PROJECT MANUAL

Ho-Chunk Blue Wing Lift Station and WWTF Improvements

Monroe County, Wisconsin

IHS Project No's. BE-19-K62 & BE-22-M82

October 2026

Prepared by:

Indian Health Service
129 North Brown St.
Rhinelander, WI 54501
Telephone: (715) 365-5145

This Page Intentionally Left Blank

Items to be Included with Bid

- ☐ Meet Bid Deadline of 2:00 PM CST on Friday, October 23, 2026
- ☐ Bid Bond
- ☐ Proof of Insurance
- ☐ Proof of Ownership
- ☐ References
- ☐ Receipt of Addenda (if applicable)
- ☐ Completed Bid Form (C-410) and Bid Schedule
- ☐ Proof of Tribal Affiliation (if applicable)
- ☐ Evidence of Authority to do Business in State of Wisconsin (or Ability to Obtain Such Authority)
- ☐ Contractor’s License Number
- ☐ List of Subcontractors

This Page Intentionally Left Blank

TABLE OF CONTENTS
HO-CHUNK NATION
HO-CHUNK BLUE WING LIFT STATION AND WWTF IMPROVEMENTS
IHS PROJECT NUMBERS: BE-19-K62 & BE-22-M82

BIDDING REQUIREMENTS

Section 00111 – Advertisement for Bids — EJCDC C-111 (2018)
Section 00200 – Instructions to Bidders — EJCDC C-200 (2018)
- Wisconsin Sales and Use Tax Exemption Certificate

Section 00410 – Bid Form (Including Bid Schedule) — EJCDC C-410 (2018)
Section 00430 – Bid Bond — EJCDC C-430 (2018)
Section 00452 – Bidding Forms
- List of Subcontractors
- General Terms and Conditions Construction Service Provider Agreement
- Request for Taxpayer Identification Number (W9) and Certification

CONTRACTING REQUIREMENTS

Section 00510 – Notice of Award — EJCDC C-510 (2018)
Section 00520 – Agreement — EJCDC C-520 (2018)
Section 00550 – Notice to Proceed — EJCDC C-550 (2018)
Section 00600 – Bonds
- Performance Bond — EJCDC C-610 (2018)
- Payment Bond — EJCDC C-615 (2018)

Section 00620 – Contracting Forms
- Contractors Application for Payment — EJCDC C-620 (2018)
- Certificate of Substantial Completion — EJCDC C-625 (2018)
- Notice of Acceptability — EJCDC C-626 (2018)
- Change Order Form — EDCJC C-941 (2018)

Section 00700 – General Conditions — EJCDC C-700 (2018)
Section 00800 – Supplemental General Conditions — RUS B 1780-26 Exhibit G
- Davis Bacon Wage Rates – U.S. Dept. of Labor Wage Determination

TECHNICAL SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS

Section 01100 – Summary of Work
Section 01270 – Price and Payment
Section 01310 – Project Management and Coordination
Section 01330 – Submittal Procedure
Section 01420 – References
Section 01430 – Quality Assurance
Section 01500 – Temporary Facilities and Controls
Section 01510 – Temporary Sewage Bypass Pumping
Section 01720 – Staking and Construction Surveying
Section 01770 – Closeout Procedure
Section 01780 – Closeout Submittals
Section 01785 – Operation and Maintenance Manual

Division 2 – SITE CONSTRUCTION

Section 02230 – Clearing and Grubbing
Section 02310 – Grading
Section 02315 – Excavation, Trenching, and Backfill
Section 02370 – Temporary Erosion and Sediment Control
Section 02530 – Sanitary Sewer
Section 02531 – Sanitary Sewer Service Lines
Section 02532 – Sanitary Sewer Manholes
Section 02539 – Sewage Lift Station with Valve Vault Rehabilitation
Section 02730 – Aggregate Surfacing
Section 02775 – Concrete Pads
Section 02843 – Steel Pipe Bollards
Section 02920 – Topsoiling, Seeding, and Fertilizing

DIVISION 3 – CONCRETE

Section 03100 – Concrete Formwork
Section 03200 – Concrete Reinforcement
Section 03300 – Cast-in-Place Concrete (Non-Structural)
Section 03350 – Concrete Finishing

DIVISION 8 – OPENINGS

Section 08100 – Metal Doors and Hardware

DIVISION 13 – SPECIAL REQUIREMENTS

Section 13430 – Electrical Control System – Sewage Lift Station

DIVISION 13 – ELECTRICAL

Section 16050 – Basic Electrical Materials and Methods
Section 16230 – Backup Power Supply
Section 16401 – Electrical Power, Service, and Distribution
Section 16500 – Lighting

APPENDICES

Appendix A – Geotechnical/Soil Boring Report
Appendix B – Ho-Chunk Nation Safety Code

This Page Intentionally Left Blank

BIDDING DOCUMENTS

This Page Intentionally Left Blank

ADVERTISEMENT FOR BIDS

HO-CHUNK NATION
MONROE COUNTY, WISCONSIN
HO-CHUNK BLUE WING LIFT STATION
AND WWTF IMPROVEMENTS

General Notice

Ho-Chunk Nation (Owner) is requesting Bids for the construction of the following Project:

Ho-Chunk Blue Wing Lift Station and WWTF Improvements
IHS Projects BE-19-K62 & BE-22-M82

Bids for the construction of the Project will be received at the **Ho-Chunk Nation's Division of Environmental Health** located at **N6520 Lumber Jack Guy Road, Black River Falls, WI 54615**, until **Friday, October 23, 2026** at **2:00 PM** local time. At **2:03 pm** local time the Bids received will be **publicly** opened and read.

The Project includes the following Work:

Lift Station Rehabilitation (BE-19-K62)

- **Installation of two new manholes and modification of an existing manhole.**
- **Installation of approximately 100 feet of 8-inch PVC SDR35, 10 feet of C900 sewer main, and one 8-inch gate valve with box.**
- **Modifications to the lift station wet well to include core-drilling a new inlet opening, installation of a trash basket and rail system, and installation of safety grating.**
- **Installation of a concrete pad, hoist base, and hoist adjacent to the wet well.**
- **Replacement of the following lift station equipment to include two submersible sewage pumps, base elbows, discharge piping, guide rails, transducer, and floats.**
- **Installation of an emergency bypass connection on the discharge piping in the valve vault.**

LS & WWTF Backup Power Supply (BE-22-M82)

- **Installation of an electrical equipment board with roof and concrete pad, to include a new meter base, automatic transfer switch, control panel, and lighting at the lift station.**
- **Installation of a new lift station control panel.**
- **Installation of a generator on a concrete pad at the lift station.**
- **Installation of an automatic-transfer switch and re-wiring of the secondary electrical service (downstream of the meter) at the wastewater treatment facility (WWTF).**
- **Installation of a generator on a concrete pad at the WWTF control building.**
- **Replacement of the exterior double entry door and hardware at the WWTF control building.**

Bids are requested for the following Contract: **Ho-Chunk Blue Wing Lift Station and WWTF Improvements – BE-19-K62 & BE-22-M82**

The Project has a Substantial Completion date of **August 15, 2027** and a Final Completion date of **August 31, 2027**.

The project has a Milestone 1 completion date of **March 31, 2027** for completion of clearing and grubbing prior to the start of oak wilt restrictions.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

The project has a Milestone 2 completion date of **May 15, 2027** for completion of the gravity sewer work so the associated road restoration can be completed prior to the scheduled mill and overlay within the Ho-Chunk Blue Wing Community (paving by others).

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website:

www.QuestCDN.com – using the specific project number 10207252

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

The Issuing Office for the Bidding Documents is:

Ho-Chunk Nation
Division of Environmental Health
N6520 Lumber Jack Guy Road
Black River Falls, WI 54615

To obtain copies of the Bidding Documents, Prospective Bidders are required to use the designated website listed above. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including addenda, if any, obtained from sources other than the Issuing Office.

Pre-bid Conference

A pre-bid conference for the Project will **NOT** be held.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

This Advertisement is issued by:

Owner: **Ho-Chunk Nation**

Kevin Gunderson

By: **Kevin Gunderson**
Title: **Environmental Sciences Program Manager**
Date: **10/01/2026**

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Page

Article 1— Defined Terms 1

Article 2— Bidding Documents 1

Article 3— Qualifications of Bidders 2

Article 4— Pre-Bid Conference 2

Article 5— Site and Other Areas; Existing Site Conditions; Examination of Site; Owner's Safety Program; Other Work at the Site 2

Article 6— Bidder's Representations and Certifications 4

Article 7— Interpretations and Addenda 5

Article 8— Bid Security 5

Article 9— Contract Times 6

Article 10— Substitute and "Or Equal" Items 6

Article 11— Subcontractors, Suppliers, and Others 6

Article 12— Preparation of Bid 7

Article 13— Basis of Bid 8

Article 14— Submittal of Bid 9

Article 15— Modification and Withdrawal of Bid 9

Article 16— Opening of Bids 9

Article 17— Bids to Remain Subject to Acceptance 9

Article 18— Evaluation of Bids and Award of Contract 10

Article 19— Bonds and Insurance 11

Article 20— Signing of Agreement 11

Article 21— Sales and Use Taxes 11

Article 22— WAGE RATE REQUIREMENTS 12

Article 23— TRIBAL REQUIREMENTS 12

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 1—DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.04 *Electronic Documents*

A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version **2017** or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.04.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

3.01 Bidder is to submit the following information with its Bid to demonstrate Bidder's qualifications to perform the Work:

A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.

B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.

C. Bidder's state or other contractor license number, if applicable.

D. Subcontractor and Supplier qualification information.

E. Other required information regarding qualifications.

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

4.01 A pre-bid conference will not be conducted for this Project.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:

a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.

c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

4. *Geotechnical Baseline Report/Geotechnical Data Report:* The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR).

a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.

b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.

c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

d. As set forth in the Supplementary Conditions, the GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

A. No other Site-related documents are available.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.04 *Site Visit and Testing by Bidders*

A. Bidders visiting the Site are required to arrange their own transportation to the Site.

B. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the following Owner contact for visiting the Site: **Kevin Gunderson, Environmental Sciences Program Manager – 608-769-4113**. Bidder must conduct the required Site visit during normal working hours.

C. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

D. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

E. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

F. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:

A. **Nicholas Rademacher; Indian Health Service; 129 North Brown St; Rhinelander, WI 54501; nciholas.rademacher@ihs.gov; 715-365-5148**

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **5** percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.

9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner.

10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the project with the Bid Documents.

11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

12.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.

12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

12.06 A Bid by an individual must show the Bidder's name and official address.

12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

12.08 All names must be printed in ink below the signatures.

12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.

12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Lump Sum*

A. Bidders must submit a Bid on a lump sum basis as set forth in the Bid Form.

13.02 *Base Bid with Alternates*

A. Bidders must submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.

B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. The comparison will only take into consideration the alternates if the Owner so chooses to complete the alternate work.

13.03 *Unit Price*

A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.04 *Allowances*

A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 14—SUBMITTAL OF BID

14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.

14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED – HO-CHUNK BLUEWING SEWER IMPROVEMENTS" A mailed Bid must be addressed to the location designated in the Advertisement.

14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.

15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 Indian Preference will be used in determining the low bidder.

This project is subject to the provisions of the Indian Self Determination and Education Assistance Act as identified within the bid documents. Indian preference will be used in selecting contractor. Bidders understand that, to the greatest extent feasible, Indian persons will be given preference if opportunities for training and employment in connection with this work arise. If opportunities in connection with this work arise, preference shall be given to qualified Indian organizations and qualified Indian owned economic enterprises who can provide services at reasonable costs.

The work to be performed under this contract is on a project subject to section 7(b) of the Indian Self Determination and Education Assistance Act (25USC450e(b)) (Indian Act), which requires that to the greatest extent feasible: a) preference and opportunities for training and employment will be given to Indians, and b) preferences in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned economic enterprises. The parties to this contract shall comply with the provisions of section 7(b) of the Indian Act. In connection with this contract, the contractor shall, to the greatest extent feasible, give preference in the award of any subcontractors to Indian organizations and Indian-owned economic enterprises, and preferences and opportunities for training and employment of Indians. The contractor shall include this section 7(b) clause in every subcontract in connection with this project, and shall, at the direction of the recipient, take appropriate action pursuant to the subcontract upon a finding by the recipient of agency that the subcontractor has violated the section 7(b) clause of the Indian Act.

Indian Preference will be used in determining the low bidder. Preference shall be given in the award of construction and service contracts to those firms (or joint ventures) whose levels of ownership and control by enrolled Indians (or Alaska Natives) each equal at least 51% of the total on a continuing basis for the duration of the contract. Award shall be made to the qualified Indian-owned economic enterprise or organization with the lowest responsive quotation if it is reasonable and no more that 5% higher that the lowest responsive quotation received. If no responsive quotation from a qualified Indian-owned economic enterprise or organization received is within 5% of the lowest responsive quotation from any qualified source, then award shall be made to the source with the lowest quotation.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18.06 *Evaluation of Bids*

A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

C. Bid prices will be compared after adjusting for differences in time of Substantial Completion

18.07 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

18.08 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

21.01 Owner is exempt from **Wisconsin** state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. See attached Wisconsin Sales and Use Tax Exemption Certificate at the end of this section.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 22—WAGE RATE REQUIREMENTS

22.01 The prevailing wage rates of the Department of Labor apply to this project. The Labor Standards Provisions found at 29 CFR 5.5(a) apply to this project if the prevailing wage rates of the Department of Labor apply.

ARTICLE 23—TRIBAL REQUIREMENTS

23.01 Successful bidder will be obligated to complete the Nation's Service Provider Agreement and Request for Taxpayer Identification Number and Certification in addition to the Agreement. See Section 00452 for sample forms.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

WISCONSIN SALES AND USE TAX EXEMPTION CERTIFICATE

Check One ► ☐ Single Purchase ☑ Continuous

Purchaser's Business Name	Purchaser's Address
HO-CHUNK NATION	W9814 AIRPORT RD BLACK RIVER FALLS, WI 54615

The above purchaser, whose signature appears on the reverse side of this form, claims exemption from Wisconsin state, county, baseball or football stadium, local exposition, and premier resort sales or use tax on the purchase, lease, license, or rental of tangible personal property, property under sec. 77.52(1)(b), items under sec. 77.52(1)(c), goods under sec. 77.52(1)(d), or taxable services, as indicated by the box(es) checked below.

I hereby certify that I am engaged in the business of selling, leasing, licensing, or renting: GOVERNING BODY OF THE HO-CHUNK NATION

(Purchaser's description of property, items, goods, or services sold by purchaser.)

Purchaser's description of property or services purchased (itemize property, items, or goods purchased if "single purchase"): ALL PROPERTY AND SERVICES

Seller's Name	Seller's Address

REASON FOR EXEMPTION

☐ **Resale** (Enter purchaser's seller's permit or use tax certificate number) _____

Manufacturing and Biotechnology

☐ Tangible personal property (TPP) or item under s.77.52(1)(b) that is used exclusively and directly by a manufacturer in manufacturing an article of TPP or items or property under s.77.52(1)(b) or (c) that is destined for sale and that becomes an ingredient or component part of the article of TPP or items or property under s.77.52(1)(b) or (c) destined for sale or is consumed or destroyed or loses its identity in manufacturing the article of TPP or items or property under s.77.52(1)(b) or (c) destined for sale.

☐ Machines and specific processing equipment and repair parts or replacements thereof, exclusively and directly used by a manufacturer in manufacturing tangible personal property or items or property under s.77.52(1)(b) or (c) and safety attachments for those machines and equipment.

☐ The repair, service, alteration, fitting, cleaning, painting, coating, towing, inspection, and maintenance of machines and specific processing equipment, that the above purchaser would be authorized to purchase without sales or use tax, at the time the service is performed. Tools used to repair exempt machines are not exempt.

☐ Fuel and electricity consumed in manufacturing tangible personal property or items or property under s.77.52(1)(b) or (c) in this state.
Percent of fuel exempt: _____ % Percent of electricity exempt: _____ %

☐ Portion of the amount of fuel converted to steam for purposes of resale. Percent of fuel exempt: _____ %

☐ Property used exclusively and directly in qualified research, by persons engaged in manufacturing at a building assessed under s. 70.995, by persons engaged primarily in biotechnology in Wisconsin, or a combined group member conducting qualified research for another combined group member that meets these requirements.

Farming

(To qualify for this exemption, the purchaser must use item(s) exclusively and directly in the business of farming, including dairy farming, agriculture, horticulture, floriculture, silviculture, or custom farming services.)

☐ Tractors (except lawn and garden tractors), all-terrain vehicles (ATV) and farm machines, including accessories, attachments, and parts, lubricants, nonpowered equipment, and other tangible personal property or items or property under s.77.52(1)(b) or (c) that are used exclusively and directly, or are consumed or lose their identities in the business of farming. This includes services to the property and items above.

☐ Feed, seeds for planting, plants, fertilizer, soil conditioners, sprays, pesticides, and fungicides.

☐ Breeding and other livestock, poultry, and farm work stock.

☐ Containers for fruits, vegetables, grain, hay, and silage (including containers used to transfer merchandise to customers), and plastic bags, sleeves, and sheeting used to store or cover hay and silage. Baling twine and baling wire.

☐ Animal waste containers or component parts thereof (may only mark certificate as "Single Purchase").

☐ Animal bedding, medicine for farm livestock, and milk house supplies.

This Form May Be Reproduced

Governmental Units and Other Exempt Entities

Enter CES No., if applicable: 062768

- ☐ The United States and its unincorporated agencies and instrumentalities.
- ☑ Any federally recognized American Indian tribe or band in this state.
- ☐ Wisconsin state and local governmental units, including the State of Wisconsin or any agency thereof, Wisconsin counties, cities, villages, or towns, and Wisconsin public schools, school districts, universities, or technical college districts.
- ☐ Organizations organized and operated exclusively for religious, charitable, scientific, or educational purposes, or for the prevention of cruelty to children or animals. CES Number _____ (Required for Wisconsin organizations).

Other

- ☐ Containers and other packaging, packing, and shipping materials, used to transfer merchandise to customers of the purchaser.
- ☐ Trailers and accessories, attachments, parts, supplies, materials, and service for motor trucks, tractors, and trailers which are used exclusively in common or contract carriage under LC, IC, or MC No. (if applicable) _____.
- ☐ Machines and specific processing equipment used exclusively and directly in a fertilizer blending, feed milling, or grain drying operation, including repair parts, replacements, and safety attachments.
- ☐ Building materials acquired solely for and used solely in the construction or repair of holding structures used for weighing and dropping feed or fertilizer ingredients into a mixer or for storage of such grain, if such structures are used in a fertilizer blending, feed milling, or grain drying operation.
- ☐ Tangible personal property purchased by a person who is licensed to operate a commercial radio or television station in Wisconsin, if the property is used exclusively and directly in the origination or integration of various sources of program material for commercial radio or television transmissions that are generally available to the public free of charge without a subscription or service agreement.
- ☐ Fuel and electricity consumed in the origination or integration of various sources of program material for commercial radio or television transmissions that are generally available to the public free of charge without a subscription or service agreement.
  Percent of fuel exempt _____ % Percent of electricity exempt _____ %
- ☐ Tangible personal property and items, property and goods under s.77.52(1)(b), (c), and (d) to be resold by _____ on my behalf where _____ is registered to collect and remit sales tax to the Department of Revenue on such sales.
- ☐ Tangible personal property, property, items and goods under s.77.52(1)(b), (c), and (d), or services purchased by a Native American with enrollment # _____, who is enrolled with and resides on the _____ Reservation, where buyer will take possession of such property, items, goods, or services.
- ☐ Tangible personal property and items and property under s.77.52(1)(b) and (c) becoming a component of an industrial or municipal waste treatment facility, including replacement parts, chemicals, and supplies used or consumed in operating the facility. Caution: Do not check the "continuous" box at the top of page 1.
- ☐ Portion of the amount of electricity or natural gas used or consumed in an industrial waste treatment facility. (Percent of electricity or natural gas exempt _____ %)
- ☐ Electricity, natural gas, fuel oil, propane, coal, steam, corn, and wood (including wood pellets which are 100% wood) used for fuel for **residential** or **farm** use.

	% of Electricity Exempt	% of Natural Gas Exempt	% of Fuel Exempt
☐ Residential	_____ %	_____ %	_____ %
☐ Farm	_____ %	_____ %	_____ %

Address Delivered: _____

- ☐ Percent of printed advertising material solely for out-of-state use. _____ %
- ☐ Catalogs, and the envelopes in which the catalogs are mailed, that are designed to advertise and promote the sale of merchandise or to advertise the services of individual business firms.
- ☐ Computers and servers used primarily to store copies of the product that are sent to a digital printer, a plate-making machine, or a printing press or are used primarily in prepress or postpress activities, by persons whose NAICS code is 323111, 323117, or 323120.
- ☐ Purchases from out-of-state sellers of tangible personal property that are temporarily stored, remain idle, and not used in this state and that are then delivered and used solely outside this state, by persons whose NAICS code is 323111, 323117, or 323120.
- ☐ Other purchases exempted by law. (State items and exemption). _____

I hereby certify that if the item(s) being purchased are not used in an exempt manner, I will remit use tax on the purchase price at the time of first taxable use. I understand that failure to remit the use tax may result in a future liability that may include tax, interest, and penalty.

Signature of Purchaser	Print or Type Name	Title	Date
[signature]	WILFRID CLEVELAND	PRESIDENT	7-8-15

(DETACH AND PRESENT TO SELLER)

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to: **Ho-Chunk Nation; Division of Environmental Health; Attn: Kevin Gunderson; N6520 Lumber Jack Guy Road, Black River Falls, WI 54615**

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. List of Proposed Subcontractors;

C. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;

D. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;

E. Completed Bid Form (C-410) and Receipt of Addenda (if applicable);

F. Proof of tribal affiliation (if applicable);

G. Proof of Ownership;

H. Completed Bid Schedule(s);

I. References; and

J. Proof of insurance.

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Lump Sum Bids*

A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:

1. Lump Sum Price (Single Lump Sum) – See attached Bid Schedule following this section.

3.02 *Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices – See attached Bid Schedule following this section.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Bidder acknowledges that:

1. Each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. Estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

3. In the event the total of Bid Schedule A and B exceeds the available funding, the Owner reserves the right to negotiate with the lowest bidder regarding the amount of work to be completed based on available funding.

4. It is not guaranteed to award the Alternate work. Owner reserves the right to accept or reject the alternate work. Comparison of Bids will consider the Base Bid Price amount initially and then the addition of the Alternate.

3.03 *Total Bid Price (Lump Sum and Unit Prices)*

Total Bid Price from the attached Bid Schedules A and B	$

ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

BID SCHEDULE

HO-CHUNK NATION
HO-CHUNK BLUE WING COMMUNITY SEWER IMPROVEMENTS
IHS PROJECT BE-19-K62

SCHEDULE A - LIFT STATION IMPROVEMENTS

ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	TOTAL PRICE
1.	Manhole Modifications - MH19	1	L.S.		
2.	4-Foot Diameter Concrete Manhole New Install (MH20 & MH21)	2	EA		
3.	8-Inch PVC SDR 35 Sewer Main	92	FT		
4.	8-Inch C900 PVC DR18 Sewer Main	10	FT		
5.	8-Inch Gate Valve and Box	1	EA		
6.	Sewer Service Stub Out	1	EA		
7.	Wet Well Renovations	1	L.S.		
8.	Valve Vault Emergency Bypass Connection	1	L.S.		
9.	Temporary Sewage Bypass	1	L.S.		
10.	Clearing and Grubbing	1	L.S.		
11.	Site Work	1	L.S.		
12.	Road Restoration	1	L.S.		
				Total Schedule A	

NOTE TO OFFERORS:

- The offeror must submit a proposal on ALL items of the bid schedules as award will be made in aggregate.
- The estimated quantities of individual items may be increased or decreased as required to accommodate actual conditions at the site by the Nation's Representative at the unit bid price.
- In no event shall the total value of the work performed exceed the total contract amount without prior written approval of the Nation.
- The contractor shall be paid for actual quantities installed.
- Davis-Bacon Wage Rates are required for work completed under these bid schedules

BID SCHEDULE

HO-CHUNK NATION
HO-CHUNK BLUE WING COMMUMITY SEWER IMPROVEMENTS
IHS PROJECT BE-22-M82

SCHEDULE B - ELECTRICAL IMPROVEMENTS & BACKUP POWER SUPPLY

ITEM	DESCRIPTION	EST QTY	UNIT	UNIT PRICE	TOTAL PRICE
1.	Lift Station Electrical & Controls Replacement	1	L.S.		
2.	Lift Station Generator	1	L.S.		
3.	WWTF Generator	1	L.S.		
4.	WWTF Control Building Door Replacement	1	L.S.		
				Total Schedule B	
				Total Schedules A + B	

Signature of Offeror

Date

Position and Company

NOTE TO OFFERORS:

- The offeror must submit a proposal on ALL items of the bid schedules as award will be made in aggregate.
- The estimated quantities of individual items may be increased or decreased as required to accommodate actual conditions at the site by the Nation's Representative at the unit bid price.
- In no event shall the total value of the work performed exceed the total contract amount without prior written approval of the Nation.
- The contractor shall be paid for actual quantities installed.
- Davis-Bacon Wage Rates are required for work completed under these bid schedules

SECTION 00430
BID BOND

This section includes the following bond forms:

- Bid Bond

Bid Bond: Submit bid bond per the requirements of the bid solicitation



This Page Intentionally Left Blank

BID BOND (PENAL SUM FORM)

Bidder	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Bid**
Name:	Project *(name and location)*:
Address *(principal place of business)*:	Bid Due Date:
Bond	
Penal Sum:	
Date of Bond:	

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

Bidder	Surety
_____	_____
(Full formal name of Bidder)	*(Full formal name of Surety) (corporate seal)*
By: _____	By: _____
(Signature)	*(Signature) (Attach Power of Attorney)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title: _____	Title: _____
Attest: _____	Attest: _____
(Signature)	*(Signature)*
Name: _____	Name: _____
(Printed or typed)	*(Printed or typed)*
Title:	Title:

Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
    3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
    3.2. All Bids are rejected by Owner, or
    3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SECTION 00452
BIDDING FORMS

This section includes the following forms:

- List of Subcontractors
- Qualification Statement
  - The Qualifications Statement is NOT required to be submitted with bid. Instead this document is listed for reference. Any Bidder when specifically requested by Owner shall complete and submit the Qualification Statement (Form EJCDC C-451 Qualifications Statement) to the Owner. Form will be provided to Bidder if it is requested to be submitted.
- Ho-Chunk Nation General Terms and Conditions Construction Service Provider Agreement
- Request for Taxpayer Identification Number (W-9) and Certification

This Page Intentionally Left Blank

LIST OF SUBCONTRACTORS

All Bidders are required to list the Subcontractors related to their branch of the work. Failure to list Subcontractors may be considered cause for rejection of a Bid. After the Agreement(s) have been let, Subcontractors other than those listed hereunder cannot be substituted unless authorized by the Owner after a written request has been submitted.

1) PORTION OF WORK: _____

Amount of Subcontract: _____

_____

(Name)

_____

(Street) (City) (Zip Code)

2) PORTION OF WORK: _____

Amount of Subcontract: _____

_____

(Name)

_____

(Street) (City) (Zip Code)

3) PORTION OF WORK: _____

Amount of Subcontract: _____

_____

(Name)

_____

(Street) (City) (Zip Code)

4) PORTION OF WORK: _____

Amount of Subcontract: _____

_____

(Name)

_____

(Street) (City) (Zip Code)

5) PORTION OF WORK: _____

Amount of Subcontract: _____

_____

(Name)

_____

(Street) (City) (Zip Code)

This Page Intentionally Left Blank

HO-CHUNK NATION GENERAL TERMS AND CONDITIONS CONSTRUCTION SERVICE PROVIDER AGREEMENT

Independent Contractor (IRS W-9)

THIS AGREEMENT is entered into by and between the HO-CHUNK NATION, a federally recognized Indian Tribe located at W9814 Airport Road, P.O. Box 667, Black River Falls, Wisconsin 54615, acting by and through its _____ (hereinafter "Nation"), AND _____, a Type of Entity located at _____, collectively known as the Parties.

In consideration of the mutual promises set forth herein and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Parties agree as follows:

1.) PROJECT AND/OR PURCHASE ITEMS. The Nation hereby contracts with the Service Provider to perform the project and/or deliver purchased item(s) described on the attached documentation hereto incorporated herein. This documentation may take the form of a Statement of Work created by the Nation, terms of a bid or RFP, or an invoice from Service Provider describing the services to be performed or goods to be delivered.

2.) SERVICE PROVIDER DUTIES. The Service Provider shall:

a.) Perform and carry out the project in a good and workman-like manner and to the best of Service Provider's abilities;

b.) Devote sufficient time to the Project to carry it out in an appropriate and proficient manner, and in accordance with the timetable, described on the attached Service Provider's Documentation;

c.) Conduct the Project and perform services in a professional manner and in accordance with the directives of the Nation's Representative, identified on the attached documentation; and/or

d.) Deliver purchase item(s) in accordance with the specifications and directives of the Nation's Representative, identified on the attached documentation;

e.) Warrant to the Nation that all goods and services furnished hereunder, will conform in the necessary respects to the terms of this Agreement, including any drawings, specifications or standards incorporated herein, and/or defects in materials,

workmanship and free from such defects in design. In addition, the Service Provider warrants that goods and services are suitable for and will perform in accordance with the purposes for which they were intended.

f.) Regardless of F.O.B. Point, agree to bear all risk of loss, injury, or destruction of goods and materials ordered herein which for any reason occur prior to acceptance of the Nation. No such loss, injury, or destruction shall release the Service Provider from any obligations herein.

g.) Submit a Certificate of Insurance naming the Ho-Chunk Nation as additional insured, and it must be submitted prior to starting work.

3.) PAYMENT. Service Provider shall be compensated for performance of the Project and/or delivery item(s) on the basis, in the manner, and at the time specified on the attached documentation.

4.) TERM. This Agreement shall commence on the date specified on the attached Service Provider's agreement and shall continue until the earliest to occur of: (a) completion of the Project and/or delivery of purchased item(s); (b) either party terminates this Agreement with at least fourteen (14) days prior written notice; or (c) the Nation terminates this Agreement immediately following the material breach of this Agreement by Service Provider. In lieu of 14 days notice, the Nation may terminate this Agreement immediately, but must pay Service Provider for any work that would have been done in the 14 day period after notice would have been given. Should the Service Provider subsequently assume employment with the Nation in any capacity, this Service Agreement shall immediately terminate. No payment will be made for services under this Agreement, if such services are rendered while Service Provider is in a dual

employment with the Nation. Material breach is defined as failure to provide duties as identified herein, or the Service Provider's assumption of simultaneous (dual) compensated employment with the Nation in any capacity, contractual or at-will.

5.) RELATIONSHIP OF PARTIES. The Parties to this Agreement agree that Service Provider is an independent business/person or corporation and that the relationship created by this Agreement is that of Independent Contractor. No agent, employee, or servant of Service Provider shall be deemed to be an employee, agent or servant of the Nation. The Service Provider is not authorized to bind the Nation to any agreement or act on the behalf of the Nation in anyway; other than to perform the Project, and shall not represent to any person or otherwise purport to be so authorized.

6.) NO EMPLOYMENT RIGHTS OR BENEFITS. Service Provider is not an employee of the Ho-Chunk Nation and is not entitled to the benefits provided by the Ho-Chunk Nation to its employees, including, but not limited to, commendation, insurance, unemployment insurance, group insurance and pension plan. No right, preference or interest conferred upon employees of the Nation by the Employment Relations Act of the Nation, or any other source whatsoever, shall apply to the Service Provider. The Service Provider shall not be entitled to any such right, preference, or interest, and shall have no right to utilize any grievance procedure or any other procedural right provided thereby. The Service Provider shall be entitled to only such rights, preferences, or interests as may be specifically conferred in this Agreement or by the laws of the Ho-Chunk Nation which are generally applicable to independent service contractors with the Nation.

7.) SERVICE PROVIDER TAX AND RECORD KEEPING RESPONSIBILITIES. The Parties recognize and agree that Service Provider is and shall be treated as an Independent Contractor for all purposes under the laws of the Ho-Chunk Nation and any and all other applicable tax laws. However, to assure compliance with the Internal Revenue Code and income tax laws of the State of Wisconsin, the Service Provider and Nation will mutually agree that if Service Provider under this Agreement shall be treated as wages paid to an employee for purposes of all withholding and reporting provisions of the Internal Revenue Code and, if applicable, the laws of the State of Wisconsin.

8.) INDEMNIFICATION. The Service Provider shall indemnify and hold the Nation harmless from any claims, actions, and liabilities arising from any breach of this Agreement by Service Provider, or otherwise arising in connection with Service Provider's performance of the Project, unless and only if caused by the wrongful act or gross negligence of an employee or other agent of the Nation. If any employee of Service Provider is sued based on any cause of action, Nation shall have the right to defend such actions on behalf of it. Services Provider agrees to defend itself and to fully cooperate with the defense of the Nation. Service Provider shall pay for the cost of Nation defending a lawsuit as well as any liability incurred by Nation's pursuant to this section.

9.) COMPLIANCE WITH DRUG POLICY. Service Provider shall abide by the Nation's Drug and Controlled Substance Policies and Procedures and agrees to submit to testing pursuant to the Drug Policies and Procedures. This Agreement shall immediately terminate upon positive test result of Service Provider for a drug or controlled substance in accordance with the Drug Policies and Procedures. No Service Provider shall be eligible to enter into a Service Agreement with the Nation during any period where Service Provider is ineligible to be employed by the Nation an accordance with the Drug Policies and Procedures.

10.) VENDOR LICENSING. If Service Provider is subject to comply with Nation vendor licensing requirements and fails to fulfill such requirements this Agreement is voidable by the Nation.

11.) CHOICE OF LAW. This Agreement shall be construed under the laws of the Nation. The undersigned agrees that the Tribal Court of the Ho-Chunk Nation in Black River Falls, Wisconsin shall have exclusive jurisdiction over any claim or controversy arising hereunder. The undersigned does hereby consent to the subject matter and personal jurisdiction of said Court over any such dispute arising pursuant to this Agreement and any and all subsequent additions, appendixes, addenda or any other amendment to this Agreement, without regard to conflicts of laws.

12.) NON-WAIVER OF SOVEREIGN IMMUNITY. Nothing contained in this Agreement or any amendments hereinafter shall in any manner be construed or deemed to be a waiver of the sovereign immunity of the Nation, except that the Nation agrees that it shall make the payment for goods and services provided under this Agreement in accordance with its terms upon satisfactory performances by the Service Provider of its obligations hereunder. This

limited waiver pertains to payment for goods and services delivered in strict accordance with this Agreement, and to no other claim or cause of action whatsoever, whether or not arising under or in any way in connection with this Agreement. This limited waiver is personal to Service Provider and in non-assignable. Commencement of an action by Nation against Service Provider shall not constitute consent to any countersuit by Service Provider exceeding the scope of this limited waiver. Nothing in this section shall give Service Provider recourse to collect any assets held in trust for individual members of the Nation, including assets credited to the trust accounts for minors or legally incompetent persons. Service Provider agrees that if they receive a judgment against the Nation for goods and services rendered, they will not be able to collect from the above indicated assets.

13.) CONSTRUCTION LIEN. If a Construction Lien is filed pursuant to this Agreement the Construction Lien shall not be for any amount greater than what is owed and undisputed at the conclusion of the improvements to any property.

14.) NON-DISCLOSURE. Service Provider, within the scope of work may receive confidential information, either in written form or by observation and agrees that any such information or access shall be kept confidential and shall not disclose or reveal it to any person other than to its Representatives who are involved in the project. Service Provider and its Representatives agree to maintain the Confidential Information as confidential and not to disclose or reveal it to any other person not associated with the project.

15.) NON-SOLITICATION & CONFLICT OF INTEREST. The Service Provider shall not, directly or indirectly:

a.) Solicit or accept anything of value other than as agreed herein, that could reasonably be expected to influence actions or judgment, or could reasonably be considered a reward for any action or inaction.

b.) Use or disclose confidential or proprietary information gained during the course of this agreement to obtain financial gain or anything of substantial value for the private benefit of Service Provider or Service Provider's immediate family, or for an organization with which Service Provider is associated.

c.) Use or disclose confidential or proprietary information gained during the course of this agreement to cause another individual, tribe, business, partner, joint venture, employee, agent, salesperson, contractor, officer, director or otherwise, to discontinue, reduce or detrimentally modify employment, agency, or business relationships for the Nation.

d.) Use or disclose confidential or proprietary information gained during the course of this agreement to cause another individual, tribe, business, partner, joint venture, employee, agent, salesperson, contractor, officer, director or otherwise, to compete with the Nation.

e.) Request or advise any customer/prospective customer, or supplier or vendor/prospective supplies or vendor, to withdraw, curtail, cancel or refrain from doing business with the Nation in any capacity.

16.) SUCCESSORS AND ASSIGNMENTS. The benefits and obligations of this Agreement shall transfer and be binding upon the Parties and their respective successors and permitted assigns, provided that neither party may assign or transfer their interest in this Agreement without prior written approval of the other party(s), which shall not be unreasonably withheld.

17.) FORCE MAJEURE CLAUSE. All parties shall not be liable under the provisions of this Agreement for damages on account of strikes, lockouts, accidents, fires, inclement weather, delays of common carriers, acts of God, detrimental governmental actions, state of war, pandemic, or any other causes beyond the control of the parties.

18.) TIME IS OF ESSENCE. All times stated in this Agreement or in all related document(s) are of the essence in this Agreement.

19.) SEVERABILITY OF AGREEMENT CLAUSES. If any provision of this Agreement is invalid or unenforceable under any statute or rule of law within the appropriate jurisdiction, the provision is to that extent to be deemed omitted and the remaining provisions shall not be affected in any way.

20.) WARRANTIES OF AUTHORITY TO ENTER THIS AGREEMENT. Each party represents and warrants that it has the full right, power and authority to enter into this Agreement and to effectuate the purpose and intent hereof. Each party further represents and warrants, respectively, that it is aware of no obligation or disability that would prevent it from entering into this Agreement and fully performing all of its obligations hereunder.

21.) ENTIRE AGREEMENT. This Agreement contains the entire agreement and understanding between the Nation and Service Provider relating to the subject matter herein, and supersedes any other agreement or understanding, whether written or oral, relating to this Agreement. The Nation will accept no alteration of this Agreement by the Service Provider. The Servers Provider agrees that the Ho-Chunk Nation Service Provider Agreement supersedes any conflicting language which may include documentation provided by the Service Provider, including but not limited to, agreements, contracts, proposals, bids, or invoices. No terms of the Service Provider on any of their documentation that may be incorporated shall be binding upon the Nation. Any unauthorized alteration of this Agreement will automatically void this Agreement. No agreement or understanding to modify this agreement shall be binding upon the Nation unless in writing and approved by the Nation.

22.) DUPLICATE AND COUNTERPARTS. This Agreement may be signed in one copy or any number of copies, and all copies shall constitute one and the same original. An electronic signature or a facsimile copy of a signature upon this Agreement shall be binding upon the party whose signature so appears.

23.) ATTESTATION.
IN WITNESS WHEREOF, the Parties execute this Agreement at Ho-Chunk Nation Executive Building in Jackson County, Wisconsin.

HO CHUNK NATION, SERVICE PROVIDER NAME,

_____
Vice President Authorized Signature

_____
Date

SERVICE PROVIDER,

_____
Authorized Signature

_____
Date

Request for Taxpayer Identification Number (W-9) and Certification

Name (as shown on your income tax return):

Business name/disregarded entity name, if different from above:

Check appropriate box for federal tax classification:
Individual/sole proprietor ☐ C Corporation ☐ S Corporation ☐ Partnership ☐
Limited liability company ☐

Taxpayer Identification Number (TIN): Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). For other entities, it is your employer identification number (EIN).	**Social Security Number:** **Employer Identification Number:**

Certification:

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below), and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return.

Further, I affirm that I/we are NOT an employee(s) of the Nation, as evidenced by the following facts:

1. I/We offer similar services to other clients besides the Ho-Chunk Nation by means of public advertising.
2. I/We currently have other paying clients besides the Ho-Chunk Nation for whom I/we perform similar services.
3. I/We maintain a workplace, not furnished by the Ho-Chunk Nation, and incur business expenses in the operation thereof.
4. I/We employ other people in providing services to the Ho-Chunk Nation and other clients, and file employer tax returns using the Employer Identification Number provided above.
5. No one in the Ho-Chunk Nation acts as a formal supervisor over me/us or is authorized to subject me/us to directives, discipline or other forms of control suitable for employees.
6. I/We bill the Ho-Chunk Nation for services based on my/our own records of time and output or I/we receive compensation according to a payment schedule set forth in advance as part of the contract with the Ho-Chunk Nation.
7. I/We utilize my/our own equipment in providing services to the Ho-Chunk Nation.

Signature:	**Print Name:**	**Date:**

This Page Intentionally Left Blank

CONTRACTING DOCUMENTS

This Page Intentionally Left Blank

NOTICE OF AWARD

Date of Issuance:			
Owner:	Ho-Chunk Nation	Owner's Project No.:	
Engineer:	Indian Health Service	Engineer's Project Nos.:	BE-19-K62 BE-22-M82

Project: Ho-Chunk Blue Wing Lift Station and WWTF Improvements

Contract Name: Same as Project

Bidder:

Bidder's Address:

You are notified that Owner has accepted your Bid dated **(DATE)** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Ho-Chunk Blue Wing Lift Station and WWTF Improvements

The Contract Price of the awarded Contract is $**[Contract Price]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

(3) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☒ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **(3)** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **Ho-Chunk Nation**

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Copy: Engineer

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **Ho-Chunk Nation** ("Owner") and **[name of contracting entity]** ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **Ho-Chunk Blue Wing Lift Station and WWTF Improvements – BE-19-K26 & BE-22-M82**

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **Ho-Chunk Blue Wing Lift Station and WWTF Improvements – BE-19-K26 & BE-22-M82**

ARTICLE 3—ENGINEER

3.01 The Owner has retained **Indian Health Service** ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by **the Engineer**.

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before **August 15, 2027**, completed, and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **August 31, 2027**.

4.03 Milestones

A. Parts of the Work must be substantially completed on or before the following Milestone(s):

1. Milestone 1 – Clearing and grubbing shall be completed on or before **March 31, 2027**.

2. Milestone 2 – Installation of the gravity sewer extension shall be completed on or before **May 15, 2027**.

.

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4.04 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner **$200** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **$50** for each day that expires after such time until the Work is completed and ready for final payment.

3. Milestones: Contractor shall pay Owner **$200** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.04.A.1 will apply, rather than the Milestone rate.

4. Liquidated damages for failing to timely attain Substantial Completion, and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

Unit Price Work					
Item No.	**Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Extended Price**
1	Sch A – Lift Station Improvements	LS	1	$	$
2.	Sch B – Electrical Improvements and Backup Power Supply	LS	1	$	$
Total of all Extended Prices for Unit Price Work (subject to final adjustment based on actual quantities)					$

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

C. Total of Lump Sum Amount and Unit Price Work (subject to final Unit Price adjustment) $**[number]**.

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **30th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

a. **95** percent of the value of the Work completed (with the balance being retainage).

b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Consent of Surety*

A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

6.05 *Interest*

A. All amounts not paid when due will bear interest at the rate of **1** percent per annum.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement.
2. General Conditions.
3. Specifications as listed in the table of contents of the project manual.
4. Plan Set with general name "Ho-Chunk Bluewing Lift Station and WWTF Improvements" consisting of 10 sheets
5. Addenda (numbers **[number]** to **[number]**, inclusive).
6. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

(b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on **date on which Contract is signed by Owner below** (which is the Effective Date of the Contract).

Owner:	Contractor:
Ho-Chunk Nation *(typed or printed name of organization)*	 *(typed or printed name of organization)*
By: _____ *(individual's signature)*	By: _____ *(individual's signature)*
Date: _____ *(date signed)*	Date: _____ *(date signed)*
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)* *(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest: _____ *(individual's signature)*	Attest: _____ *(individual's signature)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address for giving notices: N6520 Lumber Jack Guy Road Black River Falls, WI 54615	Address for giving notices:
Designated Representative: Name: Kevin Gunderson *(typed or printed)* Title: Env Sciences Program Manager *(typed or printed)* Address: N6520 Lumber Jack Guy Road Black River Falls, WI 54615	Designated Representative: Name: _____ *(typed or printed)* Title: _____ *(typed or printed)* Address:
Phone: 608-769-4113 Email: kevin.gunderson@ho-chunk.com *(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*	Phone: _____ Email: _____ License No.: _____ *(where applicable)* State: _____

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

NOTICE TO PROCEED

Owner:	Ho-Chunk Nation	Owner's Project No.:	
Engineer:	Indian Health Service	Engineer's Project No.:	BE-19-K62 BE-22-M82
Contractor:		Contractor's Project No.:	

Project: Ho-Chunk Blue Wing Lift Station and WWTF Improvements

Contract Name: Ho-Chunk Blue Wing Lift Station and WWTF Improvements

Effective Date of Contract:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **the executed date of Section C520** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Milestone 1 must be achieved is **March 31, 2027**, the date by which Milestone 2 must be achieved is **May 15, 2027**, the date by which Substantial Completion must be achieved is **August 15, 2027**, and the date by which readiness for final payment must be achieved is **August 31, 2027**.

Before starting any Work at the Site, Contractor must comply with the following:

Submit and receive approval of all required submittals.

Submit and obtain all necessary permits.

Owner: **Ho-Chunk Nation**

By *(signature)*:

Name *(printed)*:

Title:

Date Issued:

Copy: Engineer

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

SECTION 00600
BONDS AND CERTIFICATES

This section includes the following bond forms:

- Performance Bond
- Payment Bond

Performance Bond: If awarded the contract, submit performance bond per the requirements of the contract documents prior to execution of the agreement. Use the EJCDC form provided.

Payment Bond: If awarded the contract, submit payment bond per the requirements of the contract documents prior to execution of the agreement. Use the EJCDC form provided.



This Page Intentionally Left Blank

PERFORMANCE BOND

Contractor Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner Name: **[Full formal name of Owner]** Mailing address *(principal place of business)*: **[Address of Owner's principal place of business]**	**Contract** Description *(name and location)*: **[Owner's project/contract name, and location of the project]** Contract Price: **[Amount from Contract]** Effective Date of Contract: **[Date from Contract]**

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

    3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

    3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

    3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

    5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

    5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

    5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

    5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

PAYMENT BOND

Contractor	**Surety**
Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner	**Contract**
Name: **[Full formal name of Owner]** Mailing address *(principal place of business)*: **[Address of Owner's principal place of business]**	Description *(name and location)*: **[Owner's project/contract name, and location of the project]** Contract Price: **[Amount, from Contract]** Effective Date of Contract: **[Date, from Contract]**

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-615, Payment Bond.
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond will arise after the following:

    5.1. Claimants who do not have a direct contract with the Contractor

        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).

    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

    7.2. Pay or arrange for payment of any undisputed amounts.

    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SECTION 00620
CONTRACTING FORMS

This section includes the following bond forms:

- Partial Pay Estimate Forms
- Certificate of Substantial Completion
- Notice of Acceptability
- Change Order Form

Partial Pay Estimate Forms: EJCDC C-620 (2018) with one additional IHS quantity form. Form to be submitted in accordance with contract documents.

Certificate of Substantial Completion: EJCDC C-625 (2018). Form to be completed by Engineer, Contractor, and Owner once work has substantially completed.

Notice of Acceptability: EJCDC C-626 (2018). Form to be completed by Engineer recommending that final payment be made.

Change Order Form: EJCDC C-941 (2018). Form to be submitted with supporting documentation in accordance with contract documents.



This Page Intentionally Left Blank

Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			
Application No.:		**Application Date:**	
Application Period:	**From**	**to**	

1. Original Contract Price				$ -
2. Net change by Change Orders				$ -
3. Current Contract Price (Line 1 + Line 2)				$ -
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)				$ -
5. Retainage				
a.	X	$ -	Work Completed	$ -
b.	X	$ -	Stored Materials	$ -
c. Total Retainage (Line 5.a + Line 5.b)				$ -
6. Amount eligible to date (Line 4 - Line 5.c)				$ -
7. Less previous payments (Line 6 from prior application)				
8. Amount due this application				$ -
9. Balance to finish, including retainage (Line 3 - Line 4)				$ -

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor:

Signature: **Date:**

Recommended by Engineer		**Approved by Owner**	
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	
Approved by Funding Agency			
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	

(c) 2018 National Society of Professional Engineers for EJCDC. All rights reserved.

Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
Original Contract								
			-			-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
	Original Contract Totals	$ -	$ -	$ -	$ -	$ -		$ -

(c) 2018 National Society of Professional Engineers for EJCDC. All rights reserved.

Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
Change Orders								
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
	Change Order Totals	$ -	$ -	$ -	$ -	$ -		$ -
Original Contract and Change Orders								
	Project Totals	$ -	$ -	$ -	$ -	$ -		$ -

(c) 2018 National Society of Professional Engineers for EJCDC. All rights reserved.

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____ **Owner's Project No.:** _____
Engineer: _____ **Engineer's Project No.:** _____
Contractor: _____ **Contractor's Project No.:** _____
Project: _____
Contract: _____

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Original Contract											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
				Original Contract Totals	$ -		$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment
(c) 2018 National Society of Professional Engineers for EJCDC. All rights reserved.

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____ **Owner's Project No.:** _____
Engineer: _____ **Engineer's Project No.:** _____
Contractor: _____ **Contractor's Project No.:** _____
Project: _____
Contract: _____

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Change Orders											
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
					-		-		-		-
				Change Order Totals	$ -		$ -	$ -	$ -		$ -
Original Contract and Change Orders											
				Project Totals	$ -		$ -	$ -	$ -		$ -

EJCDC C-620 Contractor's Application for Payment
(c) 2018 National Society of Professional Engineers for EJCDC. All rights reserved.

Stored Materials Summary

Contractor's Application for Payment

Owner:		**Owner's Project No.:**	
Engineer:		**Engineer's Project No.:**	
Contractor:		**Contractor's Project No.:**	
Project:			
Contract:			

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L	M
						Materials Stored			Incorporated in Work			
Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Previous Amount Stored ($)	Amount Stored this Period ($)	Amount Stored to Date (G+H) ($)	Amount Previously Incorporated in the Work ($)	Amount Incorporated in the Work this Period ($)	Total Amount Incorporated in the Work (J+K) ($)	Materials Remaining in Storage (I-L) ($)
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
								-			-	-
					Totals	$ -	$ -	$ -	$ -	$ -	$ -	$ -

EJCDC C-620 Contractor's Application for Payment
(c) 2018 National Society of Professional Engineers for EJCDC. All rights reserved.

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:
Engineer:
Contractor:
Project:
Contract Name:

Owner's Project No.:
Engineer's Project No.:
Contractor's Project No.:

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

NOTICE OF ACCEPTABILITY OF WORK

Owner:	Owner's Project No.:
Engineer:	Engineer's Project No.:
Contractor:	Contractor's Project No.:
Project:	
Contract Name:	
Notice Date:	Effective Date of the Construction Contract:

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated **[date of professional services agreement]** ("Owner-Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

CHANGE ORDER NO.: [Number of Change Order]

Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Contractor: Contractor's Project No.:
Project:
Contract Name:
Date Issued: Effective Date of Change Order:

The Contract is modified as follows upon execution of this Change Order:

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

	Recommended by Engineer (if required)	Authorized by Owner
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

	Authorized by Owner	Approved by Funding Agency (if applicable)
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

EJCDC® C-941, Change Order.
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

NSPE®
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed By

CSI®
Building Knowledge
Improving Project Delivery

NUCA
We Dig America

EJCDC® C-700, Standard General Conditions of the Construction Contract.
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Copyright© 2018

National Society of Professional Engineers

1420 King Street, Alexandria, VA 22314-2794

(703) 684-2882

www.nspe.org

American Council of Engineering Companies

1015 15th Street N.W., Washington, DC 20005

(202) 347-7474

www.acec.org

American Society of Civil Engineers

1801 Alexander Bell Drive, Reston, VA 20191-4400

(800) 548-2723

www.asce.org

The copyright for this EJCDC document is owned jointly by the three sponsoring organizations listed above. The National Society of Professional Engineers is the Copyright Administrator for the EJCDC documents; please direct all inquiries regarding EJCDC copyrights to NSPE.

NOTE: EJCDC publications may be purchased at www.ejcdc.org, or from any of the sponsoring organizations above.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Page

Article 1—Definitions and Terminology 1
1.01 Defined Terms 1
1.02 Terminology 6
Article 2—Preliminary Matters 7
2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance 7
2.02 Copies of Documents 7
2.03 Before Starting Construction 7
2.04 Preconstruction Conference; Designation of Authorized Representatives 8
2.05 Acceptance of Schedules 8
2.06 Electronic Transmittals 8
Article 3—Contract Documents: Intent, Requirements, Reuse 9
3.01 Intent 9
3.02 Reference Standards 9
3.03 Reporting and Resolving Discrepancies 10
3.04 Requirements of the Contract Documents 10
3.05 Reuse of Documents 11
Article 4—Commencement and Progress of the Work 11
4.01 Commencement of Contract Times; Notice to Proceed 11
4.02 Starting the Work 11
4.03 Reference Points 11
4.04 Progress Schedule 12
4.05 Delays in Contractor's Progress 12
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions 13
5.01 Availability of Lands 13
5.02 Use of Site and Other Areas 14
5.03 Subsurface and Physical Conditions 15
5.04 Differing Subsurface or Physical Conditions 16

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.05 Underground Facilities 17
5.06 Hazardous Environmental Conditions at Site 19
Article 6—Bonds and Insurance 21
6.01 Performance, Payment, and Other Bonds 21
6.02 Insurance—General Provisions 22
6.03 Contractor's Insurance 24
6.04 Builder's Risk and Other Property Insurance 25
6.05 Property Losses; Subrogation 25
6.06 Receipt and Application of Property Insurance Proceeds 27
Article 7—Contractor's Responsibilities 27
7.01 Contractor's Means and Methods of Construction 27
7.02 Supervision and Superintendence 27
7.03 Labor; Working Hours 27
7.04 Services, Materials, and Equipment 28
7.05 "Or Equals" 28
7.06 Substitutes 29
7.07 Concerning Subcontractors and Suppliers 31
7.08 Patent Fees and Royalties 32
7.09 Permits 33
7.10 Taxes 33
7.11 Laws and Regulations 33
7.12 Record Documents 33
7.13 Safety and Protection 34
7.14 Hazard Communication Programs 35
7.15 Emergencies 35
7.16 Submittals 35
7.17 Contractor's General Warranty and Guarantee 38
7.18 Indemnification 39
7.19 Delegation of Professional Design Services 39
Article 8—Other Work at the Site 40
8.01 Other Work 40
8.02 Coordination 41
8.03 Legal Relationships 41

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Article 9—Owner's Responsibilities 42
9.01 Communications to Contractor 42
9.02 Replacement of Engineer 42
9.03 Furnish Data 42
9.04 Pay When Due 42
9.05 Lands and Easements; Reports, Tests, and Drawings 43
9.06 Insurance 43
9.07 Change Orders 43
9.08 Inspections, Tests, and Approvals 43
9.09 Limitations on Owner's Responsibilities 43
9.10 Undisclosed Hazardous Environmental Condition 43
9.11 Evidence of Financial Arrangements 43
9.12 Safety Programs 43
Article 10—Engineer's Status During Construction 44
10.01 Owner's Representative 44
10.02 Visits to Site 44
10.03 Resident Project Representative 44
10.04 Engineer's Authority 44
10.05 Determinations for Unit Price Work 45
10.06 Decisions on Requirements of Contract Documents and Acceptability of Work 45
10.07 Limitations on Engineer's Authority and Responsibilities 45
10.08 Compliance with Safety Program 45
Article 11—Changes to the Contract 46
11.01 Amending and Supplementing the Contract 46
11.02 Change Orders 46
11.03 Work Change Directives 46
11.04 Field Orders 47
11.05 Owner-Authorized Changes in the Work 47
11.06 Unauthorized Changes in the Work 47
11.07 Change of Contract Price 47
11.08 Change of Contract Times 49
11.09 Change Proposals 49
11.10 Notification to Surety 50

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Article 12—Claims 50
12.01 Claims 50
Article 13—Cost of the Work; Allowances; Unit Price Work 51
13.01 Cost of the Work 51
13.02 Allowances 55
13.03 Unit Price Work 55
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work 56
14.01 Access to Work 56
14.02 Tests, Inspections, and Approvals 56
14.03 Defective Work 57
14.04 Acceptance of Defective Work 58
14.05 Uncovering Work 58
14.06 Owner May Stop the Work 58
14.07 Owner May Correct Defective Work 59
Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period 59
15.01 Progress Payments 59
15.02 Contractor's Warranty of Title 62
15.03 Substantial Completion 62
15.04 Partial Use or Occupancy 63
15.05 Final Inspection 64
15.06 Final Payment 64
15.07 Waiver of Claims 65
15.08 Correction Period 66
Article 16—Suspension of Work and Termination 67
16.01 Owner May Suspend Work 67
16.02 Owner May Terminate for Cause 67
16.03 Owner May Terminate for Convenience 68
16.04 Contractor May Stop Work or Terminate 68
Article 17—Final Resolution of Disputes 69
17.01 Methods and Procedures 69
Article 18—Miscellaneous 69
18.01 Giving Notice 69
18.02 Computation of Times 69

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18.03 Cumulative Remedies 70
18.04 Limitation of Damages 70
18.05 No Waiver 70
18.06 Survival of Obligations 70
18.07 Controlling Law 70
18.08 Assignment of Contract 70
18.09 Successors and Assigns 70
18.10 Headings 70

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

    a. will certify that the proposed substitute item will:

        1) perform adequately the functions and achieve the results called for by the general design;

        2) be similar in substance to the item specified; and

        3) be suited to the same use as the item specified.

    b. will state:

        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

        2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

    c. will identify:

        1) all variations of the proposed substitute item from the item specified; and

        2) available engineering, sales, maintenance, repair, and replacement services.

    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

    a. to supervise, direct, or control the Work;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

    e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;

2. correct such defective Work;

3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

This Page Intentionally Left Blank

Section 00800
Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. C-700, 2018 Edition) and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

TABLE OF CONTENTS

		Page
SC-1.01.A.8	Change Order	2
SC-1.01.A.50	Work Change Directive	2
SC-1.01.A.51	Abnormal Weather Conditions	2
SC-1.01.A.52	State	2
SC-1.01.A.53	Tribe	2
SC-2.02.A	Contract Documents	2
SC-3.03.B.2	Resolving Discrepancies	2
SC-4.01.A	Commencement of Contract Times; Notice to Proceed	3
SC-4.05.C.2	Delays in Contractor's Progress	3
SC-5.03	Subsurface and Physical Conditions	3
SC-5.05	Underground Facilities	3
SC-5.06	Hazardous Environmental Conditions at Site	4
SC-6.03	Contractor's Insurance	4
SC-7.05.A	Or Equals	5
SC-7.05.A.1	Or Equals	5
SC-7.07.A	Concerning Subcontractors, Suppliers, and Others	5
SC-7.07.E	Concerning Subcontractors, Suppliers, and Others	5
SC-10.03	Project Representative	5
SC-13.02.C	Contingency Allowance	9
SC-15.01.B	Applications for Payments	9
SC-15.01.B.4	Applications for Payments	9
SC-15.01.D.1	Payment Becomes Due	9
SC-15.02.A	Contractor's Warranty of Title	9
SC-18.11	Tribal Sovereignty	10
SC-19	Federal Requirements	10
SC-19.02	Conflict of Interest	10
SC-19.03	Gratuities	10
SC-19.04	Audit and Access to Records	11
SC-19.05	Anti-Kickback	11
SC-19.06	Clean Air and Pollution Control Acts	11
SC-19.07	Environmental Requirements	11
SC-19.08	Restrictions on Liens	12

SC-19.09	Davis Bacon and Contract Work Hours and Safety Acts	12
SC-20	Tribal Requirements	12
SC-20.01	Indian Preference	12

SC-1.01.A.8 Add the following language at the end of Paragraph 1.01.A.8:

The Change Order form to be used on this Project is EJCDC C941. Agency approval is required before Change Orders are effective.

SC 1.01.A.50 Add the following language at the end of Paragraph 1.01.A.50:

A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order.

SC 1.01.A.51 Add the following new Paragraph after Paragraph 1.01.A.50:

Abnormal Weather Conditions – Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

SC-1.01.A.52. Add the following new Paragraph after Paragraph 1.01.A.51:

References to the "State" in this document refer to the State of Wisconsin.

SC-1.01.A.53. Add the following new Paragraph after Paragraph 1.01.A.52:

References to the "Tribe" in this document refer to the Ho-Chunk Nation.

SC 2.02.A Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor three copies of the Contract Documents (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF).

SC 3.03.B.2 Add the following new paragraphs immediately after Paragraph 3.03.B.1 with the title "Priority Order for Resolving Discrepancies":

2. In the event of conflicts of discrepancies among the Contract Documents, interpretations will be based on the following priority order:

a. Modifications/Change Orders
b. The Agreement
c. Addenda, with those of later date having precedence over those of earlier date.
d. The Supplementary Conditions
e. The Standard General Conditions of the Construction Contract

f. Technical Specifications
g. Construction Drawings/Plan Set
h. Other documents specifically enumerated in the Agreement as part of the Contract Documents.

SC 4.01.A Amend the last sentence of Paragraph 4.01.A by striking out the following words:

In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

SC 4.05.C.2 Amend Paragraph 4.05.C.2 by striking out the following text: "abnormal weather conditions;" and inserting the following text:

Abnormal Weather Conditions;

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

E. The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:

1. Subsurface Exploration and Geotechnical Engineering Evaluation completed in 2024 by Coleman Engineering Company, Iron Mountain, MI consisting of 28 pages. The Technical Data contained in such report upon whose accuracy Contractor may rely are those indicated in the definition of Technical Data in the General Conditions.

SC 5.05 Delete Section 5.05 in its entirety and insert the following in its place:

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of Underground Facilities as being within the area affected by the Work as the Underground Facilities are shown on the drawings in accordance with available records and all Underground Facilities may not be shown, either through utility locating services or when required to complete the work as shown by exposing such Underground Facilities during the course of construction, including but not limited to verifying the size and type of the existing pipe at all points of connection to the existing community

sewer and/or water systems and adjusting bury depths as needed to complete the connection to the existing systems;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.C:

D. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

a. Tribal/State:	Statutory
b. Federal, if applicable (e.g., Longshoreman's):	Statutory
c. Bodily injury by accident, each accident	$500,000
d. Bodily injury by disease, aggregate	$1,000,000
Employer's Liability:	
e. Bodily injury, each accident	$500,000
f. Bodily injury by disease, each employee	$500,000
g. Bodily injury/disease aggregate	$1,000,000
h. Foreign voluntary worker compensation	Statutory

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

a. General Aggregate	$2,000,000
b. Products - Completed Operations Aggregate	$1,000,000
c. Personal and Advertising Injury	$1,000,000
d. Each Occurrence (Bodily Injury and Property Damage)	$1,000,000

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:	
a. Each person	$1,000,000

b. Each accident	$1,000,000
Property Damage:	
c. Each accident	$1,000,000
d. Combined Single Limit of	$1,000,000

4. Excess or Umbrella Liability:

a. Per Occurrence	$5,000,000
b. General Aggregate	$5,000,000

5. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following:

SC 7.05.A Amend the third sentence of Paragraph 7.05.A by striking out the following words:

Unless the specification or description contains or is followed by words reading that no like, equivalent, or 'or-equal' item is permitted.

SC 7.05.A.1 Amend the last sentence of Paragraph a.3 by striking out "and;" and adding a period at the end of Paragraph a.3.

SC 7.05.A.1 Delete paragraph 7.05.A.1.a.4 in its entirety and insert the following in its place:

[Deleted]

SC 7.07.A Amend Paragraph 7.07.A by adding the following text to the end of the Paragraph:

The Contractor shall not award work valued at more than thirty-three percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

SC 7.07.E Amend the second sentence of Paragraph 7.07.E by striking out "Owner may also require Contractor to retain specific replacements; provided, however, that".

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

A. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.

1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall

generally communicate with Owner only with the knowledge of and under the direction of Engineer.

2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.

3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.

4. Liaison:

    a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.

    b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

    c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.

5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

6. Shop Drawings and Samples:

    a. Record date of receipt of Samples and Contractor-approved Shop Drawings.

    b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

    c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.

7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

8. Review of Work and Rejection of Defective Work:

a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.

b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

9. Inspections, Tests, and System Start-ups:

a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.

b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. Records:

a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.

b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.

c. Maintain records for use in preparing Project documentation.

11. Reports:

a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.

b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.

b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.

c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

B. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.

5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.

7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.

8. Authorize Owner to occupy the Project in whole or in part.

SC 13.02.C Delete Paragraph 13.02.C in its entirety and insert the following in its place:

[Deleted]

SC 15.01.B Amend the second sentence of Paragraph 15.01.B.1 by striking out the following text: "a bill of sale, invoice, or other."

SC 15.01.B.4 Add the following language at the end of paragraph 15.01.B.4:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.

SC 15.01.D.1 Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place:

The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due twenty-one (21) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC 15.02.A Amend Paragraph 15.02.A by striking out the following text: "no later than seven days after the time of payment by Owner" and insert "no later than the time of payment by Owner."

SC 18.11 Add the following new paragraph after Paragraph 18.10:

Tribal Sovereignty. No provision of this Agreement will be construed by any of the signatories as abridging or debilitating any sovereign powers of the Ho-Chunk Nation; affecting the trust-beneficiary relationship between the Secretary of the Interior, Nation, and

Indian landowner(s); or interfering with the government-to-government relationship between the United States and the Nation.

SC 19 Add Article 19 titled "FEDERAL REQUIREMENTS"

SC 19.02 Add the following language after Article 19.01.A with the title "Conflict of Interest":

A. Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

SC 19.03 Add the following language after Article 19.02.A with the title "Gratuities":

A. If Owner finds after a notice and hearing that Contractor, or any of Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.

B. In the event this Contract is terminated as provided in paragraph 19.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

SC 19.04 Add the following language after Article 19.03.B with the title "Audit and Access to Records":

A. Owner, Agency, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor which are pertinent to the Agreement, for the purpose of making audits, examinations, excerpts, and transcriptions. Engineer shall maintain all

required records for three years after final payment is made and all other pending matters are closed.

SC 19.05 Add the following after Article 19.04.A with the title "Anti-Kickback":

A. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

SC 19.06 Add the following after Article 19.05.A with the title "Clean Air and Pollution Control Acts":

A. If this Contract exceeds $100,000, compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h) and 42 USC 7401et. seq.), section 508 of the Clean Water Act (33 U.S.C. 1368) and Federal Water Pollution Control Act (33 USC 1251 et seq.), Executive Order 11738, and Environmental Protection Agency regulations is required. Contractor will report violations to the Agency and the Regional Office of the EPA.

SC 19.07 Add the following after Article 19.06.A with the title "Environmental Requirements":

When constructing a Project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental conditions:

A. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.

B. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100-year floodplain areas (Standard Flood Hazard Area) delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, e.g., alluvial soils on NRCS Soil Survey Maps.

C. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact or human remains shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the Tribal Historic Preservation Officer (THPO).

D. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

E. Mitigation Measures – The following environmental mitigation measures are required on this Project:

1. Refer to project technical specifications for specific requirements.

SC-19.08 Add the following after Article 19.07.E with the title "Restrictions on Liens."

A. In accordance with IHS requirements, the CONTRACTOR is hereby notified that state lien laws do not apply on Federal trust land.

SC-19.09 Add the following after Article 19.08.A with the title "Davis Bacon and Contract Work Hours & Safety Acts."

A. The CONTRACTOR shall comply with wage and provisions of the Davis-Bacon Act (FAR52.222-6) and pay not less than the prevailing wage rates as established the U.S. Department of Labor, Davis-Bacon wage schedule. Copies of the wage determination are included as an attachment to 00800 – Supplementary Conditions. The CONTRACTOR shall also comply with Sections 103 and 107 of the Contract Work House and Safety Act.

SC 20 Add Article 20 titled "TRIBAL REQUIREMENTS"

SC-20.01 Add the following language as paragraph 20.01 with the title "Indian Preference"

A. Contractor agrees that, to the greatest extent feasible, preferences and opportunities for training and employment in connection with this Agreement shall be given to Indians; and, as reasonable, preference in the award of any subcontracts in connection with this Agreement shall be given to Indian organizations and to Indian-owned economic enterprises as defined in Section 3 of the Indian Financing Act of 1974 (88 Stat. 77).

B. Refer to Article 18 of Section 00200 Instructions to Bidders for any Indian Preference requirements applicable to the award of a contract.

"General Decision Number: WI20260008 05/18/2026

State: Wisconsin

Construction Types: Heavy

Counties: Wisconsin Counties of
Adams, Ashland, Barron, Bayfield, Brown,
Buffalo, Burnett, Calumet, Chippewa,
Clark, Columbia, Crawford, Dane, Dodge,
Door, Douglas, Dunn, Eau Claire,
Florence, Fond Du Lac, Forest, Grant,
Green, Green Lake, Iowa, Iron, Jackson,
Jefferson, Juneau, Kenosha, Kewaunee, La
Crosse, Lafayette, Langlade, Lincoln,
Manitowoc, Marathon, Marinette,
Marquette, Menominee, Milwaukee, Monroe,
Oconto, Oneida, Outagamie, Ozaukee,
Pepin, Pierce, Polk, Portage, Price,
Racine, Richland, Rock, Rusk, Sauk,
Sawyer, Shawano, Sheboygan, St Croix,
Taylor, Trempealeau, Vernon, Vilas,
Walworth, Washburn, Washington,
Waukesha, Waupaca, Waushara, Winnebago
and Wood

Tunnel, Sewer & Water Line Construction Projects

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

BRWI0001-002 06/01/2025

	Rates	Fringes
BRICKLAYER (CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES)	$ 40.09	28.10

BRWI0002-002 06/01/2025

	Rates	Fringes
BRICKLAYER (ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES)	$ 48.60	29.31

BRWI0002-005 06/01/2025

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER (ADAMS, BARRON, BROWN, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, SAUK, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES)	$ 46.01	29.31

BRWI0003-002 06/01/2024

	Rates	Fringes
BRICKLAYER (BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES)	$ 38.45	27.41

BRWI0004-002 06/01/2025

	Rates	Fringes
BRICKLAYER (KENOSHA, RACINE, AND WALWORTH COUNTIES)	$ 44.71	28.90

BRWI0006-002 06/01/2025

	Rates	Fringes
BRICKLAYER (ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES)	$ 39.36	28.83

BRWI0007-002 06/01/2025

	Rates	Fringes
BRICKLAYER (GREEN, LAFAYETTE, AND ROCK COUNTIES)	$ 40.34	29.49

BRWI0008-002 06/01/2025

	Rates	Fringes
BRICKLAYER (MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES)	$ 45.72	27.42

BRWI0009-001 06/01/2024

	Rates	Fringes
BRICKLAYER (GREEN LAKE, MARQUETTE, OUTAGAMIE, SHAWANO, WAUPACA, WASHARA, AND WINNEBAGO COUNTIES)	$ 38.45	27.41

BRWI0011-002 06/01/2024

	Rates	Fringes
BRICKLAYER (CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES)	$ 38.45	27.41

BRWI0013-002 06/01/2025

	Rates	Fringes
BRICKLAYER (DANE, GRANT, IOWA, AND RICHLAND COUNTIES)	$ 41.17	28.66

BRWI0019-002 06/01/2025

	Rates	Fringes
BRICKLAYER (BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES)	$ 39.50	28.69

BRWI0021-002 06/01/2025

	Rates	Fringes
BRICKLAYER (DODGE AND JEFFERSON COUNTIES)	$ 40.14	29.67

BRWI0034-002 06/01/2025

	Rates	Fringes
BRICKLAYER (COLUMBIA AND SAUK COUNTIES)	$ 41.17	28.66

CARP0068-011 05/05/2025

	Rates	Fringes
PILEDRIVERMAN (BURNETT (W. OF HWY 48), PIERCE (W. OF HWY 29), POLK (W. OF HWYS 35, 48 & 65), AND ST. CROIX (W. OF HWY 65) COUNTIES)	$ 47.71	30.98
CARPENTER (BURNETT (W. OF HWY 48), PIERCE (W. OF HWY 29), POLK (W. OF HWYS 35, 48 & 65), AND ST. CROIX (W. OF HWY 65) COUNTIES)	$ 47.57	31.17

CARP0231-002 06/01/2025

	Rates	Fringes
CARPENTER (KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA COUNTIES)	$ 45.46	31.52

CARP0310-002 06/01/2025

	Rates	Fringes
PILEDRIVER (ADAMS, ASHLAND, BAYFIELD (EASTERN 2/3), FOREST, IRON, JUNEAU, LANGLADE, LINCOLN, MARATHON, ONEIDA, PORTAGE, PRICE, SHAWANO (WESTERN PORTION OF THE COUNTY), TAYLOR, VILAS, AND WOOD COUNTIES)	$ 44.43	29.95
CARPENTER (ADAMS, ASHLAND, BAYFIELD (EASTERN 2/3), FOREST, IRON, JUNEAU, LANGLADE, LINCOLN, MARATHON, ONEIDA, PORTAGE, PRICE, SHAWANO (WESTERN PORTION OF THE COUNTY), TAYLOR, VILAS, AND WOOD COUNTIES)	$ 44.43	29.95

CARP0314-001 06/02/2025

	Rates	Fringes
CARPENTER: PILEDRIVERMEN (COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, JEFFERSON, LAFAYETTE, RICHLAND, ROCK, SAUK, AND WALWORTH COUNTIES)	$ 44.45	28.78

CARP0361-004 05/05/2025

	Rates	Fringes
CARPENTER (BAYFIELD (WEST OF HWY 63) AND DOUGLAS COUNTIES)	$ 46.82	31.92

CARP0731-002 06/03/2024

	Rates	Fringes
CARPENTER: PILEDRIVER (CALUMET (EASTERN PORTION OF THE COUNTY), FOND DU LAC (EASTERN PORTION OF THE COUNTY), MANITOWOC, AND SHEBOYGAN COUNTIES)	$ 42.44	28.44
CARPENTER (CALUMET (EASTERN PORTION OF THE COUNTY), FOND DU LAC (EASTERN PORTION OF THE COUNTY), MANITOWOC, AND SHEBOYGAN COUNTIES)	$ 42.44	28.44

CARP0955-002 06/01/2025

	Rates	Fringes
PILEDRIVER (CALUMET (WESTERN PORTION OF THE COUNTY), FOND DU LAC (WESTERN PORTION OF THE COUNTY), GREEN LAKE, MARQUETTE, OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO)	$ 44.43	29.95
CARPENTER (CALUMET (WESTERN PORTION OF THE COUNTY), FOND DU LAC (WESTERN PORTION OF THE COUNTY), GREEN LAKE, MARQUETTE, OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO)	$ 44.43	29.95

CARP0955-002 06/02/2025

	Rates	Fringes
PILEDRIVER (CALUMET (WESTERN PORTION OF THE COUNTY), FOND DU LAC (WESTERN PORTION OF THE COUNTY), GREEN LAKE, MARQUETTE, OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO)	$ 44.43	29.95
CARPENTER (CALUMET (WESTERN PORTION OF THE COUNTY), FOND DU LAC (WESTERN PORTION OF THE COUNTY), GREEN LAKE, MARQUETTE, OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO)	$ 44.43	29.95

CARP1056-002 06/01/2024

	Rates	Fringes
MILLWRIGHT (ADAMS, ASHLAND, BARRON, BAYFIELD , BROWN, BUFFALO, BURNETT ,CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. OF HWY. 29 & 65), POLK (E. OF HWY. 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK,	$ 42.00	28.85

CARP1074-002 06/02/2025

	Rates	Fringes
PILEDRIVER (BARRON, BURNETT, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, PEPIN, PIERCE (E. OF HWY. 29 & 65), POLK (E. OF HWY. 35, 48 & 65), RUSK, SAWYER, ST. CROIX (E. OF HWY. 65), AND WASHBURN)	$ 44.43	29.95
CARPENTER (BARRON, BURNETT, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, PEPIN, PIERCE (E. OF HWY. 29 & 65), POLK (E. OF HWY. 35, 48 & 65), RUSK, SAWYER, ST. CROIX (E. OF HWY. 65), AND WASHBURN)	$ 44.43	29.95

CARP1143-002 06/02/2025

	Rates	Fringes
PILEDRIVER (BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU AND VERNON COUNTIES)	$ 44.43	29.95
CARPENTER (BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU AND VERNON COUNTIES)	$ 44.43	29.95

CARP1146-002 06/02/2025

	Rates	Fringes
PILEDRIVER (BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, MENOMINEE, OCONTO, AND SHAWANO (WESTERN PORTION OF THE COUNTY) COUNTIES)	$ 44.43	29.95
CARPENTER (BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, MENOMINEE, OCONTO, AND SHAWANO (WESTERN PORTION OF THE COUNTY) COUNTIES)	$ 44.43	29.95

CARP2337-009 06/02/2025

	Rates	Fringes
PILEDRIVERMAN (KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA)	$ 44.39	34.79

CARP2337-010 06/02/2025

	Rates	Fringes
MILLWRIGHT (KENOSHA, MILWAUKEE, OZAUKEE, RACINE,		

WASHINGTON, AND WAUKESHA).....$ 44.03 32.94

ELEC0014-002 05/25/2025

	Rates	Fringes
ELECTRICIANS: (ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (EXCEPT MARYVILLE, COLBY, UNITY, SHERMAN, FREMONT, LYNN & SHERWOOD), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES).....	$ 44.29	25.21

ELEC0127-002 06/01/2025

	Rates	Fringes
ELECTRICIANS: (KENOSHA COUNTY).....	$ 50.01	28.40

ELEC0158-002 05/25/2025

	Rates	Fringes
ELECTRICIAN (BROWN, DOOR, KEWAUNEE, MANITOWOC (EXCEPT SCHLESWIG), MARINETTE(WAUSUAKEE AND AREA SOUTH THEREOF), OCONTO, MENOMINEE (EAST OF A INE 6 MILES WEST OF THE WEST BOUNDARY OF OCONTO COUNTY), SHAWANO (EXCEPT AREA NORTH OF TOWNSHIPS OF ANIWA AND HUTCHINS) COUNTIES).....	$ 42.00	23.93

ELEC0159-003 05/26/2024

	Rates	Fringes
ELECTRICIAN (COLUMBIA, DANE, DODGE (AREA WEST OF HWY 26, EXCEPT CHESTER AND EMMET TOWNSHIPS), GREEN, LAKE (EXCEPT TOWNSHIPS OF BERLIN, SENECA, AND ST. MARIE), IOWA, MARQUETTE (EXCEPT TOWNSHIPS OF NESHKOKA, CRYSTAL LAKE, NEWTON, AND SPRINGFIELD), AND SAUK COUNTIES).....	$ 48.55	25.91

ELEC0219-004 06/01/2019

	Rates	Fringes
ELECTRICIANS: ELECTRICAL CONTRACTS UNDER $180,000 (FLORENCE COUNTY (TOWNSHIPS OF AURORA, COMMONWEALTH, FERN, FLORENCE AND HOMESTEAD) AND MARINETTE COUNTY (TOWNSHIP OF NIAGARA)).....	$ 31.75	21.73
ELECTRICIANS: ELECTRICAL CONTRACTS OVER $180,000 (FLORENCE COUNTY (TOWNSHIPS OF AURORA, COMMONWEALTH, FERN, FLORENCE AND HOMESTEAD) AND MARINETTE COUNTY (TOWNSHIP OF NIAGARA)).....	$ 33.94	21.80

ELEC0242-005 06/01/2025

	Rates	Fringes
ELECTRICIANS: (DOUGLAS COUNTY).....	$ 47.46	33.34

ELEC0388-002 06/01/2024

	Rates	Fringes
ELECTRICIANS: (ADAMS, CLARK (COLBY, FREEMONT, LYNN, MAYVILLE, SHERMAN, SHERWOOD, UNITY), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (BEECHER, DUNBAR, GOODMAN & PEMBINE), MENOMINEE (AREA WEST OF A LINE 6 MILES WEST OF THE WEST BOUNDARY OF OCONTO COUNTY), ONEIDA, PORTAGE, SHAWANO (ANIWA AND HUTCHINS), VILAS AND WOOD		

COUNTIES)	$ 40.19	22.90

ELEC0430-002 06/01/2024

	Rates	Fringes
ELECTRICIANS: (RACINE COUNTY (EXCEPT BURLINGTON TOWNSHIP))	$ 48.50	26.25

ELEC0494-005 06/01/2025

	Rates	Fringes
ELECTRICIANS: (MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES)	$ 50.86	28.26

ELEC0494-006 06/01/2025

	Rates	Fringes
ELECTRICIANS: (CALUMET (TOWNSHIP OF NEW HOLSTEIN), DODGE (EAST OF HWY 26 INCLUDING CHESTER TOWNSHIP), FOND DU LAC, MANITOWOC (SCHLESWIG), AND SHEBOYGAN COUNTIES)	$ 45.20	25.27

ELEC0577-003 06/01/2025

	Rates	Fringes
ELECTRICIANS: (CALUMET (EXCEPT TOWNSHIP OF NEW HOLSTEIN), GREEN LAKE (N. PART INCLUDING TOWNSHIPS OF BERLIN, ST MARIE, AND SENECA), MARQUETTE (N. PART INCLUDING TOWNSHIPS OF CRYSTAL LAKE, NESHKORO, NEWTON, AND SPRINGFIELD), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES)	$ 41.76	23.65

ELEC0890-003 06/01/2024

	Rates	Fringes
ELECTRICIANS: (DODGE (EMMET TOWNSHIP ONLY), GREEN, JEFFERSON, LAFAYETTE, RACINE (BURLINGTON TOWNSHIP), ROCK AND WALWORTH COUNTIES)	$ 43.65	23.59

ENGI0139-003 06/02/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR: GROUP 6 SHOULDERING MACHINE OPERATOR; FARM OR INDUSTRIAL TRACTOR MOUNTED EQUIPMENT; POST HOLE DIGGER; AUGER (VERTICAL AND HORIZONTAL); SKID STEER LOADER WITH OR WITHOUT ATTACHMENTS; ROBOTIC TOOL CARRIER WITH OR WITHOUT ATTACHMENTS; POWER PACK VIBRATORY/ULTRA SOUND DRIVER AND EXTRACTOR; FIREMAN (ASPHALT PLANTS); SCREED OPERATOR; STONE CRUSHERS AND SCREENING PLANTS; AIR, ELECTRIC, HYDRAULIC JACKS (SLIP FORM); PRESTRESS MACHINES; AIR COMPRESSOR, 400 CFM OR OVER; REFRIGERATION PLANT/FREESE MACHINE; BOILER OPERATORS (TEMPORARY HEAT); FORKLIFTS; WELDING MACHINES; GENERATORS; PUMPS OVER 3""; HEATERS, MECHANICAL; COMBINATION SMALL EQUIPMENT OPERATOR; WINCHES, SMALL ELECTRIC; OILER; GREASER; ROTARY DRILL TENDER; CONVEYOR; ELEVATOR OPERATOR. (REMAINING COUNTIES)		

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....$ 41.60 27.89
POWER EQUIPMENT OPERATOR: GROUP 5 TRACTOR, BULLDOZER, OR ENDLOADER (UNDER 40 HP); TAMPERS -COMPACTORS, RIDING TYPE; STUMP CHIPPER, LARGE; ROLLER, RUBBER TIRE; BACKFILLER; TRENCHER, CHAIN TYPE (BUCKET UNDER 8 INCH); CONCRETE AUTO BREAKER, LARGE; CONCRETE FINISHING MACHINE (ROAD TYPE); CONCRETE BATCH HOPPER; CONCRETE CONVEYOR SYSTEMS; CONCRETE MIXERS, 14S OR OVER; PUMPS, SCREW TYPE AND GYPSUM); HYDROHAMMERS, SMALL; BROOMS AND SWEEEPRS; LIFT SLAB MACHINE; ROLLER UNDER 5 TONS; INDUSTRIAL LOCOMOTIVES; FIREMAN (PILE DRIVERS AND DERRICKS); PUMPS (WELL POINTS); HOISTS, AUTOMATIC; A-FRAMES AND WINCH TRUCKS; HOISTS (TUGGERS); BOATS (TUG, SAFETY, WORK BARGES AND LAUNCHES); ASSISTANT ENGINEER.

(REMAINING COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....$ 43.13 27.89
POWER EQUIPMENT OPERATOR: GROUP 4 HYDRAULIC BACKHOE (TRACTOR OR TRUCK MOUNTED); HYDRAULIC CRANE, 10 TONS OR LESS; TRACTOR, BULLDOZER, OR END LOADER (OVER 40 HP); MOTOR PATROL; SCRAPER OPERATOR; BITUMINOUS PLANT AND PAVER OPERATOR; SCREED-MILLING MACHINE; ROLLER OVER 5 TONS; CONCRETE PUMPS 46 METER AND UNDER; GROUT PUMPS; ROTEC TYPE MACHINE; HYDRO BLASTER, 10,000 PSI AND OVER; ROTARY DRILL OPERATOR; PERCUSSION DRILLING MACHINE; AIR TRACK DRILL WITH OR WITHOUT INTEGRAL HAMMER; BLASTER; BORING MACHINE (VERTICAL OR HORIZONTAL); SIDE BOOM; TRENCHER, WHEEL TYPE OR CHAIN TYPE HAVING 8 INCH OR LARGER BUCKET; RAIL LEVELING MACHINE (RAILROAD); TIE PLACER; TIE EXTRACTOR; TIE TAMPER; STONE LEVELER; STRADDLE CARRIER; MATERIAL HOISTS; STACK HOIST; MAN HOISTS; MECHANIC AND WELDER; OFF ROAD MATERIAL HAULERS.

(REMAINING COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....$ 45.20 27.89
POWER EQUIPMENT OPERATOR: GROUP 3 BACKHOES

(EXCAVATORS) WEIGHING UNDER 130,000 LBS; TRAVELLING CRANE (BRIDGE TYPE); MILLING MACHINE; CONCRETE PAVER OVER 27 E; CONCRETE SPREADER AND DISTRIBUTOR; CONCRETE LASER SCREED; CONCRETE GRINDER AND PLANING MACHINE; SLIPFORM CURB AND GUTTER MACHINE; BORING MACHINE (DIRECTIONAL); DREDGE OPERATOR; SKID RIGS; OVER 46 METER CONCRETE PUMP.

(REMAINING COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....$ 45.73 27.89
POWER EQUIPMENT OPERATOR: GROUP 2 BACKHOES WEIGHING 130,00 LBS AND OVER; CRANES, TOWER CRANES AND DERRICKS WITH OR WITHOUT ATTACHMENTS WITH A LIFTING CAPACITY OF 100 TONS OR LESS; CRANES, TOWER CRANES, AND DERRICKS WITH BOOM, LEADS, AND/OR JIB LENGTHS 175 FT OR LESS; CAISSON RIGS; PILE DRIVER.

(REMAINING COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....$ 49.28 27.89
POWER EQUIPMENT OPERATOR: GROUP 1 CRANES, TOWER CRANES AND DERRICKS WITH OR WITHOUT ATTACHMENTS WITH A LIFTING CAPACITY OF OVER 100 TONS; CRANES, TOWER CRANES, AND DERRICKS WITH BOOM, LEADS AND/OR JIB LENGTHS 176 FT OR LONGER.

(REMAINING COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....$ 50.53 27.89

ENGI0139-007 06/02/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR: GROUP 5 HOISTS (AUTOMATIC); FORKLIFT, 12 FT TO 25 FT; TAMPER-COMPACTORS, RIDING TYPE; A-FRAME ANDWINCH TRUCKS; CONCRETE AUTO BREAKER; HYDROHAMMER, SMALL; BROOMS AND SWEEPERS; HOIST (TUGGERS); STUMP CHIPPER, LARGE; BOATS (TUG, SAFETY, WORK BARGES AND LAUNCH); SHOULDERING MACHINE OPERATOR; SCREED OPERATOR; FARM OR INDUSTRIAL TRACTOR; POST HOLE DIGGER; STONE CRUSHERS AND SCREENING PLANTS; FIREMEN (ASPHALT PLANTS); AIR COMPRESSOR (400 CFM OR OVER); AUGERS (VERTICAL AND HORIZONTAL); GENERATORS, 150 KW AND OVER; AIR, ELECTRIC HYDRAULIC JACKS (SLIPFORM); PRESTRESS MACHINES; SKID STEER LOADER WITH OR WITHOUT ATTACHMENTS; BOILER OPERATORS (TEMPORARY HEAT); FORKLIFT, 12 FT AND UNDER; SCREED OPERATOR MILLING MACHINE; REFRIGERATION PLANT/FREEZE MACHINE; POWER PACK VIBRATORY/ULTRA SOUND DRIVER AND EXTRACTOR; GENERATORS UNDER 150 KW; COMBINATION SMALL EQUIPMENT OPERATOR; COMPRESSORS UNDER 400 CFM; WELDING MACHINES; HEATERS, MECHANICAL; PUMPS; WINCHES, SMALL ELECTRIC; OILER AND GREASER; CONVEYOR; HIGH PRESSURE UTILITY LOCATING MACHINE (DAYLIGHTING MACHINE). (DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES)		
HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR	$ 43.01	28.15
POWER EQUIPMENT OPERATOR: GROUP 4 BACKFILLER; CONCRETE AUTO BREAKER (LARGE); CONCRETE FINISHING MACHINE (ROAD TYPE); ROLLER, RUBBER TIRE; CONCRETE BATCH HOPPER; CONCRETE CONVEYOR SYSTEM; CONCRETE MIXERS (14S OR OVER); SCREW TYPE PUMPS AND GYPSUM PUMPS; GROUT PUMPS; TRACTOR, BULLDOZER, END LOADER, UNDER 40 HP; PUMPS (WELL POINTS); TRENCHER (CHAIN TYPE 8 INCH OR SMALLER BUCKET; INDUSTRIAL LOCOMOTIVES; ROLLER UNDER 5 TONS; FIREMAN (PILEDRIVERS AND DERRICKS); ROBOTIC TOOL CARRIER WITH OR WITHOUT ATTACHMENTS. (DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES)		
HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B""		

PROTECTION: $2.00 PER HOUR EPA LEVEL ""C""
PROTECTION: $1.00 PER HOUR.....$ 44.41 28.15
POWER EQUIPMENT OPERATOR: GROUP 3 MATERIAL HOISTS; STACK HOISTS; TRACTOR OR TRUCK MOUNTED HYDRAULIC BACKHOE; TRACTOR OR TRUCK MOUNTED HYDRAULIC CRANE, 5 TONS OR UNDER; MANHOIST; TRACTOR OVER 40 HP; BULLDOZER OVER 40 HP; ENDLOADER OVER 40 HP; FORKLIFT, 25 FT AND OVER; MOTOR PATROL; SCRAPER OPERATOR; SIDEBOOM; STRADDLE CARRIER; MECHANIC AND WELDER; BITUMINOUS PLANT AND PAVER OPERATOR; ROLLER OVER 5 TONS; PERCUSSION DRILL OPERATOR; ROTARY DRILL OPERATOR; BLASTER; AIR TRACK DRILL; TRENCHER (WHEEL TYPE OR CHAIN TYPE HAVING OVER 8 INCH BUCKET); ELEVATOR; MILLING MACHINE AND BORING MACHINE (HORIZONTAL OR VERTICAL); BACKHOE MOUNTED COMPACTOR.

(DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A""
PROTECTION: $3.00 PER HOUR EPA LEVEL ""B""
PROTECTION: $2.00 PER HOUR EPA LEVEL ""C""
PROTECTION: $1.00 PER HOUR.....$ 45.46 28.15
POWER EQUIPMENT OPERATOR: GROUP 2 CRANES, TOWER CRANES AND DERRICKS WITH OR WITHOUT ATTACHMENTS WITH A LIFTING CAPACITY OF 100 TONS OR UNDER; OR CRANES, TOWER CRANES, AND DERRICKS WITH BOOM, LEAD, AND\OR JIB LENGTHS MEASURING 175 FEET OR UNDER; BACKHOES (EXCAVATORS) UNDER 130,000 LBS; SKID RIGS; DREDGE OPERATOR: TRAVELING CRANE (BRIDGE TYPE); CONCRETE PAVER OVER 27 E; CONCRETE SPREADER AND DISTRIBUTOR; CONCRETE PUMPS AND BORING MACHINES (DIRECTIONAL).
(DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B""
PROTECTION: $2.00 PER HOUR EPA LEVEL ""C""
PROTECTION: $1.00 PER HOUR.....$ 46.41 28.15
POWER EQUIPMENT OPERATOR: GROUP 1 CRANES, TOWER CRANES, AND DERRICKS WITH OR WITHOUT ATTACHMENTS, WITH A LIFTING CAPACITY OF OVER 100 TONS; OR CRANES, TOWER CRANES, AND DERRICKS WITH BOOM, LEADS, AND/OR JIB LENGTHS MEASURING 176 FEET OR LONGER; BACKHOES (EXCAVATORS) 130,000 LBS AND OVER; CAISSON RIGS AND PILE DRIVERS. (DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE,

SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES)

HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....$ 47.19 28.15

IRON0008-002 06/01/2025

	Rates	Fringes
IRONWORKER (BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:).....	$ 44.66	33.67

IRON0008-003 06/01/2025

	Rates	Fringes
IRONWORKER (KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES).....	$ 47.52	33.67

IRON0383-001 06/01/2025

	Rates	Fringes
IRONWORKER (ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (EXCLUDING S.E. TIP), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (NORTHERN AREA, VICINITY OF EDGERTON AND MILTON), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES).	$ 44.00	32.66

IRON0498-005 06/01/2025

	Rates	Fringes
IRONWORKER (GREEN (S.E. 1/3), ROCK (SOUTH OF EDGERTON AND MILTON), AND WALWORTH (S.W. 1/3) COUNTIES:).....	$ 48.74	49.65

IRON0512-008 05/01/2025

	Rates	Fringes
IRONWORKER (BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES).....	$ 46.35	36.86

IRON0512-021 05/01/2025

	Rates	Fringes
IRONWORKER (ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES).....	$ 42.89	36.86

LABO0113-004 06/01/2025

	Rates	Fringes
LABORER: OPEN CUT: GROUP 9 BLASTER		
(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....	$ 45.51	24.42
LABORER: OPEN CUT: GROUP 8 CONCRETE MANHOLE		

BUILDER; CAISSON WORKER; MINER; PIPE LAYER; ROCK DRILLER AND JOINT MAN; TIMBER MAN AND CONCRETE BRUSHER; BRACER IN TRENCH BEHIND MACHINE & TIGHT SHEETING; CONCRETE FORMSETTER AND SHOVELER; JACKHAMMER OPERATOR

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 44.78 24.42
LABORER: OPEN CUT: GROUP 7 MUCKER; FORM STRIPPER; BOTTOM DIGGER AND MISC; BOTTOM MAN AND WELDER ON SURFACE

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 41.62 24.42
LABORER: OPEN CUT: GROUP 6 MUD MIXER

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 37.29 24.42
LABORER: OPEN CUT: GROUP 5 GENERAL LABORER ON SURFACE; TOP MAN

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 37.23 24.42
LABORER: OPEN CUT: GROUP 4 PAVING LABORER

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 37.05 24.42
LABORER: OPEN CUT: GROUP 3 FLAG PERSON

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 26.53 24.42
LABORER: OPEN CUT: GROUP 2 LANDSCAPER

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 22.54 24.42
LABORER: OPEN CUT: GROUP 1 YARD LABORER

(MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES).....$ 19.99 24.42

LABO0113-005 06/01/2025

	Rates	Fringes
LABORER: SEWER, TUNNEL & UNDERGROUND: GROUP 4		

PIPELAYER, MINER AND LASER OPERATOR

(KENOSHA AND RACINE COUNTIES)

TUNNEL WORK

UNDER COMPRESSED AIR: 0-15 LBS ADD $1.00, 15-30 LBS ADD $2.00, OVER 30 LBS ADD $3.00.....$ 40.88 24.42

LABORER: SEWER, TUNNEL & UNDERGROUND: GROUP 3: MACHINE AND EQUIPMENT OPERATOR, SHEETING, FORM SETTING, PATCH FINISHER, BOTTOM MAN, JOINT SAWER, GUNNITE MAN, MANHOLE BUILDER, WELDER-TORCHMAN, BLASTER, CAULKER, BRACER, BULL FLOAT, CONDUIT WORKER, MUCKER AND CAR PUSHER, RAKER AND LUTEMAN, HYDRAULIC JACKING OF SHIELDS, SHIELD DRIVERS, MINING MACHINE, LOCK TENDERS, MUCKING MACHINE OPERATOR, MOTOR MEN & GAUGE TENDERS AND OPERATION OF INCIDENTAL MECHANICAL EQUIPMENT AND ALL POWER DRIVEN TOOLS

(KENOSHA AND RACINE COUNTIES)

TUNNEL WORK UNDER

COMPRESSED AIR: 0-15 LBS ADD $1.00, 15-30 LBS ADD $2.00, OVER 30 LBS ADD $3.00.....$ 38.89 24.42

LABORER: SEWER, TUNNEL & UNDERGROUND: GROUP 2 TOP MAN, GENERAL LABORER, WELLPOINT INSTALLATION, WIRE MESH AND REINFORCEMENT, CONCRETE WORKER, FORM STRIPPER, STRIKE-OFF WORK

(KENOSHA AND RACINE COUNTIES)

TUNNEL WORK UNDER

COMPRESSED AIR: 0-15 LBS ADD $1.00, 15-30 LBS ADD $2.00, OVER 30 LBS ADD $3.00.....$ 34.17 24.42

LABORER: SEWER, TUNNEL & UNDERGROUND: GROUP 1 FLAGPERSON

(KENOSHA AND RACINE COUNTIES)

TUNNEL WORK UNDER COMPRESSED AIR: 0-15 LBS ADD $1.00, 15-30 LBS ADD $2.00, OVER 30 LBS ADD $3.00	$ 27.49	24.42

LABO0113-008 06/01/2025

	Rates	Fringes
LABORER: TUNNEL-FREE AIR: GROUP 7 BLASTER		
(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES)	$ 45.51	24.42
LABORER: TUNNEL-FREE AIR: GROUP 6 CONCRETE MANHOLE BUILDER; MUCKING MACHINE; MINER; MINING MACHINE; WELDER; ROCK DRILLER; CONCRETE BUSTER; JACK HAMMER OPERATOR; CAISSON WORKER; PIPELAYER AND JOINT MAN; BRACERMAN		
(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES)	$ 44.78	24.42
LABORER: TUNNEL-FREE AIR: GROUP 5 MUCKER; DINKEY; WELDER (RATE ON SURFACE)		
(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES)	$ 41.77	24.42
LABORER: TUNNEL-FREE AIR: GROUP 4 FORM STRIPPER; CAR PUSHER		
(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES)	$ 41.62	24.42
LABORER: TUNNEL-FREE AIR: GROUP 3 SAW MAN; TOP MAN		
(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES)	$ 37.29	24.42
LABORER: TUNNEL-FREE AIR: GROUP 2 GENERAL LABORER ON SURFACE; TOWER MAN		
(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES)	$ 37.23	24.42
LABORER: TUNNEL-FREE AIR: GROUP 1 FLAGPERSON		

(MILWAUKEE,
OZAUKEE, WASHINGTON & WAUKESHA COUNTIES).....$ 26.53 24.42

LABO0113-009 06/01/2025

Rates Fringes

LABORER: TUNNEL - *COMPRESSED AIR 0 - 15 LBS.:
GROUP 7 BLASTER

(MILWAUKEE, OZAUKEE, WASHINGTON &
WAUKESHA COUNTIES) NOTE: HAZARDOUS & TOXIC WASTE
REMOVAL: ADD $0.15 PER HOUR.

*COMPRESSED AIR 15 - 30 LBS ADD $2.00 TO ALL
CLASSIFICATIONS *COMPRESSED AIR OVER 30 LBS ADD
$3.00 TO ALL CLASSIFCATIONS.....$ 46.99 24.42
LABORER: TUNNEL - *COMPRESSED AIR 0 - 15 LBS.:
GROUP 6 MUCKING MACHINE; MINER; MINING MACHINE;
WELDER & ROCK DRILLER; LOCK TENDER IN TUNNEL;
CONCRETE BUSTER; JACK HAMMER OPERATOR; CAISSON
WORKER; PIELAYER AND JOINT MAN; BRACERMAN; NOZZLE
MAN ON GUNITE; TIMBER MAN; CONCRETE BRUSHER

(MILWAUKEE, OZAUKEE, WASHINGTON &
WAUKESHA COUNTIES)

*COMPRESSED
AIR 15 - 30 LBS ADD $2.00 TO ALL CLASSIFICATIONS
*COMPRESSED AIR OVER 30 LBS ADD $3.00 TO ALL
CLASSIFCATIONS.....$ 46.30 24.42
LABORER: TUNNEL - *COMPRESSED AIR 0 - 15 LBS.:
GROUP 5 MUCKER; DINKEY

(MILWAUKEE, OZAUKEE, WASHINGTON &
WAUKESHA COUNTIES)

*COMPRESSED AIR 15 - 30 LBS ADD $2.00 TO ALL
CLASSIFICATIONS *COMPRESSED AIR OVER 30 LBS ADD
$3.00 TO ALL CLASSIFCATIONS.....$ 43.27 24.42
LABORER: TUNNEL - *COMPRESSED AIR 0 - 15 LBS.:
GROUP 4 FORM STRIPPER; CAR PUSHER

(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA

COUNTIES)

*COMPRESSED AIR
15 - 30 LBS ADD $2.00 TO ALL CLASSIFICATIONS
*COMPRESSED AIR OVER 30 LBS ADD $3.00 TO ALL
CLASSIFCATIONS.....$ 43.12 24.42
LABORER: TUNNEL - *COMPRESSED AIR 0 - 15 LBS.:
GROUP 3 LOCK TENDER ON SURFACE

(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA
COUNTIES)

*COMPRESSED AIR 15 - 30 LBS ADD
$2.00 TO ALL CLASSIFICATIONS *COMPRESSED AIR OVER
30 LBS ADD $3.00 TO ALL CLASSIFCATIONS.....$ 42.22 24.42
LABORER: TUNNEL - *COMPRESSED AIR 0 - 15 LBS.:
GROUP 2 GENERAL LABORER ON SURFACE

(MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA
COUNTIES)

*COMPRESSED AIR 15 - 30 LBS ADD $2.00
TO ALL CLASSIFICATIONS *COMPRESSED AIR OVER 30 LBS
ADD $3.00 TO ALL CLASSIFCATIONS.....$ 37.23 24.42
LABORER: TUNNEL - *COMPRESSED AIR 0 - 15 LBS.:
GROUP 1 FLAGPERSON

(MILWAUKEE, OZAUKEE,
WASHINGTON & WAUKESHA COUNTIES)

*COMPRESSED AIR 15 - 30 LBS ADD $2.00 TO
ALL CLASSIFICATIONS *COMPRESSED AIR OVER 30 LBS
ADD $3.00 TO ALL CLASSIFCATIONS.....$ 26.53 24.42

LABO0140-005 06/01/2025

Rates Fringes

LABORER, SEWER & WATER: GROUP 4 (ADAMS,
ASHLAND, BARRON, BROWN, BUFFALO, CALUMET, CHIPPEWA,
CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, EAU
CLAIRE, FLORENCE,FOND DU LAC, FOREST, GRANT, GREEN,
GREEN LAKE, IOWA, JACKSON, JEFFERSON, JUNEAU,
KEWAUNEE, LACROSSE, LAFAYETTE, LANGLADE, LINCOLN,
MANITOWOC, MARATHON, MARINETTE, MARQUETTE,
MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE,

PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND,
ROCK, RUSK, ST CROIX, SAUK, SAWYER, SHAWANO,
SHEBOYGAN, TAYLOR, TREMM.....$ 39.78 19.97
LABORER, SEWER & WATER: GROUP 3 (ADAMS,
ASHLAND, BARRON, BROWN, BUFFALO, CALUMET, CHIPPEWA,
CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, EAU
CLAIRE, FLORENCE,FOND DU LAC, FOREST, GRANT, GREEN,
GREEN LAKE, IOWA, JACKSON, JEFFERSON, JUNEAU,
KEWAUNEE, LACROSSE, LAFAYETTE, LANGLADE, LINCOLN,
MANITOWOC, MARATHON, MARINETTE, MARQUETTE,
MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE,
PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND,
ROCK, RUSK, ST CROIX, SAUK, SAWYER, SHAWANO,
SHEBOYGAN, TAYLOR, TREMM.....$ 39.13 19.97
LABORER, SEWER & WATER: GROUP 2 (ADAMS,
ASHLAND, BARRON, BROWN, BUFFALO, CALUMET, CHIPPEWA,
CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, EAU
CLAIRE, FLORENCE,FOND DU LAC, FOREST, GRANT, GREEN,
GREEN LAKE, IOWA, JACKSON, JEFFERSON, JUNEAU,
KEWAUNEE, LACROSSE, LAFAYETTE, LANGLADE, LINCOLN,
MANITOWOC, MARATHON, MARINETTE, MARQUETTE,
MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE,
PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND,
ROCK, RUSK, ST CROIX, SAUK, SAWYER, SHAWANO,
SHEBOYGAN, TAYLOR, TREMM.....$ 38.83 19.97
LABORER, SEWER & WATER: GROUP 1 (ADAMS,
ASHLAND, BARRON, BROWN, BUFFALO, CALUMET, CHIPPEWA,
CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, EAU
CLAIRE, FLORENCE,FOND DU LAC, FOREST, GRANT, GREEN,
GREEN LAKE, IOWA, JACKSON, JEFFERSON, JUNEAU,
KEWAUNEE, LACROSSE, LAFAYETTE, LANGLADE, LINCOLN,
MANITOWOC, MARATHON, MARINETTE, MARQUETTE,
MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE,
PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND,
ROCK, RUSK, ST CROIX, SAUK, SAWYER, SHAWANO,
SHEBOYGAN, TAYLOR, TREMM.....$ 36.98 19.97

LABO0464-002 06/01/2025

Rates Fringes

LABORER: GROUP 4 PIPELAYER, MINER, AND LASER
OPERATOR

(DANE AND
DOUGLAS COUNTIES)

FOR ALL TUNNEL WORK UNDER
COMPRESSED AIR: 0 - 15 LBS ADD $1.00, 15- 30 LBS
ADD $2.00, OVER 30 LBS ADD $3.00.....$ 40.03 19.97
LABORER: GROUP 3 SHEETING FORMSETTING; PATCH
FINISHER; BOTTOM MAN; JOINT SAWER; GUNNITE MAN;
MANHOLE BUILDER; WELDER; TORCHMAN; BLASTER; CAULKER
BRACER; BULL FLOAT; MUCKER AND CAR PUSHER; RAKER
AND LUTEMAN; HYDRAULIC JACKING OF SHIELDS, SHIELD

DIRVERS; MINING MACHINE; LOCK TENDERS; MUCKING
MACHINE OPERATORS; MOTOR MEN AND GAUGE TENDERS;
POWER TOOL OPERATORS

(DANE AND DOUGLAS COUNTIES)

FOR ALL TUNNEL WORK
UNDER COMPRESSED AIR: 0 - 15 LBS ADD $1.00, 15- 30
LBS ADD $2.00, OVER 30 LBS ADD $3.00.....$ 39.38 19.97
LABORER: GROUP 2 GENERAL LABORER; WELLPOINT
INSTALLATION; CONCRETE WORKER; FORM STRIPPER;
STRIKE OFF WORKER

(DANE AND DOUGLAS COUNTIES)

FOR ALL TUNNEL WORK UNDER COMPRESSED
AIR: 0 - 15 LBS ADD $1.00, 15- 30 LBS ADD $2.00,
OVER 30 LBS ADD $3.00.....$ 39.08 19.97
LABORER: GROUP 1 FLAGPERSON

(DANE AND DOUGLAS COUNTIES)

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0 - 15
LBS ADD $1.00, 15- 30 LBS ADD $2.00, OVER 30 LBS
ADD $3.00.....$ 36.88 19.97

LABO1091-010 06/01/2025

Rates Fringes

LABORER: SEWER & WATER: GROUP 4 PIPELAYER, MINER,
AND LASER OPERATOR

(BAYFIELD, BURNETT, IRON, SAWYER,
AND WASHBURN COUNTIES)

FOR
ALL TUNNEL WORK UNDER COMPRESSED AIR: 0 - 15 LBS
ADD $1.00, 15-30 LBS ADD $2.00, OVER 30 LBS ADD
$3.00.....$ 39.68 19.97
LABORER: SEWER & WATER: GROUP 3 SHEETING
FORMSETTING; PATCH FINISHER; BOTTOM MAN; JOINT
SAWER; GUNNITE MAN; MANHOLE BUILDER; WELDER;
TORCHMAN; BLASTER; CAULKER BRACER; BULL FLOAT;
MUCKER AND CAR PUSHER; RAKER AND LUTEMAN; HYDRAULIC
JACKING OF SHIELDS, SHIELD DIRVERS; MINING MACHINE;
LOCK TENDERS; MUCKING MACHINE OPERATORS; MOTOR MEN
AND GAUGE TENDERS; POWER TOOL OPERATORS

(BAYFIELD, BURNETT, IRON, SAWYER, AND WASHBURN
COUNTIES)

FOR ALL
TUNNEL WORK UNDER COMPRESSED AIR: 0 - 15 LBS ADD
$1.00, 15-30 LBS ADD $2.00, OVER 30 LBS ADD $3.00...$ 39.03 19.97
LABORER: SEWER & WATER: GROUP 2 LABORERS, WELLPOINT
INSTALLATION; FORM STRIPPER; STRIKE OFF WORKER

(BAYFIELD, BURNETT,
IRON, SAWYER, AND WASHBURN COUNTIES)

FOR ALL TUNNEL WORK UNDER COMPRESSED
AIR: 0 - 15 LBS ADD $1.00, 15-30 LBS ADD $2.00,
OVER 30 LBS ADD $3.00.....$ 38.73 19.97
LABORER: SEWER & WATER: GROUP 1 FLAGPERSON

(BAYFIELD, BURNETT, IRON,
SAWYER, AND WASHBURN COUNTIES)

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0 -
15 LBS ADD $1.00, 15-30 LBS ADD $2.00, OVER 30 LBS
ADD $3.00.....$ 36.67 19.97

PLAS0599-002 06/01/2025

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER: AREA D: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES.....	$ 42.28	26.43
CEMENT MASON/CONCRETE FINISHER, AREA F: KENOSHA AND RACINE COUNTIES.....	$ 37.33	31.38
CEMENT MASON/CONCRETE FINISHER, AREA E: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES....	$ 41.16	27.54
CEMENT MASON/CONCRETE FINISHER AREA C: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE,		

MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES .....$ 40.06 28.65
CEMENT MASON/CONCRETE FINISHER AREA A: ASHLAND, BURNETT, BAYFIELD, DOUGLAS, IRON, PRICE, SAWYER, AND WASHBURN COUNTIES.....$ 47.22 31.90

TEAM0039-001 06/01/2025

	Rates	Fringes
TRUCK DRIVER 3 OR MORE AXLES; EUCLIDS, DUMPTOR & ARTICULATED, TRUCK MECHANIC	$ 39.72	28.70
TRUCK DRIVER 1 & 2 AXLES	$ 39.57	28.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than
SU, UAVG, SA, or SC denotes that a union rate was
prevailing for that classification in the survey. Example:
PLUM0198-005 07/01/2024. PLUM is an identifier of the union
whose collectively bargained rate prevailed in the survey for
this classification, which in this example would be Plumbers.
0198 indicates the local union number or district council
number where applicable, i.e., Plumbers Local 0198. The next
number, 005 in the example, is an internal number used in
processing the wage determination. The date, 07/01/2024 in the
example, is the effective date of the most current negotiated
rate.

Union prevailing wage rates are updated to reflect all changes
over time that are reported to WHD in the rates
in the collective bargaining agreement (CBA) governing the
classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for
those classifications, but that 100% of the data reported for
the classifications reflected union rates. EXAMPLE:
UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a
weighted union average rate. OH indicates the State of Ohio.
The next number, 0010 in the example, is an internal number
used in producing the wage determination. The date, 01/01/2024
in the example, indicates the date the wage determination was
updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to
reflect a weighted average of the current rates in the
collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The SU identifier indicates that either a single non-union
rate prevailed (as defined in 29 CFR 1.2) for this
classification in the survey or that the rate was derived by
computing a weighted average rate based on all the rates
reported in the survey for that classification. As a weighted
average rate includes all rates reported in the survey, it may
include both union and non-union rates. Example: SUFL2022-007
6/27/2024. SU indicates the rate is a single non-union
prevailing rate or a weighted average of survey data for that
classification. FL indicates the State of Florida. 2022 is the
year of the survey on which these classifications and rates are
based. The next number, 007 in the example, is an internal
number used in producing the wage determination. The date,
6/27/2024 in the example, indicates the survey completion date
for the classifications and rates under that identifier.

SU wage rates typically remain in effect until a new survey
is conducted. However, the Wage and Hour Division (WHD) has the
discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The SA identifier indicates that the classifications and
prevailing wage rates set by a state (or local) government were
adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007
01/03/2024. SA reflects that the rates are state adopted. ME
refers to the State of Maine. 2023 is the year during which the

state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

==========

END OF GENERAL DECISION

"

"General Decision Number: WI20260011 05/18/2026

State: Wisconsin

Construction Types: Building

Counties: Wisconsin Counties of
Adams, Ashland, Barron, Bayfield,
Buffalo, Burnett, Clark, Columbia,
Crawford, Dodge, Door, Dunn, Florence,
Fond Du Lac, Forest, Grant, Green, Green
Lake, Iowa, Iron, Jackson, Jefferson,
Juneau, Kewaunee, Lafayette, Langlade,
Lincoln, Manitowoc, Marinette,
Marquette, Menominee, Monroe, Oconto,
Oneida, Pepin, Polk, Portage, Price,
Richland, Rusk, Sauk, Sawyer, Shawano,
Taylor, Trempealeau, Vernon, Vilas,
Walworth, Washburn, Waupaca, Waushara
and Wood

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

ASBE0019-002 06/01/2025

	Rates	Fringes
ASBESTOS WORKERS/INSULATOR: INCLUDES THE APPLICATION OF ALL INSULATING MATERIALS, PROTECTIVE COVERINGS, COATINGS, AND FINISHES TO ALL TYPES OF MECHANICAL SYSTEMS. INCLUDES PREPARATION, WETTING, STRIPPING, REMOVAL, SCRAPPING, VACUUMING, BAGGING AND DISPOSING OF ALL INSULATION MATERIALS FROM MECHANICAL SYSTEMS WHETHER THEY CONTAIN ASBESTOS OR NOT (COLUMBIA, CRAWFORD, DODGE, GRANT, GREEN, IOWA, JEFFERSON, JUNEAU, LAFAYETTE, MARQUETTE, MONROE, RICHLAND, SAUK, VERNON, AND WALWORTH COUNTIES).....	$ 45.88	38.15

ASBE0034-005 06/09/2025

	Rates	Fringes
ASBESTOS WORKERS/INSULATOR: INCLUDES THE APPLICATION OF ALL INSULATING MATERIALS; PROTECTIVE COATINGS, COVERINGS, AND FINISHES TO ALL TYPES OF MECHANICAL SYSTEMS. INCLUDES PREPARATION, WETTING, STRIPPING, REMOVAL, SCRAPPING, VACUUMING, BAGGING AND DISPOSING OF ALL INSULATION MATERIALS FROM MECHANICAL SYSTEMS WHETHER THEY CONTAIN ASBESTOS OR NOT (BARRON, BUFFALO, DUNN, PEPIN, AND POLK COUNTIES).....	$ 55.34	34.03

ASBE0049-003 05/01/2025

	Rates	Fringes

ASBESTOS WORKERS/INSULATOR: INCLUDES THE APPLICATION OF ALL INSULATING MATERIALS; PROTECTIVE COVERINGS, COATINGS, AND FINISHES TO ALL TYPES OF MECHANICAL SYSTEMS. INCLUDES PREPARATION, WETTING, STRIPPING, REMOVAL, SCRAPPING, VACUUMING, BAGGING AND DISPOSING OF ALL INSULATION MATERIALS FROM MECHANICAL SYSTEMS WHETHER THEY CONTAIN ASBESTOS OR NOT (ASHLAND, BAYFIELD, BURNETT, IRON, SAWYER, AND WASHBURN COUNTIES).....$ 49.17 23.83

ASBE0127-002 06/01/2025

	Rates	Fringes
HEAT AND FROST INSULATOR: INCLUDES THE APPLICATION OF ALL INSULATING MATERIALS, PROTECTIVE COVERINGS, COATINGS AND FINISHES TO ALL TYPES OF MECHANICAL SYSTEMS; AND THE APPLICATION OF FIRESTOPPING MATERIAL IN WALLS, FLOORS, CEILINGS. INCLUDES PREPARATION, WETTING, STRIPPING, REMOVAL, SCRAPPING VACUUMING, BAGGING AND DISPOSING OF ALL INSULATION MATERIALS FROM MECHANICAL SYSTEMS WHETHER THEY CONTAIN ASBESTOS OR NOT (ADAMS, CLARK, DOOR, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, JACKSON, KEWAUNEE,.....	$ 45.24	30.56

BOIL0107-001 01/01/2025

	Rates	Fringes
BOILERMAKER (BOILERMAKER).....	$ 46.52	34.63

BRWI0001-003 06/01/2025

	Rates	Fringes
BRICKLAYER & TILE SETTER (CRAWFORD,JUNEAU, MONROE,TREMPEALEAU, AND VERNON COUNTIES).....	$ 40.09	28.10

BRWI0002-003 06/01/2025

	Rates	Fringes
BRICKLAYER: CEMENT MASON/CONCRETE FINISHER (ASHLAND, BURNETT, IRON, WASHBURN).....	$ 46.01	29.31
BRICKLAYER: BRICKLAYER, TILE SETTER (ASHLAND, BURNETT, IRON, WASHBURN).....	$ 48.60	29.31

BRWI0002-004 06/01/2025

	Rates	Fringes
BRICKLAYER: BRICKLAYER & TILE SETTER (BAYFIELD COUNTY).....	$ 48.60	29.31

BRWI0003-001 06/01/2024

	Rates	Fringes
BRICKLAYER: BRICKLAYER, CEMENT MASON, TILE SETTER (DOOR, KEWAUNEE, FLORENCE, FOND DU LAC, GREEN LAKE, MANITOWOC, MARINETTE, MARQUETTE, OCONTO, SHAWANO, WAUPACA, AND WAUSHARA COUNTIES).....	$ 38.45	27.41

BRWI0004-003 06/01/2025

	Rates	Fringes
TILE SETTER (WALWORTH COUNTY).....	$ 39.19	28.90
CEMENT MASON/CONCRETE FINISHER (WALWORTH COUNTY).....	$ 40.50	28.90
BRICKLAYER (WALWORTH COUNTY).....	$ 44.71	28.90

BRWI0006-001 06/01/2025

	Rates	Fringes
BRICKLAYER: BRICKLAYER,CEMENT MASON,TILE SETTER (ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MENOMINEE, ONEIDA, PORTAGE, TAYLOR, VILAS AND WOOD COUNTIES)	$ 39.36	28.83

BRWI0006-004 06/01/2025

	Rates	Fringes
BRICKLAYER & TILE SETTER (PRICE COUNTY)	$ 39.36	28.83

BRWI0007-003 06/01/2025

	Rates	Fringes
BRICKLAYER & TILE SETTER (GREEN AND LAFAYETTE COUNTIES)	$ 40.34	29.49

BRWI0013-003 06/01/2025

	Rates	Fringes
TILE LAYER (GRANT, IOWA, AND RICHLAND COUNTIES)	$ 38.39	29.79
BRICKLAYER (GRANT, IOWA, AND RICHLAND COUNTIES)	$ 41.17	28.66

BRWI0019-004 06/01/2025

	Rates	Fringes
BRICKLAYER: BRICKLAYER, CEMENT MASON, TILE LAYER (BARRON, BURNETT (SOUTHERN HALF), DUNN, PEPIN, POLK, RUSK, AND WASHBURN (SOUTHERN HALF) COUNTIES)	$ 39.50	28.69

BRWI0019-005 06/01/2025

	Rates	Fringes
BRICKLAYER & TILE SETTER (SAWYER COUNTY)	$ 39.50	28.69

BRWI0021-001 06/01/2025

	Rates	Fringes
BRICKLAYER: BRICKLAYER, CEMENT MASON, TILE LAYER (DODGE AND JEFFERSON COUNTIES)	$ 40.14	29.67

BRWI0034-001 06/01/2025

	Rates	Fringes
BRICKLAYER: BRICKLAYER, CEMENT MASON, TILE LAYER (COLUMBIA AND SAUK COUNTIES)	$ 41.17	28.66

CARP0068-013 05/05/2025

	Rates	Fringes
CARPENTER: INCLUDING DRYWALL HANGING, ACOUSTICAL WORK (BURNETT (WEST OF HIGHWAY 48) AND POLK(WEST OF HIGHWAYS 35, 48 & 65) COUNTIES)	$ 48.54	28.84

CARP0310-007 06/01/2025

	Rates	Fringes
PILEDRIVERMAN (ADAMS, BAYFIELD (EASTERN 2/3), FOREST, IRON, ONEIDA, PORTAGE, PRICE, SHAWANO (WESTERN PORTION OF THE COUNTY), TAYLOR, VILAS, AND WOOD COUNTIES)	$ 41.43	29.99
CARPENTER: INCLUDING ACOUSTICAL WORK & DRYWALL HANGING (ADAMS, BAYFIELD (EASTERN 2/3), FOREST,		

IRON, ONEIDA, PORTAGE, PRICE, SHAWANO (WESTERN PORTION OF THE COUNTY), TAYLOR, VILAS, AND WOOD COUNTIES).....$ 41.43 29.99

CARP0310-008 06/01/2025

	Rates	Fringes
CABINET INSTALLER: INCLUDING ACOUSTICAL WORK & DRYWALL HANGING (ASHLAND COUNTY).....	$ 41.43	29.99

CARP0314-006 06/02/2025

	Rates	Fringes
CARPENTER, INCLUDING DRYWALL HANGING, ACOUSTICAL WORK: PILEDRIVERMAN (COLUMBIA, DODGE, GRANT, GREEN, IOWA, JEFFERSON, LAFAYETTE, RICHLAND, SAUK, AND WALWORTH COUNTIES).....	$ 44.45	28.78

CARP0361-006 05/05/2025

	Rates	Fringes
CARPENTERS: INCLUDING DRYWALL HANGING, ACOUSTICAL WORK (BAYFIELD COUNTY (WEST OF HWY 63)).....	$ 40.79	27.90

CARP0731-006 06/01/2025

	Rates	Fringes
PILEDRIVERMAN (FOND DU LAC (EASTERN PORTION OF THE COUNTY) AND MANITOWOC COUNTIES).....	$ 41.43	29.99
CARPENTER: INCLUDING ACOUSTICAL WORK & DRYWALL HANGING (FOND DU LAC (EASTERN PORTION OF THE COUNTY) AND MANITOWOC COUNTIES).....	$ 41.43	29.99

CARP0955-004 06/01/2025

	Rates	Fringes
PILEDRIVERMAN (FOND DU LAC (WESTERN PORTION OF THE COUNTY), GREEN LAKE, MARQUETTE, WAUPACA, AND WAUSHARA COUNTIES).....	$ 41.43	29.99
CARPENTER: INCLUDING ACOUSTICAL WORK & DRYWALL HANGING (FOND DU LAC (WESTERN PORTION OF THE COUNTY), GREEN LAKE, MARQUETTE, WAUPACA, AND WAUSHARA COUNTIES).....	$ 41.43	29.99

CARP1056-004 06/01/2024

	Rates	Fringes
MILLWRIGHT (ADAMS, ASHLAND, BARRON, BAYFIELD (EASTERN 2/3), BUFFALO, BURNETT, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, PEPIN, POLK (E. OF HWY. 35, 48 & 65), PORTAGE, PRICE, RICHLAND, RUSK, SAUK, SAWYER, SHAWANO, TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA.....	$ 42.00	28.85

CARP1074-009 06/01/2025

	Rates	Fringes
PILEDRIVERMAN (BARRON, BURNETT (EAST OF HWY 48), CLARK, DUNN, POLK (EAST OF HWY 35, 48, 65), RUSK, SAWYER, AND WASHBURN COUNTIES).....	$ 41.43	29.99

CARPENTER: INCLUDING ACOUSTICAL WORK & DRYWALL HANGING (BARRON, BURNETT (EAST OF HWY 48), CLARK, DUNN, POLK (EAST OF HWY 35, 48, 65), RUSK, SAWYER, AND WASHBURN COUNTIES).....$ 41.43 29.99

CARP1143-006 06/01/2025

	Rates	Fringes
PILEDRIVERMAN (BUFALO, CRAWFORD, JACKSON, MONROE, TREMPEALEAU, AND VERNON COUNTIES).....	$ 41.43	29.99
CARPENTER: INCLUDING ACOUSTICAL WORK & DRYWALL HANGING (BUFALO, CRAWFORD, JACKSON, MONROE, TREMPEALEAU, AND VERNON COUNTIES).....	$ 41.43	29.99

CARP1146-006 06/01/2025

	Rates	Fringes
PILEDRIVERMAN (DOOR, FLORENCE (EXCEPT AREA BORDERING MICHIGAN), KEWAUNEE, MARINETTE (EXCEPT N.E. CORNER), MENOMINEE, OCONTO, AND SHAWANO (WESTERN PORTION OF THE COUNTY) COUNTIES).....	$ 41.43	29.99
CARPENTER: INCLUDING ACOUSTICAL WORK & DRYWALL HANGING (DOOR, FLORENCE (EXCEPT AREA BORDERING MICHIGAN), KEWAUNEE, MARINETTE (EXCEPT N.E. CORNER), MENOMINEE, OCONTO, AND SHAWANO (WESTERN PORTION OF THE COUNTY) COUNTIES).....	$ 41.43	29.99

CARP1348-006 05/01/2025

	Rates	Fringes
MILLWRIGHT (BAYFIELD COUNTY (WESTERN 1/3)).....	$ 41.90	29.51

ELEC0014-001 05/25/2025

	Rates	Fringes
ELECTRICIAN (ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (EXCEPT COLBY, FREMONT, LYNN, MARYVILLE, SHERMAN, SHERWOOD, UNITY), CRAWFORD, DUNN, GRANT, IRON, JACKSON, MONROE, PEPIN, POLK, PRICE, RICHLAND, RUSK, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES).....	$ 44.29	25.21

ELEC0014-005 05/25/2025

	Rates	Fringes
ELECTRICIANS: TELEDATA SYSTEM INSTALLER/TECHNICIAN. LOW VOLTAGE CONSTRUCTION, INSTALLATION, MAINTENANCE AND REMOVAL OF TELEDATA FACILITIES (VOICE, DATA, AND VIDEO) INCLUDING OUTSIDE PLANT, TELEPHONE AND DATA INSIDE WIRE, INTERCONNECT, TERMINAL EQUIPMENT, CENTRAL OFFICES, PABX, FIBER OPTIC CABLE AND EQUIPMENT, MICRO WAVES, V-SAT, BYPASS, CATV, WAN (WIDE AREA NETWORKS), LAN (LOCAL AREA NETWORKS), AND ISDN (INTEGRATED SYSTEMS DIGITAL NETWORK).....	$ 31.17	20.08

ELEC0158-007 05/25/2025

	Rates	Fringes
ELECTRICIANS: (DOOR, KEWAUNEE, MANITOWOC (EXCEPT SCHLESWIG), MARINETTE(WAUSUAKEE AND AREA SOUTH THEREOF), OCONTO, MENOMINEE (EAST OF A INE 6 MILES WEST OF THE WEST BOUNDARY OF OCONTO COUNTY), SHAWANO (EXCEPT AREA NORTH OF TOWNSHIPS OF ANIWA AND HUTCHINS) COUNTIES).....	$ 42.00	23.93

ELEC0159-001 05/26/2024

	Rates	Fringes
ELECTRICIANS: (COLUMBIA, DODGE (WEST OF HWY 26 EXCEPT CHESTER AND EMMET TWPS), GREEN LAKE COUNTY (EXCEPT TOWNSHIPS OF BERLIN, SENECA & ST. MARIE), IOWA, MARQUETTE COUNTY (EXCEPT TOWNSHIPS OF NESHKOKA, CRYSTAL LAKE, NEWTON, AND SPRINGFIELD), AND SAUK COUNTIES)	$ 48.55	25.91

ELEC0219-006 06/01/2019

	Rates	Fringes
ELECTRICIAN: ELECTRICAL CONTRACTS UNDER $180,000 (FLORENCE COUNTY (TOWNSHIPS OF AURORA, COMMONWEALTH, FERN, FLORENCE AND HOMESTEAD) AND MARINETTE COUNTY (TOWNSHIP OF NIAGARA))	$ 31.75	21.73
ELECTRICIAN: ELECTRICAL CONTRACTS OVER $180,000 (FLORENCE COUNTY (TOWNSHIPS OF AURORA, COMMONWEALTH, FERN, FLORENCE AND HOMESTEAD) AND MARINETTE COUNTY (TOWNSHIP OF NIAGARA))	$ 33.94	21.80

ELEC0388-004 06/01/2024

	Rates	Fringes
ELECTRICIAN (ADAMS, CLARK (COLBY, FREEMONT, LYNN, MAYVILLE, SHERMAN, SHERWOOD, UNITY), FOREST, JUNEAU, LANGLADE, LINCOLN, MARINETTE (BEECHER, DUNBAR, GOODMAN & PEMBINE), MENOMINEE (AREA WEST OF A LINE 6 MILES WEST OF THE WEST BOUNDARY OF OCONTO COUNTY), ONEIDA, PORTAGE, SHAWANO (ANIWA AND HUTCHINS), VILAS AND WOOD COUNTIES)	$ 40.19	22.90

ELEC0494-010 06/01/2025

	Rates	Fringes
ELECTRICIAN (DODGE COUNTY (AREA EAST OF HWY 26 INCLUDING ALL OF CHESTER TOWNSHIP, BUT EXCLUDING EMMET TOWNSHIP), FOND DU LAC (EXCEPT WAUPUN), AND MANITOWOC (SCHLESWIG) COUNTIES)	$ 45.20	25.27

ELEC0494-014 06/01/2025

	Rates	Fringes
SOUND & COMMUNICATIONS: TECHNICIAN (DODGE (AREA EAST OF HWY 26 INCLUDING CHESTER TWP BUT EXCLUDING EMMET TWP), FOND DU LAC (EXCEPT WAUPUN), AND MANITOWOC (SCHLESWIG) COUNTIES)	$ 37.13	21.58
SOUND & COMMUNICATIONS: INSTALLER (DODGE (AREA EAST OF HWY 26 INCLUDING CHESTER TWP BUT EXCLUDING EMMET TWP), FOND DU LAC (EXCEPT WAUPUN), AND MANITOWOC (SCHLESWIG) COUNTIES)	$ 37.13	21.58

ELEC0577-001 06/01/2025

	Rates	Fringes
ELECTRICIAN (GREEN LAKE (N. PART INCLUDING TWPS OF BERLIN, ST MARIE, AND SENECA), MARQUETTE (N. PART INCLUDING TWPS OF CRYSTAL LAKE, NESHKORO, NEWTON, AND SPRINGFIELD), WAUPACA, AND WAUSHARA COUNTIES,)	$ 41.76	23.65

ELEC0890-005 06/01/2024

	Rates	Fringes
ELECTRICIAN (DODGE (EMMET TOWNSHIP ONLY), GREEN,		

JEFFERSON, LAFAYETTE, AND WALWORTH COUNTIES).....$ 43.65 23.59

ENGI0139-004 06/02/2025

	Rates	Fringes
OPERATOR: POWER EQUIPMENT (6) FORKLIFT. HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....	$ 41.60	27.89
OPERATOR: POWER EQUIPMENT (4) HYDRAULIC CRANE, 10 TONS OR LESS. HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....	$ 45.20	27.89
OPERATOR: POWER EQUIPMENT (3) TRAVELLING CRANE (BRIDGE TYPE). HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....	$ 45.73	27.89
OPERATOR: POWER EQUIPMENT (2) CRANES, TOWER CRANES WITH OR W/O ATTACHMENTS 100 TONS OR LESS; CRANES, TOWER CRANES WITH BOOM, LEADS, AND OR JIB LENGTHS 175 FT OR LESS HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....	$ 49.28	27.89
OPERATOR: POWER EQUIPMENT (1) CRANES, TOWER CRANES WITH OR W/O ATTACHMENTS OVER 100 TONS; CRANES, TOWER CRANES WITH BOOM, LEADS AND OR JIB LENGTH 176 FT OR LONGER HAZARDOUS WASTE PREMIUMS: EPA LEVEL ""A"" PROTECTION: $3.00 PER HOUR EPA LEVEL ""B"" PROTECTION: $2.00 PER HOUR EPA LEVEL ""C"" PROTECTION: $1.00 PER HOUR.....	$ 50.53	27.89

IRON0008-012 06/01/2025

	Rates	Fringes
IRONWORKER (CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMIE, SHAWANO AND WALWORTH (NORTHEASTERN PART) COUNTIES).....	$ 44.66	33.67

IRON0383-004 06/01/2025

	Rates	Fringes
IRONWORKER (ADAMS, COLUMBIA, CRAWFORD, DODGE, FLORENCE, FOREST, GRANT, GREENE (EXCEPT S.E. TIP), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES).....	$ 44.00	32.66

IRON0498-007 06/01/2025

	Rates	Fringes
IRONWORKER (GREEN (S.E. 1/3) AND WALWORTH (EXCEPT N.E. PART) COUNTIES).....	$ 48.74	49.65

IRON0512-009 05/01/2025

	Rates	Fringes
IRONWORKER (BARRON, BUFFALO, CLARK, DUNN, JACKSON, PEPIN, POLK, RUSK, TAYLOR AND TREMPEALEAU COUNTIES).	$ 46.35	36.86

IRON0512-023 05/01/2025

	Rates	Fringes
IRONWORKER (ASHLAND, BAYFIELD, BURNETT, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES)	$ 42.89	36.86

LABO0140-003 06/01/2025

	Rates	Fringes
LABORER: ASBESTOS/HAZARDOUS MATERIAL REMOVER, PREPARATION, REMOVAL AND ENCAPSULATION OF HAZARDOUS MATERIALS FROM NON-MECHANICAL SYSTEMS (BUFFALO, CRAWFORD, GRANT, JACKSON, JUNEAU, MONROE, RICHLAND, TREMPEALEAU (SOUTHERN PART), AND VERNON COUNTIES)	$ 36.65	19.97
LABORER, GENERAL (BUFFALO, CRAWFORD, GRANT, JACKSON, JUNEAU, MONROE, RICHLAND, TREMPEALEAU (SOUTHERN PART), AND VERNON COUNTIES)	$ 37.70	19.97

LABO0268-005 06/02/2025

	Rates	Fringes
LABORER: ASBESTOS/HAZARDOUS MATERIAL REMOVER	$ 36.65	19.97
LABORER, GENERAL: AREA 3 (AREA 1: BARRON, CLARK (WEST 1/3), DUNN, PEPIN, POLK, RUSK TAYLOR (WEST 1/3) AREA 2: CLARK (EAST 2/3), LANGLADE, LINCOLN, ONEIDA, PRICE, TAYLOR (EAST 2/3), VILAS, WOOD AREA 3: BURNETT, IRON, SAWYER, WASHBURN)	$ 36.35	19.97
LABORER, GENERAL: AREA 2 (AREA 1: BARRON, CLARK (WEST 1/3), DUNN, PEPIN, POLK, RUSK TAYLOR (WEST 1/3) AREA 2: CLARK (EAST 2/3), LANGLADE, LINCOLN, ONEIDA, PRICE, TAYLOR (EAST 2/3), VILAS, WOOD AREA 3: BURNETT, IRON, SAWYER, WASHBURN)	$ 37.05	19.97
LABORER, GENERAL: AREA 1 (AREA 1: BARRON, CLARK (WEST 1/3), DUNN, PEPIN, POLK, RUSK TAYLOR (WEST 1/3) AREA 2: CLARK (EAST 2/3), LANGLADE, LINCOLN, ONEIDA, PRICE, TAYLOR (EAST 2/3), VILAS, WOOD AREA 3: BURNETT, IRON, SAWYER, WASHBURN)	$ 37.70	19.97

LABO0330-001 06/01/2025

	Rates	Fringes
LABORERS, GENERAL (DODGE, DOOR, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, KEWAUNEE, MANITOWOC, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, PORTAGE, SHAWANO, WAUPACA,WAUSHARA)	$ 37.05	19.97
LABORER: ASBESTOS/HAZARDOUS MATERIAL REMOVER, PREPARATION, REMOVAL, ENCAPSULATION OF HAZARDOUS MATERIALS FROM NON-MECHANICAL SYSTEMS (DODGE, DOOR, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, KEWAUNEE, MANITOWOC, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, PORTAGE, SHAWANO, WAUPACA,WAUSHARA)	$ 36.65	19.97

LABO0464-005 06/01/2025

	Rates	Fringes
LABORER: ASBESTOS/HAZARDOUS MATERIAL REMOVER, PREPARATION, REMOVAL, ENCAPSULATION OF HAZARDOUS MATERIALS FROM NON-MECHANICAL SYSTEMS (ADAMS, COLUMBIA, GREEN, IOWA, JEFFERSON, LAFAYETTE, SAUK, AND WALWORTH COUNTIES) (Remaining Area)	$ 36.65	19.97
LABORER: ASBESTOS/HAZARDOUS MATERIAL REMOVER, PREPARATION, REMOVAL, ENCAPSULATION OF HAZARDOUS MATERIALS FROM NON-MECHANICAL SYSTEMS (ADAMS,		

COLUMBIA, GREEN, IOWA, JEFFERSON, LAFAYETTE, SAUK, AND WALWORTH COUNTIES) (Adams County).....$ 36.65 19.97
LABORER, GENERAL: REMAINING AREA (ADAMS, COLUMBIA, GREEN, IOWA, JEFFERSON, LAFAYETTE, SAUK, AND WALWORTH COUNTIES).....$ 37.70 19.97
LABORER, GENERAL: ADAMS COUNTY (ADAMS, COLUMBIA, GREEN, IOWA, JEFFERSON, LAFAYETTE, SAUK, AND WALWORTH COUNTIES).....$ 37.05 19.97

LABO0464-008 06/01/2025

	Rates	Fringes
LANDSCAPE LABORER	$ 21.52	18.94

LABO1091-001 05/01/2025

	Rates	Fringes
LABORER: ASBESTOS/HAZARDOUS MATERIAL REMOVER: PREPARATION, REMOVAL, ENCAPSULATION OF HAZARDOUS MATERIALS FROM NON-MECHANICAL SYSTEMS (BAYFIELD (WEST OF COUNTY TRUNK A INCLUDING THE IRON RIVER NATIONAL FISH HATCHERY AND GREAT LAKES TRANSMISSION CO., STATION 6) COUNTY)	$ 37.04	23.47
LABORER, GENERAL (BAYFIELD (WEST OF COUNTY TRUNK A INCLUDING THE IRON RIVER NATIONAL FISH HATCHERY AND GREAT LAKES TRANSMISSION CO., STATION 6) COUNTY)	$ 36.04	23.47

LABO1091-002 05/01/2025

	Rates	Fringes
LABORER: ASBESTOS/HAZARDOUS MATERIAL REMOVER: PREPARATION, REMOVAL, ENCAPSULATION OF HAZARDOUS MATERIALS FROM NON-MECHANICAL SYSTEMS (ASHLAND & BAYFIELD (EAST OF COUNTY TRUNK A EXCLUSIVE OF THE IRON RIVER NATIONAL FISH HATCHERY AND GREAT LAKES TRANSMISSION CO., STATION 6) COUNTIES)	$ 35.59	23.47
LABORER, GENERAL (ASHLAND & BAYFIELD (EAST OF COUNTY TRUNK A EXCLUSIVE OF THE IRON RIVER NATIONAL FISH HATCHERY AND GREAT LAKES TRANSMISSION CO., STATION 6) COUNTIES)	$ 34.59	23.47

PLAS0599-003 06/01/2025

	Rates	Fringes
PLASTERER (PEPIN COUNTY)	$ 39.75	25.10
CEMENT MASON/CONCRETE FINISHER (PEPIN COUNTY)	$ 37.25	27.84

PLAS0599-007 06/01/2025

	Rates	Fringes
PLASTERER (BUFFALO, CRAWFORD, JACKSON, JUNEAU, MONROE, POLK, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES)	$ 39.75	25.10
CEMENT MASON/CONCRETE FINISHER (BUFFALO, CRAWFORD, JACKSON, JUNEAU, MONROE, POLK, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES)	$ 37.25	27.84

PLAS0599-011 06/01/2025

	Rates	Fringes
PLASTERER (GRANT, GREEN, IOWA, AND LAFAYETTE COUNTIES)	$ 39.89	28.04
CEMENT MASON/CONCRETE FINISHER (GRANT, GREEN, IOWA, AND LAFAYETTE COUNTIES)	$ 43.27	25.69

PLAS0633-046 05/01/2025

	Rates	Fringes
PLASTERER (BAYFIELD, PRICE, AND SAWYER COUNTIES)	$ 40.84	25.66
CEMENT MASON/CONCRETE FINISHER (BAYFIELD, PRICE, AND SAWYER COUNTIES)	$ 47.22	31.90

PLAS0633-046 06/01/2025

	Rates	Fringes
PLASTERER (BAYFIELD, PRICE, AND SAWYER COUNTIES)	$ 40.84	25.66
CEMENT MASON/CONCRETE FINISHER (BAYFIELD, PRICE, AND SAWYER COUNTIES)	$ 47.22	31.90

PLUM0011-009 05/06/2024

	Rates	Fringes
PLUMBER/PIPEFITTER: INCLUDING HVAC WORK (ASHLAND BAYFIELD, BURNETT, IRON, SAWYER, AND WASHBURN COUNTIES)	$ 49.32	27.18

PLUM0075-006 06/01/2025

	Rates	Fringes
PLUMBER: INCLUDING HVAC WORK (DODGE (WATERTOWN), GREEN, JEFFERSON, AND LAFAYETTE COUNTIES)	$ 60.05	27.90

PLUM0075-008 06/01/2025

	Rates	Fringes
PLUMBER: INCLUDING HVAC WORK (COLUMBIA, IOWA, MARQUETTE, RICHLAND, AND SAUK COUNTIES)	$ 60.57	27.34

PLUM0118-003 06/01/2025

	Rates	Fringes
PLUMBER/PIPEFITTER: INCLUDING HVAC WORK (WALWORTH COUNTY)	$ 57.35	29.37

PLUM0400-002 06/01/2025

	Rates	Fringes
PLUMBER/PIPEFITTER, INCLUDING HVAC WORK (ADAMS, CALUMET, DODGE (EXCEPT WATERTOWN), DOOR, FOND DU LAC, GREEN LAKE, KEWAUNEE, MANITOWOC, MARINETTE (EXCEPT NIAGARA), MENOMINEE, OCONTO, OUTAGAMIE, SHAWANO, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES) ((2) All other work)	$ 53.23	23.40
PLUMBER/PIPEFITTER, INCLUDING HVAC WORK (ADAMS, CALUMET, DODGE (EXCEPT WATERTOWN), DOOR, FOND DU LAC, GREEN LAKE, KEWAUNEE, MANITOWOC, MARINETTE (EXCEPT NIAGARA), MENOMINEE, OCONTO, OUTAGAMIE, SHAWANO, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES) ((1) Small buildings (except industrial and power plants) where plumbing or heating is $50,000 or less)	$ 50.02	23.29

PLUM0434-004 06/01/2025

	Rates	Fringes
PLUMBER/PIPEFITTER: INCLUDING HVAC WORK (BARRON, BUFFALO, CLARK, CRAWFORD, DUNN, FLORENCE, FOREST, GRANT, JACKSON, JUNEAU, LANGLADE, LINCOLN, MONROE, ONEIDA, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RUSK, TAYLOR, TREMPEALEAU, VERNON, VILAS, AND WOOD		

COUNTIES).....$ 50.94 25.98

PLUM0601-006 06/01/2025

	Rates	Fringes
PIPEFITTER: INCLUDING HVAC WORK (DODGE (WATERTOWN), GREEN, JEFFERSON, AND LAFAYETTE COUNTIES).....	$ 58.92	31.34

PLUM0601-008 06/01/2025

	Rates	Fringes
PIPEFITTER: INCLUDING HVAC WORK (COLUMBIA, IOWA, MARQUETTE, RICHLAND, AND SAUK COUNTIES).....	$ 60.13	30.16

SHEE0010-031 05/01/2025

	Rates	Fringes
SHEET METAL WORKER (ASHLAND, BAYFIELD AND IRON COUNTIES).....	$ 40.43	29.99

SHEE0010-035 06/05/2023

	Rates	Fringes
SHEET METAL WORKER (HVAC DUCT INSTALLATION ONLY)....	$ 31.97	20.67

SHEE0018-003 06/01/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (FOND DU LAC AND MANITOWOC COUNTIES).....	$ 45.07	31.04

SHEE0018-004 06/01/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (ADAMS, DOOR, FLORENCE, FOREST, GREEN LAKE, KEWAUNEE, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, SHAWANO, WAUPACA, AND WAUSHARA COUNTIES).....	$ 46.47	31.33

SHEE0018-014 06/01/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (DODGE AND JEFFERSON COUNTIES).....	$ 58.03	29.98

SHEE0018-015 09/01/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (WALWORTH COUNTY).....	$ 48.92	38.21

SHEE0018-017 06/01/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (GREEN AND IOWA COUNTIES).....	$ 48.51	35.86

SHEE0018-022 06/01/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (BARRON, BUFFALO, BURNETT, CLARK, DUNN, JACKSON, PEPIN, POLK, PRICE, RUSK, SAWYER, TAYLOR, TREMPEALEAU, AND WASHBURN COUNTIES).....	$ 42.00	31.56

SHEE0018-023 06/02/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (COLUMBIA AND SAUK COUNTIES)	$ 51.92	34.78

SHEE0018-024 06/01/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (CRAWFORD, GRANT, JUNEAU, MONROE, RICHLAND, AND VERNON COUNTIES)	$ 45.63	29.02

SHEE0018-036 05/26/2025

	Rates	Fringes
SHEET METAL WORKER: INCLUDING HVAC WORK (LANGLADE, LINCOLN, ONEIDA, PORTAGE, AND WOOD COUNTIES)	$ 42.90	32.47

SUWI2002-001 01/23/2002

	Rates	Fringes
TRUCK DRIVER (3-AXLE)	$ 15.28	4.78
ROOFER	$ 15.52	3.21
POWER EQUIPMENT OPERATOR (FRONT END LOADER)	$ 23.36	4.61
POWER EQUIPMENT OPERATOR (EXCAVATOR)	$ 17.37	7.45
POWER EQUIPMENT OPERATOR (BACKHOE)	$ 17.45	7.61
PAINTERS: SPRAY	$ 13.72	2.25
PAINTERS: (BRUSH & ROLLER (EXCLUDING DRYWALL FINISHING))	$ 14.64	2.55
GLAZIER	$ 20.21	1.86
FENCE INSTALLERS	$ 15.00	2.37

TEAM0346-003 05/01/2025

	Rates	Fringes
TRUCK DRIVER: 2 AXLE TRUCKS (ASHLAND, BAYFIELD, BURNETT, SAWYER & WASHINGTON COUNTIES)	$ 35.79	24.13

TEAM0662-002 06/01/2025

	Rates	Fringes
TRUCK DRIVER: 3 OR MORE AXLES (ADAMS, BARRON, BUFFALO, CLARK , DOOR, DUNN, JACKSON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MENOMINEE, OCONTO, ONEIDA, PEPIN, POLK, PORTAGE, PRICE, RUSK, SHAWANO, TAYLOR, TEMPEALEAU, WAUPACA & WOOD COUNTIES)	$ 39.72	28.57
TRUCK DRIVER: 2 AXLE TRUCKS (ADAMS, BARRON, BUFFALO, CLARK , DOOR, DUNN, JACKSON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MENOMINEE, OCONTO, ONEIDA, PEPIN, POLK, PORTAGE, PRICE, RUSK, SHAWANO, TAYLOR, TEMPEALEAU, WAUPACA & WOOD COUNTIES)	$ 39.57	28.57

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide

employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for

those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

==========

END OF GENERAL DECISION

"

This Page Intentionally Left Blank

TECHNICAL SPECIFICATIONS

This Page Intentionally Left Blank

TABLE OF CONTENTS

HO-CHUNK NATION
HO-CHUNK BLUE WING LIFT STATION AND WWTF IMPROVEMENTS
IHS PROJECT NO. BE-19-K62 & BE-22-M82



Division 1 – General Requirements

Section 01100 – Summary of Work
Section 01270 – Price and Payment
Section 01310 – Project Management and Coordination
Section 01330 – Submittal Procedure
Section 01420 – References
Section 01430 – Quality Assurance
Section 01500 – Temporary Facilities and Controls
Section 01510 – Temporary Sewage Bypass Pumping
Section 01720 – Staking and Construction Surveying
Section 01770 – Closeout Procedure
Section 01780 – Closeout Submittals
Section 01785 – Operation and Maintenance Manual

Division 2 – Site Construction

Section 02230 – Clearing and Grubbing
Section 02310 – Grading
Section 02315 – Excavation, Trenching, and Backfill
Section 02370 – Temporary Erosion and Sediment Control
Section 02530 – Sanitary Sewer
Section 02531 – Sanitary Sewer Service Lines
Section 02532 – Sanitary Sewer Manholes
Section 02539 – Sewage Lift Station with Valve Vault Rehabilitation
Section 02730 – Aggregate Surfacing
Section 02775 – Concrete Pads
Section 02843 – Steel Pipe Bollards
Section 02920 – Topsoiling, Seeding, and Fertilizing

Division 3 – Concrete

Section 03100 – Concrete Formwork
Section 03200 – Concrete Reinforcement
Section 03300 – Cast-in-Place Concrete (Non-Structural)
Section 03350 – Concrete Finishing

Division 8 – Openings

Section 08100 – Metal Doors and Hardware

Division 13 – Special Construction

Section 13430 – Electrical Control System – Sewage Lift Station

Division 16 – Electrical

Section 16050 – Basic Electrical Materials and Methods
Section 16230 – Backup Power Supply
Section 16401 – Electrical Power, Service, and Distribution
Section 16500 – Lighting

Appendices

Appendix A – Geotechnical/Soil Boring Report
Appendix B – Ho-Chunk Nation Safety Code

SECTION 01100
SUMMARY OF WORK

PART 1 – GENERAL

1.01 SUMMARY

A. The work to be performed under this contract shall consist of furnishing the following to perform the work outlined in these specifications and as indicated by Project Drawings:

1. tools
2. equipment
3. materials
4. labor
5. supplies
6. manufactured articles
7. all transportation to complete the work
8. temporary facilities

B. Location of Work: The Community of Blue Wing, Monroe County, Wisconsin: located east of Tomah, Wisconsin.

C. Incidentals Items: All work, materials, and services not expressly listed as being provided by others or not expressly called for in the contract but are necessary for the completion of the work in good faith, shall be furnished, installed, and performed by the contractor.

1.02 SUMMARY OF WORK TO BE COMPLETED BY CONTRACTOR

A. Schedule A – Lift Station Rehabilitation (BE-19-K62)

1. Installation of two new manholes and modifications to an existing manhole.

2. Installation of approximately 92 feet of 8-inch PVC SDR35 and 10 feet of 8-inch C900 PVC DR18 sewer main.

3. Modifications to the lift station wet well to include core-drilling a new inlet location, installation of a trash basket and rail system, and installation of safety grating.

4. Installation of a concrete pad, hoist/crane base, and hoist/crane adjacent to the wet well.

5. Replacement of the equipment to include two submersible sewage pumps, base elbows, discharge piping, guide rails, transducer, and floats.

6. Installation of an emergency bypass connection on the discharge piping in the valve vault.

B. Schedule B – Electrical Improvements & Backup Power Supply (BE-22-M82)

1. Installation of an electrical equipment board with roof and concrete pad at the lift station, to include a new meter socket, main service disconnect, automatic transfer switch (ATS), emergency generator stop switch, control panel, lighting for the equipment board and the lift station site, and installation of the existing mag meter readout.

2. Construction of a concrete pad and installation of a generator and ATS the lift station.

3. Construction of a concrete pad and installation of a generator and ATS at the WWTF control building.

4. Replacement of the exterior double entry door at the WWTF control building.

1.03 CONTACTS/REGULATORY REQUIREMENTS

A. For information regarding the technical aspects of the project, contact the project engineer:

Nicholas Rademacher, Field Engineer
Indian Health Service
129 North Brown Street
Rhinelander, WI 54501
Telephone: 715-365-5148
Email: nicholas.rademacher@ihs.gov

A. For information regarding contracting information, land use, site access, and Tribal regulations/permits, contact the Owner's Representative:

Kevin Gunderson, Program Manager
Ho-Chunk Nation Environmental Sciences
N6520 Lumber Jack Guy Road
Black River Falls, WI 5461
Telephone: 608-769-4113
Email: kevin.gunderson@ho-chunk.com

B. For information regarding the community sewer, contact:

Kevin Gunderson, Program Manager
Ho-Chunk Nation Environmental Sciences
N6520 Lumber Jack Guy Road

Black River Falls, WI 5461
Telephone: 608-769-4113
Email: kevin.gunderson@ho-chunk.com

C. For information regarding tribal roadways, contact:

Steve Christopherson, Transportation Planner
Ho-Chunk Nation Transportation Authority
27374 State Hwy 21
Tomah, WI 54660
Telephone: 608-387-9708
Email: steve.christopherson@ho-chunk.com

D. For information regarding operation of the lift station and WWTF, contact:

Tony Birrittieri
Petersen Products Company
421 Wheeler Ave
Fredonia, WI 53021
Telephone: 262-689-0278
Email: tony@petersenproducts.com

E. For information regarding cultural items/artifacts if found, contact:

William Quackenbush, Tribal Historic Preservation Officer (THPO)
Ho-Chunk Nation - Department of Heritage Preservation and Cultural Resources Division
P.O. Box 667
Black River Falls, WI 54615
Telephone: 715-284-7181

F. Comply with all Tribal regulations related to the completion of the work including the acquisition of necessary permits. Contact the Nation's Environmental Sciences Program for additional information.

1.04 SAFETY AND TRAFFIC CONTROL

A. Follow OSHA safety guidelines at all times.

B. Examples of required safety practices include, but are not limited to:

1. Hard hats worn on the job site.

2. Trench shoring and/or other practices required to ensure safety to workers in trenches.

3. Barricades, covers, or other adequate methods of preventing passerby access to unattended excavations.

4. Traffic control

5. Confined space entry procedures.

C. It is the responsibility of the Contractor to take all necessary precautions to protect the work and safety of the public and their employees in all construction areas. The Contractor shall have a competent person for safety onsite at all times.

D. If at any time work is completed (including bypass pumping) or vehicles are parked along public roads, the Contractor shall provide adequate signage to warn motorists of the construction work ahead. All signage shall conform and be placed in accordance with the "Manual on Uniform Traffic Control Devices." Reference Specification 01500 – Temporary Facilities & Control for construction/road signage.

1.05 SPECIAL REQUIREMENTS

A. Allowable work hours are Monday through Friday 7:00 am – 5:00 pm

B. Complete all tree clearing no later than March 31, 2027, to comply with oak wilt restrictions. Haul all sawlogs to the Ho-Chunk Nation Department of Natural Resources building in Black River Falls for use as firewood. Haul and dispose of all stumps at the Ho-Chunk Nation Tomah Housing Shop.

C. The gravity sewer main and manhole installation shall be completed by May 15, 2027. This completion date is required to avoid conflicts with subsequent roadwork to be completed by the Nation.

D. The cul-de-sac at the north end of Epicure Road has been pulverized and prepared for paving, which is anticipated in late May or early June 2027. Where excavation is required within the prepared roadway, carefully remove and stockpile the pulverized asphalt and aggregate base for reuse. Following completion of the Work, replace the removed materials in kind and compact the roadway subgrade and base to restore the pavement section to its pre-excavation condition. Provide third-party soil compaction testing during backfilling to verify adequate compaction prior to paving.

E. Groundwater is anticipated to be encountered during excavation, and the Contractor shall provide dewatering as necessary to complete the work.

F. Sandstone weathered bedrock is expected to be encountered periodically during project. <u>No blasting of bedrock will be allowed for a removal procedure.</u> Instead, Contractor shall have on hand an excavator hydraulic hammer to

remove solid bedrock to allow the replacements of the sanitary sewer or rock teeth on a bucket. Where encountered, Contractor shall remove bedrock 6 inches below the flow line of pipe/bottom of structure to allow a minimum of 6 inches of suitable bedding material to be placed between bedrock and pipe/structure. No bedrock removed shall be placed in trench during backfill procedures.

G. New mains shall be mandrel tested and pressure tested prior to acceptance.

H. Contractor shall have all equipment and material onsite to complete work prior to decommissioning the existing lift station to keep bypass pumping to a minimum.

I. Contractor shall coordinate the installation of the natural gas service line at the lift station with WE Energies once the sewer main work is completed and the generator pad is poured.

J. Contractor shall coordinate the installation of the electrical service at the lift station with Oakdale Electric Cooperative once the new electrical equipment (at minimum the meter base and main service disconnect) is installed.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION



This Page Intentionally Left Blank

SECTION 01270
PRICE AND PAYMENT

PART 1 – GENERAL

1.01 SUMMARY

A. Work covered by this section includes method of measurement and basis of payment for all divisions included.

B. Payment for the various items of the Bid Schedules, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, materials, labor, supplies, manufactured articles, transportation, and temporary facilities required to complete the work in accordance with contract documents including incidentals.

C. Respective prices and payment shall constitute full compensation for all work completed including incidentals.

D. All items not expressly listed as being provided by others that are necessary for the completion of work shall be furnished and installed by the Contractor.

1.02 ESTIMATED QUANTITIES

A. All quantities stipulated in the bid schedule or other contract documents are approximate and are to be used: (1) as a basis for estimating the probable cost of the work and (2) for the purpose of comparing the bids submitted.

B. The Contractor shall be paid for actual quantities installed based on the quantities measured in the field. The actual amounts of work completed and materials furnished may differ from estimated quantities. The Contractor shall make no claim for damages, anticipated profits, or otherwise, on account of differences between the estimated amounts and the actual amount of work performed and materials furnished.

1.03 SURVEY AND MEASUREMENTS

A. All quantity measurements shall be the responsibility of the Contractor and will be verified by the Engineer.

B. All measurements and subsequent payments will be based on completed and accepted work performed in strict accordance with the drawings, specifications, and other contract documents.

PART 2 – BID SCHEDULE ITEMS

2.01 GENERAL

A. Payment shall be full compensation to complete the work items in good faith, including incidental work.

B. In addition to the things listed under each item, the unit price bid shall be full compensation for all the following:

1. General requirements in Division 01, including but not limited to the following.

    a. Submittals
    b. Record drawings

2. Specific requirements in Division 02, including but not limited to the following (unless otherwise expressly defined as a line item in the bid schedule):

    a. Road restoration (gravel, asphalt, concrete)
    b. Erosion control.
    c. Silt fencing.
    d. Rock excavation.
    e. Dewatering.
    f. Clearing and grubbing.
    g. Removal and replacement of obstructions, including light poles.
    h. Associated trenching, excavation and backfill including the removal of any nuisance water, suitable materials for bedding & backfill, bedding, haunching, and compaction.
    i. Disposal of any excess material.
    j. Traffic control.
    k. Culverts, any removal & replacement of existing or new installation.
    l. Any required utility work, and
    m. Finish work, including rough grading, plant preparation mats, topsoiling, seeding, mulching, fertilizing and landscaping.

2.02 BID ITEMS

A. Schedule A: Lift Station Rehabilitation (BE-19-K62)

1. Manhole Modifications – MH19

    a. Measurement: By the lump sum.

b. Basis of Payment: Includes manhole cleaning, disposal of debris and wastewater, all other manhole preparation including but not limited to core-drilling new outlet hole, re-forming new flow channel and bench, plugging the existing outlet, pipe seal, connection to new outlet pipe, abandonment of existing sewer main from MH-19 to the wet well, soil compaction testing, and all other appurtenances and incidentals required to complete the work as specified. Includes bed rock removal as necessary.

2. 4-Foot Diameter Concrete Manhole New Install – MH-20, MH-21

   a. Measurement: By each unit installed.

   b. Basis of Payment: Includes base, manhole sections, gaskets, steps, risers, frame, cover, adjustment rings, channel forming, chimney seal, select bedding, soil compaction testing, restoration, connections to piping, testing, cleaning of equipment, and all other appurtenances and incidentals required to complete the work as specified. Includes bed rock removal as necessary.

3. 8-Inch PVC SDR 35 Sewer Main

   a. Measurement: By the linear foot measured over the centerline of pipe from center of manhole to center of manhole.

   b. Basis of Payment: Basis of Payment: Includes all pipe, fittings, select backfill for bedding, haunching, and initial backfill, soil compaction testing, flushing, post installation inspection/testing, and all other appurtenances and incidentals required to complete the work as specified. Includes bed rock removal as necessary.

4. 8-Inch C900 PVC DR18 Sewer Main

   a. Measurement: By the linear foot measured over the centerline of pipe from center of new manhole and edge of existing wet well.

   b. Basis of Payment: Includes all pipe, fittings, select backfill for bedding, haunching, and initial backfill, soil compaction testing, flushing, post installation inspection/testing, and all other appurtenances and incidentals required to complete the work as specified. Includes bed rock removal as necessary.

5. 8-Inch Gate Valve and Box

   a. Measurement: Each

b. Basis of Payment: Includes gate valve and box, extension rod, gate valve adapter, concrete support block, fittings, and all other appurtenances required to complete the work as specified. Includes bed rock removal as necessary.

6. Sewer Service Stub Out

   a. Measurement: Each

   b. Basis of Payment: Includes all pipe, fittings, wye, connection to piping, select backfill for bedding, haunching, and initial backfill, soil compaction testing, restoration, testing, cleaning of equipment, and all other appurtenances and incidentals required to complete the work as specified. Includes bed rock removal as necessary.

7. Wet Well Renovations

   a. Measurement: Lump Sum

   b. Basis of Payment: Includes all labor, materials, equipment, removal of existing submersible pumps, base elbows, discharge piping, and floats, and delivery to owner; cleaning of the existing wet well; core drilling of the structure; connecting the new sewer main to the structure; furnishing and installing new submersible pumps, guide rails, base elbows, discharge piping, transducer, floats, trash basket with railing, and hatch safety grating; plugging of the existing sewer main; soil compaction testing; construction of concrete pad for hoist/crane base; provision of hoist/crane and mounting base; site restoration; and all appurtenances and incidentals required to complete the work as specified.

   c. Note: Temporary sewage bypass pumping shall be paid under a separate pay item.

   d. NOTE: An amount of $2,000.00 will be withheld from this line item until O&M manuals are received and approved.

8. Valve Vault Emergency Bypass Connection

   a. Measurement: Lump Sum

   b. Basis of Payment: Includes installation of flange adapter, tee fitting, plug valve, quick connect with cap, and all other appurtenances required to complete the work as specified.

   c. Note: Temporary sewage bypass pumping shall be paid under a separate pay item.

9. Temporary Sewage Bypass

    a. Measurement: Lump Sum

    b. Basis of Payment: Includes all equipment, materials, labor, generator power, operating pumps, bypass hauling, manning of bypass pumps, and all other appurtenances and incidentals required to complete the work as specified while maintaining continuous sewage service throughout construction operations.

    c. NOTE: One lump sum payment will be made for temporary sewage bypass pumping regardless if work is completed in more than one phase, mobilization, or setup.

10. Clearing and Grubbing

    a. Measurement: Lump Sum

    b. Basis of Payment: Includes all labor, equipment, materials, cutting, clearing, grubbing, handling, loading, hauling, delivery, chipping, stump removal, disposal, coordination with the Nation, protection of vegetation and facilities to remain, cleanup, and all other work required to complete clearing and grubbing at the lift station. Also includes removal of the tree adjacent to the WWTF control building, including stump removal, disposal of debris, protection of adjacent facilities, and restoration of the disturbed area.

11. Site Work

    a. Measurement: Lump Sum

    b. Basis of Payment: Includes procurement and placement of fill material, topsoil, seed, mulch, and aggregate, and all other appurtenances necessary to complete site grading, restoration, and aggregate surfacing as specified at the lift station.

12. Road Restoration

    a. Measurement: Lump Sum

    b. Basis of Payment: Includes all materials, equipment, and labor to saw cut existing pavement and remove/dispose of offsite, removal and stockpile of existing pulverized and road base material, re-installation and compaction of road base and pulverized material, installation of additional road base as needed, density testing of backfill compaction, and all other incidentals required to complete the work as specified.

c. Note: Paving of the road will be completed by a paving contractor already contracted by the Nation.

B. Schedule B: Electrical Improvements & Backup Power Supply (BE-22-M82)

1. Lift Station Electrical and Controls Replacement

a. Measurement: Lump Sum

b. Basis of Payment: Includes all materials, equipment, wiring, and labor required to construct the electrical equipment board with cover and concrete pad; install new lift station control equipment, including control panel enclosure, PC, programming, UPS, level transducer, float system, and other appurtenances for a functional control system; wiring of the pumps; replacement of conduit between the wet well and the control panel; new conduit installation from valve vault to control panel for the magnetic flowmeter display wiring; temporarily relocating the existing electrical equipment board (electrical service/meter, control panel, and magnetic flowmeter display) and the existing controls to operate lift station while the new electrical service equipment (meter socket and main service disconnect) is installed and the new controls are build and installed; installation of the existing magnetic flowmeter display on the new electrical equipment board; installation of existing radio telemetry and verification it functions properly; any additional electrical wiring needed for the operation of the lift station; and all other incidentals required to complete work as specified at the lift station.

c. NOTE: An amount of $3,000.00 will be held under this line item and not paid to the Contractor until O&M manuals for the control system have been provided to the Owner and are accepted and training is complete.

2. Lift Station Generator

a. Measurement: Lump Sum

b. Basis of Payment: Basis of Payment: Includes back-up generator, materials and wiring required to provide an automatic back-up generator compatible with specified controls including but not limited to concrete mounting pad, bollards with covers, automatic transfer switch, emergency generator stop switch, coordination of natural gas service installation, connection of generator to natural gas service, gas regulator, startup and testing of backup power supply system, training on operation and maintenance, and all other appurtenances associated to complete work as specified at the lift station.

c. Note: The natural gas service has already paid for by the Nation.

d. NOTE: An amount of $2,000.00 will be held under this line item and not paid to the Contractor until O&M manuals for the generator system have been provided to the Owner and are accepted and training is complete.

3. WWTF Generator

a. Measurement: Lump Sum

b. Basis of Payment: Includes back-up generator, materials and wiring required to provide an automatic back-up generator, concrete mounting pad, bollards with covers, automatic transfer switch, emergency generator stop switch, gas regulator, gas piping, connection of generator to natural gas service, wiring of automatic transfer switch/backup system to the existing facility including new main service disconnect, startup and testing of backup power system, training on operation and maintenance, and all other appurtenances associated to complete the work as specified at the WWTF control building.

c. NOTE: An amount of $2,000.00 will be held under this line item and not paid to the Contractor until O&M manuals for the generator system have been provided to the Owner and are accepted and training is complete.

4. WWTF Control Building Door Replacement

a. Measurement: Lump Sum

b. Basis of Payment: Includes procurement and replacement of exterior double-door, lockset, hinges, weatherstripping, door stops, removal and disposal of existing doors, and all other incidentals required to complete the work as specified. Also included is painting of the existing frame and replacement doors.

PART 3 – EXECUTION (N/A)

END OF SECTION



This Page Intentionally Left Blank

SECTION 01310
PROJECT MANAGEMENT AND COORDINATION

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes the preconstruction conference, construction scheduling and coordination requirements.

1.02 PRE-CONSTRUCTION CONFERENCE

A. Required after award of contract and prior to start of construction.

B. Representatives from the following shall attend.

1. Prime Contractor

2. Subcontractors

3. Engineer and Technical Representative

4. Owner’s Representative

C. Engineer will arrange a date that is mutually acceptable to all parties planning to attend.

D. Contractor shall notify subcontractors of time and date of meeting.

1.03 CONSTRUCTION SCHEDULE

A. Present Engineer with a written preliminary construction schedule containing start and completion dates of the major items at the preconstruction meeting.

B. Notify the Engineer seven (7) days in advance of any construction.

C. Communicate major changes to the schedule to the Engineer in writing.

1.04 WORKING HOURS/DAYS

A. Except as required for safety purposes, all work shall be performed during regularly scheduled working hours. The Contractor shall not work on Saturday, Sunday, or a Federal holiday without the Owner and Engineer’s consent.

1.05 COORDINATION WITH OTHER CONTRACTORS/UTILITIES

A. Coordinate work with other contractors (i.e. roads, building, etc) in the area as necessary to complete the work specified.

B. Coordinate work with local utilities (i.e. water and sewer, power, telephone). Note: all buried utilities may not be shown on the plans. Contractor's responsibility for having utilities marked prior to construction.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION

SECTION 01330
SUBMITTAL PROCEDURE

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes information on submittal procedures. Materials requiring submittal are listed in the appropriate specification section.

1.02 SUBMITTAL PROCEDURES

A. Submit copies of submittals to the Engineer, unless requested otherwise.

1. Contractor's option:

i. Two (2) hard copies.

ii. An electronic copy in pdf format delivered to Engineer via email or other means as approved by the Engineer.

B. Identify each cut sheet or shop drawing with the following information:

1. Contract number.

2. Supplier.

3. Specification section to which the submittal pertains.

C. Submit the following information, as applicable:

1. Manufacturer's cut sheets indicating compliance with references (e.g. applicable ASTM, AWWA standards).

2. Laboratory results, as applicable.

3. Dimensional drawings or shop drawings, as applicable.

4. Other information necessary for the Engineer to determine compliance with the specifications.

5. Clearly identify brand, manufacturer, model number, sizes, and all other information on each cut sheet to identify the exact product being submitted for approval.

D. Identify variations from the contract documents and product or system limitations that may be detrimental to successful performance of the completed work.

E. Revise and resubmit submittals as required and identify all changes made since previous submittal.

F. Distribute copies of reviewed submittals to concerned parties, (i.e. suppliers, sub-contractors).

G. Submit written communication of any inability to comply with the Engineer's comments.

H. Submit information to the Engineer at least three weeks in advance of the work to be performed.

I. Approval of submittals must be provided by the Engineer prior to installation of materials.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION

SECTION 01420
REFERENCES

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes a list of common organizations, associations or appropriate agencies with jurisdiction that have references, standards, laws or regulations cited in these specifications. This list is not all-inclusive. Other agencies (county, local, tribal) with jurisdiction might not be listed here.

B. Use latest revision of all references, standards, laws or regulations.

1.02 LIST OF ORGANIZATIONS, ASSOCIATIONS & AGENCIES

A. National Standards Organizations & Associations

American Association of State Highway and Transportation Officials (AASHTO)
444 North Capital Street NW, Suite 249
Washington DC, 20001
(202) 624-5800
www.aashto.org

American Concrete Institute (ACI)
ACI International
PO Box 9094
Farmington Hills, Michigan 48333-9094
(810) 848-3700
www.aci-int.org

American Society for Testing and Materials (ASTM)
100 bar Harbor Drive
West Conshohocken, Pa 19428-2959
(610) 832-9585
www.astm.org

American Water Works Association AWWA
6666 West Quincy Avenue
Denver, CO 80235
(303) 794-7711
www.awwa.org

National Electric Code (NEC)
National Fire and Protection Association
1 Batterymarch Park
Quincy, MA 02269-9959
1 888 632-2633
www.nec.com

National Electrical Manufacturer's Association NEMA
1300 North 17th Street
Rosslyn, VA 22209
(703) 841-3200
www.nema.org

Underwriters' Laboratories, Inc. UL
333 Pfingston Road
Northbrook, IL 60062
(847) 272-8800
www.ul.com

B. Federal Agencies

Environmental Protection Agency (EPA)
Region 5
77 West Jackson
Chicago, IL 60604-3507
http://www.epa.gov/r5water/

Occupational Health and Safety Administration
Region 5 (OSHA)
238 South Dearborn Street , Room 3244
Chicago, IL 60604
www.osha.gov

C. State Agencies

Wisconsin Department of Safety and Professional Services
201 W. Washington Ave
P.O. Box 2658
Madison, WI 53701-7921
www.dsps.state.wi.us

Wisconsin Department of Natural Resources
Nonpoint Source and Land Management (Section – WR/2)
P.O. Box 7921
Madison, WI 53707-7921
www.dnr.state.wi.us

Wisconsin Department of Transportation
WIDOT
Madison, WI 53707
(608) 266-2615
www.dot.state.wi.us

D. Local Agencies

1. Contractor shall review other local agency requirements to determine applicability with this project.

E. Tribal Organizations

1. See Section 01100 for appropriate tribal contact regarding tribal laws.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION

SECTION 01430
QUALITY ASSURANCE

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes prerequisites and procedures to assure the quality of construction.

1.02 SUBMITTALS

A. Contractor Name and License Number

1.03 INSTALLER QUALIFICATIONS

A. Work shall be performed under the direction of personnel licensed in the state/reservation where the project is proposed and where licensing of the trade is regulated by the state/reservation including, but not limited to, plumbing, well drilling, septic system installation, HVAC, and electrical work.

1.04 CONTROL OF INSTALLATION

A. Review materials for acceptability when delivered to the site.

B. Store and handle materials to prevent damage.

C. Review materials, services, and workmanship to ensure that work is performed in accordance with the specifications.

D. Comply fully with manufacturers' instructions.

E. Should manufacturers' instructions conflict with contract documents, request clarification from Engineer before proceeding.

F. Correct defective work to the satisfaction of the Project Engineer.

1.05 MANUFACTURERS' FIELD SERVICES

A. Provide reports on observations and documentation of workmanship to the Engineer within 30 days of visit for review where manufacturers' field services are provided.

1.06 WARRANTY

A. Provide a minimum one (1) year warranty for all materials and labor, covering defects in the materials or deficiencies resulting from contractor installation.

B. Provide additional warranties as required under other sections.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01 SUMMARY

A. The work covered by this section includes all temporary facilities and controls needed to complete work under the Contract in a manner that protects public safety and worker safety, that preserves both public and private property and that appropriately involves local governments, emergency and law enforcement.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02315 – Excavation, Trenching and Backfill

B. Section 02705 – Road Restoration

1.03 REFERENCES

A. Manual on Uniform Traffic Control Devices

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION

3.01 GENERAL

A. Provide temporary facilities and controls that are necessary to carry out the requirements of the Contract in a manner

1. That protects public safety and worker safety

2. That preserves both private and public property

3. That communicates and cooperates with local authorities and governments.

3.02 TEMPORARY WATER (IF APPLICABLE)

A. If there is an existing building or hydrant on the site from which water can be taken, Contractor may use the available water if authorized by the Owner.

B. If the Owner has water supply mains, but no hydrant is available, Contractor may make a water main tap and create a service line if authorized by the Owner.

C. If the Owner does not have a water supply, make arrangements to obtain water and pay for it at no direct cost to the project.

D. Cross Connection Control: When connecting to the Owner's water supply, provide appropriate backflow prevention devices in accordance with State codes and the Owner's requirements.

3.03 BARRICADES & WARNING DEVICES

A. Notify local police, fire departments and other emergency programs of any proposed barricading or detouring.

B. Erect and maintain barricades, guardrails, lights and signs as necessary for public convenience and safety.

C. Ensure that barricades remain in place during critical hours.

D. Comply with "Occupational Safety and Health Act" and local safety requirements, as they apply.

3.04 TRAFFIC CONTROL

A. Conduct all traffic control operations in accordance with the latest issues of the "Manual On Uniform Traffic Control Devices" (MUTCD).

B. Coordinate and obtain approval for all traffic control from local law enforcement.

C. Signs, Signals and Devices

1. Place warning signs in the region of the work.

2. Warn of types of conditions that may be encountered.

    a. Muddy Roads
    b. Slippery Roads
    c. Flagman
    d. Detour
    e. Slow Moving Traffic
    f. Trucks Entering Roadway

3. Traffic Control Signals: Meet the needs of the local government authority.

4. Traffic Cones and Drums, Flares and Lights:

    a. Meet the needs of the local jurisdictions.
    b. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.
    c. Ensure that flares, lights, etc. remain in position throughout the night.

5. Flagman:

    a. Meet the needs of the local jurisdictions.
    b. Provide trained and equipped flagmen to regulate traffic when construction operations or traffic encroach on public traffic lanes.

D. Haul Routes:

1. Consult with authority having jurisdiction in establishing public thoroughfares to be used for haul routes and site access.

2. Confine construction traffic to designated haul routes.

3. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

E. Removal of Traffic Control:

1. Remove equipment and devices when no longer required.

2. Repair damage caused by installation.

3.05 ACCESS ROADS

A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.

B. Provide detours necessary for unimpeded traffic flow.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Permanent access roads and parking areas, if applicable, will be covered in Division 2, Site Work.

3.06 PARKING

A. If the site is large enough, the Contractor may park their own and employees' vehicles on the site without charge after obtaining permission from the Owner.

B. If the site is not large enough, the Contractor shall make parking arrangements.

C. Prevent interference with the flow of local traffic.

D. Prevent interference with emergency vehicle functions.

3.07 ROAD SURFACE MAINTENANCE

A. Remove mud and excavated spoils from the affected roadway at the end of each workday in order to preserve the roadways and maintain safe driving conditions.

B. Contractor is responsible for any costs associated with repairing the roadways that are damaged due to construction equipment.

3.08 WATER CONTROL

A. Grade site to drain.

B. Protect site from puddling or running water.

C. Provide water barriers as required to protect site from soil erosion.

3.09 DUST CONTROL

A. Use measures to minimize dust caused by the project.

B. Avoid dust-creating activities during dry, windy conditions.

3.10 SECURITY

A. The Owner will **not** be responsible for security on the site of work.

B. Each Contractor will be held responsible for loss or injury to persons or property where their work is involved.

C. Provide (if deemed necessary) such watchmen and take such other precautionary measures as deemed necessary to protect facilities during the contract period.

3.11 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.

B. Remove waste materials, debris, and rubbish from site weekly and dispose off-site.

3.12 REMOVAL OF UTILITIES, FACILITIES & CONTROLS

A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to inspection.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition.

3.13 TEMPORARY FIRST AID FACILITIES

A. Provide temporary first aid facilities for employees in sufficient quantity for the number of workers.

3.14 TEMPORARY FIRE PROTECTION

A. Post fire department telephone numbers at the jobsite.

B. Keep fire extinguishers on the job that are appropriate for the type of work being performed.

END OF SECTION



This Page Intentionally Left Blank

SECTION 01510
TEMPORARY SEWAGE BYPASS PUMPING

PART 1 – GENERAL

1.01 SUMMARY

A. The work covered by this section includes requirements for maintenance of sewage flows during rehabilitation of the existing lift station and includes all temporary facilities and controls needed to implement a temporary pumping system for the purpose of diverting existing sewage flow around the work area. Bypass pumping shall allow users of the sanitary sewer system to continue to use the sewer system at all times to prevent backup and/or overflow into adjacent ditches, homes, storm sewers, and waterways.

1.02 RELATED WORK

A. Section 02539 – Sewage Lift Station with Valve Vault Rehabilitation

1.03 REFERENCES

A. Manual on Uniform Traffic Control Devices

B. Occupational Safety and Health Administration

1.04 SUBMITTALS

A. A written plan for maintaining sewage flows during construction in conjunction with the contractor's proposed order of construction including:

1. Locations of pumps, discharge piping, road crossings and closures, etc.,
2. Expected duration of bypass pumping,
3. Sewer plugging method,
4. Bypass pump flow/head capacity, and
5. Discharge pipe material

1.05 QUALITY ASSURANCE

A. During bypass pumping, no sewage shall be leaked, dumped or spilled in or onto, any area outside of the existing sewer system.

B. Contractor shall continuously monitor the bypass system to ensure the system is working properly and not leaking.

C. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction.

1.06 EXISTING CONDITIONS

A. The Ho-Chunk Blue Wing Lift Station has an estimated daily average flow of 13,000 gpd (9 gpm).

    1. Note: These values do NOT include peaking factors.

B. The list station pumps wastewater to a treatment facility approximately 1,200-ft away. Bypass pumps will be required to meet flow rate demands with a static head of approximately 35-ft.

C. The two closest upstream manholes to the lift station are MH18 and MH19.

    1. MH18 (center of intersection of Epinal Ave and Epicure Rd)

        a. Diameter: 4-ft (inner)
        b. Depth: 16.5 ft
        c. Distance from lift station: ~345 ft from the wet well and ~330’ from the valve vault; refer to plans.

    2. MH19 (north end of cul-de-sac, buried in gravel shoulder)

        a. Diameter: 4-ft (inner)
        b. Depth: 14.7 ft
        c. Distance away: ~56 ft from the wet well and ~50 ft from the valve vault; refer to plans.

D. The nearest sewer service line is located approximately 148 ft upstream of MH19 and serves 28532 Epinal Ave.

    1. Contractor shall ensure that sewer service lines are not surcharged.

E. The valve vault does not have an existing emergency pump connection.

    1. Note: This project includes the installation of an emergency pump connection in the valve vault.

PART 2 – PRODUCTS

2.01 PUMPS

A. Pumps shall be fully automatic and self-priming units that do not require the use of foot-valves or vacuum pumps in the priming system. All pumps used must be designed for dry running over long periods of time to accommodate the cyclical

nature of sewage flows. All pumps must be sized to handle the flows anticipated with a factor of safety.

B. Contractor shall provide a reliable power source (ie portable generator) for the pumps to ensure continuous operation.

2.02 PIPING, JOINTS AND ACCESSORIES

A. Shall withstand 50 psi minimum or twice (2x) the system operating pressure whichever is more.

PART 3 – EXECUTION

3.01 GENERAL

A. Contractor shall maintain sewage flow around the work area in a manner that will not cause surcharging of sewer into homes or damage to sewers and will protect public and private property from damage and flooding.

B. In the event overnight pumping of sewage is required, generators and pumps will be encased in sound attenuating enclosures to reduce airborne noise.

C. In the event sewage accidentally drains into the drainage system or street the Contractor shall immediately stop the overflow, notify the Engineer and Tribal Representative, and take the necessary action to clean up and disinfect the spillage to the satisfaction of the Tribe.

D. Sewage shall not be discharged onto the ground or into open earth pits.

E. Outages must be coordinated 7 days in advance with the Environmental Sciences Dept. and affected homeowners.

F. Contractor may use pumper trucks in lieu of bypass pumping. Pumped waste may be dumped into septic tank #1 at the WWTF or hauled offsite and disposed of in accordance with applicable local and state requirements.

3.02 PLUGGING OR BLOCKING OF SEWAGE FLOWS

A. Shall incorporate a primary plugging device and secondary plugging device.

B. Removal of plugging or blocking shall be accomplished in a manner that prevents surcharging or causing major disturbances to existing sewage pumping facilities downstream.

3.03 ROAD CROSSING, ROAD CLOSURES, BARRICADES, & WARNING DEVICES

A. Erect and maintain barricades, guardrails, lights and signs as necessary for public convenience and safety.

B. Ensure that barricades remain in place while bypass pumping is ongoing

C. Comply with "Occupational Safety and Health Act" and local safety requirements, as they apply.

D. If roadways are to be blocked or closed due to the layout of bypass piping, Contractor must obtain all necessary permits and approvals from all entities involved prior to blocking or closing the road, including but limited to the Ho-Chunk Transportation Authority and Bureau of Indian Affairs.

    1. Provide protection to allow vehicular traffic to cross piping without directly driving on piping.

    2. Provide appropriate traffic control/signage identifying the road crossing and obstruction.

3.04 CLEANING OF EFFECTED SEWERS

A. Upon completion of the bypass pumping operations and once lift station is functioning, Contractor shall clean all associated sewer mains, sewer service laterals, and manhole structures in which surcharging occurred.

B. Cleaning shall be completed with high-pressure water jetting (for piping) and pressure washing of the manholes.

END OF SECTION

SECTION 01720
STAKING AND CONSTRUCTION SURVEYING

PART 1 – GENERAL

1.01 SUMMARY

A. This section outlines the staking and surveying work related to provide reference points in the field. The section clarifies Engineer responsibilities and Contractor responsibilities.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02315 – Excavation, Trenching and Backfill for Pipelines

B. Section 02510 – Water Distribution Mains

C. Section 02530 – Sanitary Sewer

1.03 WORK PERFORMED BY THE ENGINEER

A. Water Main Staking

1. Centerline staking (approximately every 100 feet)

B. Sewer Main and Appurtenance Staking

1. Offset centerline staking (approximately every 100 feet)

2. Manhole staking on center with offset staking

3. Hubs for vertical control at each manhole

1.04 CONTRACTOR'S RESPONSIBILITY

A. Notify the Engineer at least fourteen (14) calendar days in advance of the times and places that pipeline staking will be needed.

B. Provide supplementary staking, grade staking, offsets, temporary bench marks, and control points as necessary to complete the work in accordance with the plans and specifications.

C. Request clarification from the Engineer regarding apparent conflicts before proceeding with installation of facilities.

D. Preserve all reference staking placed by the engineer, until such time as the pipeline or other facilities are installed. Reference stakes needing replacement due to Contractor error or negligence to secure the site must be replaced by one of the following means:

    1. A professional land surveyor or engineer hired by the Contractor, or

    2. The Engineer/Owner, at a rate of $800 per day, credited to the contract.

E. All permanent survey points/markers (i.e. property corners) and bench marks not directly in the line of work shall be preserved,

    1. Replace all permanent survey markers disturbed or destroyed using a Professional Land Surveyor at no cost to the Owner/Engineer.

    2. Provide evidence of reestablishment of permanent survey markers to the Engineer.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION

SECTION 01770
CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes information on closeout procedures and final cleaning.

1.02 RELATED WORK

A. Section 01780 – Closeout Submittals

1.03 CLOSEOUT PROCEDURES

A. Submit written certification that work is complete in accordance with contract documents and ready for final inspection, providing notice of at least three (3) working days.

B. Provide warranties and record documents (e.g. as-built drawings) to the Engineer that are required within ten (10) days after date of first beneficial use.

1.04 FINAL CLEANING

A. Complete final clean-up prior to final inspection.

B. Remove waste and surplus materials and construction facilities from the site.

1.05 FINAL INSPECTION

A. A final inspection of the facilities shall be conducted in the presence of the Owner, the Engineer, and the Contractor, at a minimum.

B. Final inspection shall include inspection of all facilities installed via the project.

1.06 PUNCH LIST

A. Any deficiencies noted at the Final Inspection will be communicated to the Contractor through a letter from the Engineer.

B. All deficiencies will need to be completed before full payment is made.

C. Retainage for punch list items shall be based on the estimated cost to retain another contractor to finish the deficient work items.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION

SECTION 01780
CLOSEOUT SUBMITTALS

PART 1 – GENERAL

1.01 SUMMARY

A. This section describes the requirements for closeout submittals including, record drawings, warranty information and general operation and maintenance information.

1.02 RELATED WORK

A. Section 01430 – Quality Assurance

B. Section 01770 – Closeout Procedures

1.03 DELIVERY

A. Provide all closeout submittals meeting these requirements and any specific requirements of each section.

B. Closeout submittals must be received before payment is requested for the work that the drawings describe or illustrate.

C. All closeout submittals must be received in a correct and complete manner before final payment can be made. If material is deficient, the deficiencies will be indicated in punch lists (Section 01770).

1.04 DEFINITIONS

A. Record Drawing: A drawing showing the actual installation of facilities, showing changes from the plans, and showing detail enough that future persons can readily locate all objects.

B. Ties: Measurements from permanent easily located objects to an installed object.

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION

3.01 RECORD DRAWINGS

A. Provide record data in one of the following manners:

1. On a set of project drawings, neatly draw tie measurements and changes.
2. On separate 8½ X 11 sheets (see 01780D – Closeout Submittal Drawings), neatly draw site sketches, structure sketches, etc., indicating the necessary information.

B. Provide three (3) swing tie measurements to all buried utility objects that may need to be located in the future, including, but not limited to:

1. Gate valves
2. Corporation stops
3. Curb stops
4. Water main fittings
5. Couplings to existing water systems.
6. Cleanouts
7. Sewer wyes.
8. Utility crossings.
9. Septic tank manholes and access covers.
10. Corners of drainfields
11. Tracer Wire Boxes

C. Provide offset measurements for buried utilities (e.g. water main) installed parallel to roads.

D. Provide revised elevation data for all items that have elevations shown on the plan drawings, including, but not limited to, the following:

1. Manhole inverts (inlet and outlet)
2. Manhole rims
3. Lift station invert
4. Lift station top
5. Lift station pipe penetrations
6. Float elevations
7. Septic tank elevations
8. Elevations of pipe entering and leaving structures
9. Elevation of sewer service line stub (if terminated at right of way)
10. Other elevations indicated on profiles.

E. Provide installed bid schedule items quantities for individual facilities on 8½” X 11” sheets.

1. Engineer may supply standard forms for use by the Contractor.

3.02 WARRANTIES

A. Submit all warranty information regarding the materials installed.

B. Minimum warranty information is listed in Section 01430.

3.03 OPERATION AND MAINTENANCE INFORMATION

A. Submit all operation and maintenance information as included in the packaging from the manufacturer regarding the materials installed.

B. Additional project specific operation and maintenance requirements are listed in Section 01785.

END OF SECTION



This Page Intentionally Left Blank

SECTION 01785
OPERATION AND MAINTENANCE MANUAL

PART 1 – GENERAL

1.01 SUMMARY

A. Work under this section defines the requirements to complete an operation and maintenance manual.

1.02 SUBMITTALS

A. Form and Format

1. Three (3) hard copies of the O&M Manual data must be bound within new, white, heavy-duty 3-ring presentation binders with clear-view overlay on the front, back and spine of the binder. Each O&M Manual data binder shall have two typed labels with the project name, IHS Project No. and O&M data name on both the binder fronts and binder spines. A minimum of 16-point font size with Arial font style is requested for the binder labels.

2. Paper shall be 20-pound minimum for typed pages. Computer generated data shall be by laser printers.

3. Each binder shall have a table of contents & directory. Tabbed divider sheets shall be white with typed labels that coincide with the Table of Contents. The tabs shall be in same sequence as the table of contents and be readable from the left to the right.

4. All tabbed divider sheets shall be heavy weight and have reinforced binder strip maintain the long-term integrity of the paper.

5. Large data sheets shall be folded and presented in an 8-1/2 inch x 11-inch pocket folder within each O&M Manual binder.

6. Drawings, photographs, and envelopes shall be furnished with reinforced binder holes suitable for the above-mentioned binders and be labeled with appropriate identification.

7. Photocopies shall be legible and suitable for photocopying. All materials shall be reproducible.

8. All components of the submittal shall be typed.

9. An electronic copy in pdf format shall be delivered to Engineer via email or other means as approved by the Engineer. This copy shall be an exact

legible reproduction of the hard copy including title, table of contents, all written pages, drawing, photographs, etc.

B. Schedule

1. Three (3) hard copies and one (1) electronic copy of the operation and maintenance data shall be submitted to the project engineer 2-weeks prior to the final inspection of the project.

1.03 QUALITY ASSURANCE

A. The operation and maintenance data shall be prepared by trained personnel experienced in operation and maintenance of the described products, equipment, materials, and finishes.

B. Final acceptance of the O&M Manual(s) will be subject to review and may require revisions.

1.04 CONTENTS

A. Table of Contents

1. Provide a table of contents with each operation and maintenance manual.

a. Provide a reinforced tabbed divider for each section listed in the Table of Contents. Main sections shall be numbered; sub-sections shall be lettered.

B. Directory

1. For each item of equipment, list the name, address, and telephone number of the following:

a. Contractor
b. Manufacturer
c. Supplier
d. Local source of service
e. Local source for spare parts and replacement parts

2. List the name, address, telephone number and email address of the following:

a. Tribal Contact
b. Project Engineer
c. Utilities

C. Data to be Included:

1. Include only product data sheets which are pertinent to the specific product installed.

2. Mark-up each product data sheet to:

    a. Identify specific product or part installed.
    b. Identify data applicable to installation.
    c. Delete reference to inapplicable data.

3. Supplement product data sheets with test and drawings as necessary to illustrate:

    a. Relationship of component parts to equipment and processes.
    b. Controls, regulation and accessories.
    c. Capacities, performance curves and engineering data.

4. Provide a detailed description of normal operation and emergency operation of the product installed.

5. Provide detailed operation and maintenance, troubleshooting and lubrication instructions for each component of equipment. Include installation, disassembly, repair, reassembly and adjustment.

6. Provide break-in, summer, winter and special operation instructions.

7. Provide detailed control, regulation, stopping, shut-down, and emergency instructions.

8. Provide servicing and lubrication schedule and list of lubricants required.

9. Provide manufacturer's parts list illustrations, assembly drawings and diagrams required for maintenance. Include recommended items and quantities to be stocked as spare parts.

10. Provide start-up and shutdown procedures in a logical and consistent format. Include all points of regulation and control (valves, switches, etc.).

11. Provide all warranty information including any restrictions or precautions which might affect validity.

12. Provide other data required under pertinent section of these specifications.

13. Provide complete instrumentation loop diagrams with tabulated listing of all loop components.

14. Submit as installed control diagrams by controls manufacturer before issuance of certificate of substantial completion.

D. Data for Material Finishes:

1. Provide manufacture's product data with catalog number, size, composition, and color and texture designations.

2. Provide instructions for care, maintenance and preventative maintenance which include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods and recommended schedule for cleaning and maintenance.

1.05 EQUIPMENT DATA CARD

A. An "Equipment Data Card" MUST be completed on the form provided for each piece of equipment listed below:

1. Submersible Sewage Pumps

2. Generator (LS)

3. Generator (WWTF)

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION (N/A)

END OF SECTION

Equipment Data Card

Project Name			
Contract Number			
Contractor			
Equipment Number			
Description			
Location			
Manufacturer			
Vendor		**Asset No.***	
Vendor Order No.		**Maint. No,***	
Date of Purchase		**Purchase $**	
Local Supplier			
Address			
Phone Number			
Model Number			
No. of Units	**Serial Nos.**		

Maintenance Operation	**Frequency**

Lubricant List

Reference Symbol	**Lubricant Type**	**Recommended Lubricant & Manufacturer**

Recommended Spare Parts List

Part No.	**Description**	**DWG**	**Quantity**	**Unit Cost**

Nameplate Data

Electric Motor			**Pump/HVAC Unit**	
Manufacturer			**Manufacturer**	
Type	**AC** ☐	**DC** ☐	**Type**	
Horsepower			**Size**	
RPM			**Capacity**	
Voltage			**Pressure**	
Amperage			**Rotation**	
Phase			**Impellor Size**	
Frame			**Impellor Material**	

Additional Data and Remarks



This Page Intentionally Left Blank

SECTION 02230
CLEARING AND GRUBBING

PART 1 – GENERAL

1.01 SUMMARY

A. This section covers clearing and grubbing within the proposed areas of construction and disposal locations.

1.02 RELATED WORK (as applicable)

A. Section 02315 – Excavation, Trenching, and Backfill

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION

3.01 OAK CUTTING RESTRICTIONS

A. Do not cut, prune, damage, or otherwise wound oak trees between April 1 and August 1. Perform work involving oak trees outside this period to reduce the risk of oak wilt infection and spread, unless otherwise approved by the Nation.

3.02 TREE CUTTING AND LOG DELIVERY

A. Cut all trees 4 inches or greater in diameter at breast height (DBH) into logs suitable for handling, loading, transport, and subsequent processing into firewood.

B. Cut limbs flush with the log. Do not leave protruding branch stubs.

C. Transport sawlogs to the Ho-Chunk Nation Department of Natural Resources (DNR) building located at:

W9784 State Highway 54
Black River Falls, WI 54615

D. Coordinate delivery with the Nation prior to hauling sawlogs to the site.

3.03 TOPS, LIMBS, AND SLASH

A. Chip tops, limbs, and other suitable woody slash generated by clearing operations.

B. Unless otherwise approved by the Nation, transport all wood chips generated by clearing and grubbing operations to the Ho-Chunk Nation DNR building identified in Section 3.02.

C. Coordinate delivery with the Nation prior to hauling wood chips to the site.

D. With prior approval from the Nation, wood chips may be broadcast within adjacent wooded areas in a uniform manner.

E. Where broadcasting is approved, do not place chips at a depth greater than 6 inches at any location.

F. Do not place broadcast chips against standing tree trunks, within drainageways, or in a manner that interferes with drainage or creates concentrated piles.

3.04 STUMP DISPOSAL

A. Remove stumps from the construction area and transport them to the Ho-Chunk Nation Tomah Housing Shop located at:

28902 State Highway 21
Tomah, WI 54660

B. Coordinate delivery with the Nation prior to hauling stumps to the site.

3.05 DISPOSAL RESTRICTIONS

A. Do not burn, bury, or abandon trees, stumps, logs, brush, slash, chips, or other clearing and grubbing debris within the Project limits unless specifically approved by the Nation.

3.06 SITE PROTECTION AND CLEANUP

A. Conduct clearing and grubbing operations in a manner that avoids unnecessary damage to vegetation and areas designated to remain.

B. Remove debris generated by the work and leave cleared areas in a neat and orderly condition.

END OF SECTION

SECTION 02310
GRADING

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes rough and finished site grading of all areas disturbed during construction.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02315 – Excavation, Trenching and Backfill

B. Section 02370 – Temporary Erosion and Sediment Control

C. Section 02920 – Topsoiling, Seeding, Fertilizing and Mulching

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.01 ROUGH GRADING

A. Grade the area in the vicinity of the excavation to prevent surface water from flowing into the excavation.

B. Maintain existing drainage.

3.02 FINISH GRADING

A. Grade site to true grades as specified on the plans after all structures and piping have been installed.

B. Grade sites for effective drainage away from structures.

C. Dress and trim all slopes.

END OF SECTION



This Page Intentionally Left Blank

SECTION 02315
EXCAVATION, TRENCHING, AND BACKFILL

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes excavation, trenching and backfill necessary for the construction of the facilities as indicated on the plans including, but not limited to manholes, sewer main, sewer service lines.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 01720 – Staking and Construction Surveying

B. Section 01780 – Closeout Submittals

C. Section 02240 – Dewatering

D. Section 02310 – Grading

E. Section 02317 – Structural Fill

F. Section 02370 – Temporary Erosion and Sediment Control

G. Section 02511 – Water Service Lines

H. Section 02530 – Sanitary Sewer

I. Section 02532 – Sanitary Sewer Manholes

J. Section 02920 – Topsoiling, Seeding, Fertilization and Mulching

1.03 REFERENCES

A. Manual on Uniform Traffic Control Devices.

B. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3) [Standard Proctor Test

C. ASTM D2321 – Underground installation of Flexible Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications.

D. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).

E. OSHA – Occupational Safety and Health Administration Standards, 29 CFR Parts 1910 and 1926.

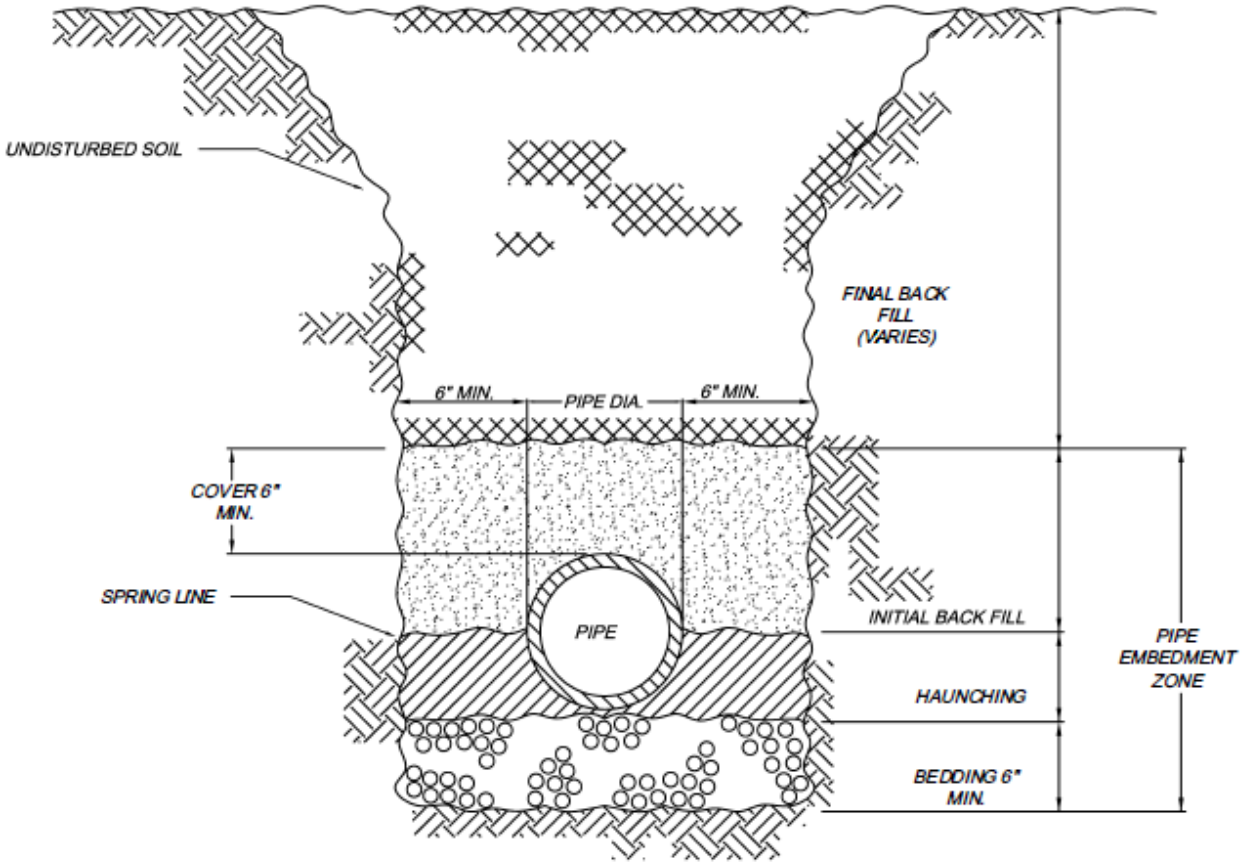
F. WI NR 110 – Wisconsin standards for the design and construction of community sewerage systems.

1.04 SUBMITTALS

A. 3rd party geotechnical testing firm

1.05 DEFINITIONS

A. Bedding, Haunching and Initial Backfill zones as defined herein and on the standard pipe trench detailed drawing below:



PIPE TRENCH DETAIL

B. Soil Materials as summarized in the table below and defined in ASTM D2321 and ASTM D2487

Description and Comparison of Soil Material Classifications

ASTM D2321		*ASTM D2487*	
Class	*Type*	*USCS Group Symbol*	*Description*
IA	Manufactured aggregates: ¼ to ¾ inch open graded, clean.	* *None*	Closest to "Poorly graded gravel (GP)" 100% passing 1.5 inch sieve Max 10% passing No. 4 sieve < 5% passing No. 200 sieve
IB	Manufactured aggregates: ¼ to ¾ inch dense graded, clean.	* *None*	Closest to "Poorly graded gravel with sand (GP)" 100% passing 1.5 inch sieve Max 50% passing No. 4 sieve < 5% passing No. 200 sieve
II	Coarse sands and gravels with maximum particle size of 1 ½ inch, clean.	GW	Well-graded gravels and gravel-sand mixtures; little or no fines.
		GP	Poorly graded gravels and gravel sand mixtures; little or no fines.
		SW	Well-graded sands and gravelly sands; little or no fines.
		SP	Poorly graded sands and gravelly sands; little or no fines
	Coarse sands and gravels with maximum particle size of 1 ½ inch, borderline clean.	GW-GC SP-SM Etc.	Sands and gravels which are borderline between clean and with fines
III	Fine sand and clayey gravels.	GM	Silty gravels, gravel-sand-silt mixtures.
		GC	Clayey gravels, gravel-sand-clay mixtures
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
IV	Fine grained soils (inorganic)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, silts with slight plasticity.
		CL	Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays.
		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
		CH	Inorganic clays of high plasticity, fat clays.
V	Organic soils	OL	Organic silts and organic silty clays of low plasticity.
		OH	Organic clays of medium to high plasticity, organic silts.
		PT	Peat and other high organic soils.

* USCS system is limited to naturally occurring soils. Manufactured aggregates not covered.

C. Use of soils in the pipe embedment zone are summarized in the table below.

Use of Soils and Aggregate for Pipe Embedment Zone

	Class IA	*Class IB*	*Class II*	*Class III*
General	Excellent pipe support. Excellent drainage. Install to a minimum of 6" above the pipe crown.	Excellent pipe support. Good drainage. Minimizes migration of adjacent material. Install to a minimum of 6" above the pipe crown.	Good pipe support. Fair drainage. Install and compact to a minimum of 6" above the pipe crown.	Reasonable pipe support. Poor drainage. Install and compact to a minimum of 6" above the pipe crown.
Compaction	Not required	Not required	Required 85% of Standard Proctor. 6 inch maximum lifts.	Required 90% of Standard Proctor. 6 inch maximum lifts.
Water Main/Force Main	Acceptable	Acceptable	Acceptable	Not Acceptable
Gravity Sewer (Main and Service Lines)	Acceptable	Acceptable	Not Acceptable	Not Acceptable
Septic Tank & Associated Piping	Acceptable	Acceptable	Acceptable	Not Acceptable
Around Structures	Acceptable	Acceptable	Acceptable	Not Acceptable

1. Wet conditions are to be considered those occurring below the current or future water table.

    a. For use of Class II soils in wet conditions, note that only clean groups are suitable.

PART 2 – PRODUCTS

2.01 BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL

A. Class I or Class II utilized in accordance with restrictions described in Part 1 - General.

2.02 INSULATION

A. Rigid extruded polystyrene insulation board, having a minimum compressive strength of 25 psi.

B. Width:

1. 4-foot for mains 6-inch (nominal diameter) and larger.

2. 2-foot for mains and service lines less than 6-inches (nominal diameter).

C. Thickness: As stipulated on the bid schedule.

2.03 POLYETHYLENE ENCASEMENT

A. Minimum 8 mils thickness.

PART 3 – EXECUTION

3.01 GENERAL

A. Trenching and excavation work shall be done in accordance with proper emphasis on safety as determined by the Contractor to conform to recommended safety standards such as OSHA 1910 and 1926. Trench box or shoring shall be used unless sloping plan is approved by engineer.

B. Obtain all permits from appropriate road agency for construction within road right of way.

C. Repair damage resulting from settlement, slides, cave-ins, water pressure, and other causes.

D. Provide adequate signs, barricades, fences and amber lights and take all necessary precautions to protect the work and the safety of the public in all construction areas.

1. Placement of construction signs and barricades shall conform to the “Manual on Uniform Traffic Control Devices.”

2. Protect barricades and obstructions at night by amber signal lights that burn from sunset to sunrise. Barricades shall also be of substantial construction, painted white or with reflective paint to increase their visibility at night.

3. Perform work without obstruction to traffic or inconvenience to the general public and the residents in the vicinity of the work.

E. Road Crossing

1. Comply with all construction and material requirements of roadway authorities having jurisdiction.

2. Maintain one lane of traffic open at all times.

3. Refer to Section 02705 – Road Restoration for backfill and restoration requirements.

3.02 EXCAVATION

A. Remove trees and stumps from excavation and site.

B. Remove and stockpile existing topsoil.

C. Install facilities as staked unless otherwise approved by Engineer.

D. Maintain surface drainage away from trenching or excavation.

E. Remove unsuitable foundation materials from excavation as shown on the plans or as authorized by the Engineer.

F. Maintain a minimum 1-foot clearance between outer surface of structure being installed and wall of excavation.

G. Limestone bedrock is anticipated to be encountered during excavation and shall be removed from the site and disposed of offsite. Costs associated with bedrock excavation, removal, hauling, and disposal shall be included in the applicable line items identified in Section 01270 – Price and Payment.

3.03 TRENCHING

A. Bottom width: No less than 12 inches.

B. Depth: Provide minimum cover as specified, or depths shown on plans.

3.04 BEDDING

A. Over-excavate 6 inches below bottom of pipe or structure and provide bedding material.

B. Utilize Class I or II materials as appropriate for bedding as listed in Pipe Embedment Zone table in 1.05.

3.05 HAUNCHING AND INITIAL BACKFILL

A. General

1. Provide complete and uniform bearing and support for the pipe, including allowance for bell holes, or structure.

2. Work material under and around the pipe to ensure full pipe support.

3. Prevent movement of the pipe during placement of material.

4. Avoid contact between the pipe and mechanical compaction equipment.

B. Utilize Class I or II materials as appropriate for haunching and initial backfill as listed in the Pipe Embedment Zone table in 1.05. No frozen materials or frozen clods.

3.06 FINAL BACKFILL

A. Backfill remainder of excavation with native material, free from large clods, large stones, organic material or frost chunks unless otherwise specified below.

B. Backfill within roadways, driveways, and shoulders.

1. Conform to Section 02705 – Road Restoration for backfill requirements under roadways, driveways, and shoulders.

C. Backfill around structures.

1. Backfill and compact around manholes, valve boxes, and other appurtenances in 12-inch lifts.

a. Compact with a mechanical tamper to a density not less than 90% of the maximum dry density, determined by ASTM D 698.
b. Compaction around structures in roadways, driveways, and shoulders shall conform to Section 02705.

2. Backfill around septic tanks in 18-inch lifts.

a. Compact in a manner that will not produce undue strain on the tank.

b. Compaction may be accomplished with the use of water, provided the material is thoroughly wetted from the bottom up, and the tank is filled with water to prevent floating.

D. Backfill of trenches and other locations not listed above.

1. Compact in 18-inch lifts to a density not less than the density of the surrounding undisturbed soil.

2. Provide 3 feet minimum of backfill over the pipe before wheel loading the trench.

3. Within 4 feet of pipe compact using handheld mechanical compaction, such as vibratory plate (whacker) or tamping rammer compactor (jumping jack).

4. Provide 4 feet minimum cover over the top of the pipe before utilization of hydrohammer compaction equipment.

5. Compact in smaller lifts if the required compaction cannot be obtained.

6. Lifts may be increased at the discretion of the Project Engineer if required compaction can be obtained.

E. Repair any trenches improperly backfilled or where settlement occurs, then refill and compact.

F. Restore surface to the required grade and compaction. Conform to Section 02310 – Grading for rough grading, finish grading and site surface drainage.

G. Remove all surplus backfill materials to a location approved by the Engineer.

3.07 SOIL COMPACTION TESTING

A. Submit representative samples of the native soil to be used for backfill to an independent laboratory for particle size analysis and optimum moisture-maximum density determinations prior to start of filling operations.

1. Determine the maximum dry density of the fill soil in accordance with ASTM Test Designation D1557.

B. Obtain field density tests for determining the compaction of the backfill.

1. Perform a minimum of **4** field density tests in the locations designated by the Project Engineer.
2. Notify Project Engineer immediately of any test that fails.
   a. Re-compact area of failure and retest at no additional cost to the Owner until a passing density result is obtained.
3. Submit test results to the Project Engineer within 3 working days of receiving test results.

3.08 FROST PROTECTION

A. Place insulation in areas where water main, sewer service lines or water service lines cross a road, driveway, traveled path, as indicated on the plans or as directed by the Engineer.

B. Center insulation over the main with no more than 6 inches of compacted fill between the pipe and the insulation. Grade fill so insulation lays flat.

C. Maintain a straight alignment of insulation.

D. Extend insulation a minimum of 5 feet on each side of the crossing.

E. Lap insulation by 6 inches or stagger by 6 inches if composed of two layers.

F. Minimum thickness for the first lift of backfill over the insulation is 12 inches.

1. Do not operate construction equipment directly on insulation. Do not compact first lift with backhoe-mounted compactor, or any other large compaction equipment.

2. Compact remaining backfill using normal construction practices.

3.09 POLYETHYLENE ENCASEMENT

A. All metallic mainline pipe, fittings, and appurtenances installed in aggressive soils shall be wrapped with polyethylene in accordance with ANSI/AWWA C105/A21.5.

B. The wrap shall extend 2-feet beyond all metallic fittings/appurtenances and cover the entire length of metallic pipe. All rips or punctures shall be repaired with tape or by rewrapping that area with polyethylene film.

C. After assembling the pipe joint, the polyethylene shall be overlapped approximately 1-foot and at all joints sealed with approved adhesive tape. Additional taping shall be used at 3-foot intervals along the pipe. All copper service connections shall be wrapped for a distance of 3-feet from the center line of the main. Before installing the polyethylene wrap, the exterior of the pipe shall be free of foreign material.

3.10 REMOVAL OF NUISANCE WATER

A. Remove nuisance water entering the trenches. Nuisance water that can be removed through the use of sump or trash pumps is not considered dewatering.

B. Keep trenches free from water until the facilities are in place, sealed against the entrance of water, and backfill has been placed and compacted above the water level.

3.11 LOCATE EXISTING UTILITIES

A. Field locate all existing underground utilities.

1. Utilize state “dig-safe” or “one-call” hotlines.

2. Contact all other utility owners not covered by the state “dig safe” hotlines.

3.12 UTILITY CONFLICTS

A. Protect existing utilities from damage during excavation and backfilling operations.

B. Provide temporary support for existing water, gas, telephone, power, or other utility services that cross the trench until backfilling of trench is complete

1. Backfill with Class 1 aggregate under disturbed utilities.

2. Repair or replace any damaged existing utilities, at no additional cost to the project.

C. Water and sewer main crossing and parallel installation

1. Maintain an 8-foot horizontal separation (O.D. to O.D.) for parallel mains.

2. Upon approval by the Engineer, water and sewer mains may be installed closer than 8 feet, provided all of the following conditions;

a. Vertical separation is 18 inches (O.D. to O.D.)
b. Water main is above the sewer main.
c. Separate trenches are maintained.

3. Maintain a minimum 18-inch vertical separation (O.D. to O.D.) for sewer crossing over water mains or minimum 6-inch vertical separation for water crossing over sewer.

a. Lay pipe with joints equidistant from the point of crossing.

4. If it is impossible to meet any of the above separation distances and deviations, one of the following methods shall be adhered to.

a. Sewer main shall be constructed to water main pressure pipe standards, and successfully pass a 150-psi pressure test prior to backfilling.

b. Either the water main or the sewer main may be encased in a watertight carrier pipe that extends 10 feet on both sides of the crossing. The carrier pipe shall be of materials approved by the regulatory agency for use in water main construction.

D. Water and sewer service crossing and parallel installation.

1. Maintain a 30-inch horizontal separation from water and sewer services.

2. Maintain a 12-inch vertical separation for crossing water and sewer services.

3. Water service line splices or joints will not be permitted within 10 feet of a sewer line crossing.

3.13 MOVING FENCES AND MINOR STRUCTURES

A. Remove and reset culverts, drainage pipes or other minor structures that fall within the alignment of the new construction, to their original location and grade.

B. Visit the project site and determine actual conditions with regard to the existence of old car bodies, abandoned houses, fences, driveways, trees, stumps, brush, sidewalks, approaches, and other miscellaneous obstacles to construction.

1. Unless specifically referenced in a bid item, no separate payment will be made for the removal or replacement of these items.

3.14 RECORDS

A. Conform to as-built requirements in Section 01780 – Closeout Submittals.

END OF SECTION



This Page Intentionally Left Blank

SECTION 02370
TEMPORARY EROSION AND SEDIMENT CONTROL

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes temporary erosion and siltation control measures accomplished through the use of silt fences, hay bales, erosion mats and other erosion control devices or methods.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02310 – Grading

B. Section 02315 – Excavation, Trenching and Backfill

C. Section 02920 – Topsoiling, Seeding, Fertilizing and Mulching

1.03 REFERENCES

A. Minnesota Pollution Control Agency – Best Management Practices Handbook

B. Environmental Protection Agency - 1987 Congressional Amendments, Clean Water Act, Section 402.

C. WI NR 528 – Management of Accumulated Sediment from Storm Water Management Structures

D. MI EGLE - Natural Resources and Environmental Protection Act Part 91 Soil Erosion and Sedimentation Control

1.04 SUBMITTALS

A. Method of erosion control

B. Silt fence and appurtenances

C. Erosion mats and appurtenances

D. Erosion control plan (If requested by the Engineer)

1.05 QUALITY ASSURANCE

A. Erosion control materials, methods and practices shall conform to the applicable state agency handbooks of Best Management Practices, or tribal laws established for the purpose of erosion control on construction sites.

B. Obtain and pay for permits and inspections in accordance with the provisions of all local government agencies having jurisdiction. No additional claim for compensation will be allowed because of the Contractor's failure to obtain or pay for such permits and inspections.

PART 2 – PRODUCTS

2.01 SILT FENCING

A. Applicability

1. Heavy Duty: General use during site grading to protect critical areas and bodies of water.

2. Standard: Light-duty applications to protect temporary construction or to supplement the other types of silt fence.

3. Machine-slice: For most applications.

B. Geotextile properties:

Description	Heavy Duty	Standard	Machine Slice
Type	Woven	Woven	Monofilament
Width	48 inches	36 inches	36 inches
Grab Tensile Strength (ASTM D 4632)	100 lb Min	100 lb Min	130 lb Min
Apparent Opening Size (ASTM D 4751)	20-70 Sieve	20-70 Sieve	30-40 Sieve
UV Stability (ASTM D 4355 500 hr)	70% Min	70% Min	70% Min
Top-fastening Component	Overlap around woven wire backing	Sewn-In cord	

* From Minnesota BMP

C. Net Backing

Description	Heavy Duty	Standard	Machine Slice
Material	Woven wire	N/A	N/A
Min. Weight	14-1/2 gauge		
Min. Mesh Opening	2 inches		
Max Mesh Opening	6 inches		
Min. Width	30 inches		
Tensile Strength (ASTM D 4595)	100 lb/ft		
UV Stability (ASTM D 4355 500 hr)	70% Min		

* From Minnesota BMP

D. Post properties:

Description	Heavy Duty	Standard	Machine Slice
Material	Metal	Wood	Metal
Min. Size	1.25 lb/ft	1.5 inch x 1.5 inch	1.25 lb/ft
Min. Length	5 feet	4 feet	5 feet
Min. Embedment	2 feet	1.5 feet	2 feet
Max. Spacing	8 feet	8 feet	6 feet

Description (cont.)	Heavy Duty (cont.)	Standard (cont.)	Machine Slice (cont.)
Type of Post Fasteners	U-shaped clips. No. 16 gauge wire	Gun staples 0.5 inch long	Plastic zip ties (50lb tensile strength)
Min. Fasteners per Post	3	5	3

* From Minnesota BMP

E. All seams shall be heat sealed or sewn

2.02 EROSION BALES

A. Applicability: Can be used in locations where silt fencing is used.

B. Rectangular clean hay bales or straw bale.

C. Posts: Wood or steel, 2” x 2” x 54” minimum.

2.03 EROSION CONTROL MATS

A. Biodegradable or photodegradable erosion control mat equal to American Excelsior Curlex II with a minimum 4-foot mat width.

2.04 OTHER

A. Other materials proposed by the Contractor shall conform to standards published by the applicable state agency handbooks of Best Management Practices (BMP’s).

PART 3 – EXECUTION

3.01 GENERAL

A. Coordinate temporary and permanent erosion control measures to assure economical, effective and continuous erosion control.

B. Keep construction areas small.

C. Divert drainage away from construction areas.

D. Perform construction in and adjacent to rivers, streams, lakes or other waterways in such a manner as to avoid washing, sloughing or deposition of material into waterways which will result in undue or avoidable contamination, pollution or siltation of such waterways.

E. Inspect and maintain erosion control materials to ensure its continued effectiveness.

1. Remove sediment material captured by erosion control systems before systems fails.

2. Inspect and repair erosion control systems within 48 hours of rain event.

F. Remove erosion control only after the area has stabilized and vegetation has developed to the extent that further erosion is unlikely.

G. Submit a plan for erosion control measures that are in compliance with State BMPs and/or Federal EPA requirements, if the area to be disturbed is greater than one (1) acre total.

3.02 TEMPORARY EROSION CONTROL

A. Use temporary erosion control measures to protect ditches and drainage ways as shown on the detailed drawings and as directed by the Engineer.

B. Silt fencing (in lieu of or in combination with erosion bales)

1. Install silt fence in accordance with manufacturer's recommendations.

2. Construct the silt fence as shown on the plans and/or install on the contour of the slope.

3. Place silt fences in an arc or horseshoe shape with the ends pointing up towards the slope.

4. Maximum drainage area = ¼ acre per 100 feet of fence.

5. Installation limitations:

Slope Steepness	Maximum Slope Length
2:1 (50%)	15 feet
3:1 (33%)	15 feet
4:1 (25%)	15 feet
5:1 (20%)	25 feet
10:1 (10%)	50 feet
20:1 (5%)	75 feet

6. Compact the soil immediately next to the silt fence fabric.

7. Clean silt fence when sediment reaches 1/3 height of the silt fence.

C. Erosion Bales

1. Install hay bales as shown on the plans and/or install on the contour of the slope.

2. Installation limitations:

Slope Steepness	Maximum Slope Length
2:1 (50%)	15 feet
3:1 (33%)	15 feet
4:1 (25%)	15 feet
5:1 (20%)	25 feet
10:1 (10%)	50 feet
20:1 (5%)	75 feet

3. Install hay bales in 4-inch deep trench.

4. Place bales at right angles to the direction of flow.

5. Securely anchor each bale with stakes as shown on the plans.

6. Compact soil on the upslope side of the hay bales.

7. Fill gaps between bales with straw.

8. Clean sediment away from bale when sediment reaches 1/2 height of the hay bale.

9. Replace damaged, destroyed or rotted bales immediately.

10. Erosion Control Mats

11. Where indicated on the plans, by the Project Engineer, or on slopes greater than 5%, use a wood fiber mat in lieu of mulch.

12. Install in accordance with manufacturer’s recommendations.

13. Roll matting strips in the direction of the flow.

14. Spread mat evenly, smoothly, and in a natural position without stretching and with all parts touching the soil.

END OF SECTION



This Page Intentionally Left Blank

SECTION 02530
SANITARY SEWER

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes the construction of sanitary sewer mains, sewer wyes, sewer main testing, and connection to existing sewage collection systems.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02310 – Grading

B. Section 02315 – Excavation, Trenching and Backfill

C. Section 02531 – Sewer Service Lines

D. Section 02532 – Sanitary Sewer Manholes

E. Section 03300 – Cast-in-Place Concrete (Non-Structural)

1.03 REFERENCES

A. ANSI/AWWA C110 / A21.10 – Ductile-Iron and Gray-Iron Fittings, 3 Inch Through 48 Inch, for Water and Other Liquids

B. ANSI / AWWA C111 / A21.11 – Rubber Gasket Joints for Ductile Iron and Gray-Iron Pressure Pipe and Fittings

C. ANSI / AWWA C151 / A21.51 – Ductile Iron Pipe, Centrifugally Cast, for Water or Other Liquids

D. ANSI / AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 Inch Through 60 Inch

E. ASTM D1248 – Polyethylene Plastics Molding and Extrusion Materials

F. ASTM D2122 – Determining Dimensions of Thermoplastic Pipe and Fittings

G. ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

H. ASTM D3034 – Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings

I. ASTM D3212 – Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

J. ASTM F477 – Elastomeric Seals (Gaskets) for Joining Plastic Pipe

K. ASTM F1336 – PVC Gasketed Sewer Fittings

L. ASTM F1417 – Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air

1.04 SUBMITTALS

A. Sewer Main Pipe

B. Sewer Main Wyes

C. Sewer Main Gate Valve, Valve Adaptor, and Valve Box

1.05 ACCEPTANCE

A. The Work will not be accepted until satisfactory pipe backfilling, testing, and cleanup is complete.

B. If the Work does not meet the specified requirements of this section and related sections, remove, replace, and retest at no additional cost.

PART 2 – PRODUCTS

2.01 SEWER MAIN PIPE MATERIALS

A. Polyvinyl Chloride (PVC) Sewer Pipe

1. Conform to ASTM D3034 or ANSI/AWWA C900.

2. Pipe Class: SDR35 or C900 (refer to plans and bid schedule)

3. Bell ended joints conforming to ASTM D3212

4. Elastomeric gaskets conforming to ASTM F477

5. Each length of pipe shall be clearly marked with the following:

a. Manufacturer
b. Nominal Pipe Size
c. PVC Cell Classification
d. Type PSM PVC Sewer Pipe

e. ASTM Designation
f. Pipe Class

2.02 SEWER APPURTENANCES

A. Manholes: Refer to Section 02532.

B. Wyes

1. In-line fitting conforming to ASTM F1336.

C. Gate Valves:

1. Meet or exceed AWWA C509 or C515.

2. Constructed with a non-rising stem (NRS) and a 2-inch square stem-operating nut, opening counter-clockwise.

3. Supply valves with mechanical or “push-on” joints.

4. Provide valves equal to: Mueller A–2361–20 or Waterous (American Flow Control) Series 2500.

D. Gate Valve Adaptor

1. Shall be ¼-inch steel with a UV polyurethane protective coating and a ¾-inch rubber gasket attached to the Gate Valve Adaptor.

2. Provide adaptor equal to: Adaptor Inc. Gate Valve Adaptor.

E. Gate Valve Extensions

1. Made of solid steel, 1-inch shaft, 2-inch top nut, centering ring, and set screw to grip valve nut.

2. Equal to Water Key LLC Gate Valve Extensions.

F. Gate Valve Box and Cover

1. Provide 3 piece, screw type, adjustable cast iron valve boxes equal to Tyler model 6860-F.

2. Cover: Lockable with brass cotter pin; marked “SEWER”.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify that pipe sizes are as indicated on the plans.

B. Verify that all products are in new condition.

C. Inspect pipe and fittings for defects.

D. Remove materials from the site that are defective, damaged, used, unsound, or that otherwise do not meet the specifications.

3.02 UTILITY CONFLICTS

A. Refer to Section 02315 – Excavation, Trenching, and Backfill.

3.03 SEWER MAIN INSTALLATION

A. Staking: Provided by the Engineer in accordance with Section 01720.

B. Pipe Installation:

1. Adhere to the excavation, trenching and backfill requirements of Section 02315.

2. Install pipe and fittings in accordance with these specifications and the manufacturer's recommendations.

3. Lay pipe of the size and to the line and grade indicated on the drawings.

    a. Ensure that the vertical alignment does not deviate from 0.05% or 0.1 feet (whichever is less) from the design grade as shown on the plans.

4. Point the spigot end in the direction of flow.

5. Protect pipe interior from soil, trench water and foreign objects.

6. Temporarily plug the exposed end of pipes whenever the trench is left unattended or when trench conditions necessitate.

C. Connection to Existing Manholes: Make connection as directed by the Engineer with the manhole floor reshaped to provide a channel in conformance with Section 02532 – Sanitary Sewer Manholes.

3.04 SEWER APPURTENANCES

A. Manhole Installation: Refer to Section 02532 – Sewer Manholes.

B. Sewer Wye Installation

1. Furnish and install a wye at the location indicated on the plans.

2. Rotate the branch or wye of the saddle to 45 degrees from horizontal, unless otherwise approved by Engineer.

3. Properly reference, record and stake wye locations to permit ready relocation, in accordance with Section 01780, and provide information to the Engineer.

4. Install a solvent weld cap or a plug and leave in place until the service line riser is installed. Refer to Section 02531 – Sanitary Sewer Service Lines for details regarding sewer service line installation.

A. Sewer Main Gate Valve and Box Installation

1. Refer to Section 02315 for excavation and backfill requirements.

2. Install valves at locations indicated on the plans.

3. Install suitable thrust restraints on all valves.

4. Support valves on a solid concrete block as shown on the plans.

5. Set valves plumb and provide with a valve box.

6. Provide adequate support for valve box base; the base should not be resting on the valve.

7. Center the valve box over the valve.

8. Install extension rod on valve so operating nut is within 4 ft of the ground surface.

9. Valve box cover shall be flush with ground surface.

3.05 SEWER MAIN TESTING

A. General:

1. Furnish all materials, labor and equipment to perform the required tests.

2. Perform all tests in the presence of the Engineer or his/her representative.

3. Repair all sections of sewer not passing the tests, at the discretion of the Engineer, in accordance with Engineer approved methods, at no cost to the Project.

4. Retest any sewer section that has failed a test or a section that has been repaired, at the discretion of the Engineer, in accordance with Engineer approved methods, until tests pass the requirements, at no cost to the Project.

B. Post-Installation CCTV Inspection

1. Following installation of the sewer main, complete a CCTV inspection of the main.

2. CCTV inspection shall be completed by an independent 3rd party company. CCTV completed with contractor's in-house equipment and personnel will not be accepted.

3. Prior to completion of CCTV inspection, contractor shall run clean water through the sewer main in order for vertical alignment issues to be identified by ponding water in the mains.

4. This inspection shall stop at the sewer service wyes and view into the service lateral.

5. Provide separate video files for each manhole-to-manhole section.

6. The starting and ending manhole and distance from the starting manhole shall be identified on the video so that any problem areas can be easily located.

7. Provide a PDF report summarizing the findings of the CCTV inspection.

    a. At a minimum, the report shall include a summary page for each section of main inspected indicating the location of problem areas with a reference to the corresponding time stamp on the video file. The summary page shall also show the measured distance to each wye.

8. Provide videos and reports to the Engineer as soon as possible following the CCTV inspection. Engineer will review the CCTV report and videos and inform the contractor of any sewer main locations that do not meet the specifications.

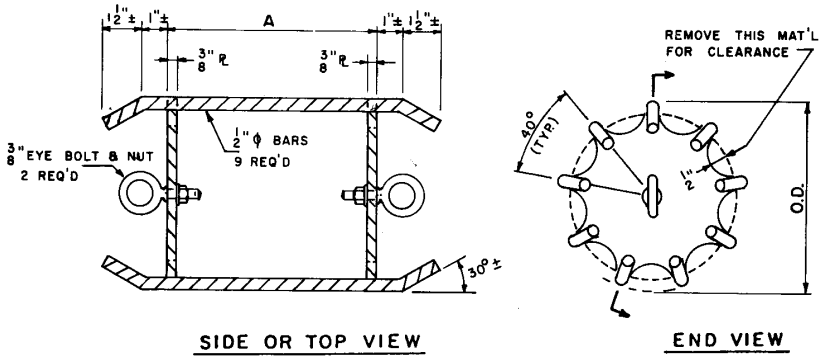
9. Repair any locations found to be out of compliance with specifications at no additional cost to the Owner. Complete additional CCTV inspections of repaired sections and provide video files to Engineer for review.

C. Deflection Test

1. Perform the deflection test on all sewer main.

2. Testing Device:

a. Use a mandrel, or some other Engineer approved rigid, cylindrical object of proper dimensions.



SDR 35 & 26 Sewer Pipe Dimensions:

Nominal Pipe Size (inches)	Min. Length (A) (inches)	95% Base Diameter SDR-35	92.5% Base Diameter SDR-35	95% Base Diameter SDR-26	92.5% Base Diameter SDR-26
4	4	3.68	3.58	3.61	3.52
6	6	5.45	5.31	5.33	5.19
8	8	7.28	7.09	7.12	6.93
10	10	9.08	8.84	8.87	8.64
12	12	10.79	10.51	10.54	10.27
15	15	13.20	12.86	12.90	12.56

b. Tests Within 30 Days of Installation: Mandrel outside diameter shall be equal to 95% of the sewer main base inside diameter (see table above, ASTM D-3034, SDR 35-26 Pipe Standards).

c. Tests Beyond 30 Days of Installation: Mandrel outside diameter shall be equal to 92.5% of the sewer main base inside diameter (see table above, ASTM D-3034, SDR 35-26 Pipe Standards).

3. To be considered a successful test, the mandrel shall pass through the entire length of sewer main in one smooth continuous pass without additional mechanical force.

D. Air Test

1. All gravity sewers and appurtenances shall successfully pass a low-pressure air test prior to acceptance.

2. Preparation: Clean all sewer pipe before the test.

3. Testing Equipment:

   a. Plugs: mechanical or pneumatic type. One shall have an inlet tap for adding air to the sewer line.
   b. Air Compressor
   c. Main Shutoff Valve
   d. Pressure Relief Valve: 9 psig relief
   e. Input Pressure Gauge
   f. Continuous Monitoring Pressure Gauge: Minimum divisions of 0.10 psi with an accuracy of +/- 0.04 psi.

4. Testing Procedure: Test according to the Time-Pressure Drop Method outlined in ASTM F1417.

   a. Plug all pipe outlets with test plugs capable of holding under the test pressures.
   b. Install plugs and brace as necessary to ensure that the plugs will not blow out when the main is under pressure.
   c. Inspect sewer main pipe integrity in the area that will not be tested due to the plug, and report any possible defects to the Engineer.
   d. Ensure test apparatus and gauges are accessible to Owner's representative without entry into the manhole.
   e. Pressurize Pipe:

      (1) Introduce air slowly until air pressure reaches 4.0 psig greater than any backpressure resulting from groundwater over the pipe, where the pressure equals:

4.0 psi + (0.43 psi X Depth of Groundwater over Pipe Invert in Feet)

      (2) Never exceed a pressure of 9.0 psig.

   f. Do not enter manhole once pipe is pressurized.
   g. Maintain pressure for at least two (2) minutes.
   h. Disconnect air supply after the initial two (2) minutes have passed.

i. Adjust pressure to test pressure.

(3) Decrease air pressure to 3.5 psig greater than any pressure resulting from groundwater over the pipe, where the test pressure equals:

3.5 psi + (0.43 psi X Depth of Groundwater over Pipe Invert in Feet)

j. Determine elapsed time for the pressure to drop 1.0 psig and use Table 1, or determine the elapsed time for the pressure to drop 0.5 psig from the test pressure and use Table 2.

TABLE 1: Minimum Specified Time Required for a 1.0 psig Pressure Drop

Pipe Dia. (in.)	Min. Time (min:sec)	100 Feet	150 Feet	200 Feet	250 Feet	300 Feet	350 Feet	400 Feet	Time for Longer Pipe Lengths (Seconds)
4	3:46	3:46	3:46	3:46	3:46	3:46	3:46	3:46	.380*L
6	5:40	5:40	5:40	5:40	5:40	5:40	5:40	5:42	.854*L
8	7:34	7:34	7:34	7:34	7:34	7:36	8:52	10:08	1.520*L
10	9:26	9:26	9:26	9:26	9:53	11:52	13:51	15:49	2.374*L
12	11:20	11:20	11:20	11:24	14:15	17:05	19:56	22:47	3.418*L
15	14:10	14:10	14:10	17:48	22:15	26:42	31:09	35:36	5.342*L
18	17:00	17:00	19:13	25:38	32:03	38:27	44:52	51:16	7.692*L

TABLE 2: Minimum Specified Time Required for a 0.5 psig Pressure Drop

Pipe Dia. (in.)	Min. Time (min:sec)	100 Feet	150 Feet	200 Feet	250 Feet	300 Feet	350 Feet	400 Feet	Time for Longer Pipe Lengths (Seconds)
4	1:53	1:53	1:53	1:53	1:53	1:53	1:53	1:53	.190*L
6	2:50	2:50	2:50	2:50	2:50	2:50	2:50	2:51	.427*L
8	3:47	3:47	3:47	3:47	3:47	3:48	4:26	5:04	.760*L
10	4:43	4:43	4:43	4:43	4:57	5:56	6:55	7:54	1.187*L
12	5:40	5:40	5:40	5:42	7:08	8:33	9:58	11:24	1.709*L
15	7:05	7:05	7:05	8:54	11:08	13:21	15:35	17:48	2.671*L
18	8:30	8:30	9:37	12:49	16:01	19:14	22:26	25:38	3.846*L

k. The time interval recorded in the field must be greater than the time listed for the length and pipe diameter being tested and for the pressure drop recorded.

l. If the pressure drop time is less than that in the appropriate table, for the pipe diameter and the length being tested, the test shall be considered failed.

m. No variance in the time allowances shall be granted for the fact that sewer service lines have been installed.

5. Individual service lines shall be capped and tested with the sewer main.

6. In lieu of low-pressure air testing of the sewer system, the Engineer may approve a hydrostatic exfiltration testing procedure to test the lines.

a. Approval of the procedure, equipment and basis of acceptance for this testing method will be sent in writing by the Engineer prior to the initiation of testing.

END OF SECTION

SECTION 02531
SANITARY SEWER SERVICE LINES

PART 1 – GENERAL

1.01 SUMMARY

A. This section covers stubbing out a sewer line, including connection to the sewer main wye, installation of the service line riser, capping, and marking the stub-out location.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 01780 – Closeout Submittals

B. Section 02310 – Grading

C. Section 02315 – Excavation, Trenching and Backfill

D. Section 02530 – Sanitary Sewer

1.03 REFERENCES

A. ASTM D2122 – Determining Dimensions of Thermoplastic Pipe and Fittings

B. ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

C. ASTM D3034 – Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings

D. ASTM D3212 – Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

E. ASTM F477 – Elastomeric Seals (Gaskets) for Joining Plastic Pipe

F. ASTM F1336 – PVC Gasketed Sewer Fittings

1.04 SUBMITTALS

A. Sewer Service Line Pipe and Fittings

B. Tracer Wire

1.05 ACCEPTANCE

A. The work will not be accepted until satisfactory pipe backfilling and cleanup is complete.

B. If the work does not meet the specified requirements of this section and related sections, remove, and replace at no additional cost.

PART 2 – PRODUCTS

2.01 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS

A. Conform to ASTM D3034

B. Pipe Class: SDR 35

C. Bell ended joints conforming to ASTM D3212

D. Elastomeric gaskets conforming to ASTM F477

E. 4-inch nominal diameter unless otherwise indicated.

F. Each length of pipe shall be clearly marked with the following:

1. Manufacturer
2. Nominal Pipe Size
3. PVC Cell Classification
4. Type PSM PVC Sewer Pipe
5. ASTM Designation
6. Pipe Class

2.02 SEWER WYES

A. Refer to Section 02530 – Sanitary Sewer

2.03 TRACER WIRE

A. Wire: Provide #10 AWG jacketed solid copper wire, with 30 mil HDPE coating rated for direct bury or #12 AWG extra-high-strength copper-clad steel tracer wire, insulated with 45 mil HDPE, equal to Copperhead #12 (EHS-CCS) Tracer Wire, or Trace Safe #19 AWG, tin coated CU, SOL, 300V, with Blue 32 mil HDPE jacket, wove UOM:FT, manufactured by NEPTCO or equal.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify that dimensions and elevations are as indicated on the Drawings.

B. Verify that all products are in new condition.

C. Inspect pipe and fittings for defects.

D. Remove materials from the site that are defective, damaged, used, unsound, or that otherwise do not meet the specifications.

3.02 UTILITY CONFLICTS

A. Refer to Section 02315 – Excavation, Trenching, and Backfill.

3.03 SEWER SERVICE LINE INSTALLATION

A. Sewer Wyes: Refer to Section 02530 – Sanitary Sewer.

B. Riser

1. Extend riser from sanitary wye to an elevation that will allow for the sanitary sewer service line to be laid above the bedrock and groundwater.

2. Install riser at an angle equal to or less than 45 degrees measured from horizontal.

3. Encase the bottom of riser, wye and 1/8 bend in crushed rock or sand.

4. Extend bedding the full width of the trench as excavated and not less than 18 inches in length from either side of the center of the riser.

5. Place bedding material to a point 12 inches above centerline of the sewer main at the location of the wye.

6. No separate payment will be made for risers.

C. Service Line Stub:

1. Furnish and install a sewer service line stub-out at the location on the plans or as directed by the Engineer.

    a. Install service line stub-out until a grade of 1-foot above groundwater is achieved.

b. Pace a water-tight cap on end of stub-out.
c. Place concrete thrust block behind cap to prevent movement of cap during pressure test.
d. Install a pressure treated 4-inch x 4-inch wooden post from cap to 2 feet above grade to mark the location of the end of the stub. Paint wood post green for area above grade.
e. Install a 3-foot stick of rebar adjacent to the wooden post.

2. Follow general pipe installations requirements of Section 02315 – Excavation, Trenching and Backfill.

3. Minimum slope for sewer service lines is 1/8-inch per foot (1%).

4. Maximum slope for sewer service lines is 1/2-inch per foot (4%), unless otherwise specified in the plans.

5. Ninety-degree bends are not allowed between the house and sewer main.

6. Install tracer wire with all pipe.

   a. Wrap or tape tracing wire to pipe at each fitting and a minimum of every 20 feet.
   b. Splices will not be accepted.
   c. Run tracer wire from connection at main and bring tracing wire up along the wooden post marking the stub out and wrap 12 inches of extra wire around the post.

3.04 TESTING

A. Test tracer wire for proper functioning using a conductive/inductive type locator in the presence of the Engineer and/or Owner Representative. Repair and retest, at no additional cost to owner, any section of tracer wire that does not function properly.

3.05 AS-BUILTS

A. Provide as-built information on each system in accordance with Section 01780. Use standard forms (if supplied) by the Engineer.

END OF SECTION

SECTION 02532
SANITARY SEWER MANHOLES

PART 1 – GENERAL

1.01 SUMMARY

A. Work covered by this section includes standard and shallow concrete manholes, standard manholes, drop manholes, adjustment rings, frames and covers for community wastewater collection systems. Also includes modifications to manhole MH19, including relocation of the outlet piping, reconstruction of the bench and flow channel, and abandonment of the existing outlet piping.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02310 – Grading

B. Section 02315 – Excavation, Trenching and Backfill

C. Section 02530 – Sanitary Sewer

1.03 REFERENCES

A. ASTM C 443 – Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets

B. ASTM C 478 – Precast Reinforced Concrete Manhole Sections

C. ASTM C 923 – Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes

D. ASTM C 990 – Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants

E. ASTM C 1244 – Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test

1.04 SUBMITTALS

A. Manhole frame and cover

B. Manhole steps

C. Precast manhole sections

D. Precast manhole base section

E. Joint sealing material

F. Pipe to manhole connections

G. Chimney seals w/manufacturer's instructions (if applicable)

H. Repair mortar

1.05 DEFINITIONS

A. Shallow Manhole: Manholes with a depth from rim to outlet pipe invert equal to 7-feet or less, and with a flat top.

B. Standard Manhole: Manholes with a depth from rim to outlet pipe invert greater than 7-feet, and with a conical top section.

PART 2 – PRODUCTS

2.01 MANHOLES

A. Design and fabricate reinforced concrete manholes to conform to ASTM C 478.

B. Base Section:

1. Precast integral concrete bottom section and base.

2. Channel (or invert) shape:

    a. Smooth
    b. Semicircular
    c. Same diameter as adjoining sewer pipe
    d. Ogee shaped, so there is no free drop.

3. Drop:

    a. Minimum: 0.10 feet through manholes measured from any invert in to the invert out
    b. Maximum: 2 feet through manholes measured from any invert in to the invert out.

4. Changes in Pipe Size or Grade: Make changes in size and grade of channels gradually and evenly.

5. Changes in Direction: Smooth curve of as large a radius as the size of the manhole will permit with the intersection of the lines occurring at the center of the manhole.

6. Benches: Construct the manhole floor, outside of the channel, smooth and slope toward the channel not less than ½-inch per foot.

C. Barrel Sections:

1. Provide 48-Inch inside diameter unless otherwise noted in the plans.

D. Cone Sections:

1. Provide eccentric cone sections.

E. Top Slab Sections:

1. Provide manhole opening eccentrically located to allow positioning over the outlet.

F. Manhole Steps:

1. Cast and anchor steps in concrete sections, aligned to form a continuous ladder.

2. Install steps so they are horizontal, protruding 5-inches, minimum.

3. Material: 1/2-inch steel steps encased in neoprene or polypropylene.

4. Width: 12-inches, minimum.

5. Space rungs 16-inches apart.

6. Maximum spacing from the top of the cone to the first rung shall be 6-inches.

7. Center steps over the manhole outlet.

G. Manhole Adjustment Rings:

1. Concrete rings.

2. HDPE Adjustment Rings

a. Ladtech or approved equal

H. Sewer Pipe Connection:

1. Watertight gasket precast into the manhole wall conforming to ASTM C 923.

2. Acceptable Products:

a. PSX Seal Gasket (Press-Seal, Fort Wayne, Indiana) or approved equal.
b. A-Lok (Tullytown, Pennsylvania) or approved equal.
c. Kor-N-Seal (Trelleborg, Milford, New Hampshire) or approved equal.

I. Joint Sealing:

1. Provide joint sealant and external joint wrap in sizes recommended by the respective manufacturers for the manhole diameter and joint configuration.

2. Joint Sealant: Preformed flexible butyl rubber joint sealant conforming to ASTM C990. Provide one of the following or approved equal:

a. Rub'R-Nek LTM, Henry Company.
b. ConSeal CS-102, Concrete Sealants, Inc.

3. External Joint Wrap: External sealing band conforming to ASTM C877. Provide the following or approved equal:

a. Infi-Shield Gator Wrap, Sealing Systems, Inc.

J. Chimney Seals

1. Rubber material with minimum tensile strength of 1500 psi

2. Stainless steel bands and hardware.

3. Equal to Adaptor Inc Internal/External Manhole Seal or approved equal.

2.02 FRAMES AND COVERS

A. Fabricated from cast iron.

1. Clean and smooth.

2. Free from distortion, shrinkage or other defects

B. Combined Weight: 300 pounds, minimum.

C. Conform to detail drawings.

D. Frame:

1. Designed for use with covers without open pickholes

2. Machined, horizontal bearing surfaces

E. Cover:

1. Machined horizontal bearing surfaces

2. Neoprene ring gasket

3. Non-rocking traffic cover

4. Solid cover with concealed pickhole

F. Use Neenah R-1550, Municipal Castings frame #301-7 and cover #301A, or approved equal with provisions to meet the specifications.

2.03 REPAIR MORTAR

A. Rapid-setting, fiber-reinforced, calcium-aluminate cement-based repair mortar suitable for plugging abandoned sewer openings and reconstructing manhole benches and flow channels. Strong-Seal QSR Plus, or approved equal,

PART 3 – EXECUTION

3.01 INSTALLATION

A. Construct manholes at the locations and elevations shown on the plans or as directed by the Engineer.

B. Refer to section 02315 for excavation and backfill requirements.

C. Bed precast manhole bases in a minimum of 8 inches of crushed stone meeting Class 1A or 1B requirements stated in Section 02315.

D. Install manholes so that the walls are vertically plumb.

E. Construction of Invert:

1. PVC Pipe Invert Channel:

a. Install a full length of pipe through the manhole.
b. Form a concrete bench up to the spring-line of the pipe.

c. Slope the concrete bench toward the channel at a ½ - inch per foot, minimum.
d. Cut the top hemisphere of the pipe off for the entire length of the pipe through the manhole.

2. Formed Concrete Channel:

a. Form a channel that meets the requirements outlined in 2.01B.
b. Ensure that the channel is smooth and free of rough patches.

F. Connection of Sewer Main Pipe:

1. Install sanitary sewer main according to pipe to manhole gasket manufacturer's recommendations.

2. Outside Drop Construction:

a. Install an outside manhole drop where the invert of the inlet pipe is more than 24-inches higher than the invert of the outlet pipe.
b. Use the same material as was used for the sewer main pipe to construct the drop.
c. Construct according to the detail drawings.

G. Top Slab Section Installation:

1. Install with the opening over the outlet of the manhole.

2. Use on shallow manholes only.

H. Conical Section Installation:

1. Install with the opening over the outlet of the manhole.

2. Install 4-feet of manhole section with cylindrical configuration before installing a conical section.

3. Use on standard manholes.

I. Joint Sealants:

1. Install joint sealants around entire circumference of each manhole joint.

2. Place sealant on the lower horizontal surface of the joint.

3. Ensure that a watertight seal is provided at the joint.

J. Adjustment Rings:

1. Install at least one adjustment ring, and no more than 12-inches of adjustment rings.

2. Concrete Adjustment Rings:

   a. Grout concrete adjustment rings in place between each ring and around the interior and exterior.

3. HDPE Adjustment Rings:

   a. Place sealant between each adjustment ring in accordance with manufacturer recommendations.

4. Discard all cracked adjustment rings.

K. Frame and Cover:

1. If a road finish grade exists, set manhole frames and covers to the finish grade of the road.

2. If plans indicate rim elevations, set manhole frames and covers to the elevation indicated on the plans and adjust the elevation of the frame and cover to meet field requirements as determined by the Engineer.

L. Chimney Seals:

1. Install in accordance with manufacturer's recommendations in the locations specified by the Engineer.

M. Refer to Section 02310 – Grading for finish grading requirements.

3.02 PRESSURE AND LEAKAGE TESTING

A. Test all newly constructed manholes using a low-pressure vacuum test.

B. Preparation:

1. Plug all lift holes.

2. Temporarily plug all pipes entering the manholes.

3. Brace all plugs to prevent them from being drawn into the manhole.

C. Testing Procedure: Test according to ASTM C 1244.

1. Place test head at the top of the manhole in accordance with manufacturer's recommendations.

2. Pressurize manhole to 4.9 psi (10 inches of mercury).

3. Determine elapsed time for the pressure to drop 0.5 psi (1 inch of mercury) from the test pressure and use the following table to determine acceptability.

Minimum Test Times for Various Manhole Diameters (ASTM C1244)

Diameter, in									
Depth (ft)	30	33	36	42	**48**	54	60	66	72
	Times, s								
8	11	12	14	17	**20**	23	26	29	33
10	14	15	18	21	**25**	29	33	36	41
12	17	18	21	25	**30**	35	39	43	49
14	20	21	25	30	**35**	41	46	51	57
16	22	24	29	34	**40**	46	52	58	67
18	25	27	32	38	**45**	52	59	65	73
20	28	30	35	42	**50**	53	65	72	81
22	31	33	39	46	**55**	64	72	79	89
24	33	36	42	51	**59**	64	78	87	97
26	36	39	46	55	**64**	75	85	94	105
28	39	42	49	59	**69**	81	91	101	113
30	42	45	53	63	**74**	87	98	108	121

4. The time interval recorded in the field must be greater than the time listed for the length and manhole diameter being tested and for the pressure drop recorded.

5. If the pressure drop time is less than that in the table for the diameter of manhole being tested, the test shall be considered failed.

    a. Repair manhole and retest until the test passes.

D. Repair all leakage or seepage that appears during the warranty period by Engineer approved method.

3.03 MANHOLE MODIFICATIONS (MH19)

A. Core-drill a new outlet opening in existing manhole MH19 at the location and elevation shown on the Drawings. Remove portions of the existing bench and flow channel as necessary to complete the work.

B. Install a flexible, watertight pipe boot at the new outlet opening and connect the new sewer outlet pipe.

C. Abandon the existing outlet pipe between manhole MH19 and the lift station wet well. Cut the existing pipe within 1 foot of the manhole and install watertight caps on both exposed pipe ends. Permanently seal the abandoned outlet opening in manhole MH19 with repair mortar.

D. Clean interior surfaces of the manhole in areas affected by the work by washing and brushing to remove dirt, oil, loose or deteriorated material, and other foreign matter. Prepare surfaces as required for proper bonding of repair mortar.

E. Modify the existing bench and form a new flow channel to direct flow to the new outlet pipe. Fill and reshape the portion of the existing flow channel leading to the abandoned outlet. Fill voids around the new pipe boot and outlet pipe with repair mortar as required to provide a watertight installation and continuous bench surface.

F. Finish bench and channel surfaces smooth and free of irregularities that could obstruct flow or collect solids.

END OF SECTION



This Page Intentionally Left Blank

SECTION 02539
SEWAGE LIFT STATION AND VALVE VAULT REHABILITATION

PART 1 – GENERAL

1.01 SUMMARY

A. Work covered by this section includes the rehabilitation of the existing lift station serving the Ho-Chunk Blue Wing Community, including but not limited to: installation of two submersible sewage pumps, base elbows, pump guide rails, 3-inch discharge piping, liquid level transducer, float switches, pump removal system, trash baskets and rails, safety grate for the wet well, emergency bypass connection in valve vault, and all appurtenances needed to complete the work.

1.02 RELATED WORK

A. Section 01510 – Temporary Sewage By-Pass Pumping

B. Section 02310 – Grading

C. Section 02315 – Excavation, Trenching and Backfill

D. Section 02538 – Sewage Force Main

E. Section 13430 – Electrical Controls – Sewage Lift Station

F. Section 16050 – Basic Electrical Materials and Methods

1.03 REFERENCES

A. Use latest revisions of all References

1.04 SUBMITTALS

A. Submersible Sewage Pumps

B. Pump Removal System

C. Pump Guide Rail System

D. Stainless Steel Pipe

E. Pipe Penetration Seals

F. Trash Basket and Rails

G. Hoist/Crane and Base

H. Safety Grate

I. Flange Adapter

1.05 OPERATION AND MAINTENANCE MANUALS

A. Refer to Section 01785 – Operation and Maintenance Manual

1.06 ACCEPTANCE

A. Work covered by this section will not be accepted until backfilling and testing connected with this work has been completed satisfactorily.

B. Work found defective in material, alignment, joints, or performance shall be corrected to the satisfaction of the Engineer.

C. Structures shall be free from visible leakage.

1.07 WARRANTY

A. Provide a manufacturer's five (5) year warranty for parts and labor for the submersible pumps.

B. Provide an eighteen (18) month warranty on the entire lift station assembly including lift station and equipment, valve vault and equipment, and controls system and equipment from the date of facility start-up.

PART 2 – PRODUCTS

2.01 SUBMERSIBLE SEWAGE PUMPS

A. Provide two (2) submersible sewage pumps with explosion proof, 3 HP, 208 V, 3 phase motors with built-in variable frequency drive (VFD) in motor.

1. Capable of pumping 255 gpm against a total dynamic head of 29.5 feet at full speed.

2. Flygt 6020 DP N80 Concertor or approved equal

3. 3-Inch diameter discharge

B. Ability to set and re-set the pump performance curve it is to operate at. Set initially so it is running at approximate speed of 1380 rpm.

C. Ability to self-reverse impeller direction if unit senses high amp draw (clog).

D. Mechanical Seal shall have a lifetime warranty to be free from defects in materials and workmanship and against wear for the life of the pump.

E. Capable of passing a minimum of 3-inch spherical solids and handling unscreened sewage, storm water, and other solids-laden fluids without clogging.

F. Motors

1. Designed for continuous duty in air.

2. Capable of a minimum of 10 starts per hour.

3. Contain seal failure detection system.

4. Minimum motor efficiency of 90.54% at full load amps.

5. Designed to operate the pump without operating in the service factor.

G. Power Cables:

1. Provide power cables long enough to extend to the control panel without splices.

2. Size power cables in accordance with the National Electric Code and pump manufacturer's recommendations.

3. Provide power cables capable suitable for submersion in raw sewage.

H. Provide strain reliefs at each cable entry into the pump.

I. Provide area under the pump free of any additional support legs or guide pipes to insure free entrance of solids to the impeller.

J. Provide a Flygt-Lift Lifting System for each pump.

1. Lifting system shall consist of a 3/16-inch stainless steel cable (length shall match depth of lift station plus 10 feet and diameter shall be suitable for weight of lifting chain), short length (able to extend 6 inches above lag pump set point) of high tensile strength stainless steel proof-tested chain, and a forged "grip-eye" constructed of wrought alloy steel. Note that the cable can be replaced with continuous stainless steel chain.

2. Unit shall be sized to handle the weight of the specified pumps.

2.02 LIFT STATION PIPING, ACCESSORIES AND HARDWARE

A. Inlet Piping: Piping: Refer to Section 02530.

B. Inlet Pipe Seal: Designed to absorb vibration, distortion, and normal settling while maintaining a leak proof seal. Equal to Link-Seal with stainless steel hardware.

C. Interior Discharge Piping: 3-inch stainless steel Sch 10 316L

1. All pipe joints and fittings shall be welded.

2. Transition to existing 4-inch D.I. piping with a 3” x 4” reducing 90-degree bend fitting.

3. Transitions shall be made with flange end fittings (weld on stainless steel flange faces).

D. Base Elbows: Provide base elbow manufactured by submersible pump manufacturer for the selected pump, with selected discharge diameter, and for the selected pump guide rail system.

1. Discharge connection shall include an ANSI Class 125 flange that discharges vertically.

E. Pump Guide Rail System: Provide non-sparking stainless steel guide rail system and hardware that is designed to operate with the specified pumps. The assembly shall be capable of:

1. Removing the pump completely from the wet well.

2. Connecting pump to the discharge piping without requiring bolts, nuts, or fasteners to seal the connection.

3. Provide intermediate support brackets as needed.

F. Transducer and Float Mounting Cables

1. Provide a 3/16-inch stainless steel cable cut to the length required to mount the floats and transducer. Provide a separate cable for the floats and the transducer.

2. Provide a 15 pound PVC coated cast iron or stainless steel weight for each cable.

3. Refer to Section 13430 regarding floats and transducer.

G. Provide stainless steel bolts, nuts, hardware, etc for all connections.

H. Provide stainless steel hooking system for pump, transducer, and float cables.

2.03 TRASH BASKET AND RAILS

A. Stainless steel basket with 2-inch round openings**, provide two (2) baskets.**

B. Non-sparking stainless steel guide rails and hardware.

C. Equal to Halliday Series B1A basket with suitable rails

D. Provide a Fernco fitting with stainless steel clamps sized for an 8-inch PVC C900 pipe to attach to the inlet pipe of the wet well to bridge gap between pipe discharge and opening in basket.

2.04 HOIST/CRANE BASE

A. Pedestal type with galvanized finish.

B. Provide pedestal base cover to prevent water from collecting in the base.

C. Thern Model 524GAL or equal

2.05 PORTABLE HOIST/CRANE

A. Provide a portable hoist/crane for removal of the lift station pumps from lift station. Hoist/crane shall have the following features:

1. Galvanized finish

2. 115 V power winch

3. 360 degree rotation

4. Adjustable boom length and angle. Hook reach range from 28 to 81-inches.

5. Minimum of 1,000 lb load rating at maximum boom extension.

6. Sufficient stainless steel wire rope or aircraft aluminum cable to allow for a 25-ft lift below floor level (this is in addition to length needed from winch to top of list station lid). Fitted with a stainless steel swivel hook for connecting to items to be lifted.

7. Thern Model 5124E2GAL or equal

2.06 SAFETY GRATE

A. Safety grate shall match the size of the wet well hatch opening.

B. Equal to Halliday Series X Retro-Grate or Bilco Fall Protection Grating System.

2.07 VALVE VAULT EMERGENCY PUMP CONNECTION

A. Provide one EBAA Series 2100 MEGAFLANGE or equivalent for connection to existing D.I. discharge pipe.

1. Coating on the fitting shall be MEGA-BOND or approved equal.

B. Provide one 4-inch ductile iron flanged tee fitting.

1. Conform to AWWA C110 or C153.

2. Pressure rated to 250 psi

3. Rubber gasket for flanged fittings

4. Exterior coating: Polyamidoamine epoxy primer

5. Interior lining: Ceramic epoxy lined equal to Protecto 401

C. Provide eccentric plug valve with operating lever, rated for 285 psi with ductile iron body and epoxy coating equal to Dezurik PEF.

D. Provide one 4-inch, stainless steel male cam/groove emergency pump connection with pressure rated cap on one discharge as shown on the plans.

E. Provide stainless steel hardware with FlouroKote #1 coating or approved equal for all fittings and connections.

PART 3 – EXECUTION

3.01 GENERAL

A. A. Set up, test, and verify proper operation of the bypass pumping system prior to commencing lift station renovation work. Refer to Section 01510.

3.02 INLET PIPING RELOCATION

A. Refer to Section 02315 for excavation and bedding requirements.

B. Cut existing inlet piping within 1 foot of the wet well and install a watertight cap on both the short stub of pipe entering the wet well and the abandoned pipe in the ground.

C. Core-drill the wet well for the inlet pipe opening at the location and elevation indicated on the Drawings. Notify the Engineer if the proposed core-drill opening is within is within 6 inches of a wet well barrel section joint.

D. Extend the new inlet pipe into the wet well a sufficient distance to accommodate installation of the trash basket as specified in Part 3.03.

E. Backfill in accordance with Section 02315.

3.03 WET WELL PIPING, PUMPS, ACCESSORIES, AND HARDWARE

A. Wash and brush interior of wet well to remove dirt, oil, and other foreign material.

B. Remove existing submersible pumps and return to the Utility Dept.

C. Remove interior piping and base elbows and replace with new.

D. Install two (2) complete pump guide rail units as shown on the plans.

1. Install guide rails to allow vertical pump removal through the access door using a hoist.

E. Install stainless steel hooks just inside the door to accommodate the pump cables, float cables, transducer cable, and pump lifting cables.

1. Locate hooks so the access hatch can be fully closed with all cables supported on the hooks.

2. Locate hooks on the same side of the access hatch as the pump guide rails.

F. Attach stainless steel chain of pump lifting system to the lifting eye/bail of the submersible pump. Attach stainless steel cable to the stainless steel hooks. Coil excess cable so it is out of the way of other cables.

G. Install pumps and break away fittings as shown on the plans.

H. Install, extend, and coil pump cables to hooks on the access cover. Trim the pump cables so no excessive cable is hanging in the wet well (provide enough slack to allow the removal and install of pumps). Provide strain relief for all cables.

I. Install transducer and float mounting cables in wet well, suspended from the hooks adjacent to the hatch, and anchor attached at the bottom of cable. Refer to Section 13430 for transducer and float installation details. Provide strain relief for all cables.

J. Install pump wires, transducer wires, and float wires in separate conduits. (Refer to Section 13430 for wiring information)

3.04 TRASH BASKET

A. Install trash basket and rail system in accordance with manufacturer's specifications and with the Drawings.

B. Position in a location that allows basket to be easily removed for cleaning and does not impede pump removal/installation.

C. Install Fernco fitting to bridge gap between pipe end and basket.

3.05 HOIST/CRANE AND BASE

A. Anchor hoist/crane pedestal base to concrete base with 5/8-inch stainless steel anchor bolts at the location shown on the plans.

B. Position such that the hoist/crane does not interfere with operation of the access hatch. If it does, notify Engineer and install as directed.

3.06 SAFETY GRATE

A. Install safety grate in the opening of the wet well hatch in accordance with manufacturer's recommendations.

3.07 VALVE VAULT EMERGENCY PUMP CONNECTION

A. Wash and brush interior of valve vault to remove dirt, oil, and other foreign materials.

B. Remove section of existing 4-inch D.I. discharge piping to install emergency pump connection at the location shown on the plans.

C. Install 4-inch D.I. tee fitting and restrained flange adapter in place of the removed section of piping.

D. Install 4-inch plug valve with operating lever to the branch outlet on the tee fitting.

E. Install 4-inch male quick connect emergency pump connection with pressure rated cap on the plug valve discharge as shown on the plans.

3.08 START-UP/FIELD TESTING

A. Verify that pumps and trash basket can each be pulled out of wet well vertically through existing access cover with the hoist for maintenance.

B. Refer to Section 13430 for sewage pump start-up requirements.

END OF SECTION



This Page Intentionally Left Blank

SECTION 02730
AGGREGATE SURFACING

PART 1 – GENERAL

1.01 SUMMARY

A. Work covered by this section includes furnishing and installing aggregate surfacing at the Ho-Chunk Blue Wing Lift Station.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02310 – Grading

1.03 REFERENCES

A. Unless otherwise specified, the work for this section shall conform to the applicable portions of the following standard specifications:

1. AASHTO – American Association of State Highway and Transportation Officials

2. ASTM – American Society of Testing and Materials

3. WDOT – Wisconsin Department of Transportation

1.04 SUBMITTALS

A. Geotextile fabric

1.05 DELIVERY, STORAGE AND HANDLING

A. Deposit aggregate in stockpiles in such a manner that the material may be removed from the stockpile by methods which will provide aggregate having a uniform gradation.

B. Handle in a manner that prevents contamination of products.

PART 2 – PRODUCTS

2.01 GEOTEXTILE FABRIC

A. Geotextile fabric equal to Typar C3-SDE.

2.02 AGGREGATE FOR EXTERIOR SURFACING

A. Aggregate shall conform to Wisconsin DOT Section 305 Dense-Graded Base.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify compacted subgrade is dry and ready to receive aggregate material.

B. Verify subgrade shaping will allow for drainage.

3.02 EXTERIOR AND ACCESS AGGREGATE SURFACING

A. Install geotextile fabric on top of subgrade in areas which are to receive aggregate surfacing as shown in the plans and staked in the field.

B. Place aggregate to a depth of 6 inches over geotextile.

C. Top of aggregate shall be placed to finish grade as shown on plans and drain away from structures.

END OF SECTION

SECTION 02775
CONCRETE PADS

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes the construction of a concrete pad for the hoist/crane mount and a concrete pad for the control panel, electrical equipment board/cover at the lift station, and for generators at the lift station and wastewater treatment facility, as indicated on the Drawings.

1.02 RELATED WORK

A. Section 02539 – Sewage Lift Station with Valve Vault

B. Section 03100 – Concrete Formwork

C. Section 03200 – Concrete Reinforcement

D. Section 03300 – Cast-in-Place Concrete (Non-Structural)

E. Section 13430 – Electrical Control System – Sewage Lift Station

F. Section 16230 – Backup Power Supply

G. Section 16401 – Electrical Power, Service, and Distribution

PART 2 – PRODUCTS

2.01 CONCRETE AND APPURTENANCES

A. Reinforcement steel shall conform to Section 03200 – Concrete Reinforcement.

B. Concrete and appurtenance materials shall conform to Section 03300 – Cast-in-Place Concrete (Non-Structural).

PART 3 – EXECUTION

3.01 GENERAL

A. Construct forms in accordance with Section 03100 – Concrete Formwork.

B. Finish concrete in accordance with Section 03350 – Concrete Finishing.

3.02 HOST/CRANE BASE PAD

A. Construct a concrete pad for the hoist/crane base to the dimensions and at the locations shown on the plans.

B. Construct such that the top of pad is flush with the top of existing wet well cover and chamfer the outer edges of pad.

C. Place No. 4 rebar 12 inches on center in both directions and each face, 3 inches from bottom face of pad, and 2 inches from top face of pad.

D. Install expansion joint along wet well.

E. Pour concrete to a minimum thickness of 18 inches.

3.03 ELECTRICAL EQUIPMENT PAD

A. Construct a 6-foot wide x 7-foot long concrete pad for the electrical equipment board and control panel.

B. Construct such that the top of pad is approximately 1 inch above proposed finished grade and chamfer edges.

C. Place No. 3 rebar 12 inches on center in both directions, 3 inches from the bottom of pad.

D. Install penetrations and/or conduit for electrical lines.

E. Pour concrete to a minimum thickness of 5 inches.

3.04 GENERATOR CONCRETE PADS

A. Construct a concrete slab for each generator assembly that extends 6 inches beyond all sides of the generator.

B. Construct such that the top of pad extends approximately 2 inches above proposed finished grade and chamfer edges.

C. Place No. 4 rebar 12 inches on center in both directions and each face, 3 inches from bottom face of pad, and 2 inches from top face of pad.

D. Install penetrations and/or conduit for gas and electrical lines.

E. Place anchors for generator in accordance with manufacturer recommendations.

F. Pour concrete to a minimum thickness of 8 inches.

END OF SECTION



This Page Intentionally Left Blank

SECTION 02843
STEEL PIPE BOLLARDS

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes the provision and installation of permanent steel pipe bollards at locations identified on the plans.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02315 – Excavation, Trenching, and Backfill

B. Section 02775 – Concrete Pads

C. Section 02920 – Topsoiling, Fertilizing, Seeding, and Mulching

1.03 REFERENCES

A. American Concrete Institute, ACI 301-89

1.04 SUBMITTALS

A. Steel Pipe Bollards

B. Pipe Bollard Post Cover

PART 2 – PRODUCTS

2.01 PERMANENT BOLLARD

A. Steel Pipe:

1. Schedule 40 (standard weight)

2. 6-inch diameter

3. 7 feet in length (3.5 feet buried, 3.5 feet above ground).

B. Concrete:

1. In accordance with Division 3 – Site Concrete.

C. Post Cover:

1. HDPE post cover with a domed end cap

2. Safety yellow color with two bands of reflective tape near top

3. Equal to post covers manufactured by Ideal Shield.

PART 3 – EXECUTION

3.01 INSTALLATION OF PERMANENT BOLLARDS

A. Install pipe bollards at locations indicated on the Drawings.

B. Excavate a minimum 12-inch-diameter hole to the depth required to provide 3.5 feet of bollard embedment. Provide a minimum of 6 inches of concrete below the bottom of the steel bollard.

C. Center bollard in excavation and brace securely in a plumb position.

D. Fill annular space around bollard with concrete.

E. Fill bollard pipe completely with concrete and form concrete at the top into a dome to shed water.

F. Maintain bollard alignment and bracing until concrete has sufficiently set. Remove bracing after concrete has hardened.

G. Clean exposed bollard surfaces of oil, grease, dirt, concrete residue, and other foreign materials.

H. Allow concrete to cure before installing the bollard cover. Install and secure cover over pipe bollard in accordance with the manufacturer’s instructions.

I. Extend cover to within 1 inch of the finished ground surface.

END OF SECTION

SECTION 02920
TOPSOILING, SEEDING, FERTILIZING, AND MULCHING

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes topsoiling, seeding, fertilizing, and mulching areas disturbed by construction activities.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02310 – Grading

B. Section 02370 – Temporary Erosion and Sediment Control

1.03 REFERENCES

A. Wisconsin Department of Transportation – Standard Specifications for Highway and Structure Construction

B. Michigan Department of Transportation – Standard Specifications for Construction

1.04 SUBMITTALS

A. Topsoil

B. Seed Mixture and Application Rate Data

C. Mulching Material

PART 2 – PRODUCTS

2.01 TOPSOIL

A. Natural loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to the sustenance of plant life.

B. Neither excessively acid nor excessively alkaline.

2.02 FERTILIZER

A. Use a 20-10-10 mixture of 20% Nitrogen, 10% Phosphorous, and 10% Potassium.

2.03 SEED MIXTURE

A. Use appropriate see mixture for state and soil conditions.

1. For well-drained sandy soils in Wisconsin, use Wisconsin DOT seed mixture #20 or other Engineer accepted seed mixture:

Wisconsin DOT Seed Mixture #20
6% Kentucky Bluegrass
24% Hard Fescue or Chewings Fescue
40% Tall Fescue
30% Perennial Ryegrass

2. For heavy clay or predominately moist soils in Wisconsin, use Wisconsin DOT seed mixture #10 or other Engineer accepted seed mixture: predominately moist soils:

Wisconsin DOT Seed Mixture #10
40% Kentucky Bluegrass
25% Creeping Red Fescue
5% Redtop
20% Perennial Ryegrass

3. For well-drained sandy soils in Michigan, use Michigan DOT TDS seed mixture or other Engineer accepted seed mixture:

Michigan DOT TDS Seed Mixture
5% Kentucky Bluegrass
25% Hard Fescue
45% Creeping Red Fescue
25% Perennial Ryegrass

2.04 MULCHING MATERIAL

A. Straw or hay

PART 3 – EXECUTION

3.01 TOPSOIL

A. After grading is completed, spread stockpiled topsoil over all disturbed areas, excluding those where another type of finished surface is being provided.

3.02 FERTILIZING

A. Work soil to be seeded until soil is reasonably even and loose.

B. Fertilize all topsoiled areas using 20-10-10 fertilizer at an application rate of 400-600 pounds per acre.

3.03 SEEDING

A. Sow seed using either equipment suited to that purpose or scatter seed uniformly over area with hand seeders when the weather is sufficiently quiet to prevent seeds from blowing away.

B. Sow seeds at 150% of the manufacturer recommended rate.

1. Wisconsin DOT mix #20: minimum rate of 5 pounds per 1000 square feet

2. Wisconsin DOT mix #10: minimum rate of 3 pounds per 1000 square feet

3. Michigan DOT TDS mix: minimum rate of 5 pounds per 1000 square feet

C. Lightly rake soil to cover the seed with approximately ¼ inch of soil.

3.04 MULCHING

A. Place hay or straw mulching on seeded area loose enough to allow some sunlight to penetrate and air to circulate but thick enough to shade the ground, conserve soil moisture, and prevent/reduce erosion.

B. Do not perform mulching activities during periods of excessively high winds, which would preclude the proper placing of the mulch.

C. Apply straw or hay uniformly over the disturbed area to a loose depth of ½ to 1½ inches using 1½ to 3 tons of mulch per acre.

D. Immediately after spreading, anchor mulch using a mulch tiller consisting of a series of dull flat discs with notched edges or other approved equipment.

E. Anchor mulch to a depth of approximately 1½ to 2½ inches in the soil.

3.05 QUALITY CONTROL

A. All work necessary for topsoiling, fertilizing, seeding and mulching shall be completed to insure adequate re-establishment of vegetation.

B. The Contractor is responsible for re-establishing vegetation.

END OF SECTION



This Page Intentionally Left Blank

SECTION 03100
CONCRETE FORMWORK

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes formwork for cast-in-place concrete complete with furnishing, preparation, installation, coating, protection, adjustment, removal and accessories.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02315 – Excavation, Trenching, and Backfill

B. Section 02775 – Concrete Pads

C. Section 03350 – Concrete Finishing

D. Section 03200 – Concrete Reinforcement

E. Section 03300 – Cast-In-Place Concrete

F. Section 03150 – Concrete Accessories

1.03 REFERENCES

A. Use latest revision for all references.

B. ACI 347 – Recommended Practice for Concrete Formwork

1.04 QUALITY ASSURANCE

A. Design for loads, lateral pressure and allowable stresses as outlined in ACI 347.

PART 2 – PRODUCTS

2.01 FORM SURFACES

A. Lumber: Straight, uniform width and thickness, free from knots, offsets, holes, dents, warpage and other surface defects.

B. Plywood: Product standard psi, waterproof, resin bonded, exterior-type Douglas Fir, face adjacent to concrete Grade B or better.

C. Metal: Smooth metal plate free of surface irregularities.

D. Chamfer Strips: Clear white pine, surface against concrete planed, 1-inch bevel width or cant strip.

2.02 FORM COATING

A. Non-staining form oil or other mineral oil which will neither discolor nor otherwise injuriously affect the concrete.

2.03 FORM TIES

A. Permanently embedded body type with removable end cones on outer ends, permanently embedded portion 1 inch back from concrete face.

PART 3 – EXECUTION

3.01 PREPARATION

A. Do not use forms that show evidence of surface wear and tear or defects that would impair the quality of the surface.

B. Clean surface of forms and embedded material of any mortar, foreign material or water before coating is placed.

C. Remove surplus coating on form surfaces or any coating on reinforcing steel and construction joints before placing.

3.02 FIELD QUALITY CONTROL

A. Tolerance limits for formwork are as follows:

1. Variations from plumb in lines and surfaces of piers, walls or columns

    a. In any ten feet of length – 1/4 inch
    b. Maximum for entire length – 1 inch

2. Variation from the level or from the grades

    a. In any ten feet of length – 1/4 inch
    b. Maximum for entire length – 3/4 inch

3. Variation of distance between walls, columns and beams.

    a. In any ten feet of length – 1/4 inch
    b. Maximum for entire length – 1 inch

4. Variation of the linear lines as indicated on the plan.

    a. In any twenty feet of length – 1/2 inch
    b. Maximum for entire length – 1 inch

5. Variation in sizes and locations of sleeves, floor and wall openings.

    a. Minus 1/4 inch
    b. Plus 1/2 inch

6. Variation in cross-sectional dimensions of columns and beams and thickness of slabs and walls.

    a. Minus 1/4 inch
    b. Plus 1/2 inch

7. Variation of footing dimensions.

    a. In Plan: Minus 1/2 inch, Plus 2 inch
    b. Thickness: Minus 5 percent

3.03 INSTALLATION, REMOVAL, AND RESHORING

A. Set forms true to the lines and grades indicated on the plans, tied and braced to remain true, within tolerances, during and after concrete placement.

B. The Project Engineer may at any time condemn any section or sections of forms found deficient in any respect, and such form shall be promptly removed and replaced.

C. No wooden spreaders are allowed to remain in the concrete and no metal shall be within 1 inch of any surface.

D. Prepare forms for keyways in advance of pouring concrete.

E. Keyway forms for horizontal joints in walls may be placed at the conclusion of the pour, provided that the full depth and form of the keyway is maintained.

F. Screw jacks for pipe shores or scaffold-type shoring may be used at both top and bottom so long as they are secured to avoid lateral deflection.

G. Wedges may be used at the top or bottom of shores, but not at both ends, to facilitate vertical adjustment, to correct uneven settlements, or to facilitate dismantling of the formwork.

H. Check for elevations, camber and plumbness of formwork before initial set. Make appropriate adjustments promptly where necessary.

I. Removal of Forms

1. Do not remove forms, wedges or shoring until concrete has attained sufficient strength to safely support all superimposed dead, temporary construction and live loads.

2. Forms and shoring used to support the weight of concrete in beams, slab, and other structural members shall remain in place a minimum of 14 days or until the concrete has a minimum cylinder strength of 2,500 psi or 2/3 of the specified compressive strength.

3. Formwork for columns, walls and other vertical members shall remain in place for a minimum of 2 days unless the formwork also supports the beams and slabs.

4. Remove forms in an orderly fashion, taking care not to damage the structure, to permit the concrete to carry its share of the loads gradually and uniformly.

J. Reshoring

1. Install reshores when removing forms before structural members are strong enough to carry dead load and or construction loads to assure a safe distribution.

END OF SECTION

SECTION 03200
CONCRETE REINFORCEMENT

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes metal reinforcement used for cast-in-place concrete.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02775 – Concrete Pads

B. Section 02776 – Concrete Sidewalk

C. Section 03300 – Cast-In-Place Concrete (Non-Structural)

D. Section 03310 – Cast-In-Place Concrete (Structural)

1.03 REFERENCES

A. ACI 301 – Specifications for Structural Concrete for Buildings

B. ASTM A184 – Fabricated Deformed Steel Bar Mats for Concrete Reinforcement

C. ASTM A493 – Stainless Steel Wire and Wire Rods for Cold Heading and Cold Forging

D. ASTM A615 – Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

E. ASTM A616 – Rail Steel Deformed and Plain Bars for Concrete Reinforcement

F. ASTM A617 – Axle Steel Deformed and Plain Bars for Concrete Reinforcement

G. ASTM A706 – Low-Alloy Steel Deformed Bars for Concrete Reinforcement

H. ASTM A1064 – Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete

I. ASTM C55 – Concrete Brick

J. ASTM D1248 – Polyethylene, Plastics Molding and Extrusion Material

K. CRSI – Concrete Reinforcing Steel Institute.

1.04 SUBMITTALS

A. Reinforcing Steel: Test certificates of manufacturer's laboratory, identifying chemical and physical analysis of each load of reinforcing steel.

1.05 QUALITY ASSURANCE

A. Perform work in accordance with ACI 301.

PART 2 – PRODUCTS

2.01 REINFORCEMENT

A. All reinforcement shall be the grade and type as indicated on the plans and conform to the following standards.

1. Reinforcing Bars

    a. Deformed and Plain Billet-Steel Bars: ASTM A615
    b. Rail-Steel Deformed and Plain Bars: ASTM A616
    c. Axle-Steel Deformed and Plain Bars: ASTM A617
    d. Low Alloy Steel Deformed Bars: ASTM A706
    e. Fabricated steel bar or rod mats: ASTM A184

2. Welded Wire Fabric

    a. Plain and Deformed welded wire fabric: ASTM 1064

3. Tie Wire

    a. Plain Cold Drawn Steel Wire for Reinforced Concrete: ASTM A1064, 16-gage minimum size.
    b. Deformed Steel Wire for Concrete Reinforcement: ASTM A1064, size 4-D minimum.

4. Metal Bar Supports

    a. Type 1, Standard: in accordance with current CRSI standard.
    b. Type 2, Stainless Steel Protected: ASTM A493
    c. Type 3, Plastic Protected: ASTM D1248

5. Precast Concrete Brick Supports

    a. Type 1, Grade N: ASTM C55

PART 3 – EXECUTION

3.01 PLACEMENT

A. Place metal reinforcement accurately according to the plans.

B. All joints or splices shall be made by using approved clamps, welding or by lapping the ends of the bars a distance of at least 40 times their nominal diameters unless otherwise noted on the plans.

C. Lap adjoining wire mesh by no less than one full mesh and lace securely with wire.

D. Avoid splicing at points of maximum stress.

E. Accommodate placement of formed openings.

F. Minimum distances shall be as follows:

1. Wall Bars: 1-1/2 inch clear, 2 inch clear if exposed to weather or water.

2. Slab Bottom and Top Bars: ¾ inch clear, 2 inch clear if exposed to weather or water.

3. Footing Top Bars: 2 inch clear.

4. Footing Bottom Bars: 3 inch clear, unless otherwise noted.

5. Beams and Column Bars: 1-1/2 inch clear, 2 inch if exposed to weather or water.

6. Slab on Grade: Top bar 2 inch clear, bottom bar 3 inch clear.

G. Lace reinforcement with wire, in accordance with current CRSI standard, to supports or reinforcing to prevent displacement during concrete placement.

END OF SECTION



This Page Intentionally Left Blank

SECTION 03300
CAST-IN-PLACE CONCRETE (NON-STRUCTURAL)

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes provisions for non-structural cast-in-place concrete.

1.02 RELATED WORK

A. Section 03200 – Concrete Reinforcement

1.03 REFERENCES

A. ASTM C33 – Standard Specification for Concrete Aggregates.

B. ASTM C94 – Standard Specification for Ready Mix Concrete.

C. ASTM C150 – Standard Specification for Portland Cement.

D. ASTM A1064 – Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete

E. ASTM A615 – Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

1.04 QUALITY ASSURANCE

A. Obtain cement and aggregate from the same source for all work.

PART 2 – PRODUCTS

2.01 CONCRETE MATERIALS

A. Cement: ASTM C150, Portland Cement Type – IA, Air Entrained (3-5%).

B. Aggregates: ASTM C33.

1. Fine Aggregates:

a. Fine aggregates shall be clean, hard, tough, water sound and free of deleterious substances.

b. One hundred percent passing 3/8-inch sieve.
At least fifty percent passing No. 16 sieve.

2. Coarse Aggregates

    a. Coarse aggregates shall be clean, hard, tough, water sound and free of deleterious substances.

    b. Maximum aggregate size for reinforced concrete shall not be larger than 1/5 of the narrowest dimension between forms, nor larger than 3/4 of the minimum clear spacing between reinforcing bars or between bars and forms.

    c. Maximum aggregate size for unreinforced slabs shall not be larger than 1/3 the slab thickness or 2 inches, whichever is smaller.

C. Mixing Water

1. Use potable water unless approved by the Engineer.

D. Material Storage

1. Store materials in such a manner as to prevent deterioration or intrusion of foreign matter.

2.02 METAL REINFORCEMENT

A. Rebar: Conforming to ASTM A615

B. Welded Wire Fabric: Conform to ASTM A1064

PART 3 – EXECUTION

3.01 PLACING CONCRETE

A. Concrete shall not be placed when atmospheric temperature is below 40 degrees Fahrenheit unless authorized in writing by the Engineer.

B. Forms shall conform to shapes, lines and dimensions of members as called for on the plans and shall be sufficiently tight to prevent leakage of mortar.

1. Properly brace and tie forms together to maintain position and shape and prevent leakage.

C. Remove water from place of deposit before concrete is placed.

D. Moisten subgrade at the time the concrete is deposited.

E. For job mixed concrete, rotate the mix at the speed recommended by the manufacturer in a clean batch machine. Mix the materials until they are uniformly distributed.

F. Deliver and mix Ready-Mixed Concrete in accordance with ASTM C94.

G. Access to the mixing plant shall be provided to the Engineer.

H. Tickets indicating time of adding initial mixing water may be required by the Engineer.

I. Place concrete in one continuous operation, once placing is started.

J. Remove supporting forms and shoring after members have acquired sufficient strength to support their weight and imposed loads safely.

K. If concrete placement is authorized for atmospheric temperatures at or below 40 degrees Fahrenheit, concrete temperature shall not be less than 45 degrees Fahrenheit at the time of placement.

1. Heating procedures that alter or prevent the entrainment of the required amount of air in the concrete will not be permitted.

2. Do not heat aggregates and water used for mixing to a temperature exceeding 120 degrees Fahrenheit.

L. Air temperatures surrounding concrete shall be maintained at a temperature of not less than 45 degrees Fahrenheit, nor more than 70 degrees Fahrenheit, for a period of four days.

1. Following the four-day period, the concrete shall be protected from air temperatures below 35 degrees Fahrenheit, for an additional four-day period.

M. Chemical or other foreign material shall not be added to the concrete.

3.02 FIELD QUALITY CONTROL

A. Concrete shall have a compressive strength of 4000 psi at 28 days.

B. The Engineer may require slump and compression tests.

END OF SECTION



This Page Intentionally Left Blank

SECTION 03350
CONCRETE FINISHING

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes finishing concrete by screeding, floating, troweling and edging.

1.02 RELATED WORK (AS APPLICABLE)

A. Section 02775 – Concrete Pads

B. Section 02776 – Concrete Sidewalk

C. Section 03310 – Cast-in-Place Concrete (Structural)

D. Section 03300 – Cast-in-Place Concrete (Non-Structural)

1.03 REFERENCES

A. ACI 301 –Specifications for Structural Concrete for Buildings

B. ACI 318 – Building Code Requirements for Structural Concrete

PART 2 – PRODUCTS (N/A)

PART 3 – EXECUTION

3.01 FINISHING UNFORMED SURFACES

A. Finish all unformed surfaces in accordance with ACI 301.

B. Buried and permanently submerged concrete blocking and encasement will require no finishing except that necessary to obtain the required surface elevations.

C. Strike off top surfaces of driveways, sidewalks, concrete pads, curb and gutters, tops of tank walls, manholes, etc. and give a smooth wood float concrete finish.

D. Screeding

1. Provide a concrete surface conforming to the proper elevation and contour with all aggregates completely embedded in mortar.

2. Surfaces shall be free of irregularities with a height or depth in excess of 1/4 inch.

E. Floating

1. Perform floating with hand floats or suitable mechanical compactor floats.

2. Give screeded surfaces an initial float finish as soon as the concrete has stiffened sufficiently for proper working.

3. Remove and replace with mortar any aggregate causing surface irregularities.

4. Follow initial floating with a second floating at the time of initial set.

5. Provide a uniform texture and color with the second floating.

6. Unless additional floating is required, the completed float finish will be provided by the second float finish.

F. Troweling

1. Trowel surfaces that will be exposed after construction is complete with a steel trowel.

2. Trowel finishing is not required for floors that are normally submerged.

3. Perform troweling after the second floating when the surface has hardened sufficiently to prevent an excess of fines being drawn to the surface.

4. Produce a dense, smooth, uniform surface free from blemishes and trowel marks.

G. Edging

1. Edge floated or troweled surfaces with an edger having a ¼-inch radius, unless specified to be beveled.

3.02 FINISHING FORMED SURFACES

A. Finish all formed surfaces in accordance with ACI 301 and ACI 318.

B. Finish concrete after the removal of forms as soon as the conditions will permit.

C. Dampen concrete with water prior to starting work.

D. Take care not to damage tie holes and defects with water used for dampening.

E. Apply dry Portland cement to surfaces to be finished by rubbing in with a suitable cloth.

F. After pointing and removal of projections, give a rubbed surface finish to all exposed surfaces of concrete, including walls, columns, beams, pilasters and undersides of slabs.

3.03 FLOORS

A. Finish all floors in accordance with ACI 301.

B. Bring floor up to proper elevation and screed, making sure the floor is sloped toward the floor drains.

C. Give (minimum) two steel trowelings when cement has set sufficiently to finish smoothly.

3.04 EXTERIOR EXPOSED SURFACES

A. Provide medium broom finish.

END OF SECTION



This Page Intentionally Left Blank

SECTION 08100
METAL DOORS AND HARDWARE

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes replacing the exterior double-door slabs (2) and hardware on the control building at the Ho-Chunk Blue Wing WWTF. Also includes painting the existing double-door frame.

1.02 RELATED WORK (NOT APPLICABLE)

1.03 SUBMITTALS

A. Exterior Door Slabs (2)

B. Paint

C. Sealant

D. Door Hardware (as listed in Section 2.04)

PART 2 – PRODUCTS

2.01 DOOR MATERIAL

A. Insulated Exterior Door Slabs

1. The doors shall be equivalent to Ceco Imperial Doors manufactured by Ceco Door Products and satisfy the following requirements:

    a. Flush type, Grade III, extra heavy duty, insulated
    b. Door: 16 gauge, cold rolled, prime quality steel
    c. Weatherproof threshold
    d. Double Doors: One (1) 36 inch wide active door x 7-feet and one (1) 36 inch wide passive door x 7-feet high
    e. Minimum 1 ¾-inch thick.
    f. Insulation: foamed-in-place polyurethane, R-11.5 minimum
    g. Shop primed and phosphatized
    h. Three hinge, ANSI A156.7, 4 ½ inc
    i. Outward opening
    j. Locking doorstop (wall-type)
    k. Prepared for mortise lockset
    l. Reinforced for closures

m. Ceco Imperial doors as manufactured by Ceco Door Products, Oakbrook Terrace, IL or approved equal.

2. Contractor shall confirm compatibility with door hinge spacing on the existing frame.

2.02 PAINT

A. Exterior Door and Frame

1. Suitable for wet, chemical exposure, and mild physical abuse.

2. Primer (frame only): Tnemec Series 1 Omnithane (applied at 2.5-3.5 mil DFT) or approved equal.

3. Tie-Coat: Equal to Tnemec Series 27 Epoxy (applied at 2-3 mil DFT) or approved equal.

4. Finish Coat: Tnemec Series 73 Endura-Shield Polyurethane (applied at 2-3 mil DFT) or approved equal. Color to be selected by Owner from full manufacturers color palette.

2.03 Sealant

A. Equal to Sika 1A.

2.04 DOOR HARDWARE

A. Exterior Double Door

1. Exterior double door shall have one active (primary) door and one passive door.

2. Lockset (active door): a deadbolt extra heavy-duty Mortise-type entrance lock set with deadbolt equal to Sargent 9243 series - stainless steel - Apartment Corridor Door.

a. Match key pattern to the Owner’s existing keys.

3. Flush bolt (passive door): Hager 278D US26D or approved equal

4. Wallstop: Hager 256 W 2GD finish or approved equal (one for each door)

5. Hinges: Spring-loaded, standard weight, full mortise stainless steel hinges equal to Hager 1150.

6. Threshold: Reese S4LA or approved equal

7. Weatherstrip jamb: Reese D S78A or approved equal.

8. Weatherstrip threshold: Reese 701A or approved equal.

9. Provide a high-impact resistant clear plastic kickplate located on the interior side of the door.

10. The main entry door shall conform to the Uniform Federal Accessibility Standards, Section 4.13.

PART 3 – EXECUTION

3.01 GENERAL

A. Remove existing doors and hardware from the door frame and dispose of off-site.

B. Prepare the existing door frame for painting by removing loose paint and corrosion.

3.02 PAINTING

A. Inspection

1. Verify surfaces are ready to receive paint in accordance with paint manufacturer's recommendations.

B. Protection

1. Furnish drop cloths, shields, and protective materials to prevent spray or droppings from disfiguring other surfaces.

C. Perform all painting in accordance with manufacturer's recommendations unless otherwise specified in this document, including but not limited to the following:

1. Surface preparation
2. Mixing
3. Application method
4. Spreading rate
5. Surface temperature
6. Curing temperature
7. Drying times
8. Minimum dry film thickness

D. Paint Application

1. Spray or roller apply.

2. If roller applied, more coats than stated in this specification may be required to achieve the specified paint thickness.

E. Finish Work

1. Remove all paint spills or drips.

2. Repair damages to other surfaces caused by work of this section.

3. Remove all materials such as drop cloths and used paint cans from site.

3.03 EXTERIOR DOUBLE-DOOR AND HARDWARE INSTALLATION

A. Install replacement door slabs in the existing frame in accordance with manufacturer specifications.

B. Install weather stripping on doors if not already installed.

C. Seal any gaps between frame and wall with sealant. Color of sealant shall match block color or color of paint (if applicable).

3.04 TOLERANCES

A. Maximum Diagonal Distortion for Doors: 1/16” measured with straight edge, corner to corner.

3.05 ADJUSTMENT AND CLEANING OF DOORS

A. Adjust hardware for smooth and balanced door movement.

B. Clean doors and glazing prior to final acceptance.

END OF SECTION

SECTION 13430
ELECTRICAL CONTROL SYSTEM – SEWAGE LIFT STATION

PART 1 – GENERAL

1.01 SUMMARY

A. Work under this section covers the provision and installation of a complete electrical control system for the Ho-Chunk Blue Wing Lift Station including, but not limited to, enclosures, circuit breakers, control devices, alarm/status lights, back-up power supply and associated electrical wiring.

B. When installed and wired in accordance with Section 16050, a fully functional control system for the lift station shall be provided. All necessary appurtenances not specified herein that are required to make the system operational according to this specification, shall be provided and installed by the Contractor at no additional cost.

C. Proposed genset and automatic transfer switch shall be integrated with the control system to provide a fully operational lift station under either utility power or backup power.

D. The cellular SCADA equipment in the existing control panel shall be removed and reused in the new control panel to maintain compatibility with the cellular SCADA equipment at the Ho-Chunk Blue Wing Wastewater Treatment Facility (WWTF). Once reinstalled, Contractor shall verify operation of the equipment and adjust as needed.

E. The existing magnetic flowmeter display shall be installed on the new electrical equipment board and connected to the new electrical control system. The magnetic flowmeter pulse shall be calibrated at the time of installation.

1.02 RELATED WORK

A. Section 01330 – Submittal Procedures

B. Section 01785 – Operation and Maintenance Manual

C. Section 02539 – Sewage Lift Station with Valve Vault Rehabilitation

D. Section 02775 – Concrete Pads

E. Section 16050 – Basic Electrical Materials and Methods

F. Section 16230 – Backup Power Supply

G. Section 16401 – Electrical Power, Service and Distribution

1.03 REFERENCES

A. National Electric Code (NEC)

B. Wisconsin Administrative Code NR110

C. Use latest revision of all references

1.04 SUBMITTALS

A. Electrical control system including Pump Controller (PC) and Operator Interface Unit (OIU)

B. Electrical wiring diagrams showing integration of all electrical and control components

C. Enclosure and panel board including outline dimensions and general arrangement drawings of each

D. Isolation contactors

E. Submersible level transducer

F. Floats and mounting hardware

G. Uninterrupted power supply (UPS) unit

H. Lightening arrester

I. Selector switches, pushbuttons, and lights

J. Motor hour meters

K. Motor cycle counters

L. Ammeter

M. Data storage file format

N. Condensation heater

1.05 CONTROL SYSTEM – GENERAL

A. Provide standard products, UL labeled, automatic control equipment with proven field performance.

B. Provide all new components, factory assembled, wired, tested, and covered by complete electrical drawings and instructions to assure proper system interconnections, reliability, and long-term operation.

C. All materials to be furnished shall be the standard products of a manufacturer regularly engaged in the production of such equipment and shall be the manufacturer's latest standard design.

D. Wiring within panels and boxes shall be installed neatly without the use of excessive amounts of wire.

E. Where circuits and terminals are provided for connection of wires by others, space and a clear path within the panel or box shall be provided by the control manufacturer to allow the installation of these wires without disturbance of the control wiring.

F. Provisions for adequate grounding shall be incorporated into the wiring within the electrical control system.

G. Mechanical selector switches shall override virtual selector switches.

1.06 DESCRIPTION OF OPERATION

A. The lift station control system shall incorporate a Setup Wizard and associated hardware to guide Owner/operator through station control setup. After setup, the OIU shall allow the control/setup of all levels of the lift station functionality including, but not limited to:

1. Pump operating set points (lead and lag).

2. "Pump 1 Lead" / "Auto" / "Pump 2 Lead" pump alternation selection.

3. System alarm functions.

4. System data collection and presentation.

5. Individually adjustable pump start and stop delays to prevent simultaneous pump starts and stops.

6. Facility and pipe cleaning function to minimize fats, oils, and grease (FOG) buildup.

7. Energy efficiency operation maximization.

8. Pump/motor protection from seal fail, overheating, and dry-run.

9. Maintenance pump run settings to prevent pumps from sitting idle for extended periods of time

B. Primary Transducer Control

1. The primary lift station pump control shall utilize a submersible level transducer control system that automatically controls two submersible sewage pumps in a pump down, alternating, lead-lag mode. The pumps shall operate based on the following local OIU adjustable setpoints:

   a. High Water Alarm
   b. Lag Pump Start
   c. Lead Pump Start
   d. Pump(s) Stop
   e. Low Water Alarm

   When the level in the wet well rises to the “Lead Pump Start” level, the lead pump will energize and continue to run until the level in the wet well falls to the “Pump(s) Stop” level at which time the pump will deenergize. The sewage pumps shall alternate automatically upon completion of each pump cycle. If the level in the wet well continues to rise and reaches the “Lag Pump Start” level after the lead pump is energized, the lag pump will energize, and both pumps will continue to run until the level in the tank drops to the “Pump(s) Stop” level. If the level in the wet well rises to the “High Water Alarm” level, both pumps will continue to run and a high water alarm will be triggered and relayed to the cellular SCADA system. If the level in the wet well reaches the “Low Water Alarm” level, the pumps will deenergize (if running) and a low water alarm will be triggered and relayed to the cellular SCADA system.

   The pump control system shall require a 5-second delay after a call to run and sequence pump starts and stops with a 10-second delay between the operation of Pump 1 and Pump 2 to prevent simultaneous starting and stopping of the pumps.

C. Backup Float Control Operation

1. An independent, three-float backup control system based on relay logic shall be provided for the lift station pump control in the event of PC and/or transducer failure. **PC or transducer failure shall be assumed if the high-water alarm float or low-water alarm float is tripped.** The floats shall also be wired such that they work independently of the PC in the event of a PC failure. The function of the floats shall be as such:

   a. Top Float – High water float, if tripped shall energize the back-up control system, signal a high level alarm, and energize lead pump. If

level doesn't drop to the Low Float in a set time period (adjustable via a solid state timer), the PC shall also energize lag pump. After the back-up control system has cycled one cycle, the Top Float shall serve to start the lag-pump.

b. Mid Float – After the back-up control system has cycled one cycle, the mid float shall start the lead pump. Once tripped, it shall energize the lead pump and allow pump to run for an adjustable set time.

c. Low Float – Pump(s) off float. Shall de-energize pump(s) if running. If multiple pumps are running, the shutdown of each pump shall be delayed to prevent simultaneous shutdown.

2. The pump control system shall require a 5-second delay after a call to run and sequence pump starts and stops with a 10-second delay between the operation of Pump 1 and Pump 2 to prevent simultaneous starting and stopping of the pumps.

3. A "Backup Mode Active" indicator light shall illuminate when the backup float control system is active. Level control shall be returned to the transducer manually through a "Transducer Reset" button mounted on the inner door panel.

4. The system controlling the pumps (Primary Transducer Control or Backup Float Control) shall be indicated through the OIU.

5. Float elevations shall be set as indicated on plans.

D. Back-Up (Generator) Power Operation

1. Upon loss of utility power, the automatic transfer switch shall automatically transfer the station electrical load to the onsite standby generator. The generator shall supply power to the station until utility power is restored.

2. While operating on generator power, the lift station shall operate as specified above under either the primary transducer controls or the backup float controls.

E. Manual/Automatic Pump Operation – Hand-Off-Auto (HOA)

1. A mechanical HOA switch for each pump mounted through the inner door panel of the enclosure shall designate the pumps to manual (hand), off, or automatic operation.

a. In the "Hand" position, the automatic pump control system shall be overridden and the applicable pump shall be energized.

b. In the “Off” position, the automatic pump control system shall be overridden and the applicable pump shall not be allowed to energize.
c. In the “Automatic” position, automatic pump control system shall control the operation of the applicable pump(s).

2. Provide a virtual Hand-Off-Auto (HOA) selector switch on the control system OIU. The mechanical HOA switch shall override the virtual HOA selector when the mechanical switch is in the “Hand” or “Off” position.

3. The pump control system shall require a 5-second delay after a call to run and sequence pump starts and stops with a 10-second delay between the operation of Pump 1 and Pump 2 to prevent simultaneous starting and stopping of the pumps.

F. Pump Alternation Selector Switches

1. Provide a three-position selector switch labeled “Pump 1 – Alternate – Pump 2.” In the PUMP 1 or PUMP 2 position, the selected pump shall operate as the lead pump. In the “Alternate” position, lead pump duty shall automatically alternate between Pump 1 and Pump 2.

2. Provide a virtual pump alternation display matrix on the OIU that displays which pump is the lead vs lag for the upcoming pumping cycle.

G. Station Flow

1. The station flow (gpm) shall be measured using the existing magnetic flow meter and displayed on the OIU and existing flowmeter display.

2. Calibrate the magnetic flow meter pulse at time of installation for the appropriate OIU calculations.

H. Data Storage

1. The control system shall collect and store the daily data listed below. The data to be collected shall be adjustable through the OIU as needs/wants of the operator change. The data shall be available for the Owner to download at the lift station via a USB drive port surface mounted through the inner door panel. The data shall be organized by date and the file format shall be compatible with Microsoft Excel (.csv or .txt) and be formatted with headers, etc. A minimum of 90 days’ worth of data shall be available for download.

a. <u>Pump Data (each pump):</u>
- Daily Pump Hours
- Daily Pump Cycles

- Totalized Pump Hours
- Totalized Pump Cycles

b. Combined Pump #1 and #2 Data:
- Daily Combined Pump Hours
- Daily Combined Pump Cycles
- Totalized Combined Pump Hours
- Totalized Combined Pump Cycles

c. Flow Data:
- Daily Station Pumped Volume (gpd)
- Totalized Station Volume (gallons)
- Pump #1 Average Pumping Rate (gpm)
- Pump #2 Average Pumping Rate (gpm)
- Combined Pumps Average Pumping Rate (gpm)
- Pump #1 Totalized Volume (gallons)
- Pump #2 Totalized Volume (gallons)
- Combined Pumps Totalized Volume (gallons)

d. Trending (continuous):
- Pump Operation - each pump (On / Off)
- Station Flow – Effluent (gpm)
- Wet Well Level

e. Generator Operation:
- Daily Run Hours
- Daily Cycles
- Totalized Run Hours
- Totalized Cycles

I. Data Presentation

1. The PC system shall present the following data listed below through the OIU at the lift station. These lists shall be adjustable as the wants/needs of the operator change through the OIU.

a. Pump Data (each pump):
- Daily Pump Hours
- Daily Pump Cycles
- Totalized Pump Hours
- Totalized Pump Cycles
- Average Motor Amps

b. Combined Pump #1 and #2 Data:
- Daily Combined Pump Hours
- Daily Combined Pump Cycles

- Totalized Combined Pump Hours
- Totalized Combined Pump Cycles

c. Pump Status (each pump):
   - Running (Running, Ready, or Fail)
   - Failure to Start

d. Flow Data:
   - Daily Station Pumped Volume (gpd)
   - Totalized Station Volume (gallons)
   - Pump #1 Average Pumping Rate (gpm)
   - Pump #2 Average Pumping Rate (gpm)
   - Combined Pumps Average Pumping Rate (gpm)
   - Pump #1 Totalized Volume (gallons)
   - Pump #2 Totalized Volume (gallons)
   - Combined Pumps Totalized Volume (gallons)

e. Generator Data:
   - Status Icon (Running, Ready, or Fail)
   - Total Hours
   - Total Starts

f. Trending – continuous (Trend data shall be available for review for a minimum of 30 days):
   - Wet Well Liquid Level
   - Pump On/Off (each pump separately)
   - Generator Operation

g. Wet Well Liquid Level:
   - Current Level
   - Maximum and Minimum Level (range over the previous 30-days).

h. Transducer setpoints (adjustable)

i. HOA switch position indicator for each pump.

j. Pump alternator switch position.

k. Active control system indicator (Primary Transducer or Backup Float).

l. Alarm History.

J. Setpoint Adjustment

1. The facility set points of all facility functions (as discussed in Section 1.06.A) shall be adjustable on the OIU.

K. Alarm Presentation

1. The PC system shall present the following alarms through the OIU at the lift station:

a. Control Power Fail
b. Panel Power Surge
c. Phase Imbalance
d. Utility Power Fail/Genset Called to Run
e. Generator Fail to Run
f. Generator Exercise Fail
g. Automatic Transfer Switch Fail
h. Pump Fail (each pump)
i. Pump Overload (each pump)
j. Pump High Temperature (each pump)
k. Pump Seal Fail (each pump)
l. Backup (Float) Control System Active
m. High/Low Water Level
n. Enclosure Temperature

2. Alarms shall be relayed to the cellular SCADA system and transmitted to the main PLC at the WWTF and displayed on the main SCADA interface.

3. In the event of a pump high temperature alarm, the pump shall be de-energized and remain de-energized until they are manually reset via the push button on the inner door panel for each pump.

1.07 FACTORY TESTING

A. Prior to shipment, a certified final inspection and factory test shall be run on the control system as a unit with simulators connected to provide characteristics identical to that which the equipment will experience in the field. These tests shall be certified by the factory and may be witnessed by representatives of the Owner should they desire. The Owner shall be notified at least ten days prior to the checkout and final inspection test.

B. During the inspection, each of the units shall be checked segment-by-segment and component-by-component against the plans and specifications and equipment characteristics as supplied by other manufacturers, to be sure that the system will respond in the field providing the required and specified service.

C. Enclosure shall contain thermostatically controlled ventilation to ensure overheating of the electrical components does not occur.

1.08 TRAINING

A. Provide training to educate operators and maintenance personnel with the required level of system familiarity to provide a common working knowledge concerning all significant aspects of the system being supplied.

B. The system supplier shall provide all instructional material, equipment, and manuals to conduct the training program. The training shall be provided using the Owner's actual control system and related software.

1.09 OPERATION AND MAINTENANCE MANUALS

A. Provide operation and maintenance manuals in accordance with Section 01785 – Operation and Maintenance Manual. Draft manuals shall be provided a minimum of two (2) weeks prior to the start-up of the system.

B. Manuals shall be provided for all components provided under this specification section.

C. The submitted documentation shall be in sufficient detail to facilitate the operation, removal, installation, programming and configuration, adjustment, calibration, testing and maintenance of each component and/or instrument.

D. The Engineer and the Tribe shall have discretion of acceptance of O&M manual contents and composition.

1.10 QUALITY ASSURANCE

A. The contractor shall assume the total, undivided responsibility for the correct operation of the control system. It is expected the system supplier will be required to make field changes to the control logic at the direction of the Owner and the Project Engineer and thus should include all of these costs within the proposed allowance for system.

B. The completed electrical installation shall meet the requirements of the latest edition of the NEC. This shall not be construed to permit a lower grade of construction where plans and specifications for workmanship or materials are required in excess of code requirements.

C. The work specified shall be subject to inspection and approval by authorized representatives of the National Board of Fire Underwriters, State and local governing authorities and the Owner.

1.11 SOFTWARE RIGHTS OF OWNER

A. The system supplier shall provide to the Owner all PC operator interface pass code locking information prior to acceptance of the system. This shall be a field-demonstrated function, demonstrating the open architecture status of all application programs written for the project. The Owner will not be required to sign a non-disclosure agreement of any kind. System integrators with a demonstrated history of PC pass code locking are barred from this project. Final payment is contingent on the supply and verification of this software access information.

1.12 ACCEPTANCE

A. Work covered by this section shall not be accepted until testing connected with this work has been completed satisfactorily.

B. Work found to be defective in performance shall be corrected to the satisfaction of the Engineer.

1.13 WARRANTY

A. Provide an eighteen (18) month warranty for parts and labor from date of acceptance of entire project/sewer system by the Project Engineer guaranteeing that the entire station and all equipment shall be free from defects in design, materials, and workmanship.

B. Provide a two (2) year parts warranty for all control system components except normal use items such as light bulbs.

PART 2 – PRODUCTS

2.01 GENERAL

A. Provide new and unused materials and equipment that are UL listed and labeled, and suitable for the intended application.

2.02 ENCLOSURE

A. NEMA 4X, U.L. approved, insulated, stainless steel, free-standing enclosure with lockable front weather door and internally mounted, hinged inner door panel(s). Inner door panels shall contain all lights, meters, counters, reset buttons, circuit breakers, HOA switches, OIU, etc such that the operator can control/operate the normal functions of the lift station without being exposed to electrical components requiring PPE.

B. Enclosure shall be sized to allow the installation of the PC control system, room for additional backplane/modules, all wiring, existing cellular SCADA

equipment, and all other equipment listed below. All items that have a display, switch, or push button shall be panel mounted through the inner door of the enclosure.

C. For single-door enclosures, provide the door with hinges on the left side. Bond all exterior and interior enclosure doors to the main enclosure body.

D. Provide 18-inch stainless steel support legs and stainless steel panel skirting.

2.03 ENCLOSURE WIRING

A. Conform to the National Electrical Code, state, local, and NEMA (National Electrical Manufacturer Association) Electrical Standards.

B. Provide properly sized solid copper wire with a minimum of 600V insulation.

C. Color code control wiring.

D. Provide a power terminal block located at the bottom of the enclosure to facilitate bottom conduit entry and to ensure sound electrical integrity of the incoming power connections.

2.04 LIGHTNING ARRESTOR

A. Provide a properly sized lightning arrestor connected to each leg ahead of the main circuit breaker and properly grounded as recommended by the manufacturer.

2.05 TRANSFORMER

A. Shall be rated for use with the current utility power supply.

B. Shall be dry type and industry standard construction for this specific installation.

C. Able to drop the 208V incoming utility power to 120V for the load center.

2.06 CIRCUIT BREAKERS

A. 208V 3-phase Main Circuit Breakers: Supply 208V thermal magnetic molded case circuit breaker to provide overcurrent protection for the main panel power circuit as follows.

1. Circuit #1 – Main Breaker

B. 208V 3-phase Branch Circuit Breakers: Supply 208V thermal magnetic molded case circuit breaker to provide overcurrent protection for each separate circuit as follows.

2. Circuit #1 – Pump #1
3. Circuit #2 – Pump #2
4. Circuit #2 – Spare

C. 120V 1-phase Branch Circuit Breakers: Supply 120V single phase thermal magnetic molded case circuit breaker to provide overcurrent protection for each separate circuit as follows.

1. Circuit #1 – Lift Station Controls
2. Circuit #2 – Flow Meter
3. Circuit #3 – Condensation Heater
4. Circuit #4 – Panel Ventilation System
5. Circuit #5 – Convenience Receptacle (20A; control panel)
6. Circuit #6 – Convenience Receptacle and Lighting (20A; outdoor)
7. Circuit #7 – Generator Coolant Heater
8. Circuit #8 – Generator Battery Charger
9. Circuit #9 – Spare
10. Circuit #9 – Spare

2.07 CONTROL SYSTEM COMPONENTS

A. PC: Xylem MultiSmart Powered by Nexicon or approved equal.

1. Shall be a pre-programmed plug and function module type system.
2. Shall be made specifically to maximize the performance and efficiency of the facility's use of two (2) Flygt Concertor pumps.
3. Shall be cybersecurity rated to highest standards (IEC 62443-4.1)
4. Shall contain the following modules and accessories:

a. Backplane
b. Backplane supply
c. Application manager
d. Machine/Concertor Module (FPM 711)
e. Digital I/O Module
f. Analog I/O Module

B. OIU: B&R Industrial Automation P/N 6PPT80.101E-10B, color output, minimum 10-inch screen or approved equal.

C. Isolation Contactors: Provide NEMA rated magnetic isolations contactors sized to match the supplied pump motors (Refer to Section 02539).

D. Submersible Level Transducer: Equal to Keller LevelRat.

1. Sequence of set points:

    a. High Water Alarm
    b. Lag Pump Start
    c. Lead Pump Start
    d. Pump(s) Off
    e. Low Water Alarm

E. Floats: Provide three (3) intrinsically safe mercury free floats equal to Siemens 9G-EF Mercury Free Direct Acting Float Switch for back-up control of two submersible pumps for a “High Water” alarm/lag pump start, lead pump start, and pump(s) stop.

F. UPS: Equal to Best or APC, to provide a minimum of 500 VA back-up control power for a minimum of 15 minutes.

G. Selector Switches, Pushbuttons, and Lights

1. Reset buttons - Provide inner door located door-mounted overload reset push buttons as follows:

    a. For resetting each pump
    b. For resetting the transducer to return to transducer control from back-up float control.

2. HOA Switches: Provide an inner-door mounted, heavy-duty, three position HOA selector switch for each pump. In the HAND position, the pumps shall operate independent of the PC. Equal to Allen Bradley 800 series.

3. Pump Running Lights: Provide inner-door mounted, replaceable bulb, push to test, green LED pilot lights for each pump. The light shall be operated by the auxiliary contact on the respective isolation contactor to indicate a “Pump Running” condition. Equal to Allen Bradley 800T.

4. Pump Fail Lights: Provide inner-door mounted, replaceable bulb, push to test, red LED pilot lights for each pump. Equal to Allen Bradley 800T. The light shall be wired to indicate the following fail conditions:

    a. “Pump Fail” – condition triggered by any condition in which pump does not operate.

5. Generator Alarm Light: Provide inner-door mounted, replaceable bulb, push to test, red LED pilot lights for generator. Equal to Allen Bradley 800T.

H. Timer: Provide adjustable 0-60 second time delay devices to prevent simultaneous pump starts/stops after a power outage. Initial settings shall be

set with a 5-second start delay following a pump “Call to Run” and a 10-second offset between pump starts/stops. The delays shall be adjustable and apply to both “Primary Transducer Control” and “Backup Float Control” modes.

I. Elapsed Time Meter (ETM): Provide three (3) inner-door mounted 120 VAC, non-resettable, mechanical running time meters measuring hours and tenths of hours of operation up to 99999.9 hours.

1. Use one ETM for each pump running separately and one ETM for the pumps running together.

2. ETMs shall shall be operated by the auxiliary contact on the isolation contactor for each respective pump.

3. Meters shall be visible from the inner door panel.

J. Cycle Counter: Provide three (3) inner-door mounted 120 VAC, non-resettable, mechanical, cycle counters capable of recording up to 99999 cycles.

1. Use one counter for each pump running separately and one counter for the pumps running together.

2. Counters shall be operated by the auxiliary contact on the isolation contactor for each respective pump.

3. Counters shall be visible from the inner door panel.

K. Pump Alternator: Provide a solid-state pump alternator that will alternate the operation of the pumps after each pump cycle.

F. Pump Lead Switch: Provide a manual, 3-position, “Pump 1 Lead/ Alternating/Pump 2 Lead” selector switch to allow the operator to designate either pump to stay in the lead position continuously or the pumps to alternate after each cycle.

G. Cellular SCADA: Remove existing cellular equipment from the existing control panel and mount in the new control panel. Verify communication with the WWTF is achieved and reliable. Revise location of antenna as needed.

1. The existing cellular SCADA gateway has the following characteristics:

a. DIN-rail-mounted
b. Modbus TCP over ethernet (RJ45 connection)
c. Approximately 5 inches high × 2 inches wide × 5 inches deep. (Contractor shall verify)

2. Alarms to be communicated are described in Section 1.06.K.

L. Wiring Diagram: Provide an as-built wiring diagram laminated in plastic and a pouch on the interior of the panel door for storage.

2.08 NAMEPLATES AND COMPONENTS TO BE ACCESSIBLE FROM INNER DOOR PANEL

A. Make accessible on the inner door panel all major components and sub-assemblies noted below. Identify these items as to function with laminated, engraved Bakelite nameplates, laser screen laminated Mylar nameplates, or approved equal.

Device	Nameplate
208V Circuit Breaker	Main Circuit Breaker
208V Circuit Breaker	Pump 1
208V Circuit Breaker	Pump 2
208V Circuit Breaker	Spare
120V Circuit Breaker	Lift Station Controls
120V Circuit Breaker	Flow Meter
120V Circuit Breaker	Condensation Heater
120V Circuit Breaker	Panel Ventilation System
120V Circuit Breaker	Convenience Receptacle (control panel)
120V Circuit Breaker	Convenience Receptacle and Lighting (outdoor)
120V Circuit Breaker	Generator Battery Charger
120V Circuit Breaker	Generator Coolant Heater
120V Circuit Breaker	Spare
120V Circuit Breaker	Spare
H-O-A Switch	Pump 1
H-O-A Switch	Pump 2
Selector Switch	Pump 1 Lead / Alternating / Pump 2 Lead
Pilot Light (green)	Pump 1 – Run
Pilot Light (green)	Pump 2 – Run
Pilot Light (red)	Pump 1 – Fail
Pilot Light (red)	Pump 2 – Fail
Pilot Light (red)	Generator Common Alarm
Reset Push Button	Pump 1 – Reset
Reset Push Button	Pump 2 – Reset
Reset Push Button	Transducer Control – Reset
Counter	Pump 1 – Cycle Counter
Counter	Pump 2 – Cycle Counter
Counter	Pump 1 & 2 – Cycle Counter
Meter	Pump 1 – ETM
Meter	Pump 2 – ETM
Meter	Pump 1 & 2 – ETM
Ammeter & Selector	Pump 1
Ammeter & Selector	Pump 2

2.09 CONVENIENCE RECEPTACLE

A. Provide a 120VAC, 20-amp, duplex GFI receptacle accessible on the inner door.

2.10 CONDENSATION HEATER

A. Provide adjustable Hoffman, 120V, thermostatically controlled condensation heater(s) properly sized for the enclosure. Heater shall turn on when the temperature in the enclosure falls to the adjustable temperature set point.

2.11 AIR CONDITIONING SYSTEM

A. Provide 120V, adjustable, thermostatically controlled AC unit properly sized for the enclosure to maintain an internal panel temperature below the recommended maximum temperature of the equipment in the enclosure.

B. The AC unit shall be energized when the temperature in the enclosure exceeds the adjustable temperature set point on the “Ventilation On” thermostat.

C. The AC unit Shall operate to cool the enclosure until the adjustable temperature set point on the “Ventilation Off” thermostat is reached.

2.12 TEMPERATURE ALARM THERMOSTAT

A. Provide an adjustable high/low thermostat mounted in the control panel to communicate temperature alarm conditions to the PC.

2.13 SPARE PARTS/ACCESSORIES

A. Provide five (5) spare bulbs for each unique bulb and five (5) spare fuses for each unique fuse for all appurtenance in the panel.

PART 3 – EXECUTION

3.01 GENERAL

A. Install the system and associated wiring in accordance with the NEC and Wisconsin Administrative Code NR 110.

B. Provide a completed control panel enclosure, including all installed components, that is UL listed and labeled.

C. Provide hardware and accessories constructed of corrosion-resistant materials and subject to approval by the Project Engineer.

3.02 ENCLOSURE MOUNTING

A. Securely anchor freestanding control panel enclosure to concrete pad with stainless hardware.

B. Orient the enclosure as shown on the Drawings and as required to maintain necessary clearances and separation distances.

C. Actual panel location must be approved by the Owner. See Section 01100 – Summary of Work for contact information.

3.03 WIRING INSTALLATION

A. Install all wiring, including wiring between the lift station and control panel, in conduit except where conductors exit the conduit and enter the control enclosure as specified herein.

B. Install transducer wires, float wires, and pump wires in separate conduits.

C. Trim cables and wires so no excessive cable/wiring hangs in the wet well. Enough slack shall be provided to allow the removal and installation of the equipment.

D. No splices or junction boxes shall be allowed in the wet well.

E. No splices or junction boxes between wet well and control panel

F. Seal all conduits exiting the wet well with approved conduit seals. Extend conduits a minimum of 6 inches above finished grade within the enclosure skirting to protect conductors and provide an air gap between the wet well and control enclosure. Provide conduit seals below the enclosure at all conduit and wiring penetrations to prevent the migration of moisture, gases, and vapors into the enclosure.

3.04 LEVEL TRANSDUCER AND FLOAT INSTALLATION

A. Install in accordance with manufacturer’s recommendations.

B. Install units on PVC coated steel or stainless steel weights to prevent movement during pump operation.

C. Mount each float securely on a stainless steel cable inside wet well using non-corrosive materials at the elevations shown on the plans.

D. Refer to plans for level set points.

E. Install a bellows style vent within the control panel for the transducer.

3.05 CELLULAR SCADA EQUIPMENT

A. Remove the existing cellular SCADA equipment from the existing control panel and install it in the new control panel. The existing cellular SCADA equipment shall remain operational until the existing control panel is no longer in use and the new control panel is being installed. Verify the operation of the equipment once installed in the new enclosure and adjust as needed to ensure communication is reliable.

3.06 START-UP/FIELD TESTING

A. Provide the services of a factory trained, qualified representative to inspect the completed installation, make adjustments necessary to place the system in trouble-free operation and instruct the operating personnel on the proper maintenance and operation of the equipment.

B. Provide clear water in the wet well to perform start-up testing.

C. Perform an operational test under field conditions during the project final inspection. Complete items below under both utility power and generator/backup power.

1. Complete the Setup Wizard with Operator/Owner and go over control system adjustments.

2. Verify transducer system operation for pump #1, pump #2, and pump #1 and pump #2 in combination.

3. Verify that set points are adjustable via OIU.

4. Verify back-up float system operation and transducer reset.

5. Verify operation of pilot lights.

6. Verify pump alternation.

7. Verify operation of H-O-A switches.

8. Verify operation of selector switch.

9. Verify operation of delay timer.

10. Verify operation of cycle counters and hour meters.

11. Verify operation of emergency generator.

12. Verify operation of GFI receptacle.

13. Verify operation of condensation heater.

14. Verify operation of panel AC system.

D. Test and record voltages and amperages of each individual pump and both pumps operating simultaneously while operating on utility power and on generator/backup power.

E. Perform pump test to verify operating capacity of pump.

1. Record gallons per minute and pressure for each individual pump.

2. Record gallons per minute and pressure for pumps operating in combination.

F. Record hour meter readings and pump counters.

G. Place system into complete operation.

H. Demonstrate the functionality of the alarms.

I. Demonstrate the functionality of the lift station’s communication to the WWTF.

J. Provide written certification from the manufacturer to the Project Engineer that the control installation is in accordance with the manufacturer’s requirements and the warranty is validated.

END OF SECTION

SECTION 16050
BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 – GENERAL

1.01 SUMMARY

A. This Section includes furnishing and installing basic electrical materials and methods for providing electrical power to the sewage lift station and wastewater treatment facility (WWTF). Also included are provision and installation of convenience receptacles and switches.

1.02 RELATED WORK

A. Section 02539 – Sewage Lift Station with Valve Vault

B. Section 13430 – Electrical Control System – Sewage Lift Station

C. Section 16230 – Backup Power Supply

D. Section 16401 – Electrical Power, Service and Distribution

E. Section 16500 – Lighting

1.03 REFERENCES

A. NFPA 70 – National Electrical Code (NEC), 2023 Edition, as adopted and modified by Wisconsin Administrative Code Chapter SPS 316.

B. Underwriters Laboratories, Inc. (UL)

1.04 SUBMITTALS

A. Conductors and cables

B. Conduit, raceways, and boxes

C. Duct seal

D. Receptacles and Switches

PART 2 – PRODUCTS

2.01 GENERAL

A. Provide new, unused materials and equipment of the type, size, rating, and capacity suitable for the intended application, circuit characteristics, and environmental conditions.

2.02 CONDUCTORS AND CABLES

A. Conductors installed in conduit: THW or THWN

B. Conductors and cables for direct burial: USE or UF

C. Minimum 600-volt rating Minimum voltage rating: 600 volts

D. Conductors: Copper

2.03 CONDUIT, RACEWAYS, AND BOXES

A. Rigid Non-metallic Conduit and Raceways

1. Interior or underground: PVC Schedule 40

2. Exterior above ground: PVC Schedule 80

B. Fittings, boxes, clamps, and straps: PVC, compatible with conduit and raceway

C. Hardware: Corrosion-proof or corrosion-resistant

D. Expansion fittings: PVC, compatible with conduit and sized to accommodate anticipated movement.

2.04 DUCT SEAL

A. Soft, non-hardening duct seal equal to Killark Sealing Compound.

2.05 RECEPTACLES

A. Receptacle: Thermoplastic, commercial-grade, self-grounding, duplex GFCI receptacle, 20-amp, 125-volt, weather-resistant type.

B. Weatherproof Receptacle Cover: Single-gang, extra-duty, weatherproof in-use receptacle cover, suitable for horizontal or vertical installation, with gasket,

mounting hardware, and required adapters. Commercial Electric Model WCW1PC or approved equal.

2.06 SWITCHES

A. Switch: Thermoplastic, commercial grade-grade, single-pole toggle switch, 20-amp, 120/277-volt AC.

B. Weatherproof Switch Cover: Single-gang, extra-duty, weatherproof in-use receptacle cover, suitable for horizontal or vertical installation, with gasket, mounting hardware, and required adapters. Commercial Electric Model WCW1PC or approved equal

PART 3 – EXECUTION

3.01 GENERAL

A. Complete Work in accordance with NFPA 70, National Electrical Code (NEC), 2023 Edition, as adopted and modified by Wisconsin Administrative Code Chapter SPS 316.

B. Install grounding and bonding in accordance with NEC.

C. Color code and number conductors.

D. Install expansion fittings on conduits exiting the ground and entering panels or other fixed equipment.

3.02 CONTROL PANEL

A. Terminate conduits below the control panel behind the vented skirting to provide an air gap between the conduits and panel enclosure.

B. Seal conduit ends behind the skirting with duct seal after conductor installation.

C. Seal conductor penetrations into the control panel as required to maintain the enclosure rating.

3.03 RECEPTACLES

A. Install one receptacle within the lift station control panel enclosure on the dead-front panel.

B. Install one receptacle in a weatherproof box mounted to the electrical equipment board at the lift station, at the location shown on the Drawings.

3.04 SWITCHES

A. Install one switch in a weatherproof box on the electrical equipment board at the lift station, at the location shown on the Drawings, for control of the floodlight and ceiling-mounted lights.

END OF SECTION

SECTION 16230
BACKUP POWER SUPPLY

PART 1 – GENERAL

1.01 SUMMARY

A. This section is for permanently installed natural gas fired generator, automatic transfer switch, emergency generator stop switch, and operation and maintenance manual as specified.

B. Provide backup power supply systems that will provide the appropriate electrical power output for the Ho-Chunk Blue Wing lift station and the Ho-Chunk Blue WWTF.

C. The Contractor shall coordinate installation of the natural gas service once the gravity sewer main work is completed and the generator pad is constructed.

1.02 RELATED WORK

A. Section 01785 – Operation and Maintenance Manual

B. Section 02775 – Concrete Pads

C. Section 02843 – Steel Pipe Bollards

D. Section 13430 – Electrical Control System – Sewage Lift Station

E. Section 16050 – Basic Electrical Materials and Methods

F. Section 16401 – Electrical Power, Service, and Distribution

1.03 REFERENCES

A. All components of the Backup Power Supply shall comply with the appropriate code or ratings. (i.e. UL Listed, DOT, NEC, EPA, etc.)

1.04 SUBMITTALS

A. Details of generator systems with enough detail to determine compliance with these specifications.

B. Detailed generator system sizing calculations. (Calculations shall verify generator is properly sized to provide backup power for the loads at each facility. Load information for each facility will be provided to Contractor.)

C. Automatic transfer switches

D. Emergency generator stop switches

1.05 COORDINATION

A. Coordinate generator start-up testing with Owner and Project Engineer. Start-up shall occur on same day as lift station start-up and be completed with electrician, control integrator, Engineer, and Owner present.

WARRANTY

A. Provide a comprehensive (including travel, parts, and labor) one (1) year manufacturer's warranty on the generator, engine, automatic transfer switch, and associated components. The warranty shall begin at time of generator start-up.

PART 2 – PRODUCTS

2.01 GENERATORS

A. Enclosure: Provide an aluminum, weather-protective, Level 2 sound-attenuated enclosure. Provide extreme-cold-weather equipment, including coolant heater, battery charger, high-capacity battery, and other manufacturer-required accessories necessary for reliable starting and operation at ambient temperatures down to -20°F. Cooling system shall be suitable for operation at ambient temperatures up to 122°F.

B. Base: Provide a system mounted on a fabricated, galvanized-steel base assembly for installation on a concrete slab. Shall also include vibration isolation devices.

C. The base and enclosure shall be completely sealed to prevent varmints from accessing unit.

D. Generator / Engine:

1. Provide generator that uses natural gas as the fuel source. Pressure regulator shall be located on/by fuel meter.

2. Provide the following generators or approved equals (manufacturer shall be the same for both generators)

a. Lift Station: 20 kW natural gas powered generator, 120/208V, 60 Hz, 3-phase. **Cummins Model C20N6**
b. WWTF: 40 kW natural gas powered generator, 120/240V volt, 60 Hz, 1-phase. **Cummins Model C40N6**

3. Provide battery with float-type trickle charge system that will be hard wired to the power supply.

4. Provide an engine cooling system.

5. Provide an engine coolant heater that will be hard wired to the power supply.

6. Provide AC meter package including the following:

    a. Voltmeter – to measure voltage on each line
    b. Ammeter – to measure amperage on each line
    c. Hour meter
    d. Start counter

7. Provide DC monitoring package including the following:

    a. Low oil pressure
    b. High engine temperature
    c. Over-speed
    d. Over-crank

8. Provide a generator circuit breaker.

9. Generator controls shall have:

    a. Automatic voltage regulation
    b. Run time meter
    c. Fault indicator lights
    d. Low oil pressure shutdown
    e. Low coolant level shutdown
    f. Over-speed shutdown
    g. Over-crank shutdown
    h. High temperature shutdown
    i. Start counter

10. Auxiliary Receptacle:

    a. Provide a 120V 20A convenience receptacle within the genset enclosure to be energized if genset is operating or not (hardwired back to the control panel).

11. Provide output to control system from generator and automatic transfer switch for all critical and non-critical alarm conditions.

12. Provide an automatic adjustable timer to exercise generator as desired by Owner.

2.02 AUTOMATIC TRANSFER SWITCHES

A. Provide the lift station and WWTF each with an automatic transfer switch with an automatic exerciser system and the following features:

1. NEMA 4X stainless steel enclosure with lockable weather front door and lockable control box cover to prevent the tampering of the controls.

2. 200-amp rating; appropriately sized for backup generator.

3. Senses partial or total loss of utility power.

4. Integral time delay.

5. Non-service entrance (SE) rated.

6. Provide open/delay transition transfer switch.

7. On/off indicating lights.

8. Designed to meet the National Electrical Code.

9. ATS manufacturer shall equal the manufacturer of the generator.

2.03 EMERGENCY GENERATOR STOP SWITCHES

A. Provide the lift station and WWTF with an emergency generator stop switch and the following features:

1. NEMA 3R weatherproof enclosure suitable for exterior installation.

2. Red, maintained-contact, mushroom-head pushbutton labeled “EMERGENCY GENERATOR STOP.”

3. Locate the emergency stop switch in a readily accessible location outside the generator enclosure and remote from the generator.

4. Operation of the emergency stop switch shall immediately shut down the generator set and prevent automatic restart until the emergency stop switch has been manually reset.

5. Emergency stop circuit shall be hardwired to the generator controls and shall function in all operating modes, including manual, automatic, and exercise modes.

6. Emergency stop switch and associated installation shall be suitable for the installed generator and comply with the National Electrical Code, NFPA 110, and all applicable codes and regulations.

7. Emergency generator stop switch shall be furnished by the generator manufacturer or shall be approved by the generator manufacturer for use with the specified generator set.

8. At the lift station, provide an emergency generator stop switch Equal to Pilla Model GS120 with a break-glass enclosure equal to Pilla Model ST120SN3RSL.

9. At the WWTF, provide an emergency generator stop with equal to model Pilla Model GS120CLM which includes a clear hinged lockout lid.

2.04 APPURTENANCES

A. Provide conduit, wiring, and all other appurtenances required to connect the generator, automatic transfer switch, and emergency stop switches in accordance with the National Electric Code, and local and state codes.

B. Wiring from generator into the ATS shall be color coded brown, orange, yellow.

C. Provide properly sized natural gas piping, fuel regulator, and all other required appurtenances to connect the generator to the natural gas service after gas meter in accordance with gas utility, local, and state codes. Piping shall be sized to provide necessary fuel to generator at full load and at correct pressure.

D. Coordinate installation of natural gas service at the lift station with WE Energies (Dianne Stojak 608-366-2204).

PART 3 – EXECUTION

3.01 EXAMINATION

A. Inspect generator equipment to verify compliance with specifications and with approved submittals prior to shipment and during start-up.

B. Ensure that the system is in new condition.

C. Remove any equipment not meeting these specifications.

3.02 PREPARATION

A. Install concrete slabs for generators and appurtenances in accordance with Section 02775 Concrete Pads.

3.03 INSTALLATION

A. Install generators, transfer switches, and wiring in accordance with the National Electric Code, and local and state laws.

B. Install generators on concrete slabs at the locations identified on plans.

C. Install automatic transfer switches at locations identified on plans.

   a. Re-wire electrical service at the WWTF control building to accommodate automatic transfer switch and main service disconnect.

D. Install all above and underground wiring in conduit.

E. Bury natural gas line minimum of 24 inches deep and in accordance with gas fuel codes.

F. Connect gas lines to generator. Provide protective sleeves as needed to protect gas line (above grade).

3.04 WIRING TO LIFT STATION SCADA

A. Install necessary relays and wiring to communicate the following information to the PLC in the lift station controls enclosure.

   1. Daily and total generator starts

   2. Daily and total generator run time

   3. Alarm conditions

      a. Fail to start
      b. Common alarm

3.05 WIRING TO WWTF CONTROL BUILDING

A. Install data wires in conduit from generator to ATS for future use.

3.06 FIELD QUALITY CONTROL

A. Notify Engineer and Owner of start-up.

B. Perform generator start-up requirements as part of the lift station operation start-up.

C. Start-Up Testing:

1. Test generator electrical output. Complete this testing under a load bank test at a maximum running capacity for a minimum of 4 hours.

2. Make necessary adjustments.

3. Demonstrate how to transfer power manually.

4. Demonstrate the operation of an automatic transfer.

5. Demonstrate how to adjust operational features of generator and automatic transfer switch.

6. Provide owner with a minimum of 1 hour of training on generator operation and maintenance for the lift station generator.

    a. Demonstrate operation of generator.
    b. Run each pump separately.
        i. Measure, balance, and record voltage and amperage on each line. Take measurements at the generator control panel and on the wires leading to the pumps at the lift station control panel.
        ii. Make adjustments to generator as necessary to ensure proper operation
    c. Run two (2) pumps in parallel
        i. Measure, balance, and record voltage and amperage on each line as discussed above.
    d. Provide written report to the engineer that shall include voltage and amperage of each pump for pumps running separately and together.

7. Provide owner with a minimum of 1 hour of training on generator operation and maintenance for the WWTF generator.

    a. Demonstrate operation of generator.
    b. Run each pump separately.
        i. Measure, balance, and record voltage and amperage on each line. Take measurements at the generator control panel and on the wires leading to the pumps at the lift station control panel.
        ii. Make adjustments to generator as necessary to ensure proper operation
    c. Run the WWTF under maximum generator load (all pumps combined).

i. Measure, balance, and record voltage and amperage on each line. Take measurements at the generator control panel within the enclosure and on the wires leading to pump motors.

d. Provide written report to the engineer that shall include voltages and amperages measured.

8. Repair any deficiencies in the backup power supply equipment noted during start-up.

3.07 OPERATION AND MAINTENANCE MANUAL

A. Provide ***two (2) hardcopy and one (1) electronic copy*** standard manufacturer's operation and maintenance manuals for each facility a minimum 2 weeks prior to facility start-up for the generator as part of the operation and maintenance manuals, to include, but not limited to:

1. Detailed drawings of the generator with dimensions.

2. Parts list for the generator with dimensions.

3. Recommended regular maintenance of the generator and frequency.

4. Troubleshooting guide.

END OF SECTION

SECTION 16401
ELECTRICAL POWER, SERVICE AND DISTRIBUTION

PART 1 – GENERAL

1.01 SUMMARY

A. This Section includes electrical service and distribution work at the lift station, including electrical power from the meter to the main service disconnect, automatic transfer switch, and lift station control panel. Provide all materials, equipment, wiring, conduit, and appurtenances required for a complete installation. Work also includes construction of the electrical equipment mounting board and cover.

B. This Section also includes modifications to the electrical service and distribution system at the WWTF for installation of a main service disconnect and automatic transfer switch, including all materials, equipment, wiring, conduit, and appurtenances required for a complete installation.

C. The Contractor is responsible for coordinating installation of the electrical service from the utility transformer to the meter base with Oakdale Electrical Cooperative. The cost of the electrical service has been paid for by the Owner.

1. The Contractor shall supply the electrical meter base.

D. Refer to Section 13430 for electrical equipment provided as part of the lift station control system.

1.02 RELATED WORK

A. Section 02539 – Sewage Lift Station with Valve Vault Rehabilitation

B. Section 02775 – Concrete Pads

C. Section 13430 – Electrical Control System – Sewage Lift Station

D. Section 16050 – Basic Electrical Materials and Methods

E. Section 16230 – Backup Power Supply

1.03 REFERENCES

A. National Electric Code

B. NFPA 79 Electrical Standard for Industrial Machinery

C. Underwriters Laboratories, Inc. (UL)

1.04 SUBMITTALS

A. Meter Base

B. Main Service Disconnects (lift station and WWTF)

C. Submit shop drawings showing the layouts and components of the following:

1. Meter socket

2. Grounding plan

D. All products used shall be approved by electrical utility for use in the power grid system and to their requirements.

E. Shop drawings shall state overall size of each device, box, gutter widths and depths for top, bottom and sides.

F. Include circuit diagrams where appropriate.

G. Draw shop drawings to show the physical arrangement of the sections and breaker arrangements for main distribution equipment.

H. Include dimensions sufficient to determine the size of the equipment.

I. Include circuit breaker type, size, interrupting capacity, number of poles and quantities shall be indicated. Include catalog cuts where appropriate for standard equipment on drawings.

1.05 QUALITY ASSURANCE

A. Provide a complete electrical system at each location specified to operate all the equipment and appurtenances.

B. Complete all work in accordance with the National Electric Code, NFPA 79, and state and local codes.

C. Coordinate work and equipment to be provided under this section with the control system being installed under Section 13430.

PART 2 – PRODUCTS

2.01 GENERAL

A. Provide new materials approved by the Underwriters Laboratory (UL listed) conforming to the project specifications.

B. Materials furnished shall be standard products of current design from a manufacturer regularly engaged in the production of such equipment.

C. All wiring on customer side of meter shall be copper.

2.02 ELECTRICAL POWER AND SERVICE

A. Provide 208/120V AC, 3-phase, 60 Hertz, 200 amp service from the meter base to the lift station electrical equipment.

B. Provide power supply with voltages on all legs within 2% specified voltage.

C. Secondary service wiring, conduit, and trim shall be in accordance with electrical utility standards.

D. Service includes but is not limited to, electrical meter and trim, conduit and wiring between the power company termination and the lift station.

2.03 METER BASE

A. NEMA 3R factory primed and painted, galvanized steel.

B. Rated for current incoming power.

C. Meet the specifications of Oakdale Electric Cooperative.

D. Equal to Milbank.

2.04 MAIN SERVICE DISCONNECTS

A. NEMA 3R factory primed and painted, galvanized steel enclosure.

B. Contractor shall size the main service disconnects as necessary to provide the minimum required ratings:

1. Lift station: 200A, 120/208 VAC rating

2. WWTF: Lift station: 200A, 120/240 VAC rating

C. Fusible, time delay

D. Single throw safety switch style

2.05 GROUNDING

A. Ground all electrical components in accordance with NEC and all other applicable codes.

2.06 LIGHTNING ARRESTORS

A. Refer to Section 13430.

2.07 SERVICE MAINS AND PANELS

A. Refer to Section 13430.

2.08 ELECTRICAL EQUIPMENT BOARD AND COVER

A. Concrete: Refer to Section 02775 – Concrete Pads.

B. Lumber:

3. Posts: 4"x 6", No. 1 prime grade, ground-contact Southern Yellow Pine, pressure-treated and prefinished in CedarTone, or approved equal.

4. Framing: 2”x6”, No. 1 prime grade, ground-contact Southern Yellow Pine, pressure-treated and prefinished in CedarTone, or approved equal.

5. Hardware: hot-dip galvanized, stainless steel, or other corrosion-resistant fasteners approved for use with pressure-treated lumber

C. Roofing Materials

1. Sheathing: 5/8 CDX plywood

2. Roofing underlayment: Owens Corning® ProArmor® synthetic roofing underlayment or approved equal.

3. Metal roofing: steel 28-gauge galvanized Grade 80 steel roofing panels with a painted finish, 36-inch coverage width, 3/4-inch-high ribs spaced 9 inches on center, and an exposed fastener system.

a. Provide ridge cap, edge cap, and other accessories necessary to provide a complete, weather-resistant roofing assembly.

PART 3 – EXECUTION

3.01 GENERAL

A. Install and wire all electrical equipment in accordance with the NEC, manufacturers' requirements, Section 16050, approved submittals, and the locations shown on the Plans or approved by the Project Engineer.

B. Coordinate the installation of the secondary electrical service to the lift station site (from the transformer to the meter base) with Oakdale Electric Cooperative (Andy Steele – 608-372-4131).

C. Coordinate decommissioning of the existing 120/240V single-phase electrical service and transformer with Oakdale Electric Cooperative once the lift station is operating on the new electrical service.

3.02 INSTALLATION AND WIRING AT THE LIFT STATION

A. Install conduit and meter socket at the location shown on the Plans. Mount the meter socket with the new main service disconnect.

    a. Oakdale Electric Cooperative will furnish and install the electrical meter in the meter base.

B. Complete the electrical service and distribution wiring from the meter socket through the main service disconnect and automatic transfer switch to the lift station control panel.

3.03 INSTALLATION AND WIRING AT THE WWTF

A. Modify the existing electrical service and distribution wiring from the meter socket to the existing electrical panel as required to install the new main service disconnect and automatic transfer switch.

B. Provide and install conduit, conductors, fittings, and other appurtenances required for the modified electrical service and distribution system.

3.04 QUALITY ASSURANCE

A. Test and balance all devices for proper operation.

B. The electrician shall be at each generator system start-up to demonstrate proper operation of the associated main disconnect, transfer switch, and electrical distribution equipment.

1. Energize the system with utility power under no-load conditions, then operate the system under normal load.

2. Correct deficiencies identified during start-up to the satisfaction of the Project Engineer.

3.05 ELECTRICAL EQUIPMENT BOARD AND COVER

A. CONCRETE WORK

1. Construct post footings in accordance with the Drawings. Accurately locate posts and maintain plumb, aligned, and properly spaced during concrete placement and curing.

2. Construct concrete pad in accordance with the Drawings and Section 02775 – Concrete Pads.

B. FRAMING

1. Install framing true, plumb, level, square, and securely fastened in accordance with the Drawings.

    a. Cover Construction: Install roof rafters, ridge board, rafter ties, and bracing in accordance with the Drawings. Provide members of required size and spacing, and securely fasten connections to maintain alignment, stability, and proper roof geometry.
    b. Wall Paneling: Install wall panel support members as shown on the Drawings. Cut and fit members accurately and secure to posts with three lag screws per end.

2. Where field cutting, drilling, or notching exposes untreated wood, treat exposed surfaces with a preservative compatible with the specified pressure treatment.

3. Use only hot-dip galvanized, stainless steel, or other corrosion-resistant fasteners approved for use with pressure-treated lumber.

C. ROOFING INSTALLATION

1. Install 5/8-inch CDX plywood roof sheathing securely to framing with panel edges properly supported and joints staggered where practicable.

2. Install synthetic roofing underlayment over clean, dry sheathing in accordance with the manufacturer’s written instructions, including required laps, fastening, and detailing at roof edges and penetrations.

3. Install metal roofing panels in accordance with the manufacturer's written instructions and the Drawings. Align panels uniformly with ribs straight and parallel and provide required side laps and end laps.

4. Secure roofing panels using manufacturer-recommended exposed fasteners and washers compatible with the roofing system. Install fasteners straight and to the proper depth without overdriving or damaging washers or panel finishes.

5. Install ridge cap, edge caps, and other accessories necessary to provide a complete, weather-resistant roofing assembly.

END OF SECTION



This Page Intentionally Left Blank

SECTION 16500
LIGHTING

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes furnishing and installing a floodlight and lighting for the electrical equipment board at the Ho-Chunk Blue Wing lift station.

1.02 RELATED WORK

A. Section 13430 Electrical Controls – Sewage Lift Station

B. Section 16050 – Basic Electrical Material and Methods

C. Section 16401 – Electrical Power, Service, and Distribution

1.03 REFERENCES

A. National Electric Code

1.04 SUBMITTALS

A. Floodlight

B. Ceiling-Mounted Lights

PART 2 – PRODUCTS

2.01 FLOODLIGHT

A. Provide one exterior-rated floodlight to provide nighttime illumination of the lift station site.

B. Floodlight shall have the following minimum characteristics:

1. LED light source.

2. Die-cast aluminum housing with black or dark bronze finish.

3. 120-volt operation.

4. Suitable for exterior, wet-location installation.

5. Provide vandal guard and wire cage protector.

C. Lithonia Lighting D-Series LED Floodlight, Model DSXF3 LED 6 P2 50K 70CRI WFR 120V VG DBLXD, or approved equal.

D. Provide exterior-rated switch for operation of floodlight.

3.01 CEILING-MOUNTED LIGHTS

A. Provide exterior-rated LED light ceiling-mounted fixtures beneath each side of the electrical equipment board roof to provide nighttime illumination of the electrical equipment area.

B. Light fixtures shall have the following minimum characteristics:

1. LED light source.

2. Die-cast aluminum housing with natural aluminum or dark bronze finish.

3. 120-volt operation.

4. Suitable for exterior, wet-location installation.

C. Lithonia Lighting DSXSC LED Series, Model DSXSC LED 20C 530 40K T5M 120V SRM, or approved equal.

D. Provide exterior-rated switch for operation of light fixtures.

PART 3 – EXECUTION

3.01 GENERAL

A. Install lighting systems in accordance with the NEC, applicable Wisconsin Administrative Code requirements, manufacturer's written instructions, and the Contract Documents.

B. Ground lighting equipment and associated electrical systems in accordance with the NEC.

C. Color-code and identify conductors in accordance with Section 16050 – Basic Electrical Materials and Methods.

D. Provide wiring, raceways, fittings, boxes, supports, and other appurtenances required for a complete and operable lighting system in accordance with Section 16050 – Basic Electrical Materials and Methods.

3.02 FLOODLIGHT

A. Mount floodlight fixture to wood framing on the gable end of roof covering the electrical equipment board in the location shown on the Drawings.

B. Aim and adjust floodlight to illuminate the wet well, valve vault, and surrounding work area while.

C. Install exterior-rated on/off switch on the electrical equipment board approximately 4 feet above finished grade at the location shown on the Drawings.

3.03 CEILING-MOUINTED LIGHTS

A. Mount ceiling light fixtures beneath the electrical equipment board roof at the locations shown on the Drawings.

B. Secure light fixtures to pressure-treated wood blocking or mounting boards fastened to the roof framing.

C. Position fixtures to provide uniform illumination of the electrical equipment and control panel.

D. Install exterior-rated on/off switch on the electrical equipment board approximately 4 feet above finished grade at the location shown on the Drawings.

END OF SECTION



This Page Intentionally Left Blank

SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION

FOR

HO-CHUNK NATION

HO-CHUNK BLUEWING

PROPOSED SANITARY SEWER IMPROVEMENT PROJECT

MONROE COUNTY, WISCONSIN

JUNE 28, 2024

CEC PROJECT NO. GD-240162

COLEMAN ENGINEERING COMPANY

CIVIL ENGINEERING • GEOTECHNICAL ENGINEERING • SURVEYING

SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING EVALUATION

FOR

HO-CHUNK NATION

HO-CHUNK BLUEWING

PROPOSED SANITARY SEWER IMPROVEMENT PROJECT

MONROE COUNTY, WISCONSIN

JUNE 28, 2024

CEC PROJECT NO. GD-240162

Prepared By:

COLEMAN ENGINEERING COMPANY
635 Circle Drive
Iron Mountain, MI 49801

COLEMAN ENGINEERING COMPANY
CIVIL ENGINEERING • GEOTECHNICAL ENGINEERING • SURVEYING

635 CIRCLE DRIVE • IRON MOUNTAIN, MI 49801 • PHONE: 906-774-3440

June 28, 2024

Mr. Kevin Gunderson
Environmental Sciences Program Manager
Ho-Chunk Nation
N6520 Lumber Jack Guy Road
Black River Falls, WI 54615

Re: Subsurface Exploration and Geotechnical Engineering Evaluation
Ho-Chunk Nation
Ho-Chunk Bluewing
Proposed Sanitary Sewer Improvement Project
Monroe County, Wisconsin

Dear Mr. Gunderson:

Coleman Engineering Company (CEC) has completed the subsurface exploration and geotechnical engineering evaluation for the above-referenced project. This report includes a summary and results of the subsurface exploration and laboratory activities completed for this project. In addition, this report includes recommendations regarding foundation design and construction for the proposed project, and other geotechnical considerations.

If you have any questions about our report, please feel free to call me at (906) 774-3440.

Sincerely,

COLEMAN ENGINEERING COMPANY

Jake Kacynski
Geotechnical Project Manager

JK/ks

Enclosure

CEC Project No. GD-240162

TABLE OF CONTENTS

		PAGE #
I.	INTRODUCTION	1
II.	FIELD PROCEDURES.....	1
III.	LABORATORY PROCEDURES.....	2
IV.	SITE CONDITIONS.....	2
V.	ANALYSIS AND RECOMMENDATIONS	4
VI.	LIMITATIONS OF SUBSURFACE EXPLORATION	8

APPENDICES

APPENDIX A. LOCATION MAPS
- Project Location Map
- Boring Location Maps

APPENDIX B. CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)

APPENDIX C. SOIL EXPLORATION-GENERAL NOTES AND LEGEND

APPENDIX D. BORING LOGS

I. INTRODUCTION

The Ho-Chunk Nation is proposing improvements to the sanitary sewer collection system in the Bluewing Community due to damage to the existing sanitary that is allowing a significant amount of groundwater to enter the sanitary sewer, particularly during the spring thaw. The new sanitary sewer is proposed to be constructed of PVC.

The purpose of this geotechnical study was to explore and report conditions along the route of the proposed sanitary sewer, to analyze these conditions, and to provide geotechnical engineering recommendations for utility and earthwork operations with respect to the proposed construction.

II. FIELD PROCEDURES

A total of eight (8) borings were drilled at the site to a nominal depth of 15 feet below existing site grades. The borings were advanced with a Geoprobe 7822 DT drill unit present on- site from May 6, 2024 to May 8, 2024 using 3 ¼-inch I.D. hollow-stem augers (HSA). The HSAs act as continuously-advancing steel casing to prevent the borehole walls from collapsing in above the depths to be tested/sampled. Sampling tools are lowered inside the augers for testing into undisturbed soils ahead of the tip of the augers.

Drilling and field sampling were performed in accordance with ASTM D-1586, "Penetration Test and Split Barrel Sampling of Soils" using a 2-inch O.D. split spoon. The test results are reported on the individual boring logs in Appendix D.

A field log was prepared for each soil boring during subsurface exploration which contained the drilling method, Standard Penetration Test (SPT) data, sample depths, various soil types, and indication of the presence of groundwater. The field logs were submitted to Coleman Engineering Company's (CEC) laboratory along with the soil samples for evaluation of the subsurface information and preparation of the final soil boring logs. A brief explanation of soil exploration and general notes are presented in Appendix C.

The boring locations were selected, and established in the field, by Indian Health Services (IHS). Ground surface elevations at the boring locations were not part of our scope of services, however, elevation data for the boreholes was provided by IHS and is incorporated in this report and the attached boring logs. The general project location and boring location maps are presented in Appendix A.

III. LABORATORY PROCEDURES

The penetration test samples were visually observed by a laboratory technician under the supervision of a licensed Geotechnical Engineer in the state of Wisconsin to estimate the distribution of grain-sizes, plasticity, organic content, moisture condition, color, and presence of lenses and seams. All field soil samples collected were visually classified in general accordance with ASTM D2488, "Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)." A brief explanation of the classification of soils is included in Appendix B.

The final logs are contained in Appendix D. The soil boring logs contain both factual and interpretive information. Similar soils were grouped into strata on the logs. It should be emphasized that the recommendations are based only on the final boring logs. On the final logs, horizontal lines designating the interface between differing materials encountered represent approximate boundaries. The transition between soil strata in the field may be gradual in both horizontal and vertical directions.

IV. SITE CONDITIONS

A generalized summary of the subsurface conditions encountered during our exploration is presented below. The descriptions provided below are generalized and brief; individual soil boring logs should be reviewed to determine the subsurface conditions at the individual boring locations. The individual soil boring logs are included in Appendix D.

In performance of the subsurface explorations, specific information is obtained at specific locations at specific times. However, it is a well-known fact that variations in soil and rock conditions exist on most sites between boring locations and that seasonal and annual fluctuations in groundwater levels will likely occur. The nature and extent of variations may not become evident until the course of construction. Variations in the soil profile may occur and should be anticipated throughout the proposed site.

The borings encountered 0.1 to 0.3 feet of topsoil at the surface. Below the topsoil, the samples obtained at all boring locations were native poorly-graded sand (SP) to the maximum depths explored. Based on elevated SPT N values and knowledge of shallow weathered sandstone in the local area, it is possible that highly weathered bedrock/sandstone was encountered within the borings which was retrieved as poorly-graded sand in the split spoon. Possible highly weathered bedrock was encountered at depths ranging from approximately 6.5 feet to 13.0 feet below existing grade (elev. +946.33 to +926.91). In addition, trace gravel and trace organics were encountered as noted in the boring logs. The soils encountered were in a very loose to very dense

condition (possible highly weathered bedrock). Table 1 below provides a summary of the water table and apparent weathered bedrock elevations.

Table 1: Estimated Water Table and Possible Highly Weathered Bedrock Depths

Geotechnical Boring Summary				
Boring	Boring Location (latitude, longitude)	Boring Elevation (feet)	Water Table Depth Below Grade/Elevation (feet)	Approximate Possible Highly Weathered Bedrock Depth Below Grade/ Elevation (feet)
B-1	44.035642, -90.426393	+954.13	N/A*	8.0/946.13
B-2	44.034292, -90.426111	+954.36	14.8/939.56	8.0/946.36
B-3	44.034257, -90.425621	+952.63	13.3/939.33	8.0/944.63
B-4	44.034225, -90.425256	+951.76	13.4/938.36	8.0/943.76
B-5	44.034413, -90.423534	+946.89	11.2/935.69	6.5/940.39
B-6	44.036444, -90.421822	+939.91	8.8/931.11	13.0/926.91
B-7	44.036180, -90.423501	+942.30	10.0/932.30	13.0/929.30
B-8	44.037012, -90.426153	+944.95	11.3/933.65	8.0/936.95
*Groundwater not observed during drilling				

Bedrock coring was not authorized or performed. Therefore, the type and quality of underlying bedrock cannot be accurately assessed. However, as mentioned above, based on SPT N values greater than 50 and known shallow weathered sandstone in the area, it's likely that samples retrieved in the split spoon as poorly-graded sand were in fact highly (or completely) weathered bedrock. The possible bedrock was weathered enough to readily allow for auger and 2-inch split spoon advancement. Highly weathered bedrock is defined as "more than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones." Completed weathered bedrock is defined as "All rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones."

Measurable groundwater ranged from not being observed at the time of drilling, to depths of about 8.8 to 14.8 feet below existing site grades (elev. +939.56 to +931.11). The groundwater elevation should be expected to fluctuate seasonally, and over a period of years, depending upon amounts of surface runoff, evaporation, precipitation, snowmelt, and the level of any nearby rivers and lakes.

For more detailed soil descriptions see the individual soil boring logs in Appendix D.

V. ANALYSIS AND RECOMMENDATIONS

Underground Utility Construction

Based on the borings, the soils encountered at typical invert elevations are generally suitable for utility support. In the event that unstable soils are encountered, it may be necessary to sub-cut these soils 1 to 3 feet (depth to be determined by field observation) and replace them with structural fill in order to provide a stable work surface.

All trench backfill should be compacted to a minimum of ninety-five percent (95%) of the maximum dry density (ASTM D1557). Trench backfills should be placed in lifts not exceeding 9 inches in loose thickness. Excavated soils are recommended for trench backfill above the pipe bedding material if they are at or can be brought, with reasonable effort, to within +/- two percent (2%) of the optimum moisture content as defined by the modified Proctor test (ASTM D1557). In addition, the excavated soils shall be free of chunks of frozen soil, organics, cobbles, and boulders, and any other deleterious materials. If this is not the case, we recommend that all excavations be backfilled with a soil recommended by a geotechnical engineer familiar with site subsurface conditions. Pipe bedding, consisting of WisDOT Section 209 Grade 1 or Section 210 Type A sand should extend a minimum of 12 inches above the pipe crown. Alternatively, the native site soils are suitable for utility bedding material provided they are screened and free of any cobbles, boulders, angular gravel, or other materials that may be harmful to the integrity of the utility. A sieve analysis on the native soils should be completed to verify the gradation.

Excavations extending deeper than approximately 8 to 15 feet (Elev. + 931.11 to +939.56) at this site will encounter the local unconfined groundwater. It is anticipated that groundwater will flow unpredictably into excavations at this depth. Any excavation that is anticipated to intersect the water table will require dewatering as described below in the "Groundwater Conditions" section of this report.

Structural Fill

Structural fill should consist of well-graded sand and gravel containing less than eight percent (8%) by weight passing the No. 200 sieve. A soil meeting Wisconsin Department of Transportation (WisDOT) specifications for Section 209 Grade 1 or Section 210 Type A sand and gravel would be acceptable for use as structural fill depending on the application. Alternatively, excavated granular soils (SP, SP-SM, SM) may be used as structural backfill if they are at or can be brought, with

reasonable effort, to within +/- two percent (2%) of the optimum moisture content as defined by the modified Proctor test (ASTM D1557). In addition, the excavated soils shall be free of chunks of frozen soil, organics, cobbles, and boulders, and any other deleterious materials and is verified by a CEC geotechnical engineer or qualified representative.

Structural fill should be placed in lifts not exceeding 9 to 12 inches in loose thickness and compacted to a minimum of ninety-five percent (95%) of the maximum dry density in accordance to the modified Proctor test (ASTM D1557). Density testing should be performed to confirm that the material has achieved an adequate degree of compaction.

The soil borings indicate that excavations below approximately 8 to 15 feet (Elev. + 931.11 to +939.56) will most likely encounter local unconfined groundwater. If excavations are proximal to the local groundwater elevation, vibratory compaction within 12 inches of the groundwater may destabilize native soils. If this is the case, we recommend increasing the first lift of structural backfill to a thickness of 18 inches to prevent vibratory compaction from bringing groundwater to the surface of the backfill. Alternately, structural fill placed near or below the water table could consist of a layer of open-graded gravel base course (WisDOT Section 310 or similar) completely enveloped in a geotextile (Mirafi 140 N-series or similar) to prevent migration of subsequent layers of engineered fill into open voids in the aggregate. Structural backfill can then proceed as defined above.

Construction Considerations

Groundwater Considerations

Seepage of groundwater will most likely occur within excavations approaching 8 to 15 feet (Elev. + 931.11 to +939.56) in depth. Excavations performed in the spring and early summer may encounter higher groundwater conditions than excavations performed during drier seasons. Surface water may also temporarily accumulate at some of these locations after periods of extended or heavy rain. Seepage water should be able to be removed from excavations utilizing typical filtered sump pit and pumping methods to an approximate depth of 8 to 15 feet below the existing grade.

Any excavations extending below 8 to 15 feet (Elev. + 931.11 to +939.56) below grade are likely to encounter significant amounts of groundwater within the subgrade soils. More elaborate dewatering measures, such as well points or large diameter wells may be required to dewater excavations extending below this elevation.

Dewatering operations will need to be sufficient to allow fill placement and utility construction activities to take place in dry conditions. Dewatering should lower the groundwater surface to at

least 2 feet below the bottom of all excavations to avoid upward flow gradients that could destabilize the base of the excavation and so that any required engineered fill placement can take place in “dry” conditions.

Water should not be allowed to pond on the surface of the subgrade bearing soils, as this will cause softening of the subgrade and subsequent loss of strength. Concrete or fill material should not be placed on disturbed soils or in excavations containing standing water or on subgrade that is frozen. Construction should be staged to avoid leaving excavations exposed to precipitation any longer than necessary prior to constructing foundations.

The groundwater may be environmentally impacted. Therefore, all pumped groundwater should be disposed of in accordance to pertinent environmental regulations.

Excavations

OSHA has instituted strict standards for temporary construction excavations. These standards are outlined in 29 CFR Part 1926 Subpart P. Excavations within unstable soil conditions or extending 5 feet or more in depth should be adequately sloped or braced according to these standards. The actual stable angle of excavation should be determined during construction and will depend upon loading, soil, and groundwater conditions encountered. Excavation safety is the responsibility of the contractor. Stockpiles or equipment should not be placed near the top of the excavation slopes. If new excavations encroach upon existing structures or utilities, care should be exercised during construction to prevent loss of support.

While the soils encountered in the test borings are not particularly sensitive to disturbance, construction traffic on the exposed subgrade should be kept to a minimum to avoid disturbance of the soil. Construction of haul roads may be required to avoid disturbance of the entire site depending on daily traffic through the project site. In addition, placement of a granular working mat or lean concrete may aid in reducing the disturbance to the subgrade bearing soils if necessary. Any subgrade soils becoming soft and/or disturbed will need to be removed to provide for proper performance.

As discussed above, bedrock excavation may be required for this project to reach appropriate invert depths for the utility. As shown in the table, possible highly weathered bedrock (sandstone) was encountered at depths ranging from 6.5 to 13.0 (Elev. +926.91 to +944.63) feet below grade. The possible bedrock was weathered enough to readily allow for auger and 2-inch split spoon advancement. Highly weathered bedrock is defined as “more than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a

discontinuous framework or as corestones." Completed weathered bedrock is defined as "All rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones." Because bedrock coring was not authorized or performed, the type and quality of underlying bedrock cannot be accurately assessed. Local well logs and USGS bedrock maps indicate the bedrock underlying this project site is sandstone, which has variable degrees of strength and weathering. Depending on the type, condition, and quality of bedrock encountered, effort required to remove the bedrock can vary widely.

During construction, adequate provisions should be made for proper drainage, so as to prevent erosion and possible damage to this site and adjacent property. During excavations, caution should be exercised not to damage existing underground utilities or undermine existing foundations. Based upon the depth of the excavations, earth retention systems may be required and should be designed by a registered professional engineer.

In the event construction takes place during freezing conditions, precautions should be taken to prevent frost from penetrating below exposed foundations. Exposed subgrade should be free of frost prior to placement of fill. Structural fill containing ice chunks or frozen soil should not be incorporated in a structural fill.

The soil may be environmentally impacted. Therefore, any excavated soil would need to be properly handled, classified, and disposed of in accordance to pertinent environmental regulations.

Inspection and Testing

A qualified testing laboratory should be retained throughout the course of earthwork operations for testing and documentation of compliance with the recommendations of this report and related project specifications. As a guide, the following compaction testing schedule is recommended:

Area or Material To Be Tested	**Recommended Minimum Testing Frequency**
Native Subgrades	1 test per 2,500 sq. ft.
Engineered Fill	1 test per 2,500 sq. ft. per lift
Wall Footings	1 test per 100 lineal feet
Utility Trenches	1 test per 50 lineal feet per lift

VI. LIMITATIONS OF SUBSURFACE EXPLORATION

Services performed by Coleman Engineering Company as part of this investigation have been conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering profession currently practicing under similar conditions. No other warranty, expressed or implied, is made.

Subsurface conditions away from the boring will probably vary from those encountered at the location where the boring was made. The data, interpretations and recommendations contained herein are based solely on the information obtained from the eight (8) standard penetration test boring completed for this study.

The conclusions and recommendations contained in this report are based on the assumption that the materials encountered in the boring represent the site conditions. If any unforeseen difficulties or unusual conditions are encountered, Coleman Engineering Company should be contacted immediately in order to make supplemental recommendations.

This report completes our present assignment for this project. As the design nears completion, we recommend that you consult with us on unanticipated problems or questions regarding the design and/or review of any plans or specifications. The work assignments for the above services are subject to your prior approval and authorization.

Our conclusions and recommendations are predicated on observation and testing of the excavation preparations by qualified personnel. it would be logical for Coleman Engineering Company to provide that service, since we are best able to determine if the conditions encountered match those used in our analyses, to determine if modifications of our recommendations are needed, and to make such modifications of our recommendations as may be necessary. Modifications of our recommendations by others relieve us of responsibility for them.

This report has been completed under the supervision of Timothy M. Tomlanovich, a registered professional engineer in the State of Wisconsin.

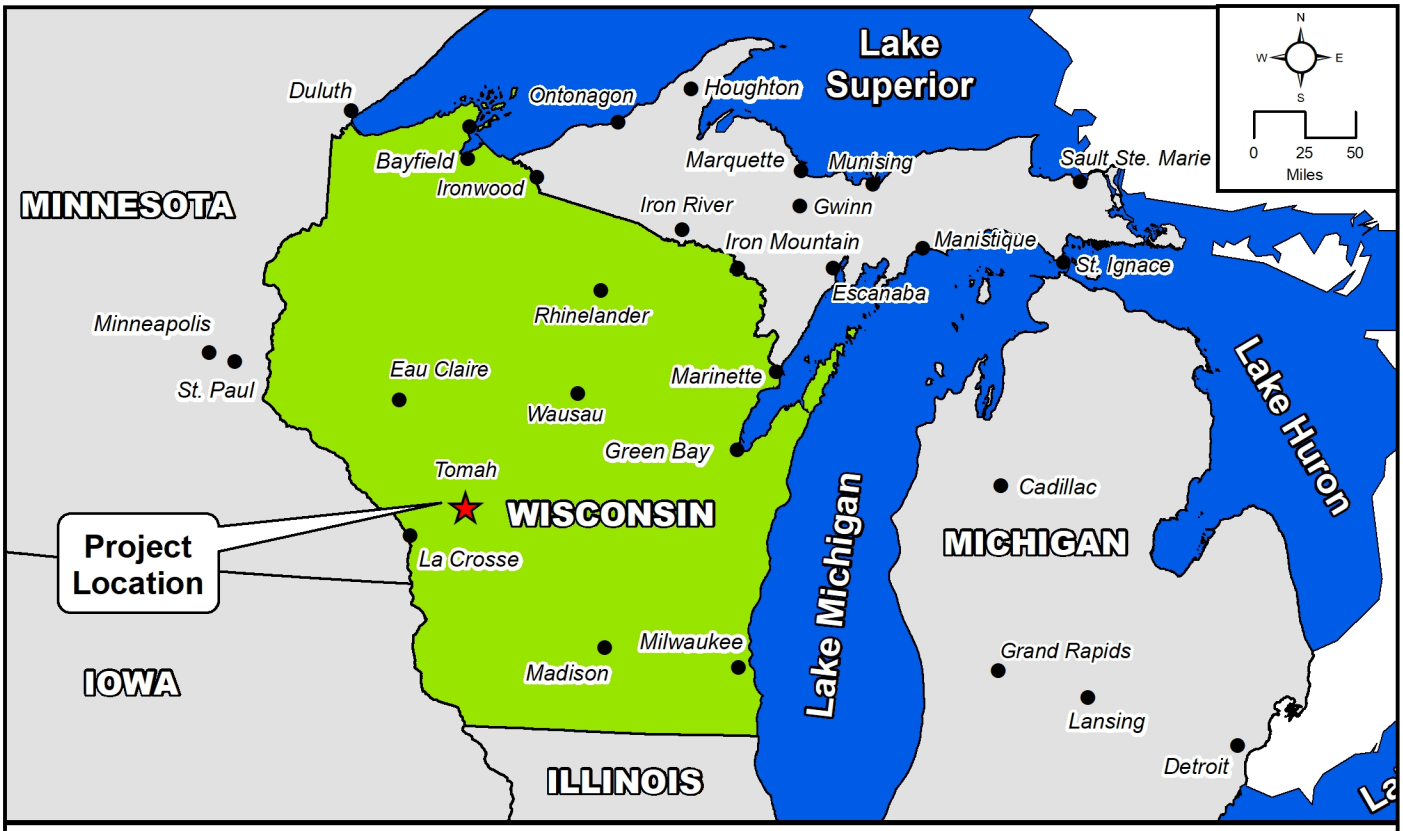
Timothy M. Tomlanovich, P.E.
Geotechnical Engineer
License WI # E-40189



APPENDIX A

PROJECT LOCATION MAPS

- Project Location Map
- Boring Location Maps

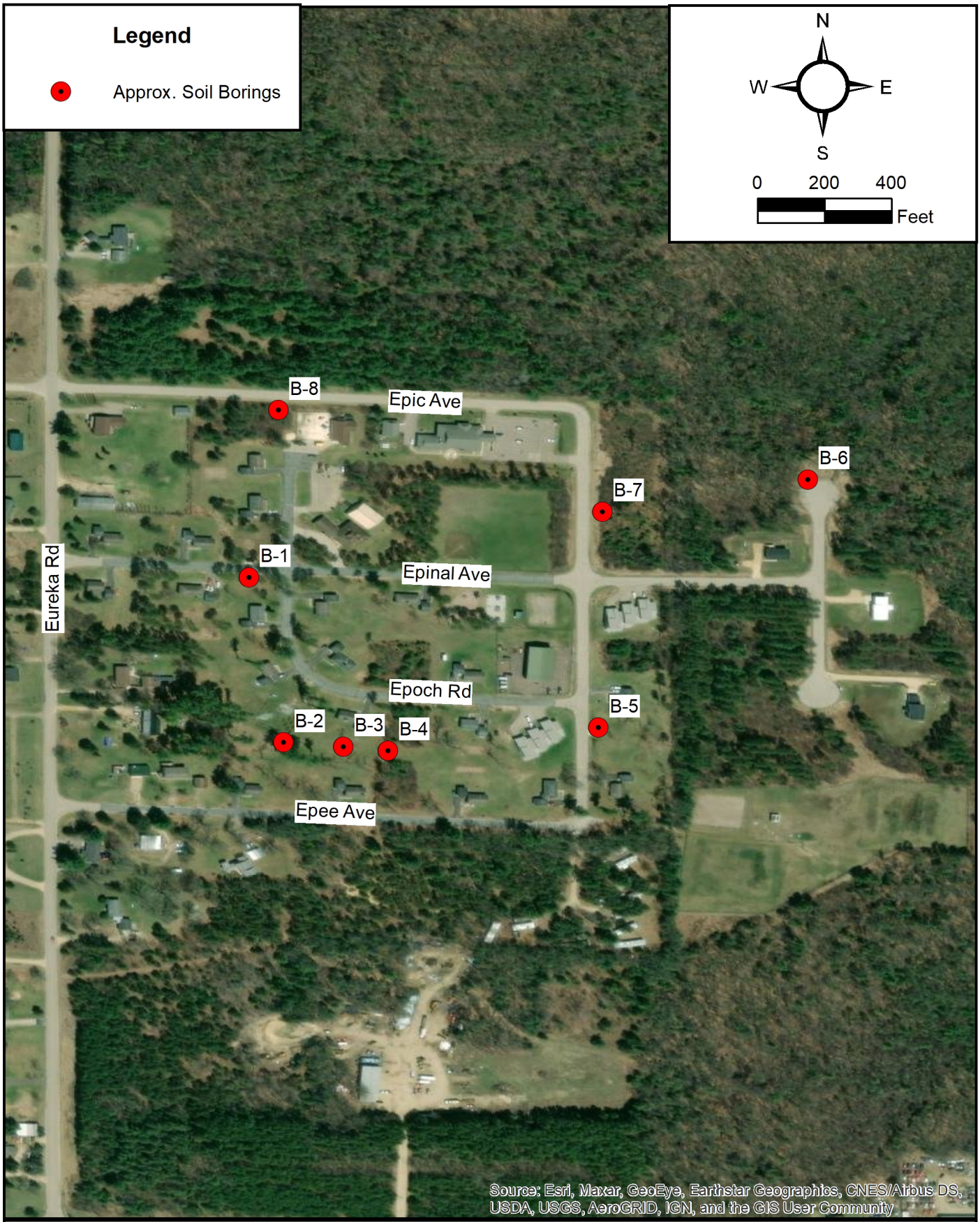


PROJECT LOCATION MAP



SITE LOCATION MAP

Coleman Engineering Company Iron Mountain • Ironwood • Green Bay www.coleman-engineering.com	Ho-Chunk Nation Bluewing Sewer Soils Investigation Byron, Wisconsin	Project No: 240162	GIS File: WIW_WIQ
		Map Date: 6/18/24	Figure No: Fig 1



AS-DRILLED SOIL BORING LOCATION MAP

Coleman Engineering Company 635 Circle Drive • Iron Mountain, MI 49801 • Phone: 906-774-3440 200 East Ayer Street • Ironwood, MI 49938 • Phone: 906-932-5048	Ho-Chunk Nation Bluewing Sewer Soils Investigation Byron, Wisconsin	Project No: **240162**	GIS File: **BORELOC.mxd**
		Map Date: **6/19/24**	Figure No: **Fig 2**

APPENDIX B

CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES
(UNIFIED SOIL CLASSIFICATION SYSTEM)

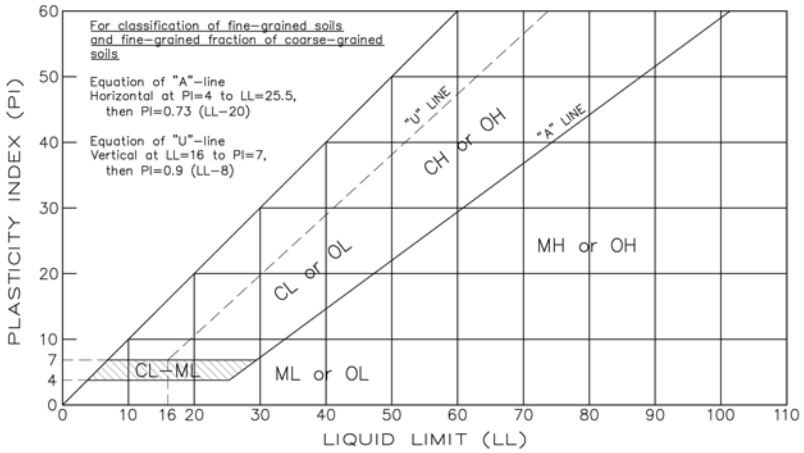
COLEMAN ENGINEERING COMPANY

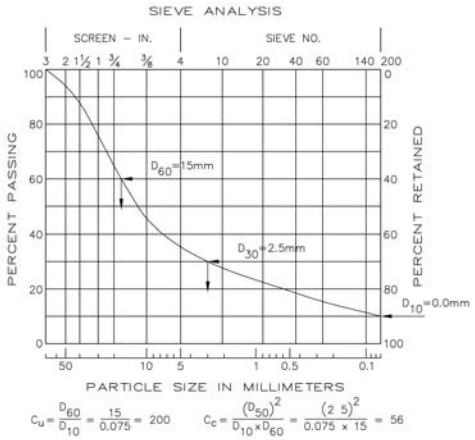
635 Circle Drive
Iron Mountain, Michigan 49801

CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES
ASTM Designation: D-2487 – 83
(Based on Unified Soil Classification System)

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A]				Soil Classification	
				Group Symbol	Group Name[B]
Coarse-Grained Soils More than 50 % retained on No. 200 sieve	Gravels More than 50 % of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5 % fines[C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]	GW	Well-graded gravel [F]
			$Cu < 4$ and/or $1 > Cc > 3$[E]	GP	Poorly graded gravel[F]
		Gravels with Fines more than 12 % fines[C]	Fines classify as ML or MH	GM	Silty gravel[F,G,H]
			Fines classify as CL or CH	GC	Clayey gravel[F,G,H]
	Sands 50 % or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5 % fines[D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$[E]	SW	Well-graded sand
			$Cu < 6$ and/or $1 > Cc > 3$[E]	SP	Poorly graded sand [I]
		Sands with Fines More than 12 % fines[D]	Fines classify as ML or MH	SM	Silty sand[G,H,J]
			Fines classify as CL or CH	SC	Clayey sand[G,H,I]
Fine-Grained Soils 50 % or more passes the No. 200 sieve	Silts and Clays Liquid limit less than 50	inorganic	Pl > 7 and plots on or above "A" line[J]	CL	Lean clay[K,L,M]
			Pl < 4 or plots below "A" line[J]	ML	Silt[K,L,M]
		organic	$\frac{\text{Liquid limit – oven dried}}{\text{Liquid limit – not dried}} < 0.75$	OL	Organic clay[K,L,M,N]
					Organic silt[K,L,M,O]
	Silts and Clays Liquid limit 50 or more	inorganic	Pl plots on or above "A" line	CH	Fat clay[K,L,M]
			Pl plots below "A" line	MH	Elastic silt[K,L,M]
		organic	$\frac{\text{Liquid limit – oven dried}}{\text{Liquid limit – not dried}} < 0.75$	OH	Organic clay[K,L,M,P]
					Organic silt[K,L,M,Q]
Highly organic soils	Primarily organic matter, dark in color, and organic odor			PT	Peat

[A] Based on the material passing the 3-in. (75-mm) sieve.
[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
[C] Gravels with 5 to 12 % fines require dual symbols:
GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
[D] Sands with 5 to 12 % fines require dual symbols:
SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
[E] $Cu = D_{60}/D_{10} \quad \frac{(D_{30})^2}{D_{10} \times D_{60}}$
[F] If soils contains ≥ 15 % sand, add "with sand" to group name.
[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.
[H] If fines are organic, add "with organic fines" to group name.
[I] If soil contains ≥ 15 % gravel, add "with gravel" to group name.
[J] If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.
[K] If soil contains 15 to 29 % plus No. 200, add "with sand" or "with gravel", whichever is predominant.
[L] If soil contains ≥ 30 % plus No. 200, predominantly sand, add "sandy" to group name.
[M] If soil contains ≥ 30 % plus No. 200, predominately gravel, add "gravelly" to group name.
[N] Pl ≥ 4 and plots on or above "A" line.
[O] Pl < 4 or plots below "A" line.
[P] Pl plots on or above "A" line.
[Q] Pl plots below "A" line.





APPENDIX C

SOIL EXPLORATION-GENERAL NOTES AND LEGEND

SOIL EXPLORATION
GENERAL NOTES AND LEGEND

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE - IRON MOUNTAIN, MICHIGAN 49801 (906) 774-3440
200 EAST AYER STREET - IRONWOOD, MICHIGAN 49938 (906) 932-5048

DESCRIPTIVE SOIL CLASSIFICATION
ASTM D2487 / 2488

GRAINSIZE TERMINOLOGY

Soil Fraction	Particle Size	U.S. Standard Sieve Size
Boulders	Larger than 12"	Larger than 12"
Cobbles	3" to 12"	3" to 12"
Gravel: Coarse	3/4" to 3"	3/4" to 3"
Fine	4.75mm to 3/4"	#4 to 3/4"
Sand: Coarse	2.00mm to 4.75mm	#10 to #4
Medium	0.42mm to 2.00mm	#40 to #10
Fine	0.075mm to 0.42mm	#200 to #40
Silt	0.005mm to 0.075mm	Smaller than #200
Clay	Smaller than 0.005mm	Smaller than #200

GENERAL TERMINOLOGY

Physical Characteristics
Color, moisture, grain shape, fineness, etc.
Major Constituents
Clay, silt, sand, gravel
Structure
Laminated, varved, fibrous, stratified, cemented, fissured, etc.
Geologic Origin
Glacial, alluvial, eolian, residual, etc.

RELATIVE DENSITY

Term	"N" Value
Very Loose	0–4 BPF
Loose	5–10 BPF
Medium Dense	11–30 BPF
Dense	31–50 BPF
Very Dense	Over 50 BPF

RELATIVE PROPORTIONS OF COHESIONLESS SOILS

Proportional Terms	Defining Range By Percentages of Weight
Trace	0%–5%
With	5%–12%
–Y (ie. silty, sandy)	12%–50%

CONSISTENCY

Term	"N"–value	qa (tsf)
Very Soft	0–1 BPF	0.0 to 0.25
Soft	1–4 BPF	0.25 to 0.50
Medium	5–8 BPF	0.50 to 1.0
Stiff	8–16 BPF	1.0 to 2.0
Very Stiff	17–31 BPF	2.0 to 4.0
Hard	Over 32 BPF	Over 4.0

ORGANIC CONTENT BY COMBUSTION METHOD

Soil Description	Loss on Ignition
Non–Organic	Less than 4%
Organic Silt / Clay	4% – 12%
Sedimentary Peat	12% – 50%
Fibrous and Woody Peat	More than 50%

PLASTICITY

Term	Plastic Index
None to Slight	0–4
Slight	5–7
Medium	8–22
High to Very High	Over 22

The penetration resistance, N–value, is the summation of the number of blows required to effect two successive 6" penetrations of the 2" split–barrel sampler or blows per foot (BPF). The sampler is typically driven 18" with a 140 lb. weight falling 30" and is seated to a depth of 6" before commencing the standard penetration test. When driven 24" the "N" is the sum of the blow of the second and third 6" increment.

SYMBOLS
DRILLING AND SAMPLING

RB – Roller Bit
RC – Rock Coring
RQD – Rock Quality Designator
CW – Clear Water
DM – Drilling Mud
HSA – Hollow Stem Auger
SSA – Solid Stem Auger
HA – Hand Auger
SPT – Standard Penetration Test
2SS – 2" Diameter Split–Barrel Sample
3SS – 3" Diameter Split–Barrel Sample
2ST – 2" Diameter Shelby Tube Sample
3ST – 3" Diameter Shelby Tube Sample
PS – 3" Diameter Piston Tube Sample
AS – Auger Sample
WS – Wash Sample
NR – No Recovery
VS – Vane Shear Test
T – Torvane Shear Test
BS – Bag Sample
GS – Grab Sample
q_a – Penetrometer Reading, tsf
q_u – Unconfined Strength, tsf
WH – Weight Of Hammer
WR – Weight Of Rods

LABORATORY TEST

W – Moisture Content, %
LL – Liquid Limit, %
PL – Plastic Limit, %
SL – Shrinkage Limit, %
LI – Loss on Ignition, %
DD – Dry Density, psf

WATER LEVEL MEASUREMENT

▽ Water Level During Drilling
▼ Water Level After Drilling
▼ Water Level at Time Shown 1
▼ Water Level at Time Shown 2
▼ Water Level at Time Shown 3
▼ Water Level at Time Shown 4
NW – No Water Encountered
BCR – Before Casing Removal
ACR – After Casing Removal

NOTE: Water level measurements shown on the boring logs represent conditions at the time indicated and may not reflect static levels, especially in cohesive soils.

Revised 3/3/22

APPENDIX D

BORING LOGS

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-1

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.035642497429, -90.426392677381 - See boring loc. dwg. — ELEV: 954.13 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 15.4

DATE STARTED: 5/6/24 — DATE COMPLETED: 5/6/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	WH-1-2 (3)	0.9		0	TOPSOIL 0.2'		954.1	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				1	(SP) POORLY-GRADED SAND, dark brown, fine to medium, with organics, moist, very loose								
				2									
				3									
				4									
2	1-3-5 (8)	1.2		5	...light brown, no organics, loose		949.1						
				6									
				7									
				8	± 8.0' Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light brown, fine, damp, very dense								
				9									
3	43-50/0.1' (-)	0.5		10			944.1						
				11									
				12									
				13									
				14									
4	50/0.4' (-)	0.3		15	15.4' End of Boring		939.1						
				16									
				17									
				18									
				19									
				20			934.1						

-AS-Auger Sample
-BS-Bag Sample
-RC-Rock-Core
-MC-Macrocore
-PS-Piston Tube
-2SS-2" Split Spoon
-3SS-3" Split Spoon
-2ST-2" Shelby Tube
-3ST-3" Shelby Tube

▽ while drilling
▼ after drilling
▼ after hours

BORING NO.: B-1

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-2

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.034292054140, -90.426111042487 - See boring loc. dwg. — ELEV: 954.36 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 15.4

DATE STARTED: 5/8/24 — DATE COMPLETED: 5/8/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	1-1-3 (4)	1.3		0	TOPSOIL 0.16'		954.4	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				1	(SP) POORLY-GRADED SAND, dark brown, fine to medium, with organics, moist, very loose								
				2									
				3									
				4									
2	3-6-7 (13)	1.5		5	...no organics, brown, trace gravel, medium dense		949.4						
				6									
				7									
				8	± 8.0' Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light brown, fine, wet, very dense								
				9									
3	6-41-50/0.2' (-)	0.7		10			944.4						
				11									
				12									
				13									
				14									
				15		▽	939.4						
4	50/0.4' (-)	0.4			15.4' End of Boring			Driller's note: Samples wet 15.0' to 15.4'					
				16									
				17									
				18									
				19									
				20			934.4						

-AS-Auger Sample
-BS-Bag Sample
-RC-Rock-Core
-MC-Macrocore
-PS-Piston Tube
-2SS-2" Split Spoon
-3SS-3" Split Spoon
-2ST-2" Shelby Tube
-3ST-3" Shelby Tube

▽ while drilling 14.8 ▼ after hours
▼ after drilling

BORING NO.: B-2

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-3

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.034257176092, -90.425621151173 - See boring loc. dwg. — ELEV: 952.63 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 15.2

DATE STARTED: 5/8/24 — DATE COMPLETED: 5/8/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	1-1-3 (4)	0.8		0	TOPSOIL 0.16'		952.6	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				1	(SP) POORLY-GRADED SAND, dark brown, fine to medium, trace organics, moist, very loose								
				2									
				3									
				4									
2	3-7-8 (15)	1.2		5	...light brown, fine, medium dense		947.6						
				6									
				7									
				8	± 8.0' Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light yellowish brown, fine, trace gravel, wet, very dense								
				9									
3	18-50/0.4' (-)	0.8		10			942.6						
				11									
				12									
				13		▽							
				14									
4	50/0.2' (-)	0.2		15	15.2' End of Boring		937.6	Driller's note: Samples wet 15.0' to 15.2'					
				16									
				17									
				18									
				19									
				20			932.6						

-AS-Auger Sample; -BS-Bag Sample; -RC-Rock-Core; -MC-Macrocore; -PS-Piston Tube; -2SS-2" Split Spoon; -3SS-3" Split Spoon; -2ST-2" Shelby Tube; -3ST-3" Shelby Tube

▽ while drilling 13.3 ▼ after drilling ▼ after hours

BORING NO.: B-3

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-4

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.034224943744, -90.425255731263 - See boring loc. dwg. — ELEV: 951.76 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 15.3

DATE STARTED: 5/8/24 — DATE COMPLETED: 5/8/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	1-2-5 (7)	0.8		0	TOPSOIL 0.16'		951.8	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				1	(SP) POORLY-GRADED SAND, dark brown, fine to medium, trace organics and roots, moist, loose								
				2									
				3									
				4									
2	1-2-2 (4)	1.5		5	...light brown, fine, no roots, very loose		946.8						
				6									
				7									
				8	± 8.0' Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light yellowish brown, fine, wet, very dense								
				9									
3	12-50/0.4' (-)	0.9		10			941.8						
				11									
				12									
				13		▽							
				14									
4	50/0.3' (-)	0.3		15	15.3' End of Boring		936.8	Driller's note: Samples wet 15.0' to 15.3'					
				16									
				17									
				18									
				19									
				20			931.8						

-AS-Auger Sample; -BS-Bag Sample; -RC-Rock-Core; -MC-Macrocore; -PS-Piston Tube; -2SS-2" Split Spoon; -3SS-3" Split Spoon; -2ST-2" Shelby Tube; -3ST-3" Shelby Tube

▽ while drilling 13.4 ▼ after drilling ▼ after hours

BORING NO.: B-4

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-5

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.034412903899, -90.423534056218 - See boring loc. dwg. — ELEV: 946.89 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 15.9

DATE STARTED: 5/7/24 — DATE COMPLETED: 5/7/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6" (N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	WH-WH-1 (-)	1.3		0	TOPSOIL		946.9	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				1	0.33' (SP) POORLY-GRADED SAND, dark brown, fine to medium, with organics, moist, very loose								
				2									
				3									
				4									
2	15-29-45 (74)	0.2		5	...trace gravel, very dense		941.9						
				6	± 6.5' Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light brown, fine, wet, very dense								
				7									
				8									
				9									
3	50/0.4' (-)	0.4		10	...light brown, no organics, with gravel	▼	936.9	Driller's note: Samples wet 10.4' to 15.9'					
				11									
				12									
				13									
				14									
4	34-50/0.4' (-)	NR		15	No Recovery		931.9						
				16	15.9' End of Boring								
				17									
				18									
				19									
				20			926.9						

-AS-Auger Sample
-BS-Bag Sample
-RC-Rock-Core
-MC-Macrocore
-PS-Piston Tube
-2SS-2" Split Spoon
-3SS-3" Split Spoon
-2ST-2" Shelby Tube
-3ST-3" Shelby Tube

▽ while drilling
▼ after drilling 11.2
▼ after hours

BORING NO.: B-5

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-6

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.036443516948, -90.421821585707 - See boring loc. dwg. — ELEV: 939.91 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 16.5

DATE STARTED: 5/7/24 — DATE COMPLETED: 5/7/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	WH-WH-1 (-)	1.5		0	TOPSOIL		939.9	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				0.2'	(SP) POORLY-GRADED SAND, dark brown, fine to medium, with organics, moist, very loose								
				1									
				2									
				3									
				4									
2	2-6-8 (14)	1.5		5	...no organics, brown, trace gravel, medium dense		934.9	Driller's note: Samples wet 5.0' to 16.5'					
				6									
				7									
				8									
				9		▽							
3	7-7-7 (14)	1.5		10	...no gravel, wet		929.9						
				11									
				12									
				13	± 13.0'								
					Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light yellowish brown, fine, wet, very dense								
				14									
4	12-38-50/0.4' (-)	1.5		15			924.9						
				16									
				16.5									
					End of Boring								
				17									
				18									
				19									
				20			919.9						

-AS-Auger Sample
-BS-Bag Sample
-RC-Rock-Core
-MC-Macrocore
-PS-Piston Tube
-2SS-2" Split Spoon
-3SS-3" Split Spoon
-2ST-2" Shelby Tube
-3ST-3" Shelby Tube

▽ while drilling 8.8 ▼ after drilling ▼ after hours

BORING NO.: B-6

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-7

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.036180281892, -90.423501300922 - See boring loc. dwg. — ELEV: 942.30 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 15.8

DATE STARTED: 5/7/24 — DATE COMPLETED: 5/7/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	WH-1-1 (2)	1.1		0	TOPSOIL 0.16'		942.3	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				1	(SP) POORLY-GRADED SAND, dark brown, fine to medium, with organics, moist, very loose								
				2									
				3									
				4									
2	2-3-4 (7)	0.6		5	...reddish brown, trace organics, loose		937.3						
				6									
				7									
				8									
				9									
3	9-9-10 (19)	1.5		10	...wet, medium dense	▽	932.3	Driller's note: Samples wet 10.0' to 15.8'					
				11									
				12									
				13	± 13.0' Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light brown, fine, wet, very dense								
				14									
4	22-50/0.3' (-)	1.0		15			927.3						
				16	15.8' End of Boring								
				17									
				18									
				19									
				20			922.3						

-AS-Auger Sample
-BS-Bag Sample
-RC-Rock-Core
-MC-Macrocore
-PS-Piston Tube
-2SS-2" Split Spoon
-3SS-3" Split Spoon
-2ST-2" Shelby Tube
-3ST-3" Shelby Tube

▽ while drilling 10.0 ▼ after drilling — ▼ after hours

BORING NO.: B-7

COLEMAN ENGINEERING COMPANY
635 CIRCLE DRIVE
IRON MOUNTAIN, MICHIGAN 49801
Telephone: (906)-774-3440 Fax: (906)-774-7776

JOB NO.: 240162.GPJ

PROJECT: Bluewing Sewer Soils Investigation — BORING NO.: B-8

CLIENT: Ho-Chunk Nation — 1 OF 1

BORING LOCATION: As-marked by GPS 44.037012117209, -90.426152716258 - See boring loc. dwg. — ELEV: 944.95 +/-

RIG TYPE: Geoprobe 7822 DT — DRILL CREW: B. Wilcox / C. Evosevich-Hynes

DRILLING METHOD: 3-1/4" Hollow Stem Auger — BORING DEPTH: 15.4

DATE STARTED: 5/7/24 — DATE COMPLETED: 5/7/24 — REVIEWED BY: J. Kacynski — DATE: 6/27/24

HOLE CLOSURE: Soil Cuttings

SAMPLE NUMBER	SPT VALUES BLOWS/6"(N)	RECOVERY	LEGEND	DEPTH (FT)	SOIL DESCRIPTION	WATER TABLE	ELEV (FT)	COMMENTS	TEST RESULTS: +4 -4 -200	MOISTURE CONTENT (%)	LL PL	T (tsf)	q_p (tsf) q_u (tsf)
1	1/1'-1 (-)	0.9		0	TOPSOIL		945.0	3-1/4" Hollow Stem Auger 2" SPT Sampling 140# wt., 30" drop Auto Hammer					
				1	0.33' (SP) POORLY-GRADED SAND, dark brown, fine to medium, trace organics, moist, very loose								
				2									
				3									
				4									
2	5-11-15 (26)	1.3		5	...light brown, medium dense, no organics		940.0						
				6									
				7									
				8	± 8.0' Possible highly weathered bedrock retrieved as (SP) POORLY-GRADED SAND, light brown, fine, trace gravel, wet, very dense								
				9									
3	25-50/0.3' (-)	0.6		10			935.0	Driller's note: Samples wet 10.0' to 15.4'					
				11									
				12									
				13									
				14									
4	50/0.4' (-)	0.3		15	15.4' End of Boring		930.0						
				16									
				17									
				18									
				19									
				20			925.0						

-AS-Auger Sample
-BS-Bag Sample
-RC-Rock-Core
-MC-Macrocore
-PS-Piston Tube
-2SS-2" Split Spoon
-3SS-3" Split Spoon
-2ST-2" Shelby Tube
-3ST-3" Shelby Tube

while drilling 11.3 — after — hours
after drilling

BORING NO.: B-8

HO-CHUNK NATION CODE (HCC)
TITLE 6 – PERSONNEL, EMPLOYMENT AND LABOR CODE
SECTION 8 – OCCUPATIONAL SAFETY AND HEALTH PROGRAM ACT OF 2002
SUBSECTION 13 – CONSTRUCTION SAFETY

ENACTED BY LEGISLATURE: MAY 20, 2002

CITE AS: 6 HCC § 8-13

1. **Authority.** See basic document (Occupational Safety and Health Program Act).

2. **Purpose.** This subsection provides for the Ho-Chunk Nation (hereinafter referred to as "HCN") to provide oversight to contractors while on Ho-Chunk Nation properties to insure their ability to work in a safe manner that is consistent with recognized good safety practices and that are in compliance with applicable Ho-Chunk Nation and Federal safety and health regulations.

3. **General.**

a. These guidelines are intended to assist the HCN in improving the safety and health performance of the contractors that work on HCN projects. Generally, the individual(s) responsible for the project is responsible to make sure the contractor is aware and applies these guidelines. Throughout the remainder of these guidelines the individual will be referred to as the Owner's Representative (O/R). Other disciplines such as Occupational Safety and Health, Environmental and Purchasing will be actively involved and assist the O/R as needed.

b. Contracts/Purchase orders will contain a provision that if the contract terms (including safety) are not met, the contract/purchase order will be subject to suspension, termination, or other means of contractual enforcement.

4. **Definitions.**

a. "Contractor" means any non-HCN company and/or employee who agree to furnish materials and/or services on site.

b. "Owner's Representative (O/R)" means a person designated as facility project manager/leader. The O/R has the responsibility to manage every aspect of the project.

c. "Director of Safety" means the position that supervises all occupational safety and health matters for the HCN.

d. "Facility Safety Representative" means a person designated by the facility to represent the facility on safety matters with the contractor.

e. "Competent Person" means one who is capable of identifying existing and predictable hazards in the surroundings or work conditions, which are unsanitary, hazardous, or dangerous to employees, and has the authority to take prompt corrective measures to eliminate them.

f. "Qualified Person" means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

5. **General Expectations of Contractors.**

a. Contractors shall have a designated safety representative on site at all times while work is being preformed.

b. The contractor shall comply with:

(1) The HCN Occupational Safety and Health Program Act and all pertinent subsections.

(2) Federal OSHA 1910 General Industry Standards, 1926 Construction Standards, along with state and local regulations.

c. Upon first notification of a Federal OSHA inspection the contractor shall immediately notify the O/R who in turn shall notify the Division of Safety.

d. The contractor is responsible for providing or making provisions for first-aid medical treatment for their employees. HCN medical facilities are off-limits, except in the case of medical emergency.

e. All contractors shall wear the appropriate personal protective equipment, as required by HCN safety ordinances. HCN will not provide any such personal protective equipment to contractors.

f. The contractor shall conduct appropriate industrial hygiene monitoring throughout the duration of the job.

g. All contractor employees shall display their company logo on their hard hat. All contractor supervisors shall display their names on their hard hats.

h. All contractor vehicles shall display a readily visible company identification on the driver's side.

i. An OSHA 200 Log must be maintained on site and updated within three days of the last OSHA Recordable injury.

j. Contractors must obtain approval from the facility prior to siting or parking trailers.

k. The contractor shall comply with HCN policy on employee consumption of drug or alcoholic beverages while on HCN property.

l. The contractor shall provide a written investigation report to the Director of Safety within 24 hours of all OSHA Recordable injuries and illness.

6. **First Aid/Medical Procedures.** Each individual contractor will be responsible to provide emergency medical first said to their employees. All injuries, no matter how minor, must be reported to the contractor and must receive first aid treatment. The facility will assist the contractor with injuries in an emergency situation. The contractor shall provide a written report of all injuries and illnesses to the O/R and or Facility Safety Representative.

7. **Alcohol and Drug Policy.** No alcoholic beverages or illegal drugs are to be brought onto Ho-Chunk Nation property, nor is anyone to be allowed to report to work while under the influence of drugs or alcohol. The Ho-Chunk Nation will not attempt to dictate subcontractor drug testing program content, but will expect that a comprehensive pre-employment and for-cause drug testing program including both alcohol and controlled substances are established.

8. **Incident/Accident Investigation.** The Contractor shall thoroughly investigate all accidents/incidents that resulted in an injury to one of its employees, as well as, near-miss situations that could have resulted in a serious accident or injury to employees. This information will be communicated to the O/R or the Facility Safety Representative.

9. **Fire Protection.** The purpose of this section is to promulgate and promote fire prevention and fire protection measures for use by all HCN and contractor personnel working on HCN projects.

a. All of the contractor's employees must be familiar with the location and use of fire extinguishing equipment and alarms to be used in case of an emergency. The contractor will provide their own fire extinguishing equipment when work being done by their employees involves working with open flame, arcs or highly-flammable materials.

b. Flammable and combustible liquids brought onto HCN projects must be stored in an approved safe container, which properly labeled and color coded to identify the contents. The facility must approve the quantity, use and storage of these chemicals. MSDS's must be available on site.

c. Smoking on HCN properties is restricted to outside smoking areas, other than casino or bingo hall proper.

10. **Safety Training.** It is the responsibility of the contractor to assure that the proper safety training for employees is updated and documented as per HCN, local, state and federal regulations. Contractor shall be required to certify that all employees have been informed of all HCN guidelines, policies and procedures.

11. **Personal Protective Equipment (PPE).** Any PPE exceptions will need to be addressed in writing to the Department of Labor, Director of Safety. If exceptions are made they will need to be approved by the Director of Safety or his/her designated representative. The contractor shall assure compliance to 6 HCC § 8-7 *Personal Protective Equipment* while HCN projects.

a. Safety Eye Wear Policy.

(1) ANSI approved eye protection is required to be worn at all times. The contractor will provide nonprescription safety glasses with side shields or approved safety glasses to be worn over prescription eyewear. Safety eyewear worn be the contractor employees must meet specifications set forth in ANSI Z87.1 standards.

(2) When operations present potential eye or face injury, goggles or a full-face shield must be worn over safety glasses. Examples: grinding, chipping or similar operations.

(3) When the employee is exposed to chemicals, or dusts additional PPE may be required (e.g., goggles or face shield).

b. Foot Protection Policy. Safety-toed footwear, meeting ANSI Z41 with a class 75 rating are required as a condition of employment on HCN projects. safety-toed footwear will be worn 100% of the time.

c. Hard Hat Policy. All employees and visitors on any HCN construction project are required to wear hard hats that meet OSHA/ANSI specifications of Z89.1. Hard hats will be worn 100% of the time.

d. Hearing Protection. All employees of the contractor who are working in designated "hearing protection" areas, must wear hearing protection. There may be other areas where noise levels exceed 85dB, or where conditions present a potential hazard to the employees' hearing, where hearing protection is required. The contractor is responsible for ensuring that this equipment is available and worn.

e. Respiratory Protection. The contractor shall have a respiratory program that meets requirements of 6 HCC § 8-18 *Respiratory Protection* and OSHA C.F.R. 29 § 1910.134, *Respiratory Protection*. It is the responsibility of the contractor to assure that the respiratory requirements of the HCN are followed.

f. Hand Protection. The contractor shall require employees to use appropriate hand protection when the employees' hands are exposed to hazards such as those from skin

absorption or harmful substances, severe cuts, lacerations, severe abrasions, punctures, chemical burns, thermal burns, or harmful temperature extremes.

12. **Personal Work Environment.**

a. All work and storage areas shall be kept clean to the extent that the nature of the work allows. Cleanups shall be made on a daily basis and al tools, materials, and debris shall be kept out of walkways (i.e., hoses and cords should be properly stored when not in use, exposed nails shall be removed or bent over immediately).

b. All lines electrical, hoses, etc., which cross a walkway shall be either elevated or protected in such a manner that they will not be damaged by traffic.

c. Personal Conduct. All contractor personnel are expected to conduct themselves in a professional and business-like manner. Horseplay, practical jokes, and physical threats will not be tolerated on HCN projects. All employees of the contractor are expected to stay within their authorized work area. No one will be allowed to wander onto or go on any other HCN property for any purpose with out the specific permission of the facility manager or project manager.

d. Illumination. The contractor is responsible for providing employees with adequate lighting to ensure safe working visibility. The contractor will supply any special equipment needed for this purpose.

e. Sanitation. Portable water and toilet facilities maybe provided for construction projects. These facilities must be used for the intended purpose in a proper manner. The contractor is responsible for supplying if needed and insure these facilities are kept in a clean and operating order.

13. **Equipment.**

a. Ladders.

(1) All of the contractors ladders shall meet the ANSI standards. Ladders shall be inspected prior to each use and maintained in a safe condition.

(2) A competent person, on a quarterly basis, shall inspect contractor ladders, and documentation maintained.

(3) Ladders shall be placed at the proper angle and shall be placed to prevent slipping, or it shall be lashed and secured in position. In no instance shall ladders be used in a horizontal position.

(4) The contractor will see that each employee receives adequate training on the proper methods of climbing and utilizing ladders.

(5) The contractor shall see that the ladders are collected and stored when not in use.

b. Scaffolding.

(1) All contractor scaffolding shall be capable of supporting, without failure, its own weight plus at least four times the maximum intended load. They shall be erected on a sound, rigid footing, capable of carrying the maximum intended load without settling or displacement.

(2) Scaffolding shall be designed by a qualified person and erected under the supervision of a competent person. Erection crews shall inspect each component part for defects. Uprights shall bear on-base plates and mudsills, or other adequate foundations.

(3) All working platforms shall be fully planked, with scaffold-grade planking; the gaps between planks shall not exceed 1inch. Planks shall be free of defects and shall extend over the supports no less than 6 inches, unless cleated, or no more than 12 inches. When overlapping planks, they must overlap at least 12 inches.

(4) Guardrails, midrails, and toe boards will be installed on all open sides and ends of platforms more than 6 feet above the ground or floor. "X" bracing can serve either as guardrails or midrails, depending upon the height of the crossing members, but never both.

(5) Scaffolds that exceed a 4:1, height to base ration, shall be restrained from tipping over by ties guys, or bracing. Scaffolds shall be secured at intervals of every 26 feet vertically and 30 feet horizontally.

(6) Mobile scaffolds require all casters to be locked when in use, with a diagonal brace to prevent racking or collapse. No one shall ride nor allow materials to be stored on the scaffold when it is being moved, towers must be only used on level surfaces and ensure that there are no overhead obstructions or energized electrical lines in the path of travel.

c. Welding and Cutting.

(1) No welding or cutting shall be performed on HCN property without proper authorization. The contractor shall be responsible to ensure appropriate fire-fighting equipment is on hand, and that all flammable and combustible materials are properly covered, shielded or moved a minimum of 35 feet from the work site.

(2) The contractor shall provide for adequate shielding around all welding and grinding work done by his employees.

d. Storage of Oxygen and Fuel Gases.

(1) Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials by a distance of 20 feet, or by a non-combustible barrier are least 5 feet tall having a fire-resistance rating of at least ½ hour.

(2) All cylinder valves must be closed when any work is finished and when any cylinders are empty or being moved.

(3) Valve protection caps must be placed and secured properly before compressed-gas cylinders are transported, moved, or stored.

(4) Compressed gas cylinders must be secured in an upright position with a chain, or other appropriate and approved system, designed for such a purpose at all times.

(5) All cylinders must be kept at a safe distance or shielded from welding or cutting operations.

(6) Fuel-gas cylinders shall not be taken into a confined space.

e. Compressed Air.

(1) Hoses and coupling shall be checked before each use. Only use hoses that are designed to handle compressed air.

(2) All hose couplings must have a positive locking device.

(3) Compressed air used for cleaning purposes is to be reduced to less than 30 PSI (pounds per square inch) when the nozzle end is obstructed or dead-ended.

(4) All hoses exceeding ½ inch inside diameter shall have a safety device at the source of supply, or branch line, to reduce pressure in case of hose failure.

(5) Use of compressed air to clean self or co-workers is strictly prohibited.

f. Motor Vehicle and Power Equipment.

(1) All vehicles or power equipment is to be checked to ensure that all parts, equipment and accessories that affect safe operation are in proper operating conditions and free from defects.

(2) All motor vehicles and power equipment are to be operated by authorized personnel. The driver has the overall responsibility for the safety of passengers and for the stability of the load.

(3) Drivers must have a valid operators/drivers license to operate vehicles.

(4) Seat belts must be worn at all timers.

(5) Only trained and licensed operators shall be permitted to operate a powered industrial truck. Industrial trucks shall be maintained free of debris accumulation.

(6) Never leave a motor vehicle running and unattended.

(7) Shut off motor to refuel.

(8) Smoking and open flames are not allowed when refueling or charging batteries.

(9) Passengers are not allowed to ride in the back of flat bed truck, or pickup trucks unless in he pickup truck passengers are seat on the bed of the truck and not seated on side rails.

g. Power Tools.

(1) Fuel-Powered Tools.

(a) All fuel-powered tools must be shut off while being refueled, serviced, or maintained.

(b) Smoking, matches, open lights, or similar ignition sources are prohibited in the vicinity of any refueling operations.

(c) Any fuel-powered tool that develops a leak in the fuel system must be taken out of service immediately and repaired or replaced.

(d) When fuel-powered tools must be operated indoors or in confined spaces, proper ventilation must be maintained so as not to allow a hazardous atmosphere to form.

(2) Electrical Tools.

(a) All 110 volt power tools, must either be approved "double insulated," or have a current assured grounding test I.D. Those not meeting one of these requirements must either be tested or replaced before use.

(b) Cords of power tools are not to be used to lift or lower the tool.

(3) Pneumatic Tools.

(a) Percussion type impact tool must have a safety clip or retainer to prevent the attachment from disengaging while in use.

(b) All pressurized hose quick disconnect type (non-threaded) fittings, couplings, and connectors, must have a safety mechanism providing a positive means to prevent accidental disconnect.

(c) All hose lines greater than ½ inch diameter are to be equipped with a safety device at the source, or branch line from the source, to automatically reduce pressure in case of hose failure.

(4) Power-Actuated Tools.

(a) Only person trained in the proper use of the particular power-actuated tool are permitted to operate it.

(b) The tool must never be pointed at another person whether it is empty or not.

(c) The tool must only be loaded just prior to use and never left unattended when loaded.

(d) The tool must never be used near flammable or explosive materials or atmosphere.

(e) Fasteners must never be driven into materials that might be easily penetrated unless suitably protected against the possibility of rear exit.

(5) Grinder – Abrasive.

(a) Abrasive wheel bench or stand grinders must have safety guards strong enough to withstand bursting wheels.

(b) Adjust work rests on grinders to a clearance not to exceed 1/8 inch between rest and wheel surface.

(c) The distance from the top of the wheel to the wheel periphery guard or tongue guard shall not exceed ¼ inch.

(d) Inspect and ring test abrasive wheels before mounting.

(e) Properly dress wheel before using and/or when finished.

(f) RPM rating of the abrasive wheel must be in accordance with the RPM rating of the motor.

(6) Grinders – Portable (Air, Electric or Fuel).

(a) Portable grinders with any wheel attachment must have guards, hood, and/or safety flanges in place expect when wheel less than 2 inch OD is used or when the wheel is entirely within the work being processed.

(b) The use of any attachment wheel rated lower than the Rpm's of the grinder is strictly prohibited.

(7) Aerial Lifts.

(a) All operators must be trained and receive proper instruction before operating aerial platforms.

(b) During use of boom-supported elevated work platforms, the employee is to wear a full body harness and a lanyard affixed to the attachment point in the basket.

(c) Check the work area for holes, obstacles, drop off or rough spots. Look for weak spots or covers on ramps or floors. Look for oil spills, wet spots, slippery surfaces, and soft soil and standing water.

(d) Check for overhead hazards. Assume all electrical parts and wiring are ENERGIZED and stay back at least 10 feet from electrical hazards.

(e) Do not travel in the extended position, except for equipment that is specifically designed for this type operation.

(f) Never use ladders, planks, steps or other devices to provide additional reach to gain greater height.

14. **Procedures.**

a. Material Handling. Physical differences make it impossible to establish safe lifting limits applicable to all workers. Before workers lift any heavy objects or bulky loads and carry it to another location, they should inspect the route over which they will move the object. By doing this walk, the employee can make sure that there are no obstacles or spill that could cause them to slip or trip.

b. Excavation and Trenching.

(1) Prior to excavation with power equipment, all utilities must be located by hand excavation to insure that no employee is exposed to any hazards and that disruption of service will occur.

(2) Preplanning of every excavation by the responsible supervisor is required in order to prevent problems with items such as underground utilities, vehicular and pedestrian traffic, overhead utility lines, surface drainage, substructures and superstructures, excessive noise, laws, environmental impact laws, medical and/or

emergency response facilities, potential for hazardous atmosphere, communications and back-up availability, and normal amounts of vibration in the area.

(3) Dewatering, as required to sustain a dry excavation, must be initiated and maintained while work is being performed.

(4) Prior to starting any work in the excavation area, the immediate supervisor, or designated person, shall inspect the excavation for possible hazards and to see that all safety requirements are met.

(5) Once an excavation exceeds 5 feet in depth, protective systems such as sloping, shoring or shielding must be provided in accordance with the type of soils present on the project.

(6) A registered professional engineer must approve excavations below the level of the base of footing of any foundation or retaining wall that could reasonably expect to pose a hazard to employees.

(7) All excavations 4 feet or deeper must have a ladder, ramp, or similar safe means of access/egress within 25 feet of persons working in the excavation.

c. Confined Space Entry. See Chapter 11, 6 HCC § 8-15, *Permit–Required Confined Spaces*.

d. Electrical. See 6 HCC § 8-4, *Electrical Safety*.

e. Lock-Out/Tag-Out Procedures. See 6 HCC § 8-5, *Lock-Out/Tag-Out*.

f. Fall Protection. See 6 HCC § 8-14, *Fall Protection*.

g. Signs, Signal and Barricades.

(1) Signs and symbols required by hazardous job site conditions are to be visible at al times when work is being performed, and are to be removed or covered promptly when the hazards no longer exist.

(2) Types of signs include:

(a) Danger Signs. To be use where immediate hazards exist.

(b) Caution Signs. To be used to warn of potential hazards or caution against unsafe practices.

(c) Exit Signs. To be used where required.

(d) Safety Instruction Signs. To be used to convey a safety message.

(e) Directional Signs. To be used to direct movement other than automotive.

(f) Traffic Signs. To be used to control traffic in the construction zone and protect pedestrians.

(3) Barricades.

(a) Barricades shall be used in place of caution tape whenever physical obstruction is required, to prevent people from falling into a hazard or being accidentally exposed to an immediate hazard or danger.

(b) Barricades must withstand a 200-pound force at any point, be 42 inches in height, have a mid-rail and have danger signs affixed.

15. **Safety Criteria for Contractor Selection with Ten or More Employees.** Contractor selection will be affected by safety performance and written safety and health program.

a. Safety performance. Contractors shall complete the form at Appendix A (Safety Criteria for Contractor Selection) to supply the following information to the Nation's Planning and Safety Department. Comparative year-to-year performance levels/trends will be the criteria for judgement.

(1) Total Case Incident Rate (TCIR) for the past three years, plus the current year. Using total column Nos. 2, 6, 9, and 13 from the OSHA 200 Log (number of Recordable injuries x 200,000/hours worked). The benchmark TCIR is 11.00 or less.

(2) Lost Time Incident Rate (LTIR) for the past three years, plus current year. Using column Nos. 3 and 10 from the OSHA 200 Log (number of lost time injuries x 200,000/hours worked). The benchmark LTIR is 5.00 or less.

(3) Workers Compensation Experience Modification Rate (EMR) for the past three years plus current year. The benchmark EMR is 1.00 or less.

b. Written Safety and Health Programs. If required, the following information will serve as a benchmark for minimum requirements for a written safety program.

(1) Safety policy statement, including Management's commitment to safety.

(2) Description of each employee's responsibility related to safety.

(3) Substance abuse program.

(4) Injury tracking, reporting and investigating system.

(5) Work practices/safety procedures, consistent with tasks routinely performed by the contractor.

(6) Requirements for periodic inspection/audit of work, etc.

(7) Provision for medical treatment/services at the work site.

(8) Safety training programs.

(9) Emergency action plans (e.g. notification, head count).

(10) Equipment and tool inspections (e.g. cranes, hoists, electrical tools, etc).

16. **Administrative and Enforcement.** See paragraph 12 of basic document (Occupational Safety and Heath Program Act).

Appendix A – Safety Criteria for Contractor Selection

Legislative History:

12/6/01	Reviewed by Administration Committee.
1/9/02	Legislature posts for 45-day Public Review.
5/20/02	Enacted as Construction Safety (6 HCC § 8-13) by Legislative Resolution 5/20/02E.

APPENDIX A (SAFETY CRITERIA FOR CONTRACTOR SELECTION) TO SUBSECTION 13 (CONSTRUCTION SAFETY

The following information is to be supplied to the Planning Department and the Safety Department when a contractor is being considered for project award.

A. Safety Performance

NAME OF CONTRACTOR:_____

1. Using your OSHA 200 Log (total of column Nos. 2, 6, 9, & 13), list your **Total Case Incident Rate** (TCIR) for the three most recent years plus the current year (number of Recordable injuries x 200,000/man-hours worked).

20__ _____ 20__ _____

20__ _____ Current _____

2. Using your OSHA 200 Log (Column Nos. 3 & 10), list your **Lost Time Incident Rate** for the three most recent years plus the current year (number of Recordable injuries x 200,000/man-hours worked).

20__ _____ 20__ _____

20__ _____ Current _____

3. Submit a list of any fatalities, which may have occurred in the past three years.

_____

4. Submit a list including the number of and nature if any OSHA citations incurred during the past three years.

_____

_____

5. **Written Safety and Health Program** will be submitted *upon request.*

6. If you are assigning someone to be the **On-site Safety Representative**

   a. Who will be the On-Site Safety Representative: _____

   b. Will safety be a part-time or full-time responsibility? _____