy-gauge, zinc dichromate plated, cold-rolled steel. Provide the lock and trim made entirely of stainless steel. The lockset must be reversible for both right hand or left hand doors and be easily installed without the use of any special tools. The knob and roses must be heavy cold forged reinforced.

Furnish and install door closers of a full rack-and-pinion type with cast aluminum alloy shell. Provide surface mounted closers projecting no more than 2-7/8 inches from the surface of the door. Provide non-handed closers to permit installation of doors of either hand. Closer fluid must contain lubricity and anti-oxidation agents and maintain stable viscosity to allow the door closer to perform in temperatures ranging from extremely high to as low as -40 °F. Size closers for each door. Provide closers with two non-critical valves, hex key adjusted, to independently regulate sweep and latch speed. Provide closers with adjustable backcheck cushioning controlled by a hex key adjusted valve.

Furnish and install door closers with a built-in door stop and holder effective at a single point selected at installation, from 85° F – 115° F in five degree increments. The door stop must be cushioned by a shock-absorbing heavy-duty spring action effective at the soffit plate pivot. Provide closers for parallel arm installation using rigid steel main arm and secondary arm lengths proportional to the door width to reduce racking at the hinge/pivot. Provide non-handed arms having a ball and detent hold-open mechanism incorporating an on /off hold-open selector and a hold-open tension adjustment.

Provide all weatherstripping fabricated from durable, UV-resistant polyethylene cladding permanently bonded to a thermoset urethane open-cell foam core. Provide thresholds manufactured of aluminum with an integral water-drainage system. Provide weatherproofing conforming to ISDSI-101 and ISDSI-104 for air and water infiltration.

Provide all kick plates fabricated of 0.050 inch thick architectural stainless steel. Furnish kick plates meeting ANSI A156.6 requirements for 0.050 inch thickness. Provide #6 x 5/8-inch oval head, undercut sheet metal screws plated to match.

Provide heavy duty cast dome door stops constructed of brass. Provide door stops meeting ANSI/BHMA 156.6, L12141. Furnish matching risers where required for use with thresholds. Furnish fasteners sufficient for mounting in all types of floor construction, including ceramic tile and concrete.

B.4.5.1 Hardware Sets No. 1

2 Pair 5-inch by 5-inch, Full Mortise, S.S. butt hinges with non-removable pin
1 Mortise Lockset with bronze knob and trim
1 Closer w/optional positive stop
1 Kick Plate 12 inches high
1 Threshold
1 Weatherstripping
1 Door Sweep

B.4.5.2 Hardware Sets No. 2

2 Pair 5-inch by 5-inch, Full Mortise, S.S. butt hinges with non-removable pin
1 Mortise Lockset with bronze knob and trim
1 Closer w/optional positive stop
1 Kick Plate 12 inches high
1 Threshold

1 Weatherstripping
1 Door Sweep

B.5 Submittals
Submit the following for engineer review:

- Manufacturer's descriptive literature for products specified in this section.
- Shop Drawings: Indicate metal flashing profiles, joint locations, fastening locations, and installation details.

C Construction
C.1 General
C.1.1 Codes and Permits
Install all equipment in strict compliance with applicable laws and the latest rules and regulations of all municipal and other public agencies having jurisdiction over this work.

If any items or requirements in this special provision conflict with any of the above-mentioned rules and regulations, then the minimum requirements shall be as shown on the plans and described in these special provisions and shall be altered, as approved in advance by the engineer, to meet any additional requirements. The engineer's interpretation will govern.

Prepare and submit drawings and/or applications for approval of the state and agencies having jurisdiction to obtain any required permits and certificates and deliver a copy of the same to the engineer. The cost of any required permits is included in this bid item.

C.1.2 Submittals
Submit to the engineer for review and approval complete construction drawings, shop details, installation drawings, catalog data, manufacturer's literature, etc. Complete submittals required include, but are not limited to, all aluminum windows, mullions, architectural metals, and other pertinent items.

C.1.3 Workmanship and Finish
Neatly finish installation of windows and all metal work. Correct any defective work to the satisfaction of the engineer at no additional expense to the state.

C.1.4 Color Selection
Match the existing soffits paint color as closely as practical. Before making the color selections, submit color samples to the engineer. Submit samples of each manufacturer's entire color line to the engineer. The engineer will make a color selection from all the color samples submitted.

C.1.5 Guarantee
For all items of work to be performed under this article, guarantee each item against defects in material and workmanship for a period equal to the standard warranty period of the manufacturer or the industry, whichever is longer. Commencement of the warranty period begins after final acceptance of the work. In the event of a legitimate claim, replace or repair

the defective item, in whole or in part, as necessary, to restore the item to its original intended state.

C.2 Windows

Remove existing windows and louvers as shown on the plans. Maintain existing lighting along windows during window replacement, or temporarily remove lighting and reinstall after window replacement.

Fabricate and install all windows and related items as shown on the plans, as directed by the engineer, and as specified herein. The nominal window sizes shall be as shown on the plans. Field measure all rough openings to determine the exact sizes of windows to be furnished. Take all necessary measurements and verify all conditions at the building site wherever window work engages other work already in place.

Submit to the engineer for approval complete construction drawings, shop details, erection drawings, catalog data, etc. for the control house windows and machinery access house windows. Coordinate all window drawings with adjacent construction prior to submitting details to the engineer for approval. Drawings must include elevations showing window unit types, sizes, and locations and shall include typical details drawn at full scale depicting window member cross-sections, trim, anchorage, and glazing.

Submit to the engineer four sets of the window manufacturer's paint color samples. Ensure that the colors are compatible with the color of the sprayed surface finish of the aluminum. The engineer will make a color selection from among all of the samples. Acceptance of color samples will be at the discretion of the engineer.

Secure window units to the building structure with allowances made for installation sequence, building movement, thermal movement of aluminum, and standard window opening construction tolerances. All material employed for securing the window units to the building structure must be aluminum or non-corrosive materials compatible with aluminum. Use only stainless steel fasteners and zinc plated steel clips and anchors. Furnish and install all fasteners, expansion channels, clips, and anchors of adequate alloy, size, and spacing to assure the structural integrity of window units.

An experienced erector must erect, anchor, and seal windows and related trim according to the approved construction drawings and install the windows in a neat, workmanlike manner to provide a weather tight closure.

Warrant to the owner that the window product shall be free from defective material and workmanship for a period of one year after date of final acceptance. In the event of a legitimate claim, replace or repair the defective product, in whole or in part, as necessary, to restore the product to its original intended state.

C.3 Doors and Door Frames

Take all necessary measurements and verify all conditions at the building site wherever door and door frame work engages other work already in place. Paint all doors and frames to match the windows.

C.4 Soffits

Fabricate and install new 1/8 inch thick metal aluminum plate soffit and related items as shown on the plans, as directed by the engineer, and as specified herein. Field measure the soffit area to determine the exact plate sizes to be furnished. Take all necessary measurements and verify all conditions at the building site wherever window work engages other work already in place.

Remove the metal soffits on the underside of the operating floor exterior catwalk and roof eaves with care to avoid damage to the existing structure. Clean and prepare the soffit mounting surface prior to installation. Secure the soffit to the building by welding, bolting, or screwing the metal soffit plate to existing channels supporting the existing soffits. All material employed for securing the soffits to the building structure must be aluminum or non-corrosive materials compatible with aluminum.

Form tight joints with plate ends accurately fitted together. Fabricate openings and replace the roof soffits 6”x6” screened vents in kind. Align screened vents with the 3 inch diameter holes in the roof framing channels on the north and south side eaves. Fabricate openings in the catwalk soffits for the installation of exterior lighting.

Paint the exposed side of the aluminum soffit plate. Match the paint color to the existing soffit paint color. Submit to the engineer four sets of the manufacturer’s paint color samples. The engineer will make a color selection from among all of the samples. Acceptance of color samples will be at the discretion of the engineer. Paint by applying two or three coats of an approved coating system as specified herein to the surfaces as described in A.1 from the department’s approved products list.

C.4.1 Coating Application

Apply paint in a neat, workmanlike manner. The resultant paint film shall be smooth and uniform without skips or areas of excessive paint. Apply coating according to the manufacturer’s recommendations.

Prior to applying the prime coat, coat with primer all edges, rivet and bolt heads, nuts and washers by using a brush, roller, or spray application.

Dry Film Thickness per coat shall be a minimum of 3-mil. The dry film thickness shall be determined by use of a magnetic film thickness gage. The gage shall be calibrated for dry film thickness measurement according to SSPC-PA 2.

During surface preparation and coating application, the ambient and steel temperature shall be between 39 and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature, and the relative humidity shall not exceed 85%.

Restore finishes damaged during the installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

C.4.2 Sealant
Caulk joints with a pressure caulking gun. Surfaces to be caulked must be thoroughly cleaned, bone dry, and finished smooth and flush with adjoining surfaces. Perform no caulking when the temperature is 40°F and falling.

C.5 Project Conditions
Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

C.6 Protection
Protect installed work until project completion.

D Measurement
The department will measure Control House Windows, Soffits, and Doors as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Control House Windows, Soffits, and Doors	LS

Payment is full compensation for removing, furnishing and installing the doors, louvers, windows and soffits within the control house.

25. Mechanical Work Bascule Span, Item SPV.0105.02.

A Description
This article covers all apparatus, material and labor required to properly detail, manufacture, ship, install, adjust, test, paint and put into approved working order all parts of the bascule span mechanical work specified. Furnish, at no extra cost, any device, material, labor or effort not herein specified, yet required to complete or perfect the equipment in a manner suitable to the department.

B Materials
B.1 Shop Drawings
Dimensions given on the plans are nominal and intended for guidance. Make note of any variations from nominal dimensions on the shop drawings or provide written notice to the engineer. Where additional information is required or changes must be made; prepare working, erection, and shop drawings and submit to the department as specified.

B.1.1 General Requirements
Detail and dimension all shop drawings accurately for all parts. Define on shop drawings limits of accuracy and tolerances required for machining, surface finishes and allowances for fits.

B.1.2 Manufacturer's Literature
Submit catalog cuts and detailed manufacturer's literature for all components not detailed in the shop drawings. Clearly mark such items with the item number corresponding to the mark shown on the assembly drawing and the full and complete part number, extended to completely define the part including all optional or custom features. If the same cut sheet is used to define more than one item, submit multiple copies.

B.1.3 Material Certifications
Submit material certifications for all materials specified to require material testing within the plans and specifications or within a referenced material specification (e.g. ASTM, ANSI, or others).

B.1.4 Procedures
In addition to required detailed shop drawings, submit to the engineer for review various procedures described herein. The procedures must be thorough and must be supplemented by sketches, calculations, details, catalog cuts, photographs, etc. as required to demonstrate that the specified requirements can be met.

B.1.5 Notification of Shop Work
Provide advance written notification to the department for all shop work and shop testing for which the specifications require, or indicate that it is the intent of the department, to provide a representative to observe or witness such activities. Provide a minimum of 30 days advance written notice of such work.

B.1.6 Material Compatibility
Provide products which are compatible with other products of the mechanical work and with other work requiring interface with the mechanical work, including mechanical/electrical connections and control devices.

B.1.7 Substitutions
Specification of a manufacturer's part number, product, and/or name is for the purpose of defining quality, configuration, rating and arrangement of parts. Part numbers shown in the contract documents are not necessarily complete numbers, nor are they intended to describe details of the component beyond those that are required. Be aware that manufacturers may change product names and part numbers without advance notification. Select and provide manufactured products that meet the requirements and intent as shown in the contract documents. Provide complete, current part numbers for all proposed equipment and verify that the part as designated is appropriate for the intended function. Contractor is responsible for design changes resulting from substitutions.

B.2 Shop Inspection and Testing

B.2.1 Notification

Provide sufficient written notice to the department prior to the beginning of work at foundries, forge and machine shops so that inspection may be arranged. Provide free access to all premises where preparation, manufacture, assembly and testing of raw materials, materials in process and assembly is conducted.

B.2.2 Responsibility

Such inspections are to facilitate work and avoid errors. It is understood that inspection by the department does not relieve the contractor of the responsibility for compliance with requirements of the contract documents or for replacing defective materials and workmanship.

B.2.3 Material Acceptance

Furnish to the department test results of all certifications required of the contract documents, including copies of chemical and physical tests and certifications of compliance. Initial acceptance of materials and finished parts and assemblies will not preclude subsequent rejection if found deficient. Replacement of such materials will be the responsibility of the contractor.

B.3 General Material Requirements

Provide materials as specified on the plans and in the specifications. Wherever materials are not shown or specified, provide materials that conform to the current specifications as outlined in TABLE 1, ASTM Materials and TABLE 2, General Materials. An alternative material may be requested in writing; the request must provide complete data justifying suitability of the alternate materials and must be approved by the department prior to initiating manufacture or construction.

Provide materials and equipment that are essentially the standard catalogued products of manufacturers regularly engaged in production of such materials or equipment and is the manufacturer's latest standard design that complies with the specification requirements. Materials and equipment must essentially duplicate items that have been in satisfactory commercial or industrial use at least 2 years prior to bid opening. Where two units of the same class of equipment are required, these units must be products of the same manufacturer. However, the component parts of the system need not be the products of the same manufacturer. Provide each major component of equipment with the manufacturer's name and address and the model and serial number on a nameplate securely affixed in a conspicuous place. The nameplate of the distributing agent will not be sufficient.

TABLE 1 – ASTM MATERIALS

DESIGNATION	DESCRIPTION
A27	Mild to Medium Strength Carbon Steel for General Applications
A29	General Requirements for Steel Bars, Carbon and Alloy, Hot-wrought and Cold-finished
A36	Structural Steel
A48	Gray Iron Castings
A53	Pipe, Steel, Black and Hot-dipped, Zinc-coated, Welded and Seamless
A108	Standard Quality Steel Bars, Carbon, Cold-finished
A125	Heat-treated Steel Helical Springs
A148	High-strength Steel Castings for Structural Purposes
A167	Stainless and Heat-resisting Chromium-nickel Steel Plate, Sheet, and Strip
A193M	Alloy-steel and Stainless Steel Bolting Materials for High Temperature Service
A240	Heat-resisting Chromium and Chromium-nickel Stainless Steel Plate, Sheet, and Strip for Fusion-welded Unfired Pressure Vessels
A276	Stainless Steel and Heat-resisting Steel Bars and Shapes
A291	Carbon and Alloy Steel Forgings for Pinions and Gears for Reduction Gears
A307	Carbon Steel Externally Threaded Standard Fasteners
A311	Steel Bars Carbon, Stress Relieved Cold Drawn, Subject to Mechanical Property Requirements
A320	Alloy Steel Bolting Materials for Low-temperature Service
A325	High-strength Bolts for Structural Steel Joints, Including Suitable Nuts and Plain Hardened Washers
A366	Commercial Quality Steel, Carbon, Cold-rolled Sheet
A449	Quenched and Tempered Steel Bolts and Studs
A501	Hot-formed Welded and Seamless Carbon Steel Structural Tubing
A519	Seamless Carbon and Alloy Steel Mechanical Tubing
A563	Carbon and Alloy Steel Nuts
A569	Commercial Quality Steel, Carbon (0.15 Maximum, Percent) Hot-rolled Sheet and Strip
A576	Special Quality Steel Bars, Carbon, Hot-rolled
A580	Stainless and Heat-resisting Steel Wire
A582	Free-machine Stainless and Heat-resisting Steel Bars, Hot-rolled and Cold-finished
A609	Ultrasonic Testing
A666	Austenitic Stainless Steel Sheet Strip, Plate and Flat Bar
A668	General Industrial Use Steel Forgings, Carbon and Alloy

A675	Steel Bars and Bar Size Shapes, Carbon, Hot-rolled, Special Quality Subject to Mechanical Property Requirements
A707	Flanges, Forged, Carbon and Alloy Steel for Low-temperature Service
A709	Structural Steel for Bridges
B22	Bronze Castings for Bridges and Turntables
B43	Seamless Red Brass Pipe, Standard Sizes
B62	Composition Bronze or Ounce Metal Castings
B148	Aluminum-Bronze Sand Castings
B438	Oil-impregnated, Sintered Bronze
D709	Laminated Thermosetting Materials
F436	Hardened Steel Washers
F468	Nonferrous Bolts, Hexcap Screws, and Studs for General Use

TABLE 2 – GENERAL MATERIALS

SPECIFICATION	DESCRIPTION	DESIGNATION
Federal Specification (FS)	Wrenches, Adjustable	GGG-W-631B INT AMD 5
	Wrenches (Box, Open End, and Combination)	GGG-W-636E
	Wrenches, Socket	GGG-W-641E
	Hammer, Hand	GGG-H-86C INT AMD 2
	Screwdriver and Screw Starter, Hand	GGG-S-121E(1)
American National Standards Institute (ANSI)	Unified Coarse Screw Threads	B1.1
	Pipe Threads (Except Dryseal)	B2.1
	Preferred Limits and Fits for Cylindrical Parts	B4.2
	Forged Steel Fittings, Socket Welding and Threaded	B16.11
	Keys and Keyseats	B17.1
	Heavy Hex Bolts	B18.2.3.7M
	Hex Nuts	B18.2.4.6M
	Socket Cap, Shoulder, and Set	B18.3.1
	Clevis Pins and Cotter Pins	B18.8.1
	Dowel Pins	B18.8.2
	Plain Washers	B18.22M
	Surface Texture	B46.1
	Tooth Proportions for Coarse-pitch Involute Spur Gears	201.02

SPECIFICATION	DESCRIPTION	DESIGNATION
Military Specifications	Fittings, Lubrication	MIL-F-3541
	Commercial Hard, High Brass	MIL-S-22499

B.4 Fasteners

B.4.1 High Strength Bolts

Unless otherwise specified, provide fasteners used for connecting machinery parts to each other and to supporting steelwork that are turned bolts conforming to the minimum specified physical requirements of high strength, ASTM A325 or ASTM A449 cut thread, washer faced, hexagonal head bolts. Provide threads for turned bolts that conform to the requirements of ASTM A325. Do not use ASTM A490 bolts. Use nuts that conform to ASTM A563 or A194, Grade DH or 2H, heavy hex series.

B.4.2 Bolt Dimensions

Dimension bolt heads, nuts and hexagonal cap screws according to ANSI B18.2. Such fasteners are to be of the heavy series.

B.4.3 Socket Head Screws

Provide socket head cap screws, socket flat head cap screws and socket set screws conforming to ANSI B18.3. Such screws must be heat treated alloy steel. Unless otherwise specified, set screws must be of the headless, safety type and be of the coarse thread series and have cup points. Do not use set screws to transmit torque nor as a stop for equipment that provides stability or contributes to operation of the bridge. Class 2 coarse thread tolerances are required for all bolts, nuts and cap screws.

B.4.4 Locking of Fasteners

Provide approved type positive locks for cap screws and nuts on turned bolts unless noted otherwise in the plans. Use standard thickness nuts where double nuts are required in locations where occasional opening or adjustment is necessary. Use flat jam nuts only where space prohibits use of standard nuts. Lock washers must be made of tempered steel and conform to regular SAE dimensions and specifications. Properly tension high strength bolts and nuts, which will create a self-locking effect. If wire is used for locking it must be stainless steel.

B.4.5 Washers

Use hardened steel, plain washers conforming to ASTM F436 at the rotated end of high strength ASTM A325 or A449 bolts.

B.4.6 Miscellaneous Fasteners and Hardware

Unless otherwise specified or shown in the plans, provide miscellaneous fasteners and hardware, including cotter pins and lock wire of corrosion resistant stainless steel, with material composition of type 316.

B.5 Lubrication of Machinery

B.5.1 Fittings

New grease fittings shall match the existing type/style fittings already exist on the bridge machinery. All new grease fittings shall be type 316 stainless steel.

B.5.2 Lubrication Tubing

Use tubing of seamless type 316 stainless steel tube. Use type 316 stainless steel or corrosion resistant hardware to secure lubrication tubing and fittings.

B.5.3 Enclosed Gear Reducers

Enclosed gear reducers lubricant must meet the requirements of the American Gear Manufacturers Association (AGMA) Standard 250.04 "Lubrication of Industrial Gear Drives." The lubricant must be manufactured by a reputable and knowledgeable supplier of lubrication and must be as recommended by the reducer manufacturer. The lubricant will contain oxidation inhibitors, rust inhibitors, anti-foaming agents, and anti-wear additives.

B.5.4 Open Gears

If required, the open gear lubricant utilized must bond strongly to gear teeth to maintain a continuous film on bearing surfaces despite high loading and high load repetition, contain an EP (Extreme Pressure) additive, repel water, resist throw-off and dripping, maintain consistency over wide temperature variations, and allow for ease in application and removal. The lubricant must have an operating range of 0 °F to 210 °F and must be considered a heavy bodied, adhesive type open gear lubricant by its reputable lubricant manufacturer. Some adhesive lubricants are available in a diluted form for ease of application. This type of lubricant is diluted with solvent that quickly evaporates after application leaving behind an adhesive tacky film. If such a lubricant is desired, the solvent must be non-flammable and the mixture must not pose any hazard to health. The detailed specifications for open gear lubricants that will satisfy the above requirements do vary. Use unleaded, non-diluent type, non-chlorinated open gear grease, SUS 7,000 @ 100 °F viscosity, water resistant, anti-wear/extreme pressure.

B.5.5 Roller Bearings

The roller bearing lubricant, the maintenance of the lubricant, method of application, and re-lubrication intervals must be recommended or approved by the manufacturer unless otherwise stated herein.

B.5.6 Couplings

Coupling lubricant and its maintenance must be specified by the manufacturer. The lubricant chosen must be approved for use in gear couplings by the manufacturer.

B.6 Paint for Floating Shafts

Furnish a complete coating system. Match existing color and provide samples for the department to select the color. Supply the engineer with the product data sheets before any coating is applied. Paint machinery component surface with the final field coat in the color selected by the department.

B.7 Limit Switches
See electrical specification for details and procedures required for new proximity limit switches.

C Construction

C.1 General
Substandard spec 506.3 of the standard specification applies to this item. Construct according to the requirements defined herein and in the plans and the provisions of the AASHTO Movable Specifications. Where a conflict exists between documents, the requirements of the plans and specifications will govern over those of the AASHTO Movable Specifications.

Unless otherwise specified in the plans or herein, dimensions between machined surfaces have a tolerance of plus or minus 0.010 inch and machined surfaces have a flatness tolerance of .040 inch.

All machinery must be set, aligned and verified by experienced millwrights. Submit to the engineer for review the qualifications of the proposed millwrights.

C.2 Erection and Testing
Erect and assemble machinery according to part numbers and match marks. Adjust all parts for precise alignment by pull parts tightly against supporting members by use of clamps, temporary bolts, or other approved means before drilling and reaming holes for connecting bolts. Install all machinery within the specified tolerances and such that satisfactory operation is achieved.

Do not install machinery unless mounting surfaces are clean of dirt, paint and other foreign materials.

Securely tighten connecting screws, bolts and nuts to torque values specified in the shop drawings or according to AASHTO if not specified on the shop drawings.

C.3 Bolting
Unless otherwise specified or shown in the plans, drill bolt holes in machinery parts for connection to supporting steelwork in the shop a minimum of 1/16-inch diameter smaller than the finished bolt diameter or drill from solid at assembly. Drill and ream at final assembly.

Where turned bolts are to be used for connecting machinery to structural steel or steel supports, do not pre-drill the bolts holes in the steel, unless otherwise specified or shown in the plans. Sub-drill turned bolt holes from solid at assembly or erection after proper alignment of the machinery. Do not ream turned bolt holes to the full size until final assembly after alignment is complete.

Clean all contact surfaces of structural steel to which machinery is to be bolted, according to the specifications for structural steel to be bolted together, before bolting.

Spot face bolt holes through unfinished, rough cast surfaces for the head and nut.

Except as noted herein or in the plans, tension ASTM A325M and ASTM A449 bolts, used for connecting steel machinery parts together or to structural steel and whose nominal threaded diameter is less than or equal to 1-1/2 inches, according to the bolted connection requirements of AASHTO and the standard specifications.

Tension turned bolts larger than 1½ inches (nominal thread diameter) by turning the nut ¼ turn past snug tight and adding a backing nut (double nuts) turned snug tight, unless otherwise noted in the plans. If the plans require a turned bolt larger than 1½ inches to be tensioned, hydraulically tension the bolt as detailed below. If the plans require a turned bolt larger than 1½ inches to be tensioned but do not specify a preload value, tension the bolt to 70 percent of the minimum tensile strength of the bolt, using the nominal area of the threaded section.

C.4 Hydraulic Tensioning of Fasteners

Where required, hydraulically tension pre-tensioned anchors, including undercut anchors, anchored into concrete and high strength bolts whose length exceeds 12 bolt diameters. Bolts conforming to the requirements of ASTM A325M and ASTM A449 may be tensioned by the hydraulic tensioning method. Provide additional length of threaded shank as required to perform hydraulic tensioning operations. Hydraulically tensioned bolts are subject to the following requirements:

- Unless specified otherwise in the plans, bolts must have a grip exceeding 12 inches or 12 bolt diameters, whichever is greater.
- Tension anchors embedded into concrete by use of the following procedures:
    1. Set and tension all bolts anchoring any one component at one time unless otherwise permitted in the contract documents.
    2. Tension all bolts sufficiently to set them. The minimum setting load is as specified by the bolt manufacturer.
    3. Perform final tensioning after all bolts are set. Tension all bolts by the use of a centerhole calibrated hydraulic ram. Mount the ram on a chair which permits access to the anchor bolt nut. Tension bolts to 70 percent of the specified minimum tensile strength of the bolt or the anchor bolt manufacturer's recommendation, whichever is greater, unless otherwise specified or shown in the plans. Snug the nut down prior to releasing the hydraulic pressure to the ram.
    4. Just after installation and again 60 days later, check the preload by again applying hydraulic tension. The bolts must have a tension equal to 60 percent of the minimum specified tensile load applied. No movement of the nut shall be detected under this load.
    5. If the preload test fails, the bolts must again be tensioned to original tensioning values and the nut retightened. Retesting at 60 day intervals will be required until the bolts are accepted.

C.5 Pins
Provide all pins that are round, true, smooth and straight. Unless otherwise required herein or on the plans to have a finer finish, the surfaces will have maximum roughness of 64µin.

C.6 Welding
Unless otherwise noted herein or in the plans, perform all welding and weld inspection of machinery according to ANSI/AASHTO/AWS D1.5.

C.7 Adjusting Rear Live Load Shoes
Before and after rear live load shoe adjustments, verify that the bascule leaves deck height between the two bascule leaves are level over the width of the roadway at both the forward and rear joints. The rear live load shoes shall be adjusted to achieve equal contact with all the strike plates. Adjust the rear live load shoes with the center locks disengaged and no traffic on the bridge. The rear live load shoes can be adjusted by turning/screwing rear live load shoe component up and down until the assembly achieves full contact with the strike plate. Full contact will be considered when a 0.002 inch feeler gauge cannot be inserted between the rear live load shoe and the strike plate. After full contact, continue turning the rear live load shoe into the strike plate until the new keeper plate can be attached to the new fixed plate.

Verify all rear live load shoes are in full contact after center locks have been driven, make adjustments as required to achieve full contact on all rear live load shoes.

C.8 Lubrication of Machinery
Connect grease fittings with tubing or fittings so that grease is introduced directly into the grease grooves for distribution. Tubing is to be extended from the bearings to convenient grease stations. Provide tubing supports at increments not to exceed 3 feet between supports.

Immediately after erection and before operation, lubricate all rotating and sliding parts and fill all gear housings with the approved lubricants specified on lubrication charts.

C.9 Painting of Machinery
Apply field touch-up paint to any applied coatings that are damaged during construction and installation. A SSPC-SP 2 hand Tool Cleaning or a SSPC-SP 3 power Tool Cleaning according to Steel Structures Painting Council Specification 2 and 3 will be required on all metal surfaces to be painted. Blast cleaning near the drive machinery is not allowed. All paint and debris as a result of surface preparation is to be removed from the site and property disposed of. Protect the bearings and gears from debris during the surface preparation process.

C.10 Protection for Shipment
Coat all finished metal surfaces as soon as practical, after machining, with rust-inhibitive coatings. Coat non-stainless shims with rust-inhibitive coating prior to shipment and wipe clean before installation. Completely protect machinery parts from weather, dirt and

foreign materials during manufacture and store indoors while awaiting installation. All surfaces must have those surfaces thoroughly coated with rust-inhibitive coatings and must be skidded or crated for protection during handling, shipment and storage.

Bag and crate mounting hardware and other small parts for shipment. Provide and secure tags, recording the part number, to each part with wire or plastic ties prior to shipment.

C.11 Startup and Testing Requirements

Implement startup procedures that protect the equipment from damage and ensure safe working conditions during bridge operations throughout construction. This section identifies specific requirements related to movable bridge startup operations. All testing must be performed in daylight hours without the presence of significant wind, rain, lightning or other adverse weather. Sufficient contractor personnel must be stationed to perform a single dedicated task. Two-way communication must be established between all locations and personnel. Testing must be witnessed by the engineer.

C.11.1 Functional Checkout

Complete and document all testing prior to or during the operational testing consisting of the "Functional Checkout." Items to be verified and documented include:

- Verification all the new proximity limit switches on all the center lock assemblies are working as intend.
- All the existing rear live load shoes make full contact with the existing strike plates.
- Verification the new oil lubrication piping on the north secondary reducer on the far leaf does not leak at any time of bridge operations.
- Verification that the all the speed reducers properly contain correct type and amount of oil lubricant.
- Verification the new vent piping and back inspection plate on the center lock reducer does not leak at any of the piping connections and back inspection plate at all angles of bridge openings.
- Verification that new primary reducer output seals do not leak at any time of bridge operations.
- Verification that new remote grease stations and connecting lube lines located all the existing trunnion bearings do not leak at any on the fitting connections.
- Verification that no unusual noise is emitted from any of the drive machinery during operation of the leaf and the bridge operates normally with no issues or errors.

Submit testing procedures for the functional testing, to include any tables or other forms to be used for documentation of the test results, for review and acceptance, prior to the functional checkout.

Payment for all testing and functional checkout activities related to all of the drive machinery is included in the lump sum payment for Mechanical Work Bascule Span.

C.12 Protection of Existing Equipment

During construction, all equipment must be protected from damage as a result of construction operations and contamination from dust and debris. Should any equipment become contaminated, immediately clean the equipment, re-lubricate, and protect from further contamination. The bridge must not be operated and no enclosed equipment opened during any period in which construction operations can contaminate the equipment.

D Measurement

The department will measure Mechanical Work Bascule Span as a single lump sum unit for the bascule span mechanical work acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Mechanical Work Bascule Span	LS

Payment is full compensation for furnishing all material and labor required to fabricate and install in working order the bascule span mechanical work as shown on the plans and as described herein.

The cost of furnishing and fabricating machinery support weldments including furnishing and installing connection bolts between machinery and machinery supports is included in bid item "Mechanical Work Bascule Span".

26. Miscellaneous Electrical Work, Item SPV.0105.03.

A Description

This special provision describes furnishing labor, tools, equipment and materials necessary for the installation, finishing, testing, and making fully operational new spanlock proximity limit switches and the light emitting diode (LED) lighting units mounted to the underside of the soffit of the Bridge Control House as shown on the Plans and as directed by the engineer.

The work shall comply with the regulations of the latest National Electrical Code including all local and state codes.

It is the intention of the contract plans to call for completely finished work, fully tested and ready for reliable and consistent operation. Furnish, deliver, and install any apparatus, appliance, materials, or work not shown on the plans but mentioned in the special provisions or vice versa, or any incidental accessories necessary to make the work complete in all respects and ready for operation, to be furnished, delivered, and installed without additional expense to the department.

A.1 Scope

The work under this item shall include, but is not limited to, the following:

- The removal existing proximity limits attached to the outer locks.
- Furnishing and installing new proximity limits on each span lock for both driven and pulled. This work includes all conduit, wiring, brackets, mounting hardware, PLC and HMI programming and miscellaneous appurtenances associated with the work required for a complete, fully operational system.
- The removal of the existing incandescent lighting units attached to the underside of the existing Control Building soffit, including all conduit, wiring, junction boxes, mounting hardware and appurtenances associated with these lighting units. The work shall include removing the existing conduits and cables (homerun feed) for these lighting units all the way back to the existing Near Side Lighting Panel.
- Conduit, wiring, junction boxes, fittings, mounting hardware and connections required for installation of new LED lighting units to the underside of the Control House soffit including installing a new homerun feed to the existing Near Side Lighting Panel.
- Any work required to modify the existing Near Side Lighting Panel to make the necessary connections to provide power to the new LED lighting units, including providing a new branch circuit breaker in the existing panel.

A.2 Related Provisions

Unless otherwise noted, work under this special provision shall conform to Section 651 - General Requirements for Electrical Work of the WisDOT Standard Specifications.

A.3 Coordination of Electrical Work

The contract documents are diagrammatic in showing certain physical relationships which must be arranged within the electrical work, and which must interface with other work including utilities and mechanical work. Coordinate electrical work with the work of other trades to eliminate conflicts. Advise other trades of openings required in their work for the subsequent move-in of large units of electrical equipment.

Schedule and arrange electrical work in a neat, well organized manner.

A.4 Electrical Journeymen

A.4.1 Designation of Electrical Journeymen

Provide a listing of pre-qualified electrical journeymen to perform the electrical work according to this special provision. Perform all work either by, or under the immediate supervision of an electrical journeyman. For this project, “under the immediate supervision” is defined to mean that the journeyman is in the immediate vicinity and physically involved in performing the electrical work. It is the intention of this special provision that the journeyman’s knowledge, talents, and skills in performing certain critical work will be judged and approved by the engineer and that the journeyman will do the actual work utilizing those talents and skills. Helpers are expected to aid the journeyman in the performance of the work and not to act as non-credentialed surrogates of a remote journeyman. Non-approved helpers may only perform tasks of a support nature

that do not directly involve responsibility for the installation, connection, or adjustment of electrical materials.

A.4.2 Qualification of Electrical Journeymen

Each electrical journeyman must hold, at a minimum, an active journeyman electrician's license, by examination, in the State of Wisconsin, and have at least five years' of experience in industrial electrical work. The journeyman must also have knowledge and experience on emergency power systems and other electrical devices required to operate the movable bridges. Each journeyman must be pre-approved by the engineer based on submitted documentation of licensing, training and experience history. The engineer might also require a demonstration of knowledge of the tool and technique requirements of specialty electrical work to be performed including, but not limited to: conductor pulling, termination, testing, conduit and device mounting before the journeyman will be permitted to perform such specialty work.

B Materials

Provide all new materials that conform to the standards of the Underwriters Laboratories, Inc., in every case where such a standard has been established for the particular type of materials in question. Submit to the engineer for approval, prior to purchase of any materials or equipment required to be furnished and installed, a complete list of all such materials and equipment including manufacturer's catalog (part and/or model) numbers, catalog data sheets, illustrations, and shop drawings.

B.1 General

In addition to the standard specifications, provide and install all equipment according to the applicable requirements of the following:

- AASHTO Standard Specifications for Movable Highway Bridges
- NFPA 70, National Electrical Code
- NFPA 79, Electrical Standard for Industrial Machinery

Ensure that equipment and its installation present a neat and attractive appearance. Use new heavy-duty industrial design, equivalent to the best grade of the particular type of equipment made by the leading manufacturers of such equipment.

Furnish new equipment that is compatible with all other associated equipment in the system. Ensure that all items furnished perform the function indicated on the approved drawings and as required by the design.

Equipment sizes and space shown on design drawings are approximate. Ensure that all required electrical equipment components can be adequately located and installed under the control house soffit and elsewhere on the project as required.

Provide the department a written warranty for operation of the light fixtures and for all of the components furnished under this work, to cover a period of one year after Substantial Completion as described in article "Control of the Work". Have normal manufacturer warranties extended to cover parts and labor for this period.

B.2 Lighting

B.2.1 General Requirements

The luminaires shall be 31-watt LED fixtures with a standard LED color temperature of 3000K with an 80 CRI, designed for surface ceiling mounting and U.L. listed for wet locations with a IP65 rating. The luminaire shall provide a minimum of 1320 lumens, have a -20 degree Celsius start temperature and an integral 120V through 277V electronic LED driver with 0-10V dimming. The luminaire shall have a black die-cast aluminum housing, clear tempered glass lens and an anodized aluminum reflector. The luminaires shall be rated for operation between 120-volt and 277-volts. The enclosure shall be fully gasketed for weather tight operation using a molded silicone rubber "U-channel" gasket.

Construct, wire, and install all luminaries in compliance with all applicable national, state and local codes. Unless otherwise specified, each luminaire shall be listed by the Underwriters' Laboratories as suitable for application and location shown and conform to any additional regulations necessary to obtain approval for use in locations shown. If Underwriters' Laboratories listing of luminaire is waived, all electrical components shall be UL recognized. Include provision for through-branch circuit wiring for all luminaires. Provide internal wiring of luminaires with a minimum number of splices and make all splices with approved connectors. Ensure wiring and connectors are suitable for the current, voltage and temperature to which they will be subjected.

No self-tapping screws, bled metal tapping methods, or rivets shall be employed for fastening any parts which must be removed to gain access to electrical components requiring service or replacement, or for fastening any electrical component or support for same. All luminaire support systems, mounting frames, screws, bolts, nuts, and other fastening and latching hardware shall be made of stainless steel, unless otherwise specified.

Final finish shall be uniform, even in appearance, free from runs and surface imperfections. Luminaires for use at wet or damp locations must be suitably gasketed to prevent access of moisture into electrical components or enclosing diffusers, lenses, or globes.

Unpainted aluminum parts of luminaires must be anodized with coating of sufficient weight to protect against corrosion. Anodize visible surfaces and trim with minimum coating of 35 mg. per square inch.

Reflectors must be free of ripples, tool marks and other surface imperfections.

Ensure lenses, diffusers or louvers contained in frames are removable, but positively held within the frame so that hinging or other motion of the frame will not cause the diffusing element to drop out.

Provide exterior fixtures, accessories, and enclosures complete with gaskets to form weatherproof assembly.

Provide a photocell to control the exterior lighting system. The photocell shall be a hermetically sealed, made of cadmium sulfide and be rated for the system voltage with single throw contacts rated 1,000 watts. The unit shall turn ON below three footcandles and OFF at 3 to 10 footcandles. Provide a time delay to prevent accidental switching from transient light sources. Mount a directional lens in front of the cell to prevent fixed light sources from creating a turn-off condition. Aim the unit according to manufacturer's instructions.

B.3 Boxes

B.3.1 Boxes and Enclosures

All pullboxes, junction boxes, and all enclosures, panels and cabinets, and all other miscellaneous housings used for pulling wires, terminating wires, or otherwise used to install electrical equipment must conform to the following requirements unless specifically stated elsewhere. For all locations, provide 4X (stainless steel) enclosures that are UL-listed for the application. If unavailable, then NEMA 4 rating may be substituted. Specify all mounting hardware material for Supporting Devices. Specify construction requirements device boxes. Provide sheet metal enclosures with “O-ring” sealing hub connectors. Equip the conduit ends projecting into all boxes and enclosures with insulated bushings. Drill no box or enclosure for more conduits than actually enter it. Use of wire ways (metallic or non-metallic) and/or sheet metal troughs with hinged or removable covers are acceptable provided their use is limited and locations are approved by the engineer. Comply with the 40 percent fill allowance per NEC.

B.4 Terminal Blocks

Provide terminal blocks for any conductor that enters or leaves a cabinet or junction box. Provide spring clamp style terminal blocks for conductors 10 AWG and smaller. Use terminal blocks rated at a minimum 600 Volts, 30 A. Provide terminal blocks with a minimum of three conductors with field side of terminal blocks utilizing two conductors. Use terminal blocks fabricated from Allen Bradley, Wago, Phoenix or approved equal.

Use manufacturer accessories for jumpers, end barriers, clamps and wire markers. All terminal block markers will be printed. Hand marked terminals will not be accepted.

B.5 Electrical Identification

B.5.1 Conduit Markers

Provide adequate marking of conduits, which are exposed or concealed, in accessible spaces, to distinguish each run as either a power or signal/communication conduit. Use orange banding with black lettering except as otherwise indicated. Provide snap-on type plastic markers. Indicate voltage ratings of conductors where above 240 VAC. Locate markers at both ends of conduit runs, near switches and other control devices, near items of equipment served by the conductors, at points where conduits pass through walls, floors or into non-accessible construction, and at spacing of not more than 50 feet along each run of exposed conduit. Switch-leg conduit and short branches for power connections need not be marked, except where conduit is larger than 1 inch. Both ends of each marked conduit run shall be provided with a brass tag having a number stamped thereon according to the

conduit diagrams. These tags shall be securely and permanently fastened to the conduit ends with bare copper wire.

B.5.2 Wire and Cable Markers

Provide wire and cable markers that are vinyl cloth, split sleeve, or tubing type. Wire numbers printed on wire insulation are not acceptable.

B.6 Supporting Devices

B.6.1 General

Conduit and equipment supports and anchors and fasteners.

- NECA - National Electrical Contractors Association.
- ANSI/NFPA 70 - National Electrical Code.
- UL - Underwriter Laboratories, Inc.

B.6.2 Manufacturer's Instructions

Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

B.6.3 Regulatory Requirements

Conform to requirements of ANSI/NFPA 70. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

B.6.4 Material Requirements

Provide adequate corrosion resistance. Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products. Minimum safety factor is 2.0. Framework for supporting boxes, switches, and other externally mounted electrical devices shall be hot-dip galvanized steel. For U-Channel strut systems utilizing bolted construction, all components shall be of the same manufacturer, and shall be 12 gauge and 1-5/8-inch width minimum.

B.7 Conduit and Wiring

B.7.1 General

Furnish and install conduit and raceways in the quantities and sizes required to complete the work as shown on the plans and as required by NEC. Conduit and circuits indicated on plans diagrams and schedule may be recombined in the field where appropriate, with the approval of the engineer. Section Includes: metal conduit, non-metallic conduit, liquid tight flexible metal conduit, and fittings and conduit bodies.

Use rigid galvanized steel conduit for conduit in the utility, entry and operator level rooms. Use PVC coated rigid galvanized steel conduit for all exterior conduit. Use PVC schedule 40 for concrete embedded and installed in a trench, unless the conduit is under a roadway, then use Schedule 80. Use heavy duty extra flexible outdoor rated cable for transitioning from movable leaf to pier connections. Ensure flexible cable is of sufficient length and locate to avoid damage or snagging during bridge operation.

B.7.2 Conduit drawings

Before the initial start of construction, submit a full size drawing showing all conduit runs between all pieces of equipment for review and approval. Provide "as-built" drawing for riser diagrams and schedules.

B.7.3 Definitions:

- Conduit: Pipe that has been treated, threaded, and classified to be suitable for use as an electrical raceway.
- Conduit Body: Fitting with removable cover to allow pulling conductors and which may also provide means for making a tight turn or "tee" connection in conduit.
- Fitting: Accessory component for joining conduit (coupling), connecting conduit to box or enclosure (connector or hub), or providing other functions (such as expansion fitting).

B.7.4 Conform to the following:

- NEMA/ANSI C80.1 - Rigid Steel Conduit - Zinc Coated (GCR).
- NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
- NEMA RN 1 - Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit.
- NEMA TC 2 - Electrical Polyvinyl-Chloride (PVC) Tubing and Conduit.
- NEMA TC 3 - PVC Fittings for use with Rigid PVC Conduit and Tubing.
- NEMA TC 14 - Filament-Wound Reinforced Thermosetting Resin Conduit.
- UL 651 - Schedule 40 and 80 Rigid PVC Conduit.
- NCEA 101 - Standard Practice for Good Workmanship in Electrical Construction.
- NEMA VE 2 - Metal Cable Tray Installation Guidelines.
- UL 1684 - Reinforced Thermosetting Resin Conduit (RTRC) and Fittings.
- UL 514B - Fittings for Cable and Conduit.
- UL 360 - Liquid-Tight Flexible Steel Conduit.
- UL 6 - Rigid Metal Conduit.

B.7.5 Conduit Requirements:

- Minimum Size: ¾ inch minimum trade size for rigid and PVC, unless otherwise specified. ½ inch for EMT.
- PVC Coated Metal Conduit Description: NEMA RN 1; rigid steel conduit (ANSI C80.1) with external PVC coating, 40 mil thick. Fittings and Conduit Bodies: NEMA FB 1; steel fittings with external PVC coating to match conduit.
- Liquid tight Flexible Metal Conduit Description: UL 360; Interlocked steel construction with PVC jacket. Fittings: NEMA FB 1.
- Non-metallic conduit description: NEMA TC 2, schedule 80 (UL 651). PVC fittings NEMA TC 3 to match conduit. Embedded in concrete use only.

B.8 Conductors

B.8.1 General

For building wire and cable, wiring connectors and connections, and flexible cable, Conform to the following:

- ANSI/NFPA 70 - National Electrical Code.
- ASTM B3/ANSI C7.1 - Standard Specifications for Soft or Annealed Copper Wire.
- UL 83 - Thermoplastic-Insulated Wires and Cable.
- UL 44 - Thermoset-Insulated Wires and Cable.
- UL 854 - Service Entrance Cables.
- UL 1063 - Machine-Tool Wire and Cables.
- UL 1685 - Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical Cables.
- Conform to requirements of ANSI/NFPA 70. Furnish products listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

B.8.2 Project Conditions

Verify that field measurements are as shown on plans. Wire and cable routing shown on plans is approximate unless dimensioned. Route wire and cable as required to meet project conditions. Where wire and cable routing is not shown, and destination only is indicated, determine exact routing and lengths required. Determine required separation between cable and other work. Determine cable routing to avoid interference with other work.

B.8.3 Building Wire and Cable

No aluminum or solid copper conductors allowed. For single conductor insulated wire use no wire smaller than No. 12 AWG for power and lighting circuits and no smaller than No. 14 AWG for control wiring, except that control wiring within a cabinet may be No. 16 AWG. Minimum field wire size is No. 12 AWG for control and No. 10 AWG for motor loads. Use minimum No. 10 AWG for 20 A, 120 VAC, branch circuit home runs longer than 75 feet, and for 20 A, 208/240/277 VAC, branch circuit home runs longer than 200 feet.

Furnish insulated conductors of seven or nineteen strand copper, minimum 98 percent conductivity and connector accessories for copper in sufficient quantities for a complete installation. Use twisted shielded pairs in cases of low level audio or digital signal when required. Provide XHNW, THHW/THWN-MTW insulation rated 600 VAC unless otherwise noted. Provide type SE, USE-2, RHW-2 or RHW insulation for incoming conductors, unless otherwise noted. All field wiring shall be rated 90 ºC.

B.9 Circuit Breakers

Protect electrical circuits with molded case circuit breakers with inverse time delay and instantaneous circuit protection. Operate the breakers with a toggle type handle with a quick-make, quick-break, over-center switching mechanism that is mechanically trip free from the handle. Include provisions so that the contacts cannot be held closed against short circuits and abnormal currents. Tripping because of overload or short circuit shall be shown by the handle automatically assuming a position midway between the manual ON and OFF positions. Ground and polish all latch surfaces. Plug-in type circuit breakers are

not acceptable. Breakers must be completely enclosed in a molded case, bolt-on type construction. For non-interchangeable trip breakers seal their covers; for interchangeable trip breakers seal the trip unit sealed to prevent tampering. Provide non-welding silver alloy contacts with Arc chutes, consisting of metal grids mounted in an insulating support.

Circuit breakers shall conform to the applicable requirements of NEMA Standards, and meet the appropriate classifications of Federal Specifications W-C-375b. Provide molded case breakers of the following types: Thermal magnetic standard type that provides inverse time delay overload and instantaneous short circuit protection by a thermal-magnetic element; or magnetic only standard (Motor Circuit Protector) that provides instantaneous short circuit protection by a front adjustable magnetic element with supplemental thermal overload protection. The adjustment button(s) shall have main setting points and mid-setting points following a linear scale so that each point has a significant value within calibration tolerance.

Provide multi-pole breakers with a single operating handle that is independently removable without disturbing adjacent units or other bus connections and is fastened to the main bus bars with a bolted connection. Plate all copper parts to prevent corrosion. Provide 100 A frame breakers with an interrupting rating of 10,000 A (minimum). Provide larger frame size breakers with an interrupting rating of 22,000 A (minimum).

B.10 Limit Switches

Provide non-contact, magnetically operated proximity style switches. Switch contacts shall be DPDT rated 10A at 120 VAC. Both contacts shall be operated by the same armature. Supply switches that are heavy duty NEMA Type 4 Construction with a stainless Steel housing and temperature rating between -40 ºC and 105 ºC.

C Construction

C.1 General

C.1.1 Codes

Comply with all local codes, all laws applying to electrical installations in effect and with the regulations of the latest edition of the National Electrical Code, where such regulations do not conflict with the laws in effect and with the requirements of the utility company.

C.1.2 Protection of Electrical Equipment

Protect electrical equipment from water damage, especially from rain, snow, condensation, and water dripping or splashing on equipment and wiring, at all times during shipment, storage and construction (prior to final acceptance). Provide temporary electrical connections to equipment heaters, or provide temporary heaters, as required to prevent damage from moisture.

Thoroughly dry out and put through a special dielectric tests as directed by the engineer at no cost to the department, or replace if not tested to the satisfaction of the engineer, any apparatus that has been subjected to possible injury by water or dampness (including the interiors of motor control equipment, cable ends, or any other electrical devices).

C.1.3 Coordination of Electrical Work

The plans are diagrammatic in showing certain physical relationships which must be arranged within the electrical work, and which must interface with other work including utilities and mechanical work. Coordinate as necessary between trades to allow for proper installation of all electrical work and to eliminate conflicts. Locate operating and control equipment to provide easy access, and arrange entire electrical work with adequate access for operation and maintenance, as per the latest NEC requirements.

C.1.4 Field Measurements and Surveys

Prior to development of submittals, conduct field surveys to verify construction dimensions. Identify field dimensions on submittals that have been field verified. Conduct field measurements and surveys as required to supplement information provided to provide a complete and satisfactory fitting and fully operational installation.

C.2 Submittals

Submit electrical equipment, hardware, drawings, testing plans, and documentation for all electrical items provided for the under soffit luminaires.

Submit working plans and shop drawings as prescribed in the contract documents and in this special provision. Clearly mark manufacturer's standard drawings that indicate dimensions and/or options for more than one piece of equipment to clearly indicate what data applies.

Provide a separate submittal package for this and all other electrical bid items unless otherwise indicated. Label each submittal package to indicate the project name and bid item number. Label data sheets for individual components such as motors, limit switches, etc. with the identification numbers shown in the plans and the special provisions.

Submit all components of a bid item by task. Include shop drawings drawn to scale and certified by the manufacturer for all submittals for major electrical equipment. Where wiring diagrams, schematic diagrams, engraving schedules, conduit drawings, interconnection diagrams, one-line, three-line diagrams, etc. are called for or provided, they are to be site specific.

Submittal approval shall be on an “all or none” basis. Provide complete resubmittals even if some items on the original submittals may not have been marked deficient. Provide sufficient time in project schedule to allow for the possibility of repetitious submittals without creating delays to the project. The department will not bear any responsibilities for delays caused by repetitious submittals.

C.3 As-Built Drawings

At the completion of the project, provide complete as-built drawings. As-built drawings will be essentially the same as the working plans and shop drawings submitted for approval but showing all of the changes made during construction.

C.3.1 Working Drawings

Prepare and submit to the engineer for approval the following working drawings and documents executed according to the provisions of the contract:

- A drawing to scale showing the location, depth, and length of cables, together with the proposed method of installing the cables and all equipment. Submit drawings for approval prior to placing cable and equipment orders with any manufacturer.
- Provide Manufacturer's data sheets (including type, length, and minimum bending radius), certified test data, and cross section drawings for each cable. Where existing cables and conduit penetrations are to be re-used, provide details of how the new cables, conduits and fittings are to be installed. Where new conduits are routed through new or existing penetrations sleeves, provide details on sealing the openings.

C.4 Terminal Block Requirements

Provide terminal blocks with white marking strips. Group them for easy accessibility unrestricted by interference from structural members and instruments. Provide 2 inches, minimum on each side of each terminal block to allow an orderly arrangement of all leads to be terminated on the block. Do not terminate more than two wires on any one terminal position. Permanently label each terminal block, device, fuse block, and both ends of each conductor to coincide with the identification indicated on the manufacturer's wiring diagrams.

C.5 Electrical Identification (Nameplates)

Degrease and clean surfaces to receive nameplates and tape labels. Install nameplates and tape labels parallel to equipment lines. Secure nameplates to equipment fronts using a minimum of two stainless steel screws or approved manufacturer's recommended adhesive. Secure nameplates to inside of recessed panelboard doors in finished locations.

Provide wire markers on each conductor in panelboard gutters, pull boxes, outlet and junction boxes, and at load connection. Identify with branch circuit or feeder number for power and lighting circuits, and with control wire number as indicated on schematic and interconnection diagrams or equipment manufacturer's shop drawings for control wiring.

C.6 Supporting Devices

Do not fasten supports to piping, ductwork, mechanical equipment, or conduit. Do not drill any holes in any structural steel or concrete members without approval of engineer. All mounting bolts, nuts, washers, and other hardware used for fastening boxes, disconnect switches, devices, lighting outlet boxes, conduit clamps, and similar devices shall be Monel metal, bronze, or stainless steel. Use hexagonal bolt heads and nuts with spring lock washers under all nuts. Use minimum 3/8-inch diameter bolts except as may be necessary to fit the mounting holes in small devices, outlet boxes, and similar standard equipment.

Fasten hanger rods, conduit clamps, and outlet and junction boxes to structure using proper fasteners. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchor on concrete surfaces; sheet metal screws in sheet

metal studs; and wood screws in wood construction. Attachment to steel or concrete shall be by stainless steel straps or hangers held at not less than two points by galvanized bolts or lag screws. Concrete inserts shall be fabricated from stainless steel. Install surface-mounted cabinets and panel boards with a minimum of four anchors. Do not use powder-actuated anchors. Do not drill or weld structural steel members.

C.7 Conduit and Wiring

Unless otherwise specified in the plans, install conduit according to NECA Standard Practice. Install nonmetallic conduit according to manufacturer's instructions. Arrange supports to prevent misalignment during wiring installation. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers. Do not use plastic straps or plastic hangers. Group related conduits; support using conduit rack. Construct rack using steel channel; provide space on each for 25 percent additional conduits. Fasten conduit supports to building structure and surfaces under provisions of supporting devices. Attachment to steel or concrete shall be by galvanized or stainless steel straps, hangers held at not less than two points by galvanized, stainless steel bolts, or lag screws. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary support.

Provide pull boxes or junction boxes wherever necessary to facilitate the installation of the conductors. Pull boxes are used for pulling conductors through. No splicing or terminations are permitted. Junction boxes are used for field connections of conductors. Conductors are to be connected using approved terminal blocks. Do not use condulets for pulling more than 10 conductors or for making such turns in conduit runs or for branching conductors, except for indoor wiring to lighting fixtures and receptacles. At any point where a conduit crosses an expansion joint, or where movement between adjacent sections of conduit can be expected, install a bronze or alloy expansion fitting.

Use of flexible conduit is allowed only for the connection of motors, limit switches, and other devices that must be periodically adjusted in position. Make connections between the rigid conduit system and all motors, and limit switches with flexible conduit with couplings and threaded terminal fittings. Do not exceed 2 feet in length for flexible conduit extensions. Install flexible conduit with bonding jumpers and arrange to drain away from the device it serves.

Provide at both ends of each conduit run a brass tag having a number stamped thereon according to the conduit diagrams. Secure and permanently fasten these tags to the conduit ends with bare copper wire. Run concealed in walls, ceiling, or floor conduits in the control room. Run exposed conduits in the bascule piers. Where conduits pass through the floors or walls of the control room, provide galvanized rigid conduit sleeves for free passage of the conduits. After the conduits are installed, caulk openings with an elastic compound and provide escutcheon plates on the interior walls, ceilings, and floors for airtight fits.

Arrange conduit to maintain headroom and present neat appearance. Route exposed conduit parallel and perpendicular to walls. Route conduit in and under slab from point-to-point. Maintain adequate clearance between conduit and piping. Maintain 12-inch clearance between conduit and surfaces with temperatures exceeding 104 ºF.

Connect conduit sections to each other with threaded couplings. Install conduits to be continuous and watertight between boxes or equipment. Protect conduits at all times from the entrance of water and other foreign matter by capping or well plugging overnight when the work is temporarily suspended.

Conduits mounted exteriorly on parts of the steel work must be set not less than 1½ inch clear from the supporting structure to prevent accumulation of dirt. Space parallel horizontal conduit 1 inch apart and securely clamp to the steel work to prevent rattling and wear. The clamps, in general, shall consist of U-bolts attached to angle or channel iron supports bolted to the members. The spacing of the clamps shall not exceed 6 feet of spacing per NEC 346 and 347 whichever is less.

Cut conduit square using saw or pipe cutter; de-burr cut ends. Bring conduit to shoulder of fittings; fasten securely. Long running threads will not be permitted. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum. Embedded conduit stub-outs shall be provided with threaded 316 stainless steel.

Use conduit hubs to fasten conduit to sheet metal boxes. Install no more than equivalent of three 90 degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use factory elbows for bends in metal conduit larger than 2 inches. All field bends shall be long sweep, free from kinks, and of such easy curvature as to facilitate the drawing in of conductors without injury to the conductors. Make conduit runs with as few couplings as standard lengths will permit.

Avoid moisture traps; provide junction box with drain fitting at low points in conduit system. Install all conduits so that they will drain properly and provide drainage tees at low points where required. Provide suitable pull string in each empty conduit except sleeves and nipples. Use suitable caps to protect installed conduit against entrance of dirt and moisture. Carefully clean all conduits before and after installation. Upon completion of the conduit installation, clear each conduit with a tube cleaner equipped with a mandrel of a diameter not less than 80 percent of the nominal inside diameter of the conduit, and draw in the conductors. Identify conduit under provisions of the Electrical Identification section of this special provision.

C.8 Conductors

Do not splice conductors (except for “pigtail” leads and lighting circuits). Use solderless pressure connectors with insulating covers for wire splices and taps, No. 8 AWG and smaller, for lighting circuits. Make lug connections with high-pressure indent connector

tools as recommended by the lug manufacturer. Use split bolt connectors for wire splices and taps, No. 6 AWG and larger, and all motor connections or other approved method.

Tape uninsulated conductors and connectors with electrical tape to 150 percent of the insulation value of conductor. Make splices and taps to carry full ampacity of conductors without perceptible temperature rise. All splices shall be waterproof. Terminate spare conductors with electrical tape.

Neatly train and lace wiring inside boxes, equipment, and panelboards. Place an equal number of conductors for each phase (three-phase system) of a circuit in same raceway or cable. Make conductor lengths for parallel circuits equal. Pull all conductors into a raceway at the same time. Use soap base wire pulling lubricant for pulling No. 4 AWG and larger wire. Tighten all connections to manufacturer's recommendations. Take precautions to avoid “sawing” through PVC conduit. Pull ropes shall be braided. Bare conductors shall not be pulled through PVC conduits. Conduit shall be swabbed with lubricant prior to pulling the conductors.

Identify wire and cable under provisions of Electrical Identification. Identify each conductor with its circuit number or other designation indicated on plans.

C.9 Limit Switches

Install limit switches according to manufacturer's instructions. Provide all mounting hardware and supports as required. The method of mounting and hardware allows for field adjustment at construction and for future maintenance. Terminate all limit switches on terminal blocks. Install drainage “T” below takeoff for limit switches on all applicable conduit runs. Submit to the engineer, for review, prior to installation the limit switch target materials, shapes, and mounting methods.

C.9.1 Testing

After installation, test switches, in the presence of the engineer, to determine if operation is as intended. Switches will relay signal to the control console and/or control panel at intended "point of operation." Switches will provide positive indications with no intermittent signals or flickering of lights on control console. Adjust position of switches as required.

C.9.2 Installation

Fabricate brackets out of stainless steel material with 3-axis adjustability. Use stainless steel material for all mounting hardware. Use painted steel for sensing plates.

C10 Programming

Connect limits switches to spare PLC inputs in PLC racks located on each side of the channel. Program each limit to provide indication display of each individual span lock on the existing HMI display. At the direction of the engineer, program an all locks pulled and all locks driven bypass-able interlock in series with the existing cam limit switch interlocks.

D Measurement
The department will measure Miscellaneous Electrical Work as a single lump sum unit for the electrical work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Miscellaneous Electrical Work	LS

Payment is full compensation for furnishing and installing the electrical components, control system, and documentation, for the miscellaneous electrical work.

27. Pedestrian Warning Gate, Item SPV.0105.04.

A Description
This special provision describes furnishing labor, tools, equipment, and materials necessary for providing a pedestrian warning gate assembly, including the anchor bolts.

This special provision also includes the removal and disposal of the existing pedestrian warning gate and anchor bolts.

A.1 Submittals
Submit the following for each component of the Traffic Gate Assembly bid item:

- Submit manufacturer's shop drawings
- Submit product data
- Submit manufacturer's installation instructions
- Submit operation and maintenance data

A.2 Related Provisions
Unless otherwise noted, work under this special provision shall conform to standard spec 651 - General Requirements for Electrical Work.

A.3 Removal of the Existing Pedestrian Warning Gate Assembly
The existing pedestrian warning gate assembly shall be removed completely from the existing foundation, become property of the contractor and be properly disposed of offsite. The existing anchor bolts shall be cut flush with the existing pavement. This work will not be paid for separately and shall be included in the cost of this bid item.

The existing gate power and control cables in existing conduit shall be protected from damage during the gate assembly removal and replacement work. The existing cables will be re-used and connected to the new pedestrian gate assembly. The contractor and engineer will meet in the field and make a condition assessment of the existing gate power/control cables and conduits prior to the removal of the existing gate. Any damage incurred to the existing cables and conduits during gate removal and replacement work shall be replaced in kind by the contractor at no additional cost to the department.

B Materials
Furnish a vertical to horizontal type, electrically operated pedestrian warning gate assembly at the location shown in the plans. The gate shall have a 5'-6" aluminum/fiberglass arm with LED warning lights.

B.1 Traffic Gate Assemblies
House the operating mechanism and main control components in a weatherproof housing. constructed of .188-inch (4.8-mm) carbon steel, hot dip galvanized after fabrication. Exterior surfaces shall be painted aluminum. All fasteners shall be corrosion resistant. Design the housing for easy removal of the arm shaft assembly as a unit, including bearings and main arm crank. Fully gasket and seal the arm assembly mounting and shaft openings.

Use full cross bronze straps for mounting front and rear access doors with slip-off type hinges and stainless steel pins. Furnish two door handles per door, with a vise action to compress a neoprene bulb-type gasket to seal the door openings.

Provide anchor bolts for the gate assembly. Quantity, size and spacing of the anchor bolts for new gate installation shall be per manufacturer's recommendations. The anchor bolts shall be with drilled into the existing concrete and set with epoxy adhesive to adequately support the entire gate assembly including all attachments.

During the opening and closing cycles, begin the gate arm movement with zero velocity and accelerate smoothly, reaching maximum velocity at mid stroke (45 degrees) then decelerate smoothly to zero velocity at full stroke (90 degrees) without whip or bounce. Standard operating time is 13 seconds for full opening or closing cycle. Size gate assemblies and anchorages to handle the weight of the arm used and to operate against a wind speed of 50 MPH.

Design the main arm shaft with a minimum of 1½-inch diameter AISI 4150 with a minimum tensile strength of 140,000 psi. Mount the shaft in heavy duty re-lubricable ball bearings. The warning arm shall pivot in the vertical plane via a mechanical 4-bar linkage utilizing cranks keyed to the main arm shaft and transmission shaft and an adjustable connecting rod between a pair of self-aligning spherical rod ends. The connecting rod shall be of ¾-inch (19 mm) diameter AISI 4150. The linkage shall be driven by a fully enclosed, double reduction, worm gear speed reducer. Gear ratio used shall produce an operation time of 5 seconds.

The motor voltage and phase shall be as specified by the engineer to match the existing gate. The motor horsepower shall be a minimum of ½ hp. The motor shall be a C-face design and shall be mounted directly to the transmission. The motor shall be instantly reversing and overload protected.

The motor shall be equipped with a solenoid-release, automatic brake. The brake shall have a manual release lever to permit manual operation of the gate during emergencies or setup.

Equip gate with a manual motor disconnect switch and with an automatic disconnect switch, pre-wired at the factory to break the motor leads. Door safety switches shall be installed and set at the factory to break the control circuit when any door is opened.

The light circuit shall be equipped with a heavy-duty, solid state, fully factory-wired, with two alternately flashing circuits and one steady burn circuit with a flash rate of 0.50 second ON, 0.50 second OFF. Provide all mounting hardware, solid state flashing circuitry, a clearly labeled terminal block, a heat sink, and a transformer when required.

A gate limit switch assembly shall be provided in a self-contained unit. The assembly shall provide 4 independent SPDT control switches. Switches shall be rated for 15 amps, 480 VAC. Switches shall be controlled by individually adjustable cams. The limit switch assembly design shall permit adjustment of all cams with the gate in any position. Use corrosion resistant non-ferrous materials for limit switch body, shafts and cams.

B.1.1 Gate Arms

Use 4-inch (102-mm) square, 6005-T5 aluminum extruded tubing for gate arm with 3-inch high strength UV-resistant fiberglass extension. Cover the front and rear arm surfaces with alternating red and white high intensity reflective sheeting.

Verify gate arm length and coordinate the existing sidewalk and roadway layout. Ensure that the gate arm is covered on both sides with alternating 16-inch reflective red and white engineering grade sheeting. Provide a break-away shear pin base for each gate arm so that when excessive force is applied to arm, the pin shears, the arm shall then swing 45 degrees horizontally and drop free of the gate operator thus minimizing damage to operator. Design shear pin base and lightweight arm assembly for easy, rapid reinstallation or replacement by one person.

Furnish and install weatherproof LED warning lights on the gate, to operate on 120 VAC.

C Construction

Verify system voltage matches gate requirements, Install according to manufacturer's instructions. Make all electrical connections to provide proper operation of the traffic gates, lights, etc. Make connections to control system, manually test hand crank, and power test traffic gates to ensure proper operation of gate operator, gate arm lights and gate interlock.

Install pressure type terminal blocks inside the housing on the roadway side and terminate all control wires on terminal blocks and clearly label all circuits. Use No. 16 AWG stranded or larger wire. Ensure that the color code or number conductors match wiring diagram.

Ensure that gear limit switches to the drive mechanism are in step with the actual gate position at all times, whether operation is by power or manual mode. Do not use cams or screws to set the limit switches. Do not use designs requiring battery backup methods to ensure position control in the event of power failure.

C.1 Testing

Visually observe the operation of gates. Adjust the balance weights of the gate arm to provide a smooth operation with little to no bounce. Adjust limits, cables and arm rods so gate arm is level when in the down position.

D Measurement

The department will measure the Pedestrian Warning Gate as a single lump sum 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.0105.04	Pedestrian Warning Gate	LS

Payment is full compensation for providing, installing, testing and making fully operational the pedestrian warning gate.

28. Bascule Span Steel Sidewalk Panels, Item SPV.0165.01.

A Description

This special provision describes furnishing, fabricating, and erecting structural steel associated with the sidewalk on the bascule span of the bridge as shown on the plans and specified herein. Perform all work for this item according to all applicable requirements of the standard specifications except as modified herein or as shown on the plans.

This work includes, but is not limited to, the following items:

- Removing and disposing of existing sidewalk panels
- Slip resistant steel panels for bascule sidewalks.
- All shop installed and field installed fasteners for steel.
- Furnishing, installing and final tensioning of bolts connecting sidewalk panels to the top flanges of the sidewalk beams.

B Materials

B.1 General

Furnish steel conforming to ASTM A709 grade 50.

B.1.2 Screws and Anchors

Amend standard spec 506.2.5.1 as follows:

Provide 2 inch long, 3/8" diameter countersunk galvanized screws and hex nuts to fasten sidewalk panels to the top flanges of the sidewalk beams.

Provide only high strength screws that meet FHWA requirements for rotational tests.

B.1.3 Slip Resistant Steel Panels

Furnish slip resistant steel plate of the size, shape, and thickness shown on the plans for the sidewalk on bascule span conforming to ASTM A709 Grade 50. Provide a surface with a static coefficient of friction of 0.50 minimum in both dry or wet conditions. Do not provide additional joints or splices not shown on the plans without prior written approval of the engineer. Cover surface of the steel plate with a Martensitic alloy having a hardness of at least 55 on the Rockwell "C" scale. Use plasma stream deposition to assure maximum adhesion to the substrate. Provide surface bond strength for the coating no less than 4,000 psi. Hot-dip galvanize, the slip resistant steel plate after fabrication, drilling of all holes for bolted connections, and application of the slip resistant coating.

B.1.4 Submittals

Prepare and submit complete steel shop detail drawings and steel erection drawings.

B.2 Galvanizing

B.2.1 General

Hot-dip galvanize the following items, including all appurtenant parts according to ASTM A123 or A153 as applicable.

- Slip resistant steel panels for the sidewalks
- All screws, unless noted otherwise on the plans

B.2.2 Screws and Nuts

Tap galvanized nuts oversize according to ASTM A563 and all other applicable ASTM standards. Supplementary Requirement S1, Lubricant and Test for Coated Nuts will apply.

Assemble and ship from a single manufacturer all screws and nuts. The manufacturer is responsible for all mill tests and other reports and will perform the rotational tests and certification.

Perform rotational capacity tests according to FHWA requirements.

B.2.3 Repair of Damaged Galvanized Coating

Repair any galvanized areas that are damaged by abrasion and other causes according to ASTM A780, using either the Zinc-Based Solders or the Zinc-Rich Paints type of materials. Follow the requirements of Annexes A1, Repair Using Zinc-Based Alloys, and/or A2, Repair Using Zinc-Rich Paints.

Alternatively, repair damaged areas as specified in standard spec 635.3.4.

B.4 Welding

Perform welding in conformance to the requirements of standard spec 506.3 supplemented by the following:

Perform all welding and non-destructive testing for in conformance to the current edition of the AWS/AASHTO Bridge Welding Specifications, D1.5 and the details shown on the plans. Perform all welding by the electric arc process. The symbols on these plans indicate only the general type of weld required. Submit to the engineer for approval, the proposed weld geometry to be used in fabrication. Include machining or grinding required to maintain 2½ to 1 transitions. If a fillet weld size is not shown on the plans, size the weld according to WisDOT requirements for minimum weld size based on material thickness.

C Construction

C.1 General

Remove the existing sidewalk panels in a manner that does not damage the existing steel curb, sidewalk beam flanges, and other related items to remain. The old steel panels will become the property of the contractor and shall be properly disposed of offsite.

Use the new panels as a template for drilling though the existing sidewalk beam support flanges. Mounting holes drilled in the existing supports are to be offset from the existing holes a minimum of 3 inches.

Tack weld the mounting anchor nuts to the underside of the existing support flanges.

Place the new sidewalk panel and attach new anchor screws. Tighten the anchor screws sufficiently to prevent loosening.

Maintain bascule span balance during construction. This may be completed by replacing each plate individually. Alternative methods must show that the balance will be maintained and must be approved by the engineer prior to construction. At no time should more than four panels be removed from the span. Coordinate with the engineer and the bridge house operator during construction to maintain marine traffic.

D Measurement

The department will measure Bascule Span Steel Sidewalk Panels by the square foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Bascule Span Steel Sidewalk Panels	SF

Payment is full compensation for removing and disposing the existing panels, furnishing, fabricating, transporting and delivering, and erecting all sidewalk panels.

Included in this bid item is the preparation of shop drawings.

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:

550.5.2 Piling

Add the following as paragraph three effective with the December 2015 letting:

(3) The department will not entertain a change order request for a differing site condition under 104.2.2.2 or for a quantity change under 104.2.2.4.3 for the Piling bid items. Instead the department will adjust pay under the Piling Quantity Variation administrative item if the total driven length of each size is less than 85 percent of, or more than 115 percent of the contract quantity as follows:

Percent of Contract Length Driven	Pay Adjustment
< 85	(85% contract length - driven length) x 20% unit price
> 115	(driven length - 115% contract length) x 5% unit price

643.2.1 General

Replace paragraph two with the following effective with the December 2015 letting:

(2) Use reflective sheeting from the department's approved products list on barricades, drums, and flexible tubular marker posts.

Errata

Make the following corrections to the standard specifications:

641.2.9 Overhead Sign Supports

Correct errata adding back accidentally deleted paragraphs one through three.

(1) Provide commercially fabricated overhead sign supports conforming to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years with a wind importance factor of 1.00. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the methods of appendix C of those AASHTO standards.

(2) Design structures, listed as applicable structure types in the AASHTO standards, to the fatigue category criteria as follows:

1. Structures carrying variable message signs:
   - Category I criteria for structures over all roadway types.
2. Structures carrying type II or III signs:
   - Category I criteria for structures used over highways and free flow ramps.
   - Category II criteria for structures with arms greater than 30 feet used over local roads and city streets.
   - Category III criteria for structures with arms 30 feet or less used over local roads and city streets.

(3) Use the posted speed limit of the roadway beneath the structure for truck-induced gusts.

(4) Submit shop drawings identified by structure number, design computations, and material specifications, to the engineer before erecting sign supports. Provide tightening procedures for mast arm or luminaire arm to pole shaft connections on the shop drawings. Have a professional engineer registered in the state of Wisconsin sign, seal, and date the shop drawings and certify that the design conforms to AASHTO standards and the contract.

(5) Provide steel pole shafts and mast arms zinc coated according to ASTM A123. Provide tapered pole and arm shafts with a minimum taper of 0.14 inch per foot for single-member vertical and single-member horizontal structure components. Provide bolts and other hardware conforming to 641.2.2.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

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

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

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

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

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.

http://wisconsindot.gov/rdwy/cmm/cm-02-28.pdf

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

http://wisconsindot.gov/hcciDocs/contracting-info/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
BROWN COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2015

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	30.85	17.61	48.46
Carpenter	32.72	16.00	48.72
Future Increase(s): Add $1.42/hr on 6/1/2015; Add $1.42/hr on 6/1/2016.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	33.86	17.96	51.82
Future Increase(s): Add $1.87 on 6/1/15;Add $1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	29.20	17.42	46.62
Future Increase(s): Add $.75/hr on 6/1/2015.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	23.73	19.09	42.82
Ironworker	29.27	23.97	53.24
Future Increase(s): Add $1.15/hr on 6/1/2015.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Line Constructor (Electrical)	39.50	17.72	57.22
Painter	23.62	9.07	32.69
Pavement Marking Operator	24.10	26.04	50.14
Piledriver	33.24	16.00	49.24
Future Increase(s): Add $1.44/hr on 6/1/2015; Add $1.44/hr on 6/1/2016.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Roofer or Waterproofer	21.00	6.77	27.77
Teledata Technician or Installer	22.25	12.24	34.49
Tuckpointer, Caulker or Cleaner	30.85	17.61	48.46
Underwater Diver (Except on Great Lakes)	35.40	15.90	51.30
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.55	15.57	51.12
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	31.60	14.98	46.58
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	27.65	13.44	41.09
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.68	12.83	38.51
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.63	33.38
TRUCK DRIVERS			
Single Axle or Two Axle	25.18	18.31	43.49
Future Increase(s): Add $1.15/hr on 6/1/2015. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Three or More Axle	25.28	18.31	43.59
Future Increase(s): Add $1.15/hr on 6/1/2015. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	30.27	21.15	51.42
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Pavement Marking Vehicle	33.22	14.77	47.99
Shadow or Pilot Vehicle	24.37	17.77	42.14
Truck Mechanic	24.52	17.77	42.29
LABORERS			
General Laborer	30.13	15.14	45.27
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	18.00	0.00	18.00
Landscaper	30.13	15.14	45.27
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	26.76	15.14	41.90
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.33	8.92	27.25
Railroad Track Laborer	17.00	3.00	20.00
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type).	37.72	21.15	58.87
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.	37.22	21.15	58.37
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub	36.72	21.15	57.87

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.72	21.15	57.87
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.17	21.15	57.32
Fiber Optic Cable Equipment.	28.89	17.95	46.84
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	41.65	21.71	63.36
Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs.	35.72	15.94	51.66

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.			
Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks-Great Lakes ONLY.	35.46	20.40	55.86

CONTRACT: 20160510027 PROJECT(S): 9210-17-60 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Contract Items					
0010	204.0170 Removing Fence	711.000 LF		.		.
0020	509.1500 Concrete Surface Repair	4,370.000 SF		.		.
0030	517.3000.S Structure Overcoating Cleaning and Priming (structure) 01. B-5-134	LUMP	LUMP			.
0040	517.4000.S Containment and Collection of Waste Materials (structure) 01. B-5-134	LUMP	LUMP			.
0050	616.0208 Fence Chain Link 8-FT	714.000 LF		.		.
0060	619.1000 Mobilization	1.000 EACH		.		.
0070	634.0614 Posts Wood 4x6-Inch X 14-FT	17.000 EACH		.		.
0080	637.2210 Signs Type II Reflective H	434.210 SF		.		.
0090	637.2230 Signs Type II Reflective F	110.750 SF		.		.

CONTRACT: 20160510027 PROJECT(S): 9210-17-60 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	638.2602 Removing Signs Type II	54.000 EACH		.		.
0110	638.3000 Removing Small Sign Supports	16.000 EACH		.		.
0120	642.5001 Field Office Type B	1.000 EACH		.		.
0130	643.0100 Traffic Control (project) 01. 9210-17-60	1.000 EACH		.		.
0140	643.0300 Traffic Control Drums	2,784.000 DAY		.		.
0150	643.0420 Traffic Control Barricades Type III	424.000 DAY		.		.
0160	643.0705 Traffic Control Warning Lights Type A	991.000 DAY		.		.
0170	643.0715 Traffic Control Warning Lights Type C	559.000 DAY		.		.
0180	643.0800 Traffic Control Arrow Boards	209.000 DAY		.		.
0190	643.0900 Traffic Control Signs	991.000 DAY		.		.
0200	643.1000 Traffic Control Signs Fixed Message	12.000 SF		.		.

CONTRACT: 20160510027 PROJECT(S): 9210-17-60 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0210	643.1050 Traffic Control Signs PCMS	58.000 DAY		.		.
0220	SPV.0060 Special 01. Strip Seal Gland Replacement	4.000 EACH		.		.
0230	SPV.0060 Special 02. Girder Surface Repair	98.000 EACH		.		.
0240	SPV.0060 Special 03. Remove Steel Plate	2.000 EACH		.		.
0250	SPV.0105 Special 01. Control House Windows, Soffits, and Doors	LUMP	LUMP			.
0260	SPV.0105 Special 02. Mechanical Work Bascule Span	LUMP	LUMP			.
0270	SPV.0105 Special 03. Miscellaneous Electrical Work	LUMP	LUMP			.
0280	SPV.0105 Special 04. Pedestrian Warning Gate	LUMP	LUMP			.
0290	SPV.0165 Special 01. Bascule Span Steel Sidewalk Panels	849.000 SF		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE