



CITY OF MILWAUKEE

DEPARTMENT OF PUBLIC WORKS

INFRASTRUCTURE SERVICES DIVISION
BRIDGES AND BUILDINGS SECTION
STRUCTURAL PLANNING AND DESIGN

CENTER LOCK REPLACEMENT AT THE WATER STREET BASCULE BRIDGE OVER THE MILWAUKEE RIVER

LOCATED IN
MILWAUKEE, WI

JOB NUMBER: BR100160105

OFFICIAL NOTICE NUMBER: 21-1-2016

DATE: MARCH, 2016

00 01 07/1

CITY OF MILWAUKEE, WISCONSIN
DEPARTMENT OF PUBLIC WORKS
INFRASTRUCTURE SERVICES DIVISION
BRIDGES AND BUILDINGS SECTION

Specifications

Governing

CENTER LOCK REPLACEMENT AT THE
WATER STREET BASCULE BRIDGE
OVER THE
MILWAUKEE RIVER

Milwaukee, Wisconsin

Job No. BR100160105



MARCH, 2016

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SECTION 00 01 15 – LIST OF DRAWING SHEETS

The following listed Drawings accompany and form a part of the project contract documents along with these specifications and generally illustrate the nature of the work.

<u>Sheet No.</u>	<u>Title</u>
T1	Title Sheet
G1	General Notes & Quantities
S1	Site Plan
D1	Detour Plan
D2	Traffic Control Quantities
	Mechanical Plans
M1	Machinery Notes
M2	Center Lock Demolition
M3	Center Lock Assembly
M4	Center Lock Details 1 of 2
M5	Center Lock Details 2 of 2
	Electrical Plans
E1	General Electrical Notes
E2	Schematic

END OF SECTION 00 01 15

**CITY OF MILWAUKEE
GENERAL OFFICIAL NOTICE TO CONTRACTORS**

Separate sealed bids for each project will be received until 10:30 a.m. of the bid opening date at which time bids will be publicly opened and read for furnishing all material and doing all work for each project in accordance with the requirements of the respective Official Notice on the bid form furnished in accordance with plans, specifications, contract documents, and proposed form of contract on file in the office of the Department of Public Works, Frank P. Zeidler Municipal Building, Room 506, Milwaukee, Wisconsin 53202.

PROSPECTIVE BIDDERS ARE TO CAREFULLY EXAMINE AND REVIEW ALL CONTRACT DOCUMENTS AND MATERIALS IN SAID OFFICE BEFORE SUBMITTING BID.

Affidavits of No Interest must accompany the bids, and the failure of prospective bidders to comply with these requirements may disqualify the bid.

The Contractor/Lessee agrees to comply with all applicable requirements of the American with Disabilities Act of 1990, 42 U.S.C. Section 12101, Et. Seq. the TDD Number for Public Works is (414) 286-2025.

As a part of the bid each bidder shall submit a full and complete list of all the proposed subcontractors and the class of work to be performed by each, which list shall not be added to nor altered without the written consent of the Commissioner of Public Works.

All Contractor(s) and subcontractor(s) are required to furnish or have on file a certificate of insurance in accordance with the insurance provisions of the General Specifications.

All Contractor(s) and subcontractor(s) are subject to the prevailing wage rates and hours of labor as prescribed by the Common Council of the City of Milwaukee consistent with provisions of Section 66.293 of the Wisconsin Statutes.

Copies of the actual work classifications and wage and fringe benefit rates enforced on this project are available in Room 506 of the Frank P. Zeidler Municipal Building.

Corporate surety will be required on performance and payment bonds for all projects listed in the following Official Notice. All applicable charter and statutory provisions and ordinances, all the provisions of this official notice, invitation to bid, general and detailed specifications, special provisions, proposal, schedule of fixed prices, addendum and plans for this project and all other contract documents set forth in the invitation to bid will be incorporated and made part of the contract as if therein set forth in full.

Tie bids, when the lowest ones, will be decided by the Commissioner of Public Works.

The Commissioner of Public Works reserves the right to reject any or all bids.

END OF SECTION 00 11 14

**CITY OF MILWAUKEE
SPECIFIC OFFICIAL NOTICE NO. 21-1-2016**

Sealed bids will be opened on **Tuesday, March 29, 2016** at 10:30 A.M. for the **Center Lock Replacement at the Water Street Bascule Bridge**, located in Milwaukee, Wisconsin 53207.

Bid Security Required: Bond (either Electronic thru Bid Express or Paper), Certified Check, Cashier's Check, or Cash to accompany bid: 10% of the Contractor's Base Bid. For those bids being submitted through BID EXPRESS and using a Paper Bond, the contractor may fax a signed/executed copy of the bid bond to the Department of Public Works Contract Office at 414-286-8110. HOWEVER, THE FAXED COPY OF THE BOND MUST BE RECEIVED BY NO LATER THAN 10:30 A.M. ON THE SAME DATE THAT THE BIDS ARE DUE FOR THAT SPECIFIC OFFICIAL NOTICE, or the bid will be considered non responsive. The original bid bond document will then need to be submitted by the contractor the Department of Public Works Contract Office, Rm. 506, Municipal Building, immediately upon being notified that they are the apparent low bidder.

Completion Date: Start Date September 12, 2016
35 Working Days

Liquidated Damages, per diem: \$750.00

THE SMALL BUSINESS ENTERPRISE REQUIREMENT FOR THIS CONTRACT IS 0%.

For a complete listing of City of Milwaukee certified SBE firms, see the Office of Small Business Development's (OSBD) website at Milwaukee.gov/osbd. If there are any questions regarding SBE certified firms, please contact OSBD office at (414) 286-5553.

THE RESIDENT PREFERENCE PROGRAM PARTICIPATION REQUIREMENT FOR THIS PROJECT IS 0%.

THE APPRENTICESHIP REQUIREMENTS FOR THIS CONTRACT ARE: NONE

IMPORTANT NOTICE: The Invitation to Bid, all bid documents and the Plans and Specifications for the listed project are all available electronically on the DPW website AS WELL AS **on the BID EXPRESS Website**. At this time, bids can be submitted using either Bid Express OR by purchasing and submitting paper bids in the usual manner. However, Bidders are strongly encouraged to utilize the electronic and/or Bid Express methods of obtaining bid documents and bid express for submitting bids, as in the near future the Department of Public Works intends to have bid documents available only electronically and through Bid Express, and to accept bid submittals only via Bid Express. Electronic documents can be obtained via <http://www.mpw.net/bids/docs/21-2016> The Bid Express website is located at www.bidexpress.com. Any required addenda or response related to listed projects will be posted on both the DPW and Bid Express websites. At this time there are still a limited number of hard copies of the bid documents available at the address listed below. At this time there are still a limited number of hard copies of the bid documents available at address listed below. **IF YOU ONLY PRINT THE DOCUMENTS FROM THE DPW WEBSITE**

PLEASE CALL 414-286-3314 TO HAVE YOUR COMPANY'S NAME AND CONTACT INFORMATION PLACED ON THE PLAN HOLDERS' LIST.

PAYMENT MONITORING REQUIREMENTS

All Contractors awarded a contract valued at \$25,000.00 or more are required to participate in training on the City of Milwaukee's B2GNow contract compliance software. Contractors must complete the training no later than 30 days after the date of contract award. Throughout the contract term, Contractors are required to regularly provide timely payment information in the City's contract compliance software.

Please contact the Office of Small Business Development (OSBD) at 414-286-5553 should you have any questions or concerns regarding the training or reporting process.

PAYROLL MONITORING REQUIREMENTS: The Prime Contractor awarded this project is required to participate in training on the City of Milwaukee's LCP Tracker Labor Compliance Software after the date of contract award. Throughout the contract term, Contractors are required to regularly provide timely payroll information via LCP Tracker.

Please contact the DPW Contracts Office at 414-286-3314 should you have any questions or concerns regarding the training or reporting process.

Plans and specifications will be furnished to the prospective bidders upon payment of a \$10.00 non-refundable fee in Room 506, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin 53202.

A \$10.00 per set additional non-refundable fee is required to obtain bid documents by mail. Plans are sent via U.S. Mail unless other arrangements are made by the contractor.

Contractor must comply with all provisions of the CITY OF MILWAUKEE GENERAL OFFICIAL NOTICE TO CONTRACTORS published above and at http://mpw.milwaukee.gov/services/bids_home

THE CONTRACTOR SHALL SPECIFICALLY NOTE THE SMALL BUSINESS ENTERPRISE, RESIDENCY AND APPRENTICESHIP FORMS FOR THIS PROJECT. IF THE FORMS ARE NOT FILLED OUT PROPERLY, IT WILL BE CAUSE FOR REJECTION OF THE BID.

THE TRAINING INCENTIVE **WILL NOT** APPLY TO THIS PROJECT.

Plans and project manual for this project may be viewed in the Infrastructure Services Division, Structural Design Unit, Room 907, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin.

END OF SECTION 00 11 17

SECTION 00 21 13 – INSTRUCTIONS TO BIDDERS

PART 1 – GENERAL

1.1 SUMMARY

- A. See also Instructions to Bidders in the “General Specifications” of the Department of Public Works, City of Milwaukee, Wisconsin, dated January 31, 1992, and all subsequent addenda.

1.2 BID FORM

- A. Submit a unit price for each item of work as indicated on the drawings and specified herein, complete in every respect.
- B. Bids will not be accepted in any form except on the bid form included with these specifications.
- C. The Contractor must recognize and abide by the right of the Owner (City of Milwaukee) to accept or reject any or all bids in the best interests of the City.

1.3 CONTRACT AWARD

- A. In case of discrepancy between the total Base Bid indicated in the proposal and that obtained by adding the products of the quantities of work and the unit prices, the unit prices shall govern. Any errors found in the total Base Bid indicated will be corrected, and the contract award shall be made to the lowest responsible bidder based on the corrected total Base Bid.
- B. The Commissioner of Public Works will award the contract based on the Base Bid only.

1.4 CONTRACT BREAKDOWN

- A. Shortly after the award of the contract, each Contractor shall submit a list showing the cost breakdown of the items in his contract. This list will be used as a basis for estimates of work completed for partial payment.

1.5 SITE VISIT

- A. All Contractors shall visit the site, consult the drawings and specifications, be familiar with the work of other Contractors and determine for himself all conditions affecting the work.
- B. Failure by a Contractor to be familiar with the project shall not release him from any obligation under this contract to complete the work in strict conformity with the plans and specifications and all City, State and Federal codes or regulations pertaining to the work.

1.6 TIME FOR COMPLETION

- A. The time allowed for completion is stated in the Specific Official Notice and shall start with the date on the Notice to proceed which will be sent to the Contractor directly following the signing of the

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contract. The time allowed includes the time required for fabricating and procuring material and doing the work at the Water Street Bascule Bridge.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 21 13

SECTION 00 72 00 – GENERAL CONDITIONS

PART 1 – GENERAL

1.1 DEPARTMENT OF PUBLIC WORKS GENERAL SPECIFICATIONS

- A. Provisions of the Department of Public Works General Specifications dated January 31, 1992, and all subsequent addenda, shall apply to all contractors and subcontractors working on the project. Copies of the General Specifications may be obtained from the Department of Public Works General Office, Room 506, Frank P. Zeidler Municipal Building, 841 North Broadway, Milwaukee, Wisconsin.

1.2 DEFINITIONS

- A. Commissioner: Commissioner of Public Works
- B. Division: Infrastructure Services Division.
- C. City Engineer: The City Engineer of the Infrastructure Services Division.
- D. Project Inspector: The authorized representative of the Commissioner assigned to make detailed inspection of any or all portions of the work and materials thereof.
- E. Addenda: Writing or graphic instruments issued prior to the execution of the contract which modify or interpret the bidding documents, including drawings and specifications by additions, deletions, clarifications or corrections. Addenda will become part of the contract documents when the contract is executed.
- F. Contract Drawings: Drawings of the work to be done as listed hereafter in the List of Drawing Sheets.
- G. Base Bid: Amount of money stated in the Bid Form as the sum of which the bidder offers to perform the work.
- H. Additive Alternate: Additional amount of money stated in the Bid Form as the sum of which the bidder offers to perform the alternate work.

1.3 CONTROL OF WORK AND MATERIALS

- A. Detail and Shop Drawings: Shop drawings and other additional drawings which may be required for each branch of the work shall be prepared by each respective contractor unless otherwise directed by the City Engineer. Prints shall be the same size as contract documents when practical. Prints of each drawing shall be submitted to the City Engineer for approval before proceeding with the work. Changes ordered by the City Engineer shall be made and revised prints submitted as above. The City Engineer's approval of drawing shall not relieve the contractor of responsibility for errors.

- B. Primary Lines and Grades: Will be established by the Contractor.
- C. Construction Lines and Grades: The Contractor must bear sole responsibility for the correct transfer of all construction lines and grades from the primary lines and grade points. He shall take such measurements from existing work as may be necessary to insure the proper construction of his work.
- D. Material Orders and Shipping Statements: The Contractor shall furnish to the City Engineer at least two (2) copies of all material orders and shipping statements. Itemized weights of the materials and individual units of finished work shall be shown.
- E. Weighing of Materials and Fabricated Units: The weighing of materials and fabricated units such as structural steel, casing, etc., when required, shall be done in the presence of the Commissioner's representative. The Contractor shall be responsible for the satisfactory weighing of such materials and units.
- F. Consignment and Delivery of Materials: The materials for the work shall be consigned to the contractor and he shall be responsible for the delivery of all materials required for the completion of the contract.

1.4 SAMPLES AND TESTS

- A. Method of Sampling: Samples of materials proposed or furnished for work may be taken by the Commissioner at any time; at the point of manufacture, point of delivery, or site of work. They will be selected, as far as practicable, in accordance with standard methods of sampling such materials as specified in the standard of the American Society of Testing and Materials. All sampling shall be done by authorized representatives of the Commissioner. Selections will be in an orderly and systematic manner, insuring samples representative of the lot.
- B. A.S.T.M. Standards: Wherever the abbreviation A.S.T.M. is used in connection with the number of a standard specification, the specification referred to shall be the standard of the American Society for Testing and Materials, designated by that number, including all revisions in affect on the date of award of the contract. Should a revised or amended standard be issued by the American Society for Testing and Materials which, in the opinion of the Commissioner, conflict with or causes undesirable changes in the standards referred to herein, the Commissioner reserves the right, by means of addenda to the specifications, to continue under the provisions of the pertinent standard referred to herein.
- C. Cost of Test Specimens and Samples: All test specimens of metals and all samples of non-metals required for tests shall be furnished by the Contractor without cost to the City.
- D. Cost of Tests: All tests on test specimens of metals will be made at the expense of the Contractor and the original test on samples of non-metals will be made at the expense of the City. In all cases, the testing procedure will be in accordance with standard A.S.T.M. tests for such materials. Subsequent tests of non-metals requested by the Contractor, or when such tests are permitted by A.S.T.M. Specification and approved by the Commissioner or subsequent tests ordered by the Commissioner will be made at the expense of the Contractor.

1.5 PROJECT COORDINATION

- A. Contractors are required, so far as possible; to arrange work and to dispose of materials so as not to interfere with the work or storage of materials of other contractors or City forces engaged upon the work.
- B. Contractor shall give full cooperation to other trades and furnish any information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay.
- C. Where the work of a contractor will be installed in close proximity to the work of other trades, or where there is evidence that the work of a contractor will interfere with the work of other trades, he shall assist in working out space conditions to make satisfactory adjustments.
- D. If a contractor installs work before coordinating it with other trades or so as to cause interference with work of other trades, he shall make necessary changes in his work to correct the condition without extra charge.
- E. Contractors are required to join their work to that of others in a proper manner, and in accordance with the spirit of the plans and specifications, and to perform the work in the proper sequence in relation to that of other contractors, and as may be directed by the Project Inspector.

1.6 TECHNICAL SPECIFICATIONS AND DRAWINGS

- A. All contractors shall have complete sets of plans and specifications on the job site at all times.
- B. Anything mentioned in the Technical Specifications and not shown on the Drawings or shown on the Drawings and not mentioned in the Technical Specifications shall be as if shown on or mentioned in both. In case of difference between Drawings and Technical Specifications, the Technical Specifications shall govern. In case of any discrepancy in drawings or Technical Specifications, the matter shall be immediately submitted to the City for decision. Said discrepancy shall not be adjusted by the contractor.

1.7 SAFETY REGULATIONS

- A. All work shall be done in accordance with the safety requirements set up by the Wisconsin Administrative Code Rules and the Occupational Safety and Health Administration (OSHA).

1.8 CODE RULES

- A. The rulings, regulations and laws of the following shall be complied with in the completion of this project:
 - 1. Wisconsin Administrative Code
 - 2. Occupational Safety and Health Administration (OSHA)

3. Plumbing and Drainage Codes of the City of Milwaukee
4. City of Milwaukee Building Codes
5. Ordinances of the City of Milwaukee

1.9 APPROVALS

- A. Wherever the words “or equal”, or “approved equal”, or similar terms are used, it shall mean as approved by the Commissioner of Public Works or his agent. All drawings, bulletins, and data necessary for an approval shall be submitted in quadruplicate to the City Engineer. Such approval shall apply to design only and shall in no way relieve this contractor from his responsibility for the full performance of his contract. Evaluation of “or equal” products will be made at the time of shop drawing submission.

1.10 GENERAL SPECIFICATIONS

- A. When the General Specifications of the Department of Public Works are in conflict with any other specification referenced herein, the General Specifications of the Department of Public Works shall govern.

1.11 SAVINGS CLAUSE

- A. If any clause, item or other part of these specifications shall be deemed illegal or in conflict with code only that item or clause shall be deemed null and void within the specifications. All other items will remain in effect.

1.12 CONSTRUCTION PROGRESS MEETINGS

- A. The City reserves the right to schedule periodic construction progress meetings requiring the attendance of the contractors’ and subcontractors’ representatives as deemed necessary by the City.

1.13 MATERIAL HAULING

- A. All trucks involved in the hauling of removals, granular backfill, crushed aggregate, bituminous concrete pavement or any other construction material subject to spillage, either by wind or vibration, to or from the project on any highway or street shall be equipped with tail gates, adequate sideboards and canvas covers which will seal the truck box against spillage.
- B. The Contractor shall not perform work on nor haul materials of any kind along or across any portion of the project or adjacent streets on any holidays unless he shall notify and receive permission from the City Engineer.

1.14 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

- A. The Contractor shall remove existing bridges, and other structures or parts thereof within the roadway right-of-way, which are replaced or which interfere with new construction, unless otherwise provided in the contract. Such removal shall be incidental to other bid items, unless a separate bid is taken on removal of old structures as hereinafter provided, or unless portions of existing structure units fall within the limits of the excavation for structures.
- B. Structures beyond the limits of the right-of-way shall remain in place unless otherwise specified in the contract.

1.15 PLANS AND WORKING DRAWINGS

- A. The approved plans will be supplemented by such working drawings and computations as are necessary to adequately control the work. It is mutually agreed that all authorized alterations of the approved plans shall be in writing. No changes shall be made on any plan or drawing after the same has been approved by the City Engineer, except by direction of the City Engineer.
- B. Working drawings for structures shall be furnished by the contractor and shall consist of such detailed plans and computations as may be required for the prosecution of the work and which are not included in the plans furnished by the engineer. Such working drawings shall be approved by the engineer. Plans may also be required and in such cases shall be likewise subject to approval, unless approval is waived by the City Engineer.
- C. It is expressly understood, however, that approval by the City Engineer of the contractor's working drawings does not relieve the contractor of any responsibility for accuracy of dimensions and details or conformity of his working drawings with the approved plans and specifications.
- D. The contract price shall include the cost of furnishing all working drawings and the contractor will be allowed no extra compensation for such drawings.

1.16 CONFORMITY WITH PLANS AND SPECIFICATIONS

- A. All work performed and all materials furnished will be in reasonably close conformity with the lines, grades, cross sections, dimensions and material requirements shown on the plans or indicated in the specifications. It shall be finished to produce quality work and appearance within limits of precision reasonably expected of good construction.
- B. Specific specification values and prescribed tolerance amounts or limits or minimum or maximum values may be specified. Whenever such tolerances or ranges are specified, the production and processing of material or performance of the work shall be so controlled that the material or work will substantially meet the specific value or fall substantially within the specified range or limits and shall only occasionally be of borderline quality or dimensions.
- C. Whenever tolerances, limits or minimum and maximum values are not specified, reasonable and accepted standards or established manufacturing or construction tolerances will be permitted.

- D. The lines, grades, typical sections, and dimensions shown on the plans are subject to adjustment by the engineer during construction, but any deviation of a character not contemplated or provided for in the plans, specifications or working drawings that may be required by the exigencies of construction or otherwise will be determined by the engineer and authorized by him in writing.
- E. In the event the engineer finds materials which are incorporated in the work, or the finished product in which the materials are used, to be not within reasonably close conformity with the plans and specifications, he will then make a determination whether or not reasonably acceptable work has been produced and can be accepted and remain in place. If the engineer determines that reasonably acceptable work has been produced and can be accepted and remain in place, he will document the basis of acceptance by contract modification or as provided elsewhere in these specifications which will provide for an appropriate adjustment in the contract price for such work or materials, either as he deems necessary to conform to his determination based on engineering judgment, or as specifically provided for elsewhere in these specifications.
- F. In the event the engineer finds that the materials, the finished product in which the materials are used, or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the contractor.

1.17 COORDINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS

- A. These specifications, the supplemental specifications, the plans, special provisions and all supplemental documents are essential parts of the contract and a requirement occurring in one is binding as though occurring in all. They are intended to be cooperative, to describe and provide for a complete work. In the event of a discrepancy between the drawing and the figured dimensions thereon, the figured dimensions, unless obviously incorrect, shall govern over scaled dimensions. In the case of a discrepancy between the supplemental specifications and these specifications, the supplemental specifications shall govern; between the plans and these specifications or the supplemental specifications, the plans shall govern; and between the special provisions and these specifications, supplemental specifications or the plans, the special provisions shall govern.
- B. The contractor shall take no advantage of any apparent error or omission in the plans or specifications, and the engineer shall be permitted to make such corrections and interpretations, as may be deemed necessary for the fulfillment of the intent of the plans and specifications.

1.18 PERSONAL LIABILITY OF PUBLIC OFFICIALS

- A. In carrying out any of the provisions of this contract or in exercising any power or authority granted to them thereby, there shall be no personal liability upon the Department, its agents and employees, it being understood that in such matters they act as agents and representatives of the City. Any right of action by the contractor against the Department, or its agents or employees, is hereby expressly waived.

1.19 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES

- A. The contractor shall give notice to the proper authorities in charge of street, gas and water pipes, electric and other conduits, railroad, poles, manholes, catch basins, sewers and all other property that may be affected by the contractor's operations, at least three days excluding Saturday, Sunday and legal holidays, before breaking ground.
- B. The contractor shall not hinder or interfere with any persons in the protection of such property, or with the operations or utilities, at any time. The contractor must obtain all necessary information in regard to existing utilities. He shall protect such utilities from damage and unnecessary exposure.
- C. The contractor must also obtain all necessary information in regard to the planned installation of new utilities and make proper provision and give proper notification so that new utilities can be installed at the proper time without delay to the contractor or unnecessary inconvenience to the owner. The location of new underground utilities, planned to be installed concurrently with the highway improvements, shall not be covered with pavement prior to the installation of such facilities.

1.20 MEASUREMENT OF QUANTITIES

- A. General: All work completed under the contract will be measured by the engineer according to United States standard measure. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

The completed work will be measured for final payment by the engineer, as specified for the various items elsewhere in these specifications, to determine the quantities of such items of work performed, except when agreements have been made providing for compensation on the basis of plan quantities as hereinafter provided or when contract change orders have been executed providing for other methods of measurement. The contractor will be paid for the actual amount of work performed in accordance with the contract, as shown by the final measurements or upon the basis of plan quantities.

If the contractor and the engineer agree in writing that the quantities of certain items or portions of items of work as set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, are in substantial agreement with the actual quantities of work performed, compensation therefore will be made based on the quantities set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, without measurement thereof, and the contractor shall accept such compensation as full payment for such items or portions of items. When standard manufactured items are specified such as fences, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, sections dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

- B. Volume: All materials which are specified for measurement by the cubic yard in the vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. No allowance will be

made for the settlement of material in transit.

The measurement of the material, the type and size of vehicle, the determination of capacity and the marking of the vehicle for identification shall conform to the requirements of Section 617 of the standard specification.

When permitted elsewhere in these specifications, or in the special provisions, material specified to be measured by the cubic yard may be weighed and the weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the engineer and shall be agreed to by the contractor before such method of measurement of pay quantities is used.

- C. Weight: All aggregates and bituminous mixtures which are specified for measurement by the ton (2,000 lbs.) shall be weighed on platform scales or other approved scales, furnished by and at the expense of the contractor. Said scales shall be satisfactory to the engineer and they shall be tested by the engineer or by authorized testing firms or agencies as often as the engineer may deem necessary to ensure their accuracy.

When materials are weighed in the hauling vehicle, gross weights shall be measured by the ton may be measured by the cubic yard and the cubic yards will be converted to tons for payment purposes. Factors for conversion from volume measurement to weight measurement will be determined by the engineer and shall be agreed to by the contractor before such method of measurement of pay quantities is used.

1.21 GUARANTEE

- A. The contractor shall guarantee to replace or repair promptly at his own expense, as directed by the Commissioner of Public Works or his agent, all workmanship or materials in which defects may develop within one (1) year from the date of final acceptance of his work. This guarantee includes all damage done by the operator due to faulty equipment, poor installation or poor construction. The City shall also receive any extended guarantees or warranties normally supplied by any vendor or manufacturer for material or equipment incorporated in the work.

1.22 ENVIRONMENTAL PROTECTION

- A. The Contractor shall establish and carry out a program for immediate removal of debris during the bridge rehabilitation in order to prevent the accumulation of unsightly, deleterious and/or potentially polluting materials in the river
- B. Utilize construction methods which will minimize local erosion or siltation.
- C. Place excess dredged or excavated materials in a confined area in such a manner as to preclude the return of polluted materials to the river by surface runoff or by leaching.
- D. Place excess dredged or excavated materials in a confined area in such a manner as to preclude the return of polluted materials to the river by surface runoff or by leaching.

- E. Take special care to avoid any spillage of oil, fuels, or any other types of pollutants while working within or along the banks of the river.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 72 00

SECTION 00 73 01 – INSPECTION CHARGES

PART 1 – GENERAL

1.1 INSPECTION CHARGES

- A. The Contractor will be charged a fee for inspection for each and every day such inspection is required after the time allowed for completion has expired.
- B. The amount of the fee for inspection shall be \$500 per day.
- C. The date of completion is stated in the Specific Official Notice and shall start with the date on the Notice to Proceed which will be sent to the Contractor directly following the signing of the contract. The time allowed includes the time required for fabricating and procuring material and doing the work at the site.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 73 01

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PREVAILING WAGE RATE DETERMINATION
 Issued by the State of Wisconsin
 Department of Workforce Development
 Pursuant to s. 66.0903, Wis. Stats.
 Issued On: 1/8/2016

DETERMINATION NUMBER: 201600002

EXPIRATION DATE: Prime Contracts MUST Be Awarded or Negotiated On Or Before 12/31/2016. If NOT, You MUST Reapply.

PROJECT NAME: ALL PUBLIC WORKS PROJECTS UNDER SEC. 66.0903, STATS-CITY OF MILWAUKEE

PROJECT LOCATION: MILWAUKEE CITY, MILWAUKEE COUNTY, WI

CONTRACTING AGENCY: CITY OF MILWAUKEE-DEPT OF PUBLIC WORKS

CLASSIFICATION:	Contractors are responsible for correctly classifying their workers. Either call the Department of Workforce Development (DWD) with trade or classification questions or consult DWD's Dictionary of Occupational Classifications & Work Descriptions on the DWD website at: dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm .
OVERTIME:	<p>Time and one-half must be paid for all hours worked:</p> <ul style="list-style-type: none"> - over 10 hours per day on prevailing wage projects - over 40 hours per calendar week - Saturday and Sunday - on all of the following 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. <p>Apply the time and one-half overtime calculation to whichever is higher between the Hourly Basic Rate listed on this project determination or the employee's regular hourly rate of pay. Add any applicable Premium or DOT Premium to the Hourly Basic Rate before calculating overtime.</p> <p>A DOT Premium (discussed below) may supersede this time and one-half requirement.</p>
FUTURE INCREASE:	When a specific trade or occupation requires a future increase, you MUST add the full hourly increase to the "TOTAL" on the effective date(s) indicated for the specific trade or occupation.
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.
DOT PREMIUM:	This premium only applies to highway and bridge projects owned by the Wisconsin Department of Transportation and to the project type heading "Airport Pavement or State Highway Construction." DO NOT apply the premium calculation under any other project type on this determination.
APPRENTICES:	Pay apprentices a percentage of the applicable journey person's hourly basic rate of pay and hourly fringe benefit contributions specified in this determination. Obtain the appropriate percentage from each apprentice's contract or indenture.
SUBJOURNEY:	Subjourney wage rates may be available for some of the trades or occupations indicated below with the exception of laborers, truck drivers and heavy equipment operators. Any employer interested in using a subjourney classification on this project MUST complete Form ERD-10880 and request the applicable wage rate from the Department of Workforce Development PRIOR to using the subjourney worker on this project.

This document **MUST BE POSTED** by the **CONTRACTING AGENCY** in at least one conspicuous and easily accessible place **on the site of the project**. A local governmental unit may post this document at the place normally used to post public notices if there is no common site on the project. This document **MUST** remain posted during the entire time any worker is employed on the project and **MUST** be physically incorporated into the specifications and all contracts and subcontracts. If you have any questions, please write to the Equal Rights Division, Labor Standards Bureau, P.O. Box 8928, Madison, Wisconsin 53708 or call (608) 266-6861.

The following statutory provisions apply to local governmental unit projects of public works and are set forth below pursuant to the requirements of s. 66.0903(8), Stats.

s. 66.0903 (1) (f) & s. 103.49 (1) (c) "PREVAILING HOURS OF LABOR" for any trade or occupation in any area means 10 hours per day and 40 hours per week and may not include any hours worked on a Saturday or Sunday or on any of the following holidays:

1. January 1.
2. The last Monday in May.
3. July 4.
4. The first Monday in September.
5. The 4th Thursday in November.
6. December 25.
7. The day before if January 1, July 4 or December 25 falls on a Saturday.
8. The day following if January 1, July 4 or December 25 falls on a Sunday.

s. 66.0903 (10) RECORDS; INSPECTION; ENFORCEMENT.

(a) Each contractor, subcontractor, or contractor's or subcontractor's agent performing work on a project of public works that is subject to this section shall keep full and accurate records clearly indicating the name and trade or occupation of every person performing the work described in sub. (4) and an accurate record of the number of hours worked by each of those persons and the actual wages paid for the hours worked.

s. 66.0903 (11) LIABILITY AND PENALTIES.

(a) 1. Any contractor, subcontractor, or contractor's or subcontractor's agent who fails to pay the prevailing wage rate determined by the department under sub. (3) or who pays less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor is liable to any affected employee in the amount of his or her unpaid wages or his or her unpaid overtime compensation and in an additional amount as liquidated damages as provided under subd. 2., 3., whichever is applicable.

2. If the department determines upon inspection under sub. (10) (b) or (c) that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the department shall order the contractor to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages within a period specified by the department in the order.

3. In addition to or in lieu of recovering the liability specified in subd. 1. as provided in subd. 2., any employee for and in behalf of that employee and other employees similarly situated may commence an action to recover that liability in any court of competent jurisdiction. If the court finds that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the court shall order the contractor, subcontractor, or agent to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages.

5. No employee may be a party plaintiff to an action under subd. 3. unless the employee consents in writing to become a party and the consent is filed in the court in which the action is brought. Notwithstanding s. 814.04 (1), the court shall, in addition to any judgment awarded to the plaintiff, allow reasonable attorney fees and costs to be paid by the defendant.

BUILDING OR HEAVY CONSTRUCTION

Includes sheltered enclosures with walk-in access for the purpose of housing persons, employees, machinery, equipment or supplies and non-sheltered work such as canals, dams, dikes, reservoirs, storage tanks, etc. A sheltered enclosure need not be "habitable" in order to be considered a building. The installation of machinery and/or equipment, both above and below grade level, does not change a project's character as a building. On-site grading, utility work and landscaping are included within this definition. Residential buildings of four (4) stories or less, agricultural buildings, parking lots and driveways are NOT included within this definition.

SKILLED TRADES

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
101	Acoustic Ceiling Tile Installer Future Increase(s): Add \$1.65/hr on 6/1/2016.	35.28	20.96	56.24
102	Boilermaker	30.21	21.97	52.18
103	Bricklayer, Blocklayer or Stonemason Future Increase(s): Add \$1.45 on 06/06/2016 Premium Increase(s): 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.	36.74	19.26	56.00
104	Cabinet Installer Future Increase(s): Add \$1.65/hr on 6/1/2016.	35.28	20.96	56.24
105	Carpenter Future Increase(s): Add \$1.65/hr on 6/1/2016. Premium Increase(s): 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.	35.28	20.96	56.24
106	Carpet Layer or Soft Floor Coverer Future Increase(s): Add \$1.65/hr on 6/1/2016.	35.28	20.96	56.24
107	Cement Finisher Future Increase(s): Add \$1.45 on 05/31/2016	32.88	19.88	52.76
108	Drywall Taper or Finisher Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.05/hr eff. 06/01/2017	30.42	21.19	51.61
109	Electrician Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17 Premium Increase(s): 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.	35.13	23.19	58.32

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
110	Elevator Constructor	43.84	27.09	70.93
111	Fence Erector	24.73	19.69	44.42
112	Fire Sprinkler Fitter	39.66	21.11	60.77
113	Glazier Future Increase(s): Add \$.90/hr eff. 06/01/2016	34.45	18.99	53.44
114	Heat or Frost Insulator	33.53	27.31	60.84
115	Insulator (Batt or Blown)	23.62	11.55	35.17
116	Ironworker	30.77	23.72	54.49
117	Lather	34.13	20.61	54.74
118	Line Constructor (Electrical)	40.81	18.06	58.87
119	Marble Finisher	25.72	18.54	44.26
120	Marble Mason	35.89	18.77	54.66
121	Metal Building Erector	19.00	2.00	21.00
122	Millwright Future Increase(s): Add \$1.35/hr on 6/1/2016.	29.78	26.38	56.16
123	Overhead Door Installer	28.73	0.00	28.73
124	Painter Future Increase(s): Add \$1.00/hr on 06/01/2016; Add \$1.05/hr on 06/01/2017 Premium Increase(s): Add \$.20/hr for paperhanging; Add \$.35/hr for bridge, iron and drywall; Add \$.75/hr for spraying and sandblasting; Add \$.60/hr for EIFS work; Add \$1.00/hr for lead based paint removal.	30.07	21.19	51.26
125	Pavement Marking Operator	30.00	19.61	49.61
126	Piledriver Future Increase(s): Add \$1.60/hr on 6/1/2016. Premium Increase(s): Add \$.65/hr for Piledriver Loftsmen; Add \$.75/hr for Sheet Piling Loftsmen. 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.	30.58	27.54	58.12
127	Pipeline Fuser or Welder (Gas or Utility)	41.01	21.54	62.55
129	Plasterer	30.22	20.53	50.75

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
130	Plumber Future Increase(s): Add \$2/hr on 6/1/16; Add \$2/hr on 6/1/17.	39.62	20.12	59.74
132	Refrigeration Mechanic Future Increase(s): Add \$2.00 on 6/1/16; Add \$2.00 on 6/1/17	42.36	21.99	64.35
133	Roofer or Waterproofer	29.65	18.61	48.26
134	Sheet Metal Worker	37.91	21.05	58.96
135	Steamfitter Future Increase(s): Add \$2.00 on 6/1/16; Add \$2.00 on 6/1/17	42.36	21.99	64.35
137	Teledata Technician or Installer Premium Increase(s): 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.	26.00	17.74	43.74
138	Temperature Control Installer	41.01	21.54	62.55
139	Terrazzo Finisher	25.72	18.54	44.26
140	Terrazzo Mechanic Future Increase(s): Add \$1.45 on 06/06/2016	31.59	19.60	51.19
141	Tile Finisher	30.00	0.00	30.00
142	Tile Setter	30.18	17.34	47.52
143	Tuckpointer, Caulker or Cleaner	34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74
146	Well Driller or Pump Installer Future Increase(s): Add \$1/hr on 6/1/2016; Add \$1/hr on 6/1/2017.	25.32	16.40	41.72
147	Siding Installer	17.00	6.71	23.71
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	20.41	57.14
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	14.96	47.61
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	25.00	12.55	37.55

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	34.47	18.70	53.17
203	Three or More Axle	20.00	18.19	38.19
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.60/hr on 5/30/2016.	33.02	19.15	52.17
205	Pavement Marking Vehicle	20.00	18.19	38.19
207	Truck Mechanic	20.00	18.19	38.19

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer	29.01	17.39	46.40
302	Asbestos Abatement Worker	19.00	0.00	19.00
303	Landscaper	14.00	11.63	25.63
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	20.83	18.39	39.22
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
314	Railroad Track Laborer	17.00	5.43	22.43
315	Final Construction Clean-Up Worker	29.01	17.39	46.40

**HEAVY EQUIPMENT OPERATORS
SITE PREPARATION, UTILITY OR LANDSCAPING WORK ONLY**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
501	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Milling Machine; Boring Machine (Directional, Horizontal or Vertical); Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfgr's Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Crane, Shovel, Dragline, Clamshells; Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Grader or Motor Patrol; Master Mechanic; Mechanic or Welder; Robotic Tool Carrier (With or Without Attachments); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Tractor (Scraper, Dozer, Pusher, Loader); Trencher (Wheel Type or Chain Type Having Over 8 Inch Bucket). Future Increase(s): Add \$1.60/hr on 5/30/2016.	35.52	19.15	54.67
502	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Environmental Burner; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Jeep Digger; Screed (Milling Machine); Skid Rig; Straddle Carrier or Travel Lift; Stump Chipper; Trencher (Wheel Type or Chain Type Having 8 Inch Bucket & Under). Future Increase(s): Add \$1.60/hr on 5/30/2016.	35.52	19.15	54.67
503	Air Compressor (&/or 400 CFM or Over); Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Greaser; High Pressure Utility Locating Machine (Daylighting Machine); Mulcher; Oiler; Post Hole Digger or Driver; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 5/30/2016.	35.22	19.15	54.37
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
505	Work Performed on the Great Lakes Including Crane or Backhoe Operator; Assistant Hydraulic Dredge Engineer; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder; 70 Ton & Over Tug Operator. Future Increase(s): Add \$1.25/hr on 1/1/2017. Premium Increase(s): Add \$.50/hr for Friction Crane, Lattice Boom or Crane Certification (CCO).	44.05	23.24	67.29

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
506	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery. Future Increase(s): Add \$1.25/hr on 1/1/2017.	39.20	23.09	62.29
507	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.	36.72	21.15	57.87

**HEAVY EQUIPMENT OPERATORS
EXCLUDING SITE PREPARATION, UTILITY, PAVING LANDSCAPING WORK**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
508	Boring Machine (Directional); 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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Premium Increase(s): Crane Operators with CCO certification add \$.50/hr. Cranes with boom length over 200 ft. not exceeding 300 ft. OR lifting capacity over 200 ton not exceeding 300 ton add \$.50/hr. Over 300 ton OR 300 ft. add \$.01/hr. per foot OR ton whichever is greater.	41.66	20.65	62.31
509	Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Boring Machine (Horizontal or Vertical); Caisson Rig; 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; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Pile Driver; Versi Lifts, Tri-Lifts & Gantrys (20,000 Lbs. & Over). Premium Increase(s): Crane Operators with CCO certification add \$.50/hr.	41.16	20.65	61.81
510	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Dredge (NOT Performing Work on the Great Lakes); Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Hydro-Blaster (10,000 PSI or Over); Milling Machine; Skid Rig; Traveling Crane (Bridge Type). Premium Increase(s): Crane Operators with CCO certification add \$.50/hr.	40.66	20.65	61.31

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
511	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Environmental Burner; Gantrys (Under 20,000 Lbs.); Grader or Motor Patrol; High Pressure Utility Locating Machine (Daylighting Machine); Manhoist; Material or Stack Hoist; Mechanic or Welder; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tining or Curing Machine; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket).	39.97	20.65	60.62
512	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Grout Pump; Hoist (Tugger, Automatic); Industrial Locomotives; Jeep Digger; Lift Slab Machine; Mulcher; Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	38.09	20.65	58.74
513	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Boatmen (NOT Performing Work on the Great Lakes); Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Elevator; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Forklift; Generator (&/or 150 KW or Over); Greaser; Heaters (Mechanical); Loading Machine (Conveyor); Oiler; Post Hole Digger or Driver; Prestress Machine; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	32.94	20.65	53.59
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment). Future Increase(s): Add \$1/hr on 5/30/2016.	37.04	22.44	59.48
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment).	34.76	20.30	55.06
516	Fiber Optic Cable Equipment	21.00	0.00	21.00

SEWER, WATER OR TUNNEL CONSTRUCTION
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Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).

SKILLED TRADES

CODE	TRADE OR OCCUPATION	FRINGE BENEFITS MUST BE PAID ON <u>All</u> Hours Worked	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
			\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason		35.89	18.77	54.66
105	Carpenter		34.13	20.61	54.74
107	Cement Finisher		31.44	22.39	53.83
	Future Increase(s): Add \$1.75 on 6/1/16.				
	Premium Increase(s): 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.				
109	Electrician		35.13	23.19	58.32
	Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17				
	Premium Increase(s): 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.				
111	Fence Erector		24.73	19.69	44.42
116	Ironworker		32.50	20.58	53.08
118	Line Constructor (Electrical)		40.81	18.06	58.87
125	Pavement Marking Operator		30.00	19.61	49.61
126	Piledriver		30.11	26.51	56.62
130	Plumber		39.95	19.45	59.40
	Future Increase(s): Add \$1.50 on 6/1/16				
135	Steamfitter		41.01	21.54	62.55
137	Teledata Technician or Installer		25.63	17.25	42.88
143	Tuckpointer, Caulker or Cleaner		34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)		31.00	20.43	51.43
146	Well Driller or Pump Installer		25.32	16.40	41.72
	Future Increase(s): Add \$1/hr on 6/1/2016; Add \$1/hr on 6/1/2017.				

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	14.96	47.61
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	22.45	11.84	34.29

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	19.00	0.00	19.00
203	Three or More Axle	19.00	0.00	19.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler	33.69	19.78	53.47
205	Pavement Marking Vehicle	19.00	0.00	19.00
207	Truck Mechanic	19.00	0.00	19.00

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer Future Increase(s): Add \$1.25/hr eff. 06/06/2016 Premium Increase(s): Add \$2.29 for bottomman; Add \$2.15 for concrete manhole builder, bracer, jointman, or pipelayer; Add \$5.44 for blaster. Add \$2.00 for all tunnel work under 15 lbs. compressed air; Add \$2.00 for 0-30 lbs. compressed air; Add \$3.00 for over 30 lbs. compressed air.	29.73	18.32	48.05
303	Landscaper	41.00	0.00	41.00
304	Flagperson or Traffic Control Person	19.31	15.21	34.52
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
314	Railroad Track Laborer	17.00	5.43	22.43

**HEAVY EQUIPMENT OPERATORS
SEWER, WATER OR TUNNEL WORK**

Fringe Benefits Must Be Paid On All Hours Worked

CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY \$	HOURLY FRINGE BENEFITS \$	TOTAL \$
521	<p>Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; 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; Master Mechanic; Pile Driver.</p> <p>Premium Increase(s): Add \$.25/hr for operating tower crane.</p>	38.09	20.80	58.89
522	<p>Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Spreader & Distributor; 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); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type).</p> <p>Premium Increase(s): Add \$.25/hr for operating tower crane.</p>	37.31	20.80	58.11
523	<p>Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Boring Machine (Horizontal or Vertical); Bulldozer or Endloader (Over 40 hp); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Manhoist; Material or Stack Hoist; Mechanic or Welder; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket).</p> <p>Premium Increase(s): Add \$.25/hr for operating tower crane.</p>	36.36	20.80	57.16

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
524	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Environmental Burner; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Hoist (Tugger, Automatic); Grout Pump; Jeep Digger; Lift Slab Machine; Mulcher; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Tining or Curing Machine; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	33.69	21.75	55.44
525	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Loading Machine (Conveyor); Post Hole Digger or Driver; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Premium Increase(s): Add \$.25/hr for operating tower crane.	33.91	20.80	54.71
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	31.89	20.15	52.04
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
528	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
529	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87
530	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.	36.72	21.15	57.87

AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION

Includes all airport projects (excluding buildings) and all projects awarded by the Wisconsin Department of Transportation (excluding buildings).

SKILLED TRADES

CODE	TRADE OR OCCUPATION	FRINGE BENEFITS MUST BE PAID ON <u>All</u> Hours Worked	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
			\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason		31.55	18.52	50.07
105	Carpenter		34.13	20.71	54.84
107	Cement Finisher Future Increase(s): Add \$1.75 on 6/1/16. Premium Increase(s): 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.		33.95	19.88	53.83
109	Electrician Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17 Premium Increase(s): 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.		35.13	23.19	58.32
111	Fence Erector		35.62	0.00	35.62
116	Ironworker		30.77	23.72	54.49
118	Line Constructor (Electrical)		40.81	18.06	58.87
124	Painter		29.87	18.79	48.66
125	Pavement Marking Operator		30.27	19.83	50.10
126	Piledriver		30.11	21.09	51.20
133	Roofer or Waterproofor		30.40	2.23	32.63
137	Teledata Technician or Installer		25.63	17.25	42.88
143	Tuckpointer, Caulker or Cleaner		34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)		36.74	16.00	52.74
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY		36.73	15.92	52.65
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY		32.65	15.67	48.32

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.09	39.62
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	22.45	11.84	34.29
TRUCK DRIVERS				

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	36.72	21.15	57.87
203	Three or More Axle Premium Increase(s): 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.	25.78	18.96	44.74
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): 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://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx .	30.82	21.85	52.67
205	Pavement Marking Vehicle	23.82	17.72	41.54
206	Shadow or Pilot Vehicle	25.28	18.31	43.59
207	Truck Mechanic	25.28	18.31	43.59

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017 Premium Increase(s): Add \$.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add \$.50/hr for line and grade specialist; Add \$.65/hr for blaster and powderman; Add \$2.01/hr for topman; Add \$2.46/hr for bottomman; Add \$3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	27.51	20.63	48.14
302	Asbestos Abatement Worker	19.00	0.00	19.00
303	Landscaper Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017 Premium Increase(s): 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).	27.51	20.63	48.14
304	Flagperson or Traffic Control Person	23.55	20.03	43.58
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
314	Railroad Track Laborer	17.00	5.43	22.43

**HEAVY EQUIPMENT OPERATORS
AIRPORT PAVEMENT OR STATE HIGHWAY CONSTRUCTION**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
531	<p>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).</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx.</p>	38.27	21.85	60.12
532	<p>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.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx.</p>	37.77	21.85	59.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
533	<p>Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsin.gov/Page/s/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx.</p>	37.27	21.85	59.12

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
534	<p>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 Sawyer (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.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx.</p>	37.01	21.85	58.86
535	<p>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.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx.</p>	36.72	21.85	58.57
536	Fiber Optic Cable Equipment.	21.00	0.00	21.00
537	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
538	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

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
539	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87
540	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.	36.72	21.15	57.87

LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION
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Includes roads, streets, alleys, trails, bridges, paths, racetracks, parking lots and driveways (except residential or agricultural), public sidewalks or other similar projects (excluding projects awarded by the Wisconsin Department of Transportation).

SKILLED TRADES

CODE	TRADE OR OCCUPATION	Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		
		HOURLY BASIC RATE OF PAY \$	HOURLY FRINGE BENEFITS \$	TOTAL \$
103	Bricklayer, Blocklayer or Stonemason	35.89	18.77	54.66
105	Carpenter Future Increase(s): Add \$1.42/hr on 6/1/2016. Premium Increase(s): 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.	33.02	17.12	50.14
107	Cement Finisher	34.95	19.38	54.33
109	Electrician Future Increase(s): Add \$1.60 on 6/1/16; Add \$1.70 on 6/1/17 Premium Increase(s): 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.	35.13	23.19	58.32
111	Fence Erector	24.73	19.69	44.42
116	Ironworker	30.77	23.72	54.49
118	Line Constructor (Electrical)	40.81	18.06	58.87
124	Painter	29.62	20.74	50.36
125	Pavement Marking Operator	30.00	19.61	49.61
126	Piledriver Future Increase(s): Add \$1.44/hr on 6/1/2016. Premium Increase(s): 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.	33.56	17.12	50.68
133	Rofer or Waterproofer	29.65	18.61	48.26
137	Teledata Technician or Installer	25.63	17.25	42.88
143	Tuckpointer, Caulker or Cleaner	34.28	18.60	52.88
144	Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	32.65	14.96	47.61
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.55	40.08
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	22.45	11.84	34.29

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	19.00	0.00	19.00
203	Three or More Axle	19.00	0.00	19.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.60/hr on 6/3/2016.	34.69	20.38	55.07
205	Pavement Marking Vehicle	19.00	0.00	19.00
206	Shadow or Pilot Vehicle	19.00	0.00	19.00
207	Truck Mechanic	19.00	0.00	19.00

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer	29.01	17.39	46.40
303	Landscaper Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017 Premium Increase(s): 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).	27.51	20.63	48.14
304	Flagperson or Traffic Control Person	19.31	15.21	34.52
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53

314	Railroad Track Laborer	17.00	5.43	22.43
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**HEAVY EQUIPMENT OPERATORS
CONCRETE PAVEMENT OR BRIDGE WORK**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
541	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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$1.60/hr on 6/3/2016. Premium Increase(s): Add \$.50/hr for >200 Ton; Add \$1/hr at 300 Ton; Add \$1.50/hr at 400 Ton; Add \$2/hr at 500 Ton & Over.	37.67	20.38	58.05
542	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 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; Crane, Tower Crane Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Increase(s): 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://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx .	37.77	21.85	59.62

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
543	<p>Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; 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.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx.</p>	37.27	21.85	59.12
544	<p>Backfiller; 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 (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Jeep Digger; Joint Sawyer (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); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx.</p>	37.27	21.85	59.12

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
545	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; 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.	31.62	19.78	51.40
546	Fiber Optic Cable Equipment.	21.00	0.00	21.00
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
548	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. Future Increase(s): Add \$1.25/hr on 1/1/2017. Premium Increase(s): Add \$.50/hr for Friction Crane, Lattice Boom or Crane Certification (CCO).	44.05	23.24	67.29
549	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or more); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87
550	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.	36.72	21.15	57.87

**HEAVY EQUIPMENT OPERATORS
ASPHALT PAVEMENT OR OTHER WORK**

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
551	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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads and/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	36.67	19.78	56.45

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
552	<p>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 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; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p> <p>Premium Increase(s): 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://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx.</p>	37.77	21.85	59.62
553	<p>Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; 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; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Laser/Screed; Concrete Slipform Placer Curb & Gutter Machine; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; 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); 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.</p> <p>Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.</p>	36.72	21.50	58.22

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
554	Backfiller; 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 Sawyer (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. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.	36.72	21.50	58.22
555	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); 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 \$1.60/hr on 6/3/2016.	32.62	20.38	53.00
556	Fiber Optic Cable Equipment.	21.00	0.00	21.00

RESIDENTIAL OR AGRICULTURAL CONSTRUCTION

Includes single family houses or apartment buildings of no more than four (4) stories in height and all buildings, structures or facilities that are primarily used for agricultural or farming purposes, excluding commercial buildings. For classification purposes, the exterior height of a residential building, in terms of stories, is the primary consideration. All incidental items such as site work, driveways, parking lots, private sidewalks, private septic systems or sewer and water laterals connected to a public system and swimming pools are included within this definition. Residential buildings of five (5) stories and above are NOT included within this definition.

SKILLED TRADES

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		
		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
		\$	\$	\$
101	Acoustic Ceiling Tile Installer	34.13	20.79	54.92
102	Boilermaker	30.21	21.97	52.18
103	Bricklayer, Blocklayer or Stonemason	30.00	2.54	32.54
104	Cabinet Installer	20.00	0.46	20.46
105	Carpenter	32.80	0.00	32.80
106	Carpet Layer or Soft Floor Coverer	24.04	4.89	28.93
107	Cement Finisher	25.00	12.00	37.00
108	Drywall Taper or Finisher	20.00	0.00	20.00
109	Electrician	27.00	6.24	33.24
110	Elevator Constructor	43.84	27.09	70.93
111	Fence Erector	17.00	0.17	17.17
112	Fire Sprinkler Fitter	39.66	21.11	60.77
113	Glazier	38.27	14.42	52.69
114	Heat or Frost Insulator	17.00	0.00	17.00
115	Insulator (Batt or Blown)	17.12	6.68	23.80
116	Ironworker	24.30	14.25	38.55
117	Lather	32.80	0.00	32.80
119	Marble Finisher	25.72	18.54	44.26
120	Marble Mason	30.00	2.54	32.54
121	Metal Building Erector	13.60	6.57	20.17
123	Overhead Door Installer	26.00	5.11	31.11
124	Painter	28.84	7.83	36.67
125	Pavement Marking Operator	30.00	19.61	49.61

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
129	Plasterer	22.00	0.00	22.00
130	Plumber	38.37	5.96	44.33
132	Refrigeration Mechanic	28.50	2.56	31.06
133	Roofer or Waterproofer Future Increase(s): Add \$1.25/hr eff. 06/01/2016	30.45	18.60	49.05
134	Sheet Metal Worker	26.13	17.37	43.50
135	Steamfitter	15.00	2.04	17.04
137	Teledata Technician or Installer	22.50	12.74	35.24
138	Temperature Control Installer	21.42	7.84	29.26
139	Terrazzo Finisher	25.72	18.54	44.26
140	Terrazzo Mechanic	31.55	18.26	49.81
141	Tile Finisher	30.00	0.00	30.00
142	Tile Setter	31.00	0.00	31.00
143	Tuckpointer, Caulker or Cleaner	25.00	2.99	27.99
146	Well Driller or Pump Installer	29.00	0.00	29.00
147	Siding Installer	17.00	0.65	17.65

TRUCK DRIVERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
201	Single Axle or Two Axle	20.00	0.42	20.42
203	Three or More Axle	18.75	2.00	20.75
205	Pavement Marking Vehicle	18.75	2.00	20.75
207	Truck Mechanic	18.75	2.00	20.75

LABORERS

Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
CODE	TRADE OR OCCUPATION	\$	\$	\$
301	General Laborer	20.00	8.29	28.29
302	Asbestos Abatement Worker	18.00	5.52	23.52

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
303	Landscaper	22.61	0.00	22.61
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.53	0.00	18.53
315	Final Construction Clean-Up Worker	15.00	0.00	15.00

**HEAVY EQUIPMENT OPERATORS
RESIDENTIAL OR AGRICULTURAL CONSTRUCTION**

Fringe Benefits Must Be Paid On All Hours Worked

<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u> \$	<u>HOURLY FRINGE BENEFITS</u> \$	<u>TOTAL</u> \$
557	Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type); Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; 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; Crane, Shovel, Dragline, Clamshells; Forestry Equipment, TImbco, Tree Shear, Tub Grinder, Processor; Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type); Winches & A-Frames.	25.00	9.78	34.78
558	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Backfiller; Belting, Burlap, Texturing Machine; Boiler (Temporary Heat); Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Jeep Digger; Lift Slab Machine; Mulcher; Oiler; Post Hole Digger or Driver; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Roller (Rubber Tire, 5 Tons or Under); Screed (Milling Machine); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Stump Chipper; Telehandler; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.60/hr on 5/30/2016.	34.17	19.15	53.32

***** END OF RATES *****

SECTION 00 83 00 – PARTIAL PAYMENTS FOR STORED MATERIALS

PART 1 – GENERAL

- 1.1 As stated in the General Conditions, the Commissioner of Public Works may grant an estimate of the amount of properly stored fabricated or manufactured materials and components specified, previously paid for by the Contractor. Said payments will be made in accordance with “Procedure Rules of the Commissioner of Public Works for Progress Estimates”.
- 1.2 For inspection of properly stored materials located outside Milwaukee County, the City shall be reimbursed by the Contractor for all transportation costs, travel time wages, meals and lodging, overtime and incidental expenses for City employees performing said inspection.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 00 83 00

SECTION 01 11 00 – SUMMARY OF WORK

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. The Contractor for this work shall refer to the “General Specifications” of the Department of Public Works dated January 31, 1992 and all subsequent addenda, as he shall be held responsible for all requirements listed herein. The Contractor shall visit the site, consult the drawings and specifications, be familiar with the project, and determine for himself all conditions affecting the work.
- B. Failure by a Contractor to be familiar with the project shall not release him from any obligation undertaken under the contract to complete the work in strict conformity with the plans and specifications and all City, State or Federal codes or regulations pertaining thereto.
- C. The State of Wisconsin Department of Transportation, Division of Highways, Standard Specifications for Highway and Structure Construction – 2016 Edition Part 2 through Part 7, and Part 1 specifically referenced herein, revised by these specifications and included in the special provisions.
- D. The drawings accompanying these specifications illustrate the nature and intent of the work and with the specifications form a part of the contract documents. Wherever the clauses “as shown”, “as directed” or similar expressions are used, it shall be understood that reference to drawings is made.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. It is understood that the submittal of a proposal shall include all labor, materials, equipment and incidentals necessary for completion of the work required, including that which may not be directly shown on the drawings or in the specifications but are necessary for proper operation and approval.
- B. The contractor shall locate and be responsible for all lines, elevations and measurements of the structure and other work executed by the Contractor under the contract. The Contractor must exercise proper precaution to verify areas to be worked on the drawing before laying out work and will be held responsible for any error resulting from failure to exercise such precaution.
- C. Contractor shall verify grades, lines, levels, locations and dimensions as shown on drawings and report any errors or inconsistencies to the Engineer before commencing work or fabrication of materials. Starting of work by the Contractor shall imply acceptance of existing conditions.

1.3 DEFINITIONS

- A. The word provide, when used in this specification shall mean that the provider shall furnish and install complete the referenced item or items.

1.4 DESCRIPTION OF PROJECT

- A. This project involves furnishing and installing, complete in every detail, and every aspect whether specified or not, all removals, all structural steel, all traffic and navigation controls, all mechanical components of the center lock system, and additional work as detailed in the contract drawings and specifications required for the completion of the center lock replacement at the Water Street Bascule Bridge over the Milwaukee River.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 HOURS OF WORK

- A. The contractor shall coordinate hours of work with the City of Milwaukee.
- B. The hours of work shall be between 7:00 AM and 7:00 PM.

3.2 EXAMINATION OF SITE

- A. All existing conditions, elevations and dimensions shall be verified at the site by the Contractor. Prior to submitting his proposal, the Contractor shall visit the site, consult the drawings and specifications and determine for himself all conditions affecting the work.
- B. Contractor shall become acquainted with the location of concealed services, utilities, structures, overhead conduits and piping, etc. which may be encountered or be affected by the Contractor's work, and shall be responsible for any damage caused by neglect to provide proper precautions or protection.
- C. Information pertaining to existing conditions that appear on the drawings is based on original construction. While such data has been collected with reasonable care, there is no expressed or implied guarantee that conditions so indicated are entirely representative of those actually existing or that unforeseen developments may not occur. They are merely provided to assist the Contractor in the investigation of conditions.
- D. Contractor shall obtain complete data at the site and inspect the area that is to receive the work before proceeding with fabricating, assembling, fitting, or erecting his work.
- E. Contractor shall notify the Engineer in case of discrepancies between existing work and drawings, and defects in such surfaces that are to receive the Contractors work. The Engineer will direct such work or surfaces to be remedied.
- F. Damage to the structure not documented prior to the rehabilitation work will be the Contractor's responsibility to repair.

3.3 SUPERVISION OF WORK

- A. The Contractor shall provide all necessary supervision, scheduling, planning and control to perform the work and coordinate the work of all trades on the project.
- B. The contractor shall furnish the services of an experienced superintendant at all times when work is being performed.
- C. The superintendant shall be constantly in charge of the installation of the work together with all subcontractors, skilled workman, helpers, and labor required to perform the work.
- D. The Contractor shall be thoroughly acquainted with and be responsible for the various Subcontractors' work so that it is properly coordinated and supervised to the satisfaction of the Commissioner of Public Works or his representative.
- E. Upon written notice to the Contractor of the lack of such coordination and supervision, the Commissioner of Public Works may authorize such services as may be required and deduct the cost of this service at an hourly rate of \$100.00 per hour per person from the contract for the work.

3.4 STORAGE OF MATERIALS

- A. The contractor shall assume full responsibility for the protection and safekeeping of products stored on the premises.
- B. The contractor shall store materials within the confines of his work space or in other areas or locations negotiated by the Contractor.
- C. Materials are to be so stored as to assure the preservation of their quality and fitness for the work. When considered necessary, materials shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground, and they shall be placed under cover. Materials stored at the site shall not damage the structure in any way. Oil, grease, or gasoline spills shall be cleaned up immediately.
- D. Stored materials shall be located so as to facilitate prompt inspection.

3.5 PROTECTION AND REPAIRS

- A. The Contractor shall continuously maintain adequate protection of all his work and materials, whether worked or unworked, on or off the site of the project, and shall protect the work and materials of all other Contractors and the City of Milwaukee's property from damage arising in connection with their contracts.
- B. The Contractor shall be responsible for any damages caused by his operations to vehicles, landscaping, persons or property. The contractor, during all operations shall take precautions necessary for the full protection of traffic, parked vehicles, property upon and in the vicinity of the structures and utilities.

- C. Whenever damage or destruction of property of any character resulting from neglect, misconduct or omission due to the manner or method of execution or non-execution of the work or caused by defective work or the use of improper materials, the Contractor shall be held responsible and not released until the work shall have been corrected, completed, and the requirements and intent of these documents complied with.
- D. All damages of each and every kind resulting from neglect or refusal of the Contractor to protect such work materials, and property during erection, construction and completion of the project shall be made good by the Contractor to the satisfaction of the City.
- E. No damaged or imperfect materials, equipment accessories, etc., will be accepted. All materials, equipment, accessories, etc. furnished or installed by this Contractor must function perfectly and as designed. If any argument should arise in regard to this requirement, the City will replace the parts and deduct the costs from the contract price.
- F. The Contractor shall repair all damages that he, any of his employees or his subcontractors may do to any other work or any other parts of the bridge structure. Repairs must be done in a neat and workmanlike manner to match existing construction and must meet with the approval of the Commissioner of Public Works or his representative.
- G. If any faults are found with the Contractor's work, he shall repair or replace any of the parts he has furnished or installed as directed without any additional costs to the City.
- H. The Contractor shall restore, repair, refinish or replace, as part of this contract any surfaces that are damaged or left incomplete or unsightly as a result of the removal of existing equipment.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 11 00

SECTION 01 22 00 – UNIT PRICES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions, Cleaning and Project Closeout, and other Division 1 Specifications Sections apply to this section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.

1.3 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services.

1.4 EXTRA WORK

- A. Extra work shall be performed in accordance with the Department of Public Works General Specifications Section 2.6.0 “Extra Work and Credits”

1.5 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, labor, insurance, overhead, profit, and applicable taxes.
- B. Measurement and Payment:
 1. All work completed under the contract will be measured by the Engineer according to United States standard measure. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.
 2. The completed work will be measured for final payment by the Engineer, as specified for the various items elsewhere in these specifications, to determine the quantities of such items of work performed, except when agreements have been made providing for compensation on the basis of plan quantities as hereinafter provided or when contract change orders have been executed providing for other methods of measurement. The Contractor will be paid for the actual amount of work performed in accordance with the contract, as shown by the final measurements or upon the basis of plan quantities.
 3. If the Contractor and the Engineer agree in writing that the quantities of certain items or portions of items of work as set forth in the contract or on the plans, as originally drawn or

subsequently corrected or revised, are in substantial agreement with the actual quantities of work performed, compensation therefore will be made based on the quantities set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, without measurement thereof, and the contractor shall accept such compensation as full payment for such items or portions of items.

4. When standard manufactured items are specified such as fences, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section, dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
- C. The items listed in the bid documents shall be considered as sufficient to complete the work in accordance with the plans and specifications. Any portion of the work not listed in the bid form shall be deemed to be a part of the item which it is most closely associated with and shall be included in the cost of the unit shown on the bid form. Payment for the unit shown on the bid form shall be considered to cover the cost of all labor, material, equipment and performing all operations necessary to complete the work in place. The unit of measurement shall be the unit shown on the bid form. Payment shall be based upon the actual quantity multiplied by the unit prices. Where work is to be performed at a lump sum price, the lump sum shall include all operations and elements necessary to complete the work. No payment will be made for any material wasted, unused, rejected, or used for the convenience of the Contractor.
- D. Quantities and measurement of work completed shall be agreed to by both the Contractor and Project Inspector prior to submission of progress payment(s).
- E. The Owner reserves the right to add or remove quantities of work from the project after the project is awarded.
- F. Final payment and release of retainage will be processed following final acceptance by the Engineer. Payment will only be released once all contract requirements are fulfilled and punch-list items are marked as acceptably completed. Punch-list work is incidental to the project quantities.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 22 00

SECTION 01 26 00 – CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, special provisions, and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing contract modifications.

1.3 MINOR CHANGES IN THE WORK

- A. The engineer will issue supplemental instructions authorizing minor changes in the work, not involving adjustment to the contract sum or contract time.

1.4 CHANGE ORDERS

- A. Change orders shall be requested and processed in accordance with Department of Public Works General Specifications, Chapter 2.1.26 and as herein specified.
- B. The Contractor shall submit all change order requests to the City in a timely manner. Each request should include a description of the proposed change, the reason for the change, and a complete breakdown of the proposed cost including supporting information to substantiate the claim.
- C. The Contractor shall include with the change order request the impact, if any, the proposed change will have on the Contractor's schedule. If a time extension to the schedule is requested, then the Contractor shall include supporting information to substantiate the claim.
- D. All change order requests shall be submitted as soon as possible after the above information can be compiled. Change order requests submitted after one month of occurrence may not be granted.
- E. Change orders requested to be paid on a time and material basis shall have all work documented on a daily basis. Contractor's superintendent and the Project Inspector shall sign off on a daily basis all labor hours and materials used and charged to the change orders.

- F. Approval of the change order work and method and/or amount of payment shall be approved prior to Contractor proceeding with change order as outlined in the Department of Public Works General Specification.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 26 00

SECTION 01 31 13 – PROJECT COORDINATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. The General Contractor shall assume and take responsible charge of the project and shall coordinate the work of each Subcontractor so as to complete the project in an orderly and timely manner.
- B. Each Contractor shall:
 - 1. Coordinate the work of his own employees
 - 2. Expedite his work to assure compliance with schedules.
 - 3. Coordinate the work with that of other Contractors and City of Milwaukee.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 COORDINATION PROCEDURES

- A. Cooperate with the City and other persons of all trades engaged in the work in such a manner and to such extent as will best facilitate the work of each and the prompt completion of the work.
- B. Maintain progress of the work, order materials and let subcontracts promptly, and schedule and expedite work so as to avoid delay.
- C. Notify other Contractors, trades and City of Milwaukee whose work is in any way connected to, combined with, or influenced by the Contractor's work and allow them reasonable time to complete their work.
- D. Carefully examine the drawings and specifications to ascertain the extent of the work of all trades.
- E. Coordinate access to and use of the site, and storage of materials on the site with the subcontractors.
- F. Coordinate Contractor's work with adjacent work and cooperate with all other trades so as to facilitate the general progress of the project. Afford all other trades every reasonable opportunity for the installation of their work and for the storage of their material. In no case exclude from the

premises or work, any other Contractor or Subcontractor or their employees; nor interfere with any Contractor or Subcontractor in the execution or installation of his work.

- G. Perform work in proper sequence in relation to that of other trades. Pay all costs caused by defective or ill-timed work.
- H. Arrange work and dispose of materials so as not to interfere with the work or storage of materials of other Contractors and join his work to that of others in accordance with the intent of the drawings, special provisions, and specifications.
- I. Notify the City of unforeseen conditions found in the field.

3.2 EXAMINATION OF DRAWINGS

- A. Examine all drawings together with the specifications, or special provisions applicable to the contract.
- B. After examination of the contract documents, bring to the attention of the City any questions with regard to the intent of these documents, in a timely manner, prior to commencing with the work.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 31 13

SECTION 01 31 19 – PROJECT MEETINGS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for project conferences and meetings, including, but not limited to, the following:
 - 1. Pre-Construction Conference
 - 2. Progress Meetings
- B. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Division 1 Section 01 31 13 “Project Coordination” for procedures for coordinating project meetings with other construction activities.
 - 2. Division 1 Section 01 33 01 “Submittals/Permits” for submitting the contractor’s construction schedule.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 PRE-CONSTRUCTION CONFERENCE

- A. Soon after award of contract and prior to the start of construction, the Contractor shall attend a Pre Construction Conference with representatives of the City.
- B. The Contractor shall have at the conference responsible representatives from subcontractors who are to furnish the required materials and perform work on the project.
- C. The purpose of the conference is to discuss in detail the plans and specifications. The discussion shall include but is not limited to:
 - 1. Schedule
 - 2. Equipment
 - 3. Material storage

4. Inspection requirements
 5. Inspection reports
 6. Protection procedures for the structure adjacent facilities, environment, and personnel
- D. The Contractor shall submit the construction schedule to the Engineer at this conference. It must include all of the Contractor's work and all the work of subcontractors. Copies of this schedule shall be submitted to the City for review. The schedule shall include the following:
1. List of starting and completion dates for each major item
 2. Running schedule of a week-by-week charting and allowing for charting of:
 - a. Expected progress on major items
 - b. Actual progress on major items
 - c. Critical path items
- E. Contractor shall describe in detail when each portion of the work is to be accomplished and subcontractors shall participate in the discussion. The Engineer will serve to interpret the contract documents should such questions arise.
- F. Any other questions that the Contractor/Subcontractors have about the work or its scheduling shall be raised at this conference.
- G. Requirements for contract administration and construction operations will be defined for participants.
- H. Time, date and place of the conference will be determined by the Engineer.

3.2 PROGRESS MEETINGS

- A. Weekly progress meetings will be held at the project site by the City's representative for the purpose of coordinating and expediting the work progress.
- B. Attendance at progress meetings by the Contractor is mandatory. These meetings shall also be attended by representatives of each Subcontractor who is either working at the site or is affected by work being done at the site.
- C. Contractors shall give written reports of progress on the project, discuss the work schedule for the coming period and present all conflicts, discrepancies, or other difficulties for resolution.
- D. The Contractor shall submit an updated construction schedule at each progress meeting with the expected progress of major items, actual progress on major items and critical path items outlined. A short narrative should be written describing the cause of any delays and intended action to

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remedy delays. On a monthly basis, provide an overall project schedule tracking the actual progress of major and critical path items, expected progress of remaining major and critical path items, and anticipated completion date.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 31 19

SECTION 01 33 01 – SUBMITTALS AND PERMITS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, special provisions, and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for submittals and permits required for performance of the work.
- B. The rulings, regulations and laws of the following shall be complied with in the completion of this project.
 - 1. United States Department of Labor – Occupational Safety and Health Administration (OSHA)
 - 2. Wisconsin Department of Workforce Development
 - 3. City of Milwaukee Building Code
 - 4. Wisconsin Administrative Code
 - 5. Ordinances of the City of Milwaukee
 - 6. National Electrical Code
 - 7. American Association of State and Highway Transportation Officials (AASHTO)
 - 8. Federal Navigation Regulations including U.S. Coast Guard Regulations

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 SUBMITTALS AND SAMPLES

- A. Comply with the requirements of the Department of Public Works General Conditions and as follows:
 - 1. Forward submittals not more than 30 calendar days after the Award of Contract for all materials to be used on the project. No work, indicated on any one shop drawing, hardware list, etc., shall be started until such information has been approved.

2. Include with each submittal a transmittal letter signed by the Contractor containing the following:
 - a. Name of Contractor
 - b. Name of Project
 - c. List of Submittals with Specification Section references
 - d. Name of Manufacturer or Supplier
 - e. Additional information as required for the items being provided.
3. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - a. The Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.
4. Processing: No specific time periods are established herein for submittals or for the engineers review. To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow up to 21 days for initial review. Allow additional time if the Engineer must delay processing to permit coordination with subsequent submittals.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow up to 21 days for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Engineer sufficiently in advance of the work to permit processing.
5. Questions on the plans and project specifications during the contract bidding phase should be directed to:

Mr. Jonathan Thomas
Project Engineer
Infrastructure Services Division
Room 907, Frank P. Zeidler Municipal Building
841 North Broadway
Milwaukee, WI 53202
(414) 286-0463
Jonathan.Thomas@milwaukee.gov

All correspondence including submittals, payment requests (4 copies), change order proposals, construction time letters (delays, suspensions), and any construction related matters shall be addressed as follows:

Construction Supervisor (To be determined)
Infrastructure Services Division
Room 701, Frank P. Zeidler Municipal Building
841 North Broadway
Milwaukee, WI 53202

Note: A specific Construction Supervisor will be assigned to the project prior to the start of construction and contact information will be shared at the preconstruction conference.

All correspondence concerning the following items; Small Business Enterprise program Reports, Residency Preference Program, Apprentice Program, Wage and Hour Reports, Insurance Certificates, Subcontractor Approval Forms, and all affidavits should be sent to:

Ms. Celeste Jantz
Department of Public Works
Room 506, Frank P. Zeidler Municipal Building
841 North Broadway
Milwaukee, WI 53202
(414) 286-3309
Celeste.Jantz@milwaukee.gov

- B. Approvals: Wherever the words “or equal” or “approved equal” or similar terms are used, it shall mean as approved by the Commissioner of Public Works or agent. All shop drawings, bulletins, manufacturer’s cut sheets and data necessary for an approval shall be submitted with four (4) copies sent to the City Engineer. Three (3) copies are required for the City’s use, and one (1) copy will be returned to the Contractor.
- C. Approval shall apply to general conformance only, and shall in no way relieve this Contractor from his/her responsibility for the full performance of contract.

3.2 CODES AND PERMITS

- A. The contractor shall obtain and pay for all permits, charges, fees and licenses, if any are necessary for the prosecution of the work.
- B. The contractor shall comply with all laws, ordinances, rules and regulations bearing in the conduct of the work including the giving of notices.
- C. The cost of special equipment, enclosures, protective coverings, etc., as may be required to comply with codes and ordinances shall be included in the appropriate price bid for the work.

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- D. If any material or work is specified contrary to such rules or omitted from the specifications or drawings but required by such rules, it shall be altered as required by the contractor to meet these rules and regulations.
- E. Attention is directed to the Milwaukee County Air Pollution Control Ordinances and the Department of Natural Resources relative to the specific sections which are applicable to sandblasting and spray painting.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 33 01

SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.

1.2 SUMMARY

- A. This section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.
- B. Temporary utilities may include, but are not limited to, the following:
 - 1. Water service and distribution
 - 2. Temporary electric power and light
 - 3. Temporary heat
 - 4. Ventilation
 - 5. Telephone service
- C. Support facilities may include, but are not limited to, the following:
 - 1. Temporary enclosures
 - 2. Hoists and scaffolding
 - 3. Temporary project identification signs and bulletin boards
 - 4. Waste disposal services
 - 5. Construction aids and miscellaneous services and facilities
- D. Security and protection facilities may include, but are not limited to, the following:
 - 1. Barricades, warning signs, and lights
 - 2. Enclosure fence for the site
 - 3. Environmental protection

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 TEMPORARY OR TRIAL USAGE

- A. The owner shall have the right to make temporary or trial usage of any mechanical device, machinery, apparatus, equipment, work, material, or construction supplied under contract before final completion or acceptance of the work, and the same shall not be construed as evidence of acceptance of the work by the owner.

3.2 TEMPORARY POWER

- A. The Contractor shall provide all power required, and be responsible for payment for all utility bills beginning at the start date for the duration of the project.
 - 1. OSHA regulations require that employers use either ground fault circuit interrupters or an assured equipment grounding conductor program in addition to any other regulation or equipment ground connectors.

3.3 TEMPORARY LIGHTING

- A. Temporary lighting shall be provided and maintained by the Contractor.
- B. Furnish, install, and maintain temporary lighting during construction.
 - 1. Lighting shall be sufficient to enable all trades to complete their work. Illumination in all areas shall meet or exceed State Code requirements. (See IND 35.38). Provide at least one 200 watt lamp for each 400 square feet of floor space.
 - 2. Remove the temporary lighting when the job is completed.

3.4 BULLETIN BOARD

- A. Furnish and maintain a 4-feet 0-inch by 4-feet 0-inch bulletin board for the posting of wage employment data, etc.

3.5 FIELD OFFICE

- A. The location of a field office shall be coordinated with the City of Milwaukee for the Center Lock Replacement at the Water Street Bascule Bridge.

PART 4–MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 50 00

SECTION 01 60 01 – MATERIALS AND EQUIPMENT

PART 1 – GENERAL

1.1 MATERIALS

- A. Furnish materials of the type, qualities and characteristics specified. The specification of a trade name and catalog number is intended to establish quality, type, character and operating characteristics of the material required. Materials by other manufacturer's meeting the approval of the Engineer of equal specifications will be considered excepting as may be specifically stated otherwise. Evaluating of other manufacturer's products will be made at the time of shop drawing submission. Samples and/or demonstrations may be requested.
- B. Materials and equipment shall be delivered adequately protected, in merchantable condition and in original unbroken packages if normally packaged. They shall be stored and handled so as to protect and maintain their merchantable condition. Packages shall have stamped on them the date of manufacture and shelf life, if applicable.
- C. The Commissioner of Public Works or his representative shall have the right to reject material not in compliance with specifications as well as damaged material and the Contractor shall remove such material from the construction site when as directed.

1.2 MATERIAL STORAGE

- A. Storage areas are available within the Contractor's occupancy limits.
- B. Refer to Section 01 11 00 Summary of Work, Storage of Materials.

1.3 EQUIPMENT

- A. Internal combustion engine and compressors shall be equipped with mufflers to reduce noise to a minimum, and shall not be operated in enclosed areas without adequate ventilation.
- B. All materials and work procedures used shall be in accordance with all air pollution control regulations in effect at the work site.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 60 01

SECTION 01 70 01 – CLEANING AND PROJECT CLOSE-OUT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, special provisions, and general provisions of the contract, including General Conditions and other Division 1 specification sections, apply to this section.
- B. Article 2.5.4 of the General Specifications of the City of Milwaukee Department of Public Works shall be supplemented as specified hereafter.

1.2 SUMMARY

- A. This section includes administrative and procedural requirements for cleaning and project closeout including, but not limited to, the following:
 - 1. Project record document submittal
 - 2. Submittal of warranties
 - 3. Final cleaning

1.3 AS-BUILT DRAWINGS

- A. At the completion of work and prior to final payment, the contractor shall provide the City with a marked up set of “as-built” drawings showing all changes or variations from contract drawings, including those specified on change order drawings heretofore issued. Contractors providing buried or concealed piping, conduit or similar items shall locate such items by dimensions and elevations.
- B. Marked up sets of prints will be acceptable providing they are in first class condition for record purposes. Each contractor shall be responsible for accuracy of record drawings.

1.4 GUARANTEE

- A. The Contractor shall guarantee to replace or repair promptly at his own expense, as directed by the Commissioner of Public Works or his agent, all workmanship, materials, or equipment in which defects may develop within a minimum one (1) year warranty period from the date of final acceptance of his work excepting as may be hereinafter specified. This guarantee includes all damage done by the City due to faulty equipment, poor installation or poor construction caused by the Contractor. The City shall also receive any extended guarantees or warranties normally supplied by any vendor or manufacturer for material or equipment incorporated in the work.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 SAFETY CLEANING

- A. Safety cleaning: Each Contractor is responsible for safety cleaning, which includes but is not limited to the following:
 - 1. Work areas, passageways, stairs, must be kept free of debris and scrap.
 - 2. Form and scrap lumber shall have nails withdrawn or bent over and lumber shall be stacked or removed.
 - 3. Spills of paint, oil, grease, or other liquids shall be removed immediately.

3.2 PROGRESS CLEANING

- A. Prime Contractor and subcontractor shall remove his rubbish and debris from the site promptly upon its accumulation.
- B. Combustible waste shall be stored in fire resistive containers and disposed of regularly.
- C. Oily, flammable or hazardous wastes such as caustics, acids, harmful dusts, etc., shall be stored in appropriate covered containers.
- D. The Contractor is not allowed to wash debris or other harmful contaminants into the Milwaukee River or down drains that would be discharged into City Sewers. Filters shall be inserted in the drain where it is likely debris may accumulate.

3.3 DISPOSAL

- A. All demolished materials required for this work shall be carefully collected and removed from site.
- B. No burning or rubbish or debris will be allowed at the site. No rubbish shall be thrown from heights without proper protection. When dust will be generated or flying debris is likely to occur, provide dust tight chutes or other means to control dust.
- C. Containers: Contractor shall provide mobile industrial type waste containers in the number and size required, placed at adequate locations to handle debris or provide other methods of disposing of debris.

3.4 FINAL CLEANING

- A. Complete final cleaning immediately prior to substantial completion.
- B. Contractors shall expedite or perform thorough cleaning, sweeping, and washing of work to remove from work area and equipment under his contract, all foreign matter, dust, debris, spots and soil, so as to put all such work and equipment including finishes, in a complete and finished condition ready for acceptance and use intended.
- C. Remove debris from drains and flush clean.

- D. Employ trained experienced workmen for the final cleaning.

3.5 CHARGES

- A. If Prime Contractors do not remove rubbish or clean the project site as specified above, the City reserves the right to have work done by others at Contractor's expense.
- B. Employees of the City who are required to clean up any rubbish will record all hours involved to complete such work.
- C. The cost incurred by the City for this special cleaning shall be charged against the contract price of the Contractor as determined by the City.

PART 4 – MEASUREMENT AND PAYMENT (Not Applicable)

END OF SECTION 01 70 01

Special Provisions

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1. General.

Perform the work under this construction contract for the City of Milwaukee Center Lock Replacement for Water Street Bascule Bridge (B-40-548) over Milwaukee River, in Milwaukee County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2016 Edition, as published by the department, and these special provisions. The City considers only City and department standard specifications, supplemental specifications, and interim supplemental specifications issued directly from the City as valid for this contract.

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.

The City of Milwaukee is referred to as the City and Wisconsin Department of Transportation is referred to as department in this specification.

2. Scope of Work.

The work under this contract shall consist of Center lock replacement, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract. The work will also include coordinating with City of Milwaukee for electrical work that will be performed by City of Milwaukee forces.

3. Prosecution and Progress.

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

Provide the time frame for construction of the project within the 2016 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

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

Multiple mobilizations may be required for items such as center lock replacement, field verification survey, traffic control, and other incidental items related to staging and daily work operations. No additional payment will be made by the City for the mobilizations.

Coordinate construction activities so that work on the contract is completed by the project's completion date.

The City of Milwaukee will be responsible for raising, lowering, and opening the existing bridge to river traffic throughout the project.

Provide the proposed sequence of operations, methods of handling traffic, method of operation in the Milwaukee River so as to minimize interference with river traffic, plans for cleanup of the Milwaukee River should spills of oil, soil, or debris from the center lock replacement or other types of pollutants be accidentally discharged into it, and a program of debris removal to prevent accumulation of unsightly debris in the water course in writing within fourteen days before the pre-construction conference. Submit revisions in traffic handling to the engineer for approval at least 48-hours in advance of making any changes in traffic operations.

Migratory Birds

There is potential for bird nesting under the North Water Street Bascule Bridge. The International Migratory Bird Act protects international migratory birds such as seagulls, swallows, and terns. The Department of Natural Resources recommends that the bridge be checked twice daily and empty nests be removed. It is a violation of federal law to disturb nests if eggs or fledgling young are present. Please contact Brian Nelson, United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services at (920) 324-4514 if eggs or fledgling young are present.

If swallow nests are present, do not remove or destroy them when the swallows are nesting or rearing their young. The nesting season for swallows has been established as May 1 through August 30. Apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy occupied nests during the nesting period. The need for a permit may be avoided by removing the existing bridge superstructure prior to nest occupation by swallows, and clearing the nests from and installing a suitable netting device on the remaining existing superstructure prior to nesting activity to prevent the swallows from nesting. The cost for preventing nesting shall be included in the cost of Containment and Collection of Waste Material B-40-548.

All construction activities should occur in an environmentally sound manner. This includes the proper disposal of all demolition material that cannot be recycled.

Maintain or provide where necessary, as directed by the engineer, pedestrian access to adjacent properties, businesses, riverwalks, and at bus stops.

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 in accordance to U.S. Coast Guard standards and per the requirements of article “Construction Over or Adjacent to Navigable Waterway.”

All posting of parking restrictions required to facilitate construction operations must be approved by the City and will be provided by the City of Milwaukee, Infrastructure Services Division, or as directed by the engineer. Contact James Brown at (414) 286-3276, at least three working days prior to the start of construction operations.

Detour

Water Street over the Milwaukee River will be closed during bridge rehabilitation work. Traffic will be detoured as described below and as shown in the plans. Traffic will be detoured via S. 1st St., E. Pittsburgh Ave., N. Broadway St., and E. Erie St.

5. Work Restrictions

Comply with all local ordinances that apply to local street work operations, including those pertaining to working during Night Time Hours. Furnish any ordinance variance issued by the municipality or required permits to the engineer, in writing, 3 days prior to performing such work. Do not operate motorized construction equipment from 7:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.

6. Construction Over or Adjacent to Navigable Waters.

Supplement standard spec 107.19 with the following:

The Milwaukee River is classified as a navigable waterway. One leaf of the bascule span shall remain operational at all times. Maintain river traffic at all times during the replacement of the span lock system on the bridge. The contractor may request from the US Coast Guard a temporary alternation to the bridge operation to include a 2 hour notice for openings requested by recreational vessels. Commercial traffic on the Milwaukee River runs on a predetermined schedule and the contractor shall coordinate work with the commercial operators. The US Coast Guard will review the request for 2 hour notice openings at the time the contractor submits the request and will determine if it is allowed.

Based on previous years data an average of seven (7) bridge openings are requested the 1st shift of each day during the proposed construction time frame.

The Coast Guard has determined that the project will not require a Coast Guard permit as there would be no changes to alter the permitted navigational clearances or character of the bridge; however it does require a letter of authorization to proceed. Once the contract

is awarded the contractor is required to coordinate efforts with the U.S. Coast Guard – Commander (OBR), Ninth Coast Guard District, 1240 East 9th Street, Room 2019, Cleveland, Ohio 44199-2060, telephone (216) 902-6084, fax (216) 902-6088 at least 30 days in advance of any construction over the waterway. Allow an additional 5 days for mail processing once the package has been received by at the U.S. Coast Guard facility. Primary contacts at the U.S Coast Guard are:

Name:	Phone:	Email:
Lee Soule	(216) 902-6085	Lee.D.Soule@uscg.mil
Scot Striffler	(216) 902-6087	Scot.M.Strifflen@uscg.mil
Blair Stanifer	(216) 902-6086	William.B.Stanifer@uscg.mil

Provide the Coast Guard with a schedule and timeframe for removal and replacement of the center lock system and describe any temporary construction aids and work within the limits of the Milwaukee River to receive the U.S. Coast Guard authorization. The Coast Guard notification requirement is based on anticipated beginning of replacement of the center lock system and any work that affects the operation of the bridge or navigation within the Milwaukee River throughout the duration of the project. During the project (due to unforeseen project requirements) if the contractor needs to alter the original plan as it affects the navigation of the waterway the contractor will have to provide a minimum of 2 weeks advance notice to the Coast Guard prior to altering the original plan. Copy the engineer on all correspondence with the Coast Guard.

During non-working hours any barges must be moored outside the bascule span navigable waterway and lighted in accordance with navigation rules. Scaffolding/containment hung from the underside of the bridge within the navigable waterway shall not suspend more than 2 feet below low steel under one leaf of the bridge and shall be lighted with steady burning amber lights on the bottom and four corners during non-working hours. Containment that extends from the bottom of the bridge down to the water will only be allowed during working hours, 24/7 containment from the bridge to the waterline will not be allowed.

Provide signage in the navigable waterway upstream and downstream from North Water Street Bascule Bridge in the Milwaukee River navigable waterway to provide notice to mariners of bridge work ahead.

Costs for furnishing, maintaining, moving, and installing lights and signs required in these special provisions are incidental to the contract.

7. 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) for disinfection:

http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf

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 ~212° 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 (>104° F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

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8. Coordination with Businesses

The contractor shall arrange and conduct a meeting between the contractor, the City, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Contact Cecelia Gilbert, City of Milwaukee's Support for Business Liaison at (414) 286-3318 to coordinate the meeting and contact with local businesses. Hold the first meeting prior to the start of

work under this contract and additional meetings held thereafter when there is an impact to an adjacent property owner or a change in traffic pattern.

9. Utilities

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

- AT&T
- City of Milwaukee
- MMSD
- Verizon (MCI)
- WE Energies (Gas)
- WE Energies (Elec)

The above named utilities have facilities within the project area, either below the roadway surface, buried under the river bed, or mounted to the bridge approach spans. No facilities are mounted on the bascule span of the water Street Bascule Bridge. Work contained within this contract is limited to the bascule span of the bridge and the associated electrical/mechanical systems of the bridge which are owned and maintained directly by the City of Milwaukee Department of Public Works.

10. Traffic Control

Perform this work in accordance to the requirements of Section 643 of the standard specifications, 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 (10) 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.

11. Work Done by Others

All electrical work related to the center lock replacement will be done by City crews. See Center Lock Electrical Work Special Provision for additional details. Contractor shall contact James Washington at (414) 286-3982 at least three (3) weeks prior to the start of construction operations to coordinate work.

12. Center Lock Electrical Work.

A Description

ALL WORK DESCRIBED IN THIS SECTION WILL BE PERFORMED BY CITY OF MILWAUKEE FORCES. THIS SPECIFICATION IS INCLUDED FOR CONTRACTOR INFORMATION AND COORDINATION ONLY.

This special provision describes furnishing labor, tools, equipment and materials necessary for the installation, finishing, testing, and making fully operational new center locks for the bridge.

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:

- Furnishing and installing new center lock limits on each new center lock for both driven and pulled. This work includes all conduit, wiring, brackets, mounting hardware, control circuit modifications and miscellaneous appurtenances associated with the work required for a complete, fully operational system.
- Replacing the thermal overload heaters on existing center lock starter.
- Replacing the flexible conduit and installing new motor conductors from center lock disconnect to the new center lock motor.
- Installing a new handcrank engaged interlock circuit for each center lock. This work includes all conduit, wiring, brackets, mounting hardware, control circuit modifications and miscellaneous appurtenances associated with the work required for a complete, fully operational system.

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.

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 in accordance with 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.

B.2 Boxes

B.2.1 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.3 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 (3) conductors with field side of terminal blocks utilizing two (2) 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.4 Electrical Identification

B.4.1 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 one (1) inch. Both ends of each marked conduit run shall be provided with a brass tag having a number stamped thereon in accordance with the conduit diagrams. These tags shall be securely and permanently fastened to the conduit ends with bare copper wire.

B.4.2 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.5 Supporting Devices

B.5.1 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.5.2 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.5.3 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.5.4 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.6 Conduit and Wiring

B.6.1 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. 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.

B.6.2 Conduit drawings

Before the initial start of construction, submit a full size drawing showing all new conduit runs and any conduit runs being modified for review and approval. Provide "as-built" drawing.

B.6.3 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.6.4 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.6.5 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.7 Conductors

B.7.1 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.7.2 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, 4/240/277 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 °C.

B.8 Limit Switches

Provide electro-mechanical, lever-operated limit switches for centerlock open (pulled) and closed (driven) indication. Switch contacts shall be double pole double throw (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. The limit switch shall be included with the new centerlocks.

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 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.

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.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 two (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 (2) 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 in accordance with NECA Standard Practice. Install nonmetallic conduit in accordance with 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 two (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 a brass tag having a number stamped thereon in accordance with the conduit diagrams. Secure and permanently fasten these tags to the conduit ends with bare copper wire. Utilize existing conduit where practical. Where new conduit is required adhere to the following: run concealed conduit in walls, ceiling, or floor in the control room. Run exposed conduit 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 °F.

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 one 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 eighty 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 in accordance with 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 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.

D Measurement

(Vacant)

E Payment

(Vacant)

13. Containment and Collection of Waste Materials B-40-548, Item 517.4000.S.

A Description

This special provision describes furnishing and erecting tarpaulins to contain, collect and store the spent material from the work, collecting such spent material, and disposing of the spent material in accordance to the contract and as hereinafter provided.

B Materials

(Vacant)

C Construction

Erect tarpaulins or other materials to collect all of the spent material from the work.

Collect and store all waste material collected by this operation at the bridge site for disposal. Collect and dispose of all waste materials at the end of each workday or more often if needed.

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 B-40-548, completed in accordance 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	Containment and Collection of Waste Materials B-40-548	LS

Payment is full compensation for designing, erecting, operating, maintaining and disassembling the containment devices; collecting and disposing of spent materials in appropriate containers.

14. Center Lock Replacement, Item SPV.0105.01.

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 specified bascule center lock. 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 City.

The machinery and components to be removed includes, but is not limited to:

1. Actuators (2), Actuator Support Weldments and associated hardware (2).
2. Rear Guide Weldment (2) and Forward Guide Weldment (2).
3. Receiver Weldment (2).
4. Manual, auxiliary drive assembly with couplings and associated hardware (2).
5. Cranks, connecting rod assemblies and support bearings (4)
6. Lock bars (2).
7. The removal and disposal of existing center lock limits

The machinery and components to be salvaged and provided to the City of Milwaukee include:

1. Motors
2. Motor brakes

The new Span Lock System machinery to be installed includes, but is not limited to:

1. Electric motor driven, mechanical lock bar operator (2).
2. Forged steel, 5 x 8 in. rectangular lock bars (2).
3. Forward and rear lock bar guide and lock bar receiver assemblies (2 each).
4. Separate end of travel limit switches

Also included is the installation and connection of the lubrication lines from the central grease station to the lock bar guides and receivers, modify existing center lock covers.

The contract documents are diagrammatic in showing certain physical relationships which must be arranged within the mechanical work, that will interface with other work including electrical work. Coordinate mechanical work with electrical and structural work as well as closures and restrictions to vehicular and navigational traffic. Schedule and arrange mechanical work in a neat, well organized manner.

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 City as specified.

B.1.1 Submitting and Review Process

Submit all data on paper measuring either 8-1/2 inch x 11 inch, 11 inch x 17 inch as appropriate. Where appropriate, bind individual sheets into sets with a cover, title sheet, and table of contents.

Submit to the Engineer samples of colors for all components which affect the appearance for the bridge. Product samples become the property of the City of Milwaukee unless determined otherwise by the Engineer.

The review process will consist of two or more steps. The first step is to submit four (4) copies of sets of materials to the Engineer, or his designated agent, for preliminary review. The Engineer, or his designated agent, will return one copy of the set of submitted materials with instruction for correction or re-submittal. When instructed by the Engineer, the final step is to submit materials to the Engineer, or his designated agent for distribution. The Engineer will return one to three (1-3) copies or sets of materials to the contractor with a stamp denoting general conformance to the plans and specifications. The exact review process, number of copies or sets of submittal materials, delivery requirements, and other procedural matters for the project will be determined at the pre-construction conference. Electronic submittal of the shop drawings and submittals is preferred over paper copies.

Drawings that are not initialed as having been checked or obviously have not been completed or are not clear and legible will not be accepted for review. The contractor will be notified that the subject drawings must be properly completed and resubmitted for review.

The title box of each shop drawing must carry the job number and structure and control section numbers, and the name and address of the fabricator, foundry, or manufacturer. The title sheet of each bound set of product information sheets must carry the job, control, and structure identification numbers, and the name and address of the supplier. Each sheet in a bound set must clearly identify the product or products being used and carry the name of the manufacturer.

A unique drawing and/or sheet number must be placed on each sheet so that similar items with subtle differences will not be confused with one another. When data is returned by the Engineer to the contractor for correction and re-submission, each revised sheet needs to be marked with a revision number, indicating the number of times the sheet has been revised since the first submission and with the date of each revision. Each change on the sheet must also be marked with the appropriate revision number, shown on a small triangle, placed next to the change.

Drawings on data sheets that contain information for items or options other than those intended for use on this project must be clearly marked so as to indicate which items or options are intended for use on this project. Line or cross out those items or options that do not apply, or by circling or highlighting those items or options that do apply. Whatever method is used it must be done in a manner that clearly indicated which items apply to the project.

The contractor is responsible to make sure that everyone, including suppliers, furnishes complete product and shop detail data for review by the Engineer. The data must include, but is not limited to, the following:

1. Drawings including information on the exact number of units, exact unit to be furnished, and all of the equipment options to be furnished with the unit. Dimensions, material grades fits, finishes applicable standards (ASTM, AASHTO, ANSI, and other applicable standards) and all other data sufficient to meet the requirements of the contract documents.
2. Complete catalog data and specifications including the part supplier contact information name, address, and telephone number. 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.
3. Complete installation and maintenance instructions.
4. Drawings and catalog data must indicate the pertinent bid item.

If a submission is incomplete, it may be returned without review or comment. If so, it must be completed before re-submittal. The contractor is advised to keep an accurate record of all shop drawing transmittals and to maintain constant contact with all suppliers to obtain prompt re-submittal of drawings and data returned for correction and completion. Significant time lapses between the return and re-submittals of data could delay the project and shall be avoided.

B.1.1.2 Submittal Review Time

It is the contractor's responsibility to ensure that all shop details and data are submitted for review in a timely manner. The preparation of construction drawings, shop details compilation of the technical data, transmittals, review, revision, and re-submittals constitutes a time consuming process.

Although no specific time periods are established herein for submittals or for the Engineer's review, the contractor should anticipate that each review may take up to

approximately 21 days. The Engineer, or his designated agent, will endeavor to complete each review in the shortest practical time. Delays in submitting, reviewing, or approving submittals will not be cause for additional compensation.

B.1.1.3 Operating and Maintenance Manuals

Submit operation and maintenance manuals required by the contract documents for preliminary review and approval in accordance with these special provisions. The number of distribution copies is six (6) unless otherwise required on the plans or in other special provisions.

Furnish final shop drawings in electronic format and six (6) hard copies. Also furnish a copy of all catalogue cuts, parts lists, operating procedures, operating and maintenance manuals, and other data required by the articles of the special provisions clearly marked that these items of work are included in the final work. The words "As-Built" and the date are acceptable for this identification.

B.1.2 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.1.3 Procedures

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

B.2 Material Compatibility

Provide products which are compatible with other products of the center lock and with other work requiring interface with the center lock, including mechanical/electrical connections and control devices.

B.3 Nameplates

Provide each piece of center lock equipment and apparatus with a permanent, corrosion-resisting metal nameplate on which is stamped the name of the manufacturer, address and the catalog or model number, and the rating or capacity of the equipment or apparatus. Nameplates on all proprietary elements must be readable, clean, and free of all paint before acceptance of the machinery. The nameplate of the distributing agent will not be sufficient.

B.4 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.5 Material Acceptance

Furnish to the City 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.6 General Material Requirements

Provide materials as specified on the plans and in the specifications. Wherever materials are not shown or specified, provide materials conforming to the current specifications as outlined in TABLE 1, 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 City prior to initiating manufacture or construction.

Materials and equipment must be essentially the standard catalogued products of manufacturers regularly engaged in production of such materials or equipment and must be 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.

TABLE 1 - MATERIALS

MATERIAL	DESCRIPTION	DESIGNATION (ASTM unless otherwise noted)
Iron castings	Gray iron	A48
Bronze castings	Bronze castings for bridges (max. Sulphur content 0.08%, chemical analysis required for each heat)	B22
Forgings	Carbon steel for industrial use Alloy steel for industrial use	A668
Hot rolled steel	Special quality carbon steel bars	A675
Dowel pins	American National Standard Unhardened Ground Dowel Pins (130 KSI minimum single shear strength)	ANSI B18.8.2

Cold rolled steel	Carbon steel bars	A311
Stainless Steel Shims	Stainless Steel	Type 316
Shapes, plates, and bars	Structural steel High strength, weathering steel	A36 or A709 A588
Stainless Steel (corrosion resistant) bolts or anchors	High Strength Stainless steel Fasteners	A193, Grade B8, A193, Grade B8M
Corrosion resistant shapes, bars, and plates	Stainless steel	A276, Type 316

B.7 Forgings

Unless otherwise specified or shown in the plans, use forgings that conform to American Association of State Highway and Transportation Officials (AASHTO) Bridge Construction Specifications, 3rd Edition, with 2016 interim revisions. Material grades must be as specified or shown in the plans.

B.8 Fasteners

B.8.1 High Strength Bolts

Unless otherwise specified, provide fasteners used for connecting center lock parts to each other and to supporting steelwork that are turned bolts conforming to the minimum specified physical requirements of high strength, ASTM F3125 Grade A449 cut thread, washer faced, hexagonal head bolts. Provide threads for turned bolts that conform to the requirements of ASTM F3125 Grade A325. Do not use ASTM F3125 Grade A490 bolts. Use nuts that conform to heavy hex series ASTM A563.

B.8.2 Bolt Dimensions

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

B.8.3 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.8.4 Locking of Fasteners

Provide positive locks of approved types, 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. High strength bolts shall be tensioned to create a self-locking effect.

B.8.5 Washers

Use hardened steel, plain washers conforming to ASTM F436 at the rotated end of high strength ASTM F3125 Grade A325 or Grade A449 bolts.

B.8.6 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.9 Weldments

Fabricate weldments for support of center locks from structural steel of the type and grade specified in the plans. Where the type and grade of steel is not specified in the plans, fabricate weldments from ASTM A709, Grade 50 structural steel. Use of steel plate larger than that denoted in the plans may be required to obtain the final required dimensions.

B.10 Lubrication of Center Locks

B.10.1 Fittings

Provide lubricant fittings for all center lock items requiring lubrication. Provide stainless steel, 5/8" head diameter button head fittings.

B.10.2 Lubrication Charts

The Contractor shall furnish three (3) copies on Mylar size (11 inches by 17 inches). The lubrication chart shall show the location of all lubrication fittings and other points of lubrication for the equipment, which will require lubrication of any kind. The chart shall show the kind of lubricant (Type, brand and series number) to be used at each point and the frequency of lubrication. Detailed notes of instructions/procedure on how to lubricate the center locks properly shall be shown. A full size print of the chart shall be framed under Lexan in a neat wooden frame with backing and shall be placed as directed by the Engineer within the control house.

Lubrication chart shall be submitted to the Engineer for review as a working drawing in accordance this Special Provision. Final lubrication chart shall not be made until the chart has been accepted by the Engineer.

B.10.3 Lubrication Tubing

Use tubing of seamless ASTM A269 Type 316 stainless steel tube with Type 316 stainless steel grease station block and coupled fittings. Use stainless steel or corrosion resistant hardware to secure lubrication tubing and fittings. Provide one grease gun for each type fitting.

B.10.4 Shipping

Immediately after the completion of fabrication, plug all grease fittings until components are installed and regular lubrication is started.

B.11 Shims

Provide shims required for leveling and alignment that are full depth shims, drilled for all bolts that pass through, and trimmed to the dimensions of the assembled unit. Provide shim material from Type 316 stainless steel, thin brass precision thickness shims may be used for final adjustment. Provide sufficient thicknesses to permit 0.005 inch variations of the nominal shim thickness plus one full allowance shim. Provide the City with one full set of additional shims for each type of component.

B.12 Lock Bar Operator

Each system shall include a mechanical bar actuator Earle EG-3 manufactured by Steward Machine Co. which moves the 5-inch x 8-inch ASTM A668 Class J lock bar through both bar guides, situated on one leaf tip, and into a receiver on the other leaf tip. A removable hand crank shall be furnished for manual operation and a removable cover over the shaft end.

Each operator shall be driven by a high starting torque, induction type, 3 HP, 1675 RPM, three phase, 60-hertz, 208-volt, NEMA design D, TENV motor with a 15-minute duty rating with a 3 ft-lbf marine duty brake with manual release and safety interlock switch. The motor shall be totally enclosed, non-ventilated, equipped with ball bearings and designed especially for marine applications subjected to adverse weather conditions. Strip heaters shall be installed in the motor housing.

Travel of the lock bars in each direction shall be governed by internal limit switches that provide open and closed contacts for each length of travel. The lock bar shall take approximately 14 seconds to complete its 18 1/2-inch stroke and the operator shall be capable of delivering a thrust to overcome Earle "Cushionlocks" resistance in each direction at 50% stall torque of the motor.

Install internal end of travel limit switches as an integral part of the new lock bar operator. See Centerlock Electrical Work for limit switch requirements.

B.13 Guides and Receivers

The lock bar guides and receivers shall be of the energy absorbing type, such as Earle "Cushionlocks" manufactured by Steward Machine Co., Inc. Each guide and receiver shall have high strength bronze wear shoes supported by a combination of stiff springs that permit some vertical movement of the shoes. When the lock bar is inserted into the guide and/or receiver it shall cause the shoes to depress the springs slightly resulting in a pre-loaded condition that will insure continuous firm contact between the lock bar and shoes. The selection and design of the system shall be such that the relationship of the minimum and maximum stresses is correct for infinite fatigue life of the energy absorbing spring system. Adjustment of the pre-load between the shoes and lock bar shall be possible without disassembly of the guides or receivers. Provide mechanism that is required for adjusting the pre-load on the center locks, included the mechanism during shipping as spare part for the Cushionlocks.

B.14 Paint for Center Locks

Clean and paint all unfinished, non-stainless surfaces of center locks, weldments, and equipment in accordance with an epoxy paint system the manufacturer recommends, except as noted herein and as shown in the plans. Provide two coats of Carboline Carbomastic 15 - Aluminum at 7-10 mils each and top coat of Carboline Carbothane 133 VOC at 5-7 mils with identical matching color code to Sherwin Williams SW6054 Canyon Clay. Provide color samples for the City for final approval. All painting shall be factory painted. Apply field touch-up paint to factory applied coatings that are damaged during construction and installation.

Prime coat finished machined mounting surfaces only, do not apply finish coat.

After completing the operating tests and acceptance of the center locks, wash with an appropriate solvent all accumulated oil, grease, dirt, and other foreign matter from exposed center lock surfaces, except rubbing surfaces.

C Construction

C.1 General

Remove existing center lock assemblies with care and not to damage existing bridge components or the motors and motor brakes to be salvaged. Reference Section "A" Center Lock Replacement, Item SPV.0105.01 for additional details on which components will be removed.

Subsection 506.3 of the WisDOT Standard Specification applies to this item. Construct in accordance with 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.

Center locks must be set, aligned and verified by experienced millwrights. Millwrights' foreman must have a minimum 10 years of experience in setting and aligning heavy machinery. Submit to the Engineer for review the qualifications of all proposed millwrights prior to installation.

C.2 Setting of Center Locks

Unless otherwise specified or shown in the plans, position center locks to be within the following tolerances:

Horizontal position:	1/32 in.
Vertical position:	1/32 in.
Orientation (parallel to Plan centerline):	0.5 degrees

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.

Unless otherwise specified or shown in the plans, drill bolt holes in steelwork for turned bolts from solid at assembly or erection after proper alignment. Do not pre-drill holes full size prior to final assembly.

Clean all contact surfaces of structural steel to which machinery is to be bolted, in accordance of American Association of State Highway and Transportation Officials (AASHTO) Bridge Construction Specifications, 3rd Edition, with 2016 interim revisions for structural steel to be bolted together, before bolting.

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

Except as noted herein or in the plans, tension ASTM F3125 Grade A325 and Grade A449 bolts, used for connecting steel machinery parts together or to structural steel and whose nominal threaded diameter is less than or equal to 1½ inches, in accordance with the bolted connection requirements of AASHTO and the standard specifications.

C.4 Welding and Weldments

Unless otherwise noted herein or in the plans, perform all welding and weld inspection of center locks in accordance with ANSI/AASHTO/AWS D1.5. Unless otherwise noted herein or in the plans treat all welded center lock members that support live load reactions as main members, all welds as subject to tension or stress reversal, and all welds as joining primary components. Do not perform field welding on these elements unless specifically required in the contract documents.

Unless otherwise shown in the plans, connect elements of weldments by complete joint penetration welds. Do not use fillet welds where they would require machining to provide clearance for machinery, fasteners, or other attachments. Clip stiffeners to avoid overlapping stiffener welds with welds at the intersection of main plates.

Stress-relieve weldments after welding and prior to final machining. Unless otherwise shown in the plans, finish machined surfaces of weldments to flatness as required herein and parallel to each other and to the bottom of the base plate. The height of the weldment must be per plan height $\pm 1/16$ inch. All exposed edges of weldments must be ground to a chamfer or radius to eliminate sharp edges and burrs. Weldment base plates which will be placed against concrete or grout must have ¾-inch minimum radii on the corners.

Unless specified in the plans or herein, dimensions between machined surfaces have a tolerance of 0.010 inch and machined surfaces have a flatness tolerance of 0.040 inch.

C.5 Lubrication of Center Locks

Connect grease fittings with tubing or fittings so that grease is introduced directly into the grease passages for distribution. Tubing is to be extended from the guides to convenient lubrication 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.

C.6 Startup Requirements

Implement startup procedures that protect the equipment from damage and ensure safe working conditions during bridge operations throughout construction. The center-lock assemblies will not be left in the engaged position unless appropriate interlocking, that prevents the operation of the bascule leaf, are in place, tested and working.

C.7 Protection of 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 center lock must not be operated and no enclosed equipment opened during any period in which construction operations can contaminate the equipment.

C.8 Erection

Erect and assemble center locks in accordance with part numbers and match marks. Adjust all parts for precise alignment by means of shims and 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 center locks within the specified tolerances and such that satisfactory operation is achieved. Utilize millwrights with demonstrated skill in this type work for all erection and adjustment of center locks.

Do not perform final shimming of the center lock assemblies until the following have been completed:

- The live load shoe assemblies and roadway joints have maintained existing alignment.
- All items of work, on the related bascule leaf, have not caused significant balance changes.

Unless approved by the Engineer prior to construction, drill bolt holes in structural steel supports only after alignment of center locks. Do not install center locks unless mounting surfaces are clean of dirt, paint and other foreign materials. Securely tighten connecting fasteners and nuts to the specified torque values.

C.9 Field System Testing

After the bridge systems have been completely installed, conduct a full functional test of the center lock operation. Include automatic and manual operations, of both driving and retracting the locks at each location, in this test. The test shall show that the new actuators and limit switches work with existing interlock system.

Verify the fully driven and fully retracted indications at the control console for each of the center locks.

Operate each center lock a minimum of four times with the leaf in the lowered position to the stroke indicated in the plans. During the test the center lock actuator must drive and retract the lockbar to not exceed 50% of full power to be accepted.

C.10 Protection for Shipment

Coat all finished metal surfaces as soon as practical, after machining, with an approved rust-inhibiting compound. Completely protect center locks parts from weather, dirt and foreign materials during manufacture and store indoors while awaiting erection. Assembled units, including guides, receivers, operators and other devices having finished mounting surfaces will have those surfaces thoroughly coated with rust-inhibitor and to be skidded or crated for protection during handling, shipment and storage. Bag 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.

D Measurement

The City will measure Center Lock Replacement as a single lump sum unit for the bascule span center locks acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Center Lock Replacement	LS

Payment is full compensation for removing and salvaging existing center lock motors and motor brakes, providing existing motors and motor brakes to the City of Milwaukee; removing and properly disposing of all other components of the existing center lock equipment; furnishing all material and labor required to provide, install in working order and test the bascule center locks as shown on the plans and as described herein; and for furnishing all tools, equipment and incidentals necessary to complete all work required under this pay item.

15. Field Verification Survey, Item SPV.0105.02.

A Description

This special provision describes performing a field survey of the existing North Water Street Bascule Bridge for the purpose of establishing current dimensions and elevations to be used in the fabrication and construction of new center lock machinery.

All dimensions and elevations shown on the contract plans are based on values found on the plans from the original bridge construction and subsequent bridge rehabilitations. These values should not be construed to be completed true or accurate. They are accurate enough for the design of the rehabilitation and for the establishment of bid quantities. However, the nature of the work involved in this rehabilitation is such that new elements must be constructed and fabricated too much closer tolerances than are needed for design. Shop drawings of the original fabrication can be made available to the contractor.

Prior to beginning the work, furnish the engineer the name of the individual who completed the survey as well as the date and time the survey was completed.

All survey field notes and sketches shall be kept in a neat orderly fashion so the fabricators of the center lock system can readily interpret them. If, following completion of the survey and submittal of all survey notes and sketches, questions arise regarding the meaning or interpretation of the notes and sketches, provide the necessary clarification and interpretation at no additional cost to the City.

B (Vacant)

C Construction

Conduct the survey in a timely and efficient manner prior to beginning any fabrication or construction of new bridge elements.

The survey shall include the determination of all dimensions and elevations necessary to fabricate and construct the new bridge elements.

It is expected that the results of the survey will correlate very closely with the dimensions and elevations given on the plans and/or shop drawings. If there are any obvious discrepancies of a magnitude that will severely and detrimentally impact the work, discuss with the engineer prior to proceeding.

Submit results of the survey, in the form of field notes, sketches and any other forms of survey documentation to the engineer for review before proceeding with fabrication. Submit sketches of any portions of existing steel that need to be cut or coped to accommodate new machinery to the engineer for review prior to performing any cutting, coping, or removal.

Following the engineer's review, use the survey results to fabricate and construct new bridge elements as shown on the plans.

The survey shall include, but not be limited to, the following:

1. Location of existing machinery connections including:

- Existing hole sizes and locations
- Bascule Girder web thickness
- North and South Sidewalk Brackets web and flange sizes
- Centerline of North and South Sidewalk Brackets in relation to the Centerline of the Span
- Bolt head heights including washers at the North and South Sidewalk Brackets connection point (to verify clearance for the new Receiver and Forward Guide)
- Any portions of existing steel that need to be cut or coped to accommodate new machinery

2. Location of existing electrical devices and connections including:

- Center lock limits switches
- Center lock disconnect switches
- Terminations and devices of existing center lock controls in control cabinets.

The above list is not to be taken as complete or all inclusive. It is presented as an example of items to be surveyed. It is the contractor's responsibility to determine the full extent of survey necessary.

If it is determined that during the course of the work, additional survey is required, it shall be furnished at no additional cost to the City.

The results of the survey are the contractor's responsibility. These results are to be used in fabrication and erection of new bridge elements. As such, in the event that elements are incorrectly fabricated and do not fit existing spaces or conditions, the contractor is responsible for correction any such errors and repairing or replacing the parts and elements to the satisfaction of the engineer at no additional cost to the City.

D Measurement

The City will measure Field Verification Survey, completed in accordance to the contract and accepted, as a single complete unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Field Verification Survey	LS

Payment is full compensation for conduction the field survey of existing conditions as described herein; for providing clear and concise survey results; for performing any required resurvey or additional survey; and for furnishing all labor, tools, and equipment and incidentals necessary to complete the work.