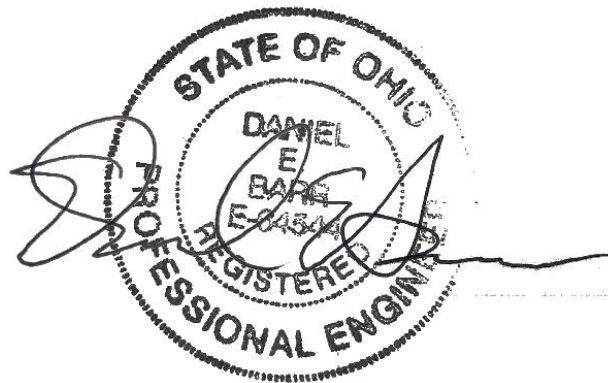


# **Cheshire Road Lift Station Upgrades**

**City of Sunbury**

**February 2025**



22000715

## **CITY OF SUNBURY OFFICIALS**

### **ADMINISTRATION**

Joseph St. John, Mayor

Daryl Hennessy, Administrator

Kaitlin Grafmiller, Assistant City Administrator

David Brehm, Esq., Director of Law

Dana Steffan, CPA, Director of Finance

Robert Howard, Police Chief

Carla Odebralski, P.E., Director of Planning & Engineering / City Engineer

### **COUNCIL**

John Grumney, President

Damin Cappel, Member

Dave Martin, Member

Cindi Cooper, Member

Tim Gose, Member

Molly Drayer, Member

Amber Swain, Clerk of Council

## **ADVERTISEMENT FOR BIDS/PUBLIC NOTICE TO BIDDERS**

Sealed bids will be received at the Service Director's Office of the Sunbury Municipal Building, 9 E. Granville Street, Sunbury, Ohio 43074 until 12:00 p.m. on March 12, 2025 and will be opened and read immediately thereafter for the

### **CHESHIRE ROAD LIFT STATION UPGRADES**

**OPINION OF PROBABLE CONSTRUCTION COST: \$395,000.00**

**SUBSTANTIAL COMPLETION DATE: 180 DAYS FROM NOTICE TO PROCEED**

**FINAL COMPLETION DATE: 30 DAYS AFTER SUBSTANTIAL COMPLETION**

Bids mailed or otherwise submitted via the United States Postal Service (USPS) shall use the Sunbury mailing address: P.O. Box 508, 9 E. Granville Street, Sunbury, Ohio 43074. The USPS does not deliver to the building, only to the post office box.

The bid specifications, drawings, plan holders list, addenda, and other bid information (**but not the bid forms**) may be viewed and/or downloaded for free via the internet at <https://bids.verdantas.com>. The bidder shall be responsible to check for Addenda and obtain same from the web site.

Bids must be in accordance with drawings and specifications and on forms available from CT Consultants, Inc. at a non-refundable cost of One Hundred Twenty Five Dollars (\$125.00) for hard copies **and \$45.00 for electronic files**. Documents may be ordered by registering and paying online at <https://bids.verdantas.com>. Please contact [planroom@verdantas.com](mailto:planroom@verdantas.com) or call (440) 530-2351 if you encounter any problems viewing, registering or paying for the documents.

Publish: *Delaware Gazette*  
February 19, 2025  
February 26, 2025

## TABLE OF CONTENTS

	<u>Page No.</u>
Title Page	i
Officials Page	ii
Advertisement for Bids/Public Notice to Bidders	iii
Table of Contents	iv - vi
SECTION 1 <u>BID DOCUMENTS AND BID FORMS</u>	
Instructions to Bidders	BD.1 – BD.8
<u>**ALL BID FORMS SHALL BE COMPLETED AND SUBMITTED WITH BID**</u>	
Form of Non-Collusion Affidavit	BF.1
Corporate Resolution	BF.2
Proposed Subcontractors	BF.3
Experience Record	BF.4
Insurance Agent Affidavit	BF.5
Supplemental Bond Acknowledgement	BF.6
Bid Security	BF.7
Proposal Forms	BF.8 – BF.9
SECTION 2 <u>CONTRACT FORMS</u>	
Notice of Award	CF.1
Contract and Certificates of Fiscal Officer & Legal Counsel	CF.2 – CF.3
Contract Bond, Certificates of Insurance & Worker's Comp.	CF.4
Delinquent Personal Property Statement	CF.5
Lobbying Affidavit	CF.6
Escrow Agreement for Contractor's Retainage	CF.7
Escrow Waiver	CF.8
Notice to Proceed	CF.9
Findings for Recovery & Notifications	N.1
SECTION 3 <u>GENERAL CONDITIONS, EJCDC No. C-700 (2007)</u>	1 – 68
SECTION 4 <u>SUPPLEMENTARY CONDITIONS</u>	SC.1 – SC.8

## SECTION 5 SPECIFICATIONS

### **DIVISION 1 - GENERAL REQUIREMENTS**

011100	SUMMARY OF WORK
011419	USE OF SITE
013323	SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
016600	PRODUCT HANDLING AND PROTECTION
017800	FINAL COMPLIANCE AND SUBMITTALS
017821	CLEANING AND PROTECTION
017823	MAINTENANCE MANUALS
017839	PROJECT RECORDS, DRAWINGS

### **DIVISION 2 - EXISTING CONDITIONS**

024119	REMOVAL OF STRUCTURES AND OBSTRUCTIONS
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### **DIVISION 26 - ELECTRICAL**

260500	GENERAL REQUIREMENTS FOR ELECTRICAL WORK
260519	CONDUCTORS AND CABLES
260520	SHIELDED INSTRUMENTATION & VARIABLE FREQUENCY DRIVE CABLE
260526	GROUNDING AND BONDING
260529	SUPPORTING DEVICES
260530	ELECTRICAL DUCT BANK
260533	CONDUIT
260534	PULL, JUNCTION BOXES AND ENCLOSURES
260553	ELECTRICAL IDENTIFICATION
262213	DRY-TYPE TRANSFORMERS (600 V AND LESS)
262726	WIRING DEVICES
262923	VARIABLE FREQUENCY DRIVES
264313	TRANSIENT VOLTAGE SUPPRESSION

### **DIVISION 32 – EXTERIOR IMPROVEMENTS**

320190.33	TREE AND SHRUB PRESERVATION
329200.19	SEEDING AND MULCHING

### **DIVISION 33 - UTILITIES**

330130	MISCELLANEOUS TEMPORARY FACILITIES
331443	PUMPING SYSTEMS FOR WASTEWATER

	<u>Page No.</u>
SECTION 6 <u>STANDARD SPECIFICATIONS</u>	SS.1
SECTION 7 <u>SPECIFIC PROJECT REQUIREMENTS</u>	SR.1
SECTION 8 <u>PREVAILING WAGE RATES</u>	PW.1 – PW.10
State Prevailing Wage Rate Determination Schedule	

06/24

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***SECTION 1***  
***BID DOCUMENTS***

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## **INSTRUCTIONS TO BIDDERS**

### **PART 1        GENERAL**

- 1.1     Sealed bids shall be received by the Owner at the location specified and until the time and date specified in the Advertisement for Bids/Public Notice to Bidders.
- 1.2     Each bid shall contain the full name and address of each person or company interested in said bid. If no other person be so interested, the Bidder shall distinctly so state the fact.
- 1.3     Bid forms must be completed in ink or by typewriter. Any corrections to the bid forms prior to submission must be initialed by the person signing the bid. Failure to submit any bid form(s) or other required document(s) may be cause for rejection of the bidder's bid at the sole discretion of the Owner.
- 1.4     Bids by Corporations must be executed in the corporate name by the President, Vice President, or other officer accompanied by evidence of authority to sign and the corporate seal must be affixed and attested by the Secretary on the Corporate Resolution form.
- 1.5     Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature.
- 1.6     All names must be typed or printed below the signature.
- 1.7     The bid shall contain an acknowledgment of receipt of all Addenda.
- 1.8     If a Bidder wishes to withdraw their bid prior to the opening of bids, they shall state their purpose in writing to the Owner before the time fixed for the opening, and when reached it shall be handed to them unread.
- 1.9     After the opening of bids, no Bidder may withdraw their bid for a period of 60 days.

### **PART 2        EXAMINATION OF CONTRACT DOCUMENTS AND SITE**

- 2.1     Before submitting a bid, each Bidder must
  - A.     Examine the Contract Documents thoroughly.
  - B.     Visit the site to familiarize themselves with local conditions that may in any manner affect cost, progress, or performance of the work.
  - C.     Familiarize themselves with Federal, State, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress, or performance of the work.
  - D.     Study and carefully correlate Bidder's observations with the Contract Documents.



- 2.2 Reference is made to the Specific Project Requirements for the identification of any reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the work which have been relied upon by the Engineer in preparing the drawings and specifications. Owner will make copies of such reports available to any Bidder requesting them if not made available with the bid documents. These reports are not guaranteed as to accuracy or completeness; nor are they part of the Contract Documents. Before submitting their bid each Bidder will, at their own expense, make such additional investigations and tests as the Bidder may deem necessary to determine their bid for performance of the work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 2.3 Upon request, the Owner will provide each Bidder access to the site to conduct such reasonable investigations and tests as each Bidder deems necessary for submission for their bid.
- 2.4 The lands upon which the work is to be performed, rights-of-way for access thereto, and other lands designated for use by Bidder in performing the work are identified on the Drawings.
- 2.5 The submission of a bid will constitute an incontrovertible representation by the Bidder that they have complied with every requirement of this section and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the work.

### PART 3 ESTIMATED QUANTITIES

- 3.1 In Unit Price Contracts, the quantities of the work itemized in the bid are approximate only and the bidders are hereby notified that the estimated quantities made by the Engineer are merely for the guidance of the Owner in comparing on a uniform basis all bids received for the work.
- 3.2 The contract quantities, where itemized, are based on plan horizontal and vertical dimensions unless otherwise specified. It is the Contractor's responsibility to verify and determine actual quantities of materials such as pipe, pavement, subgrade, etc. in their ordering materials.
- 3.3 Payments, except for lump sum contracts and except for lump sum items in unit price contracts, will be made to the Contractor only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications.
- 3.4 The successful Bidder will be required to furnish the Owner with a complete breakdown of the lump sum bid items, to the satisfaction of the Engineer/Architect, before signing the Contract documents.

## PART 4 CONTRACTOR'S QUALIFICATION

- 4.1 Bidder shall provide detailed information relating to similar projects completed within the past 5 years which demonstrates the bidder's capability, responsibility, experience, skill, and financial standing to undertake this type of project and shall include a list of all projects currently under construction including status and contact person.
- 4.2 Bidder shall own, have rental or lease agreements for, or otherwise have readily available any and all equipment and tools necessary for proper execution of the work. The Owner reserves the right to request lists of equipment or tools available for the project including sources.
- 4.3 Bidder shall provide pertinent information to the Owner relative to any pending suits or outstanding liens. If no information is provided by the Bidder, the Owner shall assume that any such suits or liens do not exist.
- 4.4 The Owner may require similar information on any or all subcontractors proposed by the Bidder.
- 4.5 Bids of corporations not chartered in the state in which the work will take place must be accompanied by proper certification that the corporation is authorized to do business in that state.

## PART 5 SUBCONTRACTORS

- 5.1 The Bidder shall state on the appropriate bid form the names of all Subcontractors, Sub Consultants and other professional service providers proposed and the items of work they are to be assigned. All work not assigned to a Subcontractor shall be assumed by the Owner to be performed by the Bidder.
- 5.2 The Owner reserves the right to approve all subcontractors proposed by the Bidder. If the Owner, after due investigation, rejects the use of a proposed subcontractor, the apparent successful Bidder may either submit an acceptable substitution without increase in bid price or decline substitution and withdraw their bid without sacrificing their bid security. Any listed subcontractor to whom the Owner does not make written objection prior to award of contract, shall be deemed acceptable to the Owner.
- 5.3 Requests for changes of Subcontractor by the Bidder after the award shall be subject to the Owner's approval and shall not change the contract bid prices.
- 5.4 No contractor shall be required to employ any Subcontractor, person or organization against whom they have reasonable objection.

## PART 6 BID REVIEW BY OWNER

- 6.1 The Owner reserves the right to reject any and all bids, to waive as an informality any and all irregularities, and to disregard all nonconforming, nonresponsive or conditional bids.

- 6.2 All extensions and totals of unit prices and quantities submitted as part of the bid shall be considered informal until verified by the Owner. All bids must be made on the forms contained herein and the bid prices must be written therein, in figures only. Unit prices shall be separately written for "Unit Price Labor," "Unit Price Material," and "Total Unit Price" for each item listed. Should an error in addition and/or multiplication be determined while checking the Contractor's math and verifying their total bid, the "Unit Price Labor" and the "Unit Price Material" figures shall govern in determining the correct "Total Unit Price" and the correct "Item Total."
- 6.3 Each bidder must bid on all Items, Alternates, Deductions, and Additions contained in the Bidding Forms. All bids not in conformity with this notice may be considered non-responsive and may be rejected.
- 6.4 More than one bid for the same work from an individual or entity under the same of different names will not be considered. Reasonable grounds for believing that any bidder has an interest in more than one bid for the work may be cause for disqualification of that bidder and the rejection of all bids in which the bidder has an interest. A subcontractor or supplier is not a bidder, and may submit prices to multiple bidders.
- 6.5 In evaluating bids, the Owner may consider:
- A. The qualifications and experience of the Bidder, proposed subcontractors, and principal material suppliers as outlined in the plans and specifications.
  - B. Financial ability and soundness of the Bidder and proposed subcontractors.
  - C. Completeness of all bid forms and bid requirements.
  - D. Alternates and unit prices requested in the Bid Forms.
  - E. Unit prices or schedules of values that are or appear to be unbalanced.
  - F. Previous contractual experience with the Owner.
  - G. Whether or not the bid package complies with the prescribed requirements.
  - H. The proposed completion date, if applicable.
  - I. Any other matter allowed by law or local ordinance or resolution.
- 6.6 Owner may conduct further investigations as they deem necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications, and financial ability of the Bidder, proposed Subcontractors, and other persons and organizations to do the work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.
- 6.7 Owner reserves the right to reject the bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

- 6.8 The Contract award shall be based on the lowest and best bid or lowest responsive and responsible bid (as applicable for the public contracting agency receiving bids) for the base bid and selected alternate items (if any) for this project.

## PART 7 BID SECURITY

- 7.1 Each bid must be accompanied by a certified or cashier's check in the amount of 10% of the amount bid, an irrevocable letter of credit in the amount of 10% of the amount bid or an original bond in the amount of 100% of the amount bid per ORC 153.54 and 153.571. The certified or cashier's check, or irrevocable letter of credit shall be from a financial institution authorized to transact business in the State of Ohio and acceptable to the Owner. The bond shall be underwritten by a Surety Company authorized to transact business in the State of Ohio having an Ohio agent and listed on the most current Department of the Treasury Circular 570, "Surety Companies Acceptable on Federal Bonds." The bond shall be a "Bid Guarantee and Contract Bond" ("rollover bond") per O.R.C. sections 153.54 and 153.571 submitted for the full amount of the bid **including all alternates**, if any.

If bid security is made by bond, the Bidder and their Surety shall sign the Supplemental Bond Acknowledgement form and submit with their bid.

- 7.2 The certified or cashier's check, irrevocable letter of credit, or bond shall be made payable to the Owner and shall serve as a guarantee that in the event the bid is accepted and a contract is awarded to the successful Bidder, the contract will be executed by the bidder including any certifications, certificates or additional bonds required by the contract.
- 7.3 Failure on the part of the successful Bidder to execute the contract documents will cause the certified or cashier's check, irrevocable letter of credit, or bond to be forfeited to the Owner as damages.
- A. If the Owner awards the contract without rebidding, the Bidder (and the Surety on their bond if a bond was submitted) shall be liable to the Owner for a penal sum not to exceed the difference between the low bid and the next lowest bidder or 10% of the amount of the bid, whichever is less.
  - B. If the Owner does not award the Contract to the next lowest Bidder, but resubmits the project for bidding; the Bidder (and the Surety on their bond if a bond was submitted) shall be liable to the Owner for a penal sum not to exceed the costs in connection with the resubmission of bids or 10% of the amount of the bid, whichever is less.
- 7.4 Checks or letters of credit for bid security of all bidders will be returned in the manner and timeframe stipulated in the Ohio Revised Code.

## PART 8 CONTRACT BOND

- 8.1 As security for faithful performance and payment of all obligations under the Contract, the Owner shall require and the successful Bidder shall furnish either:
- A. *If submitted as Bid Security at time of bid:* "Bid Guarantee and Contract Bond" (AKA "rollover bond") per O.R.C. sections 153.54 and 153.571.
  - B. *If a cashier's check or irrevocable letter of credit is submitted as Bid Security at time of bid:* Contract Bond per Ohio Revised Code Sections 153.54 and 153.57, in the amount of 100% of the Contract Price. The Contractor and their Surety shall sign the Supplemental Bond Acknowledgement form and submit with the Contract forms
- 8.2 The bond shall be underwritten by a Surety Company authorized to transact business in the State of Ohio having an Ohio agent and listed on the most current Department of the Treasury Circular 570, "Surety Companies Acceptable on Federal Bonds."
- 8.3 The contract bond shall cover correction of the work for the period stated in the specifications and the correction period shall start upon Final Acceptance of the entire project and final payment by the Owner.
- 8.4 Nothing in the performance of the Engineer's service to the Owner in connection with this project shall in any way imply any undertaking for the benefit of the successful Bidder, its subcontractor(s), or the surety of any of them.

## PART 9 AWARD AND EXECUTION OF CONTRACT

- 9.1 After the Owner's legislative body awards the project, the successful bidder will receive the unsigned contract documents. Within 10 days after their receipt, the successful Bidder shall sign and deliver to the Owner said contract documents including any certifications, certificates, or additional bonds required by the contract.
- 9.2 The Owner shall execute the Contract within 60 days after the day of the bid opening. When necessary and by mutual consent between the Owner and the Successful Bidder, this 60-day period may be extended.
- 9.3 The date of the Owner's signature on the Contract Agreement shall be the effective contract date.
- 9.4 The Owner shall execute and deliver to the successful Bidder one set of fully executed contract documents.

## PART 10 INSURANCE

- 10.1 Verification of limits for public liability, property damage, automobile, Worker's Compensation, or any other insurance required by the provisions of this Contract must be submitted to the Owner prior to execution of the Contract.

- 10.2 All insurance shall be endorsed so that it cannot be cancelled for non-payment of premium for 10 days or cancelled or non-renewed for any other reason in less than 30 days after a written notice of such proposed action by the insurer is given to the Owner. The cancellation clause on the Certificate(s) of Insurance shall read as specified in the Supplementary Conditions and failure to submit an insurance certificate and/or policy endorsement verifying same shall be reason for the Owner to consider the Contractor non-responsive in complying with the requirements for contract execution and may be cause for forfeiture of the Bid Security to Owner.
- 10.3 The Insurer's affording coverage shall be authorized to transact business in the State of Ohio and be listed on the most current Ohio Department of Insurance list of Ohio Licensed Companies.
- 10.4 The Contractor's Liability Insurance policy(s) shall be endorsed such that limits are on a Per Project basis.
- 10.5 The Contractor shall also provide an Owner's and Contractor's Protective Policy.

#### PART 11 NON-COLLUSION AFFIDAVIT

- 11.1 Collusion between bidders will be cause for rejection of affected bids and may be cause for rejection of all bids. Multiple bids submitted by one bidder under the same name or different names, whether as an individual, firm, partnership, corporation, profit or non-profit, affiliate, or association will be cause for rejection of bids. A subcontractor is not a bidder, and may submit prices to multiple bidders.
- 11.2 All bidders shall submit an affidavit that their bid is genuine and not collusive or sham; that such bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham bid, or that such other bidder or person shall refrain from bidding; that such bidder has not in any manner, directly or indirectly sought by agreement or collusion, or communication or conference, with any person, to fix the bid price of affiant or any other bidder, or to fix any overhead, profit or cost element of said bid price, or of that of any other bidder, or to secure any advantage against the Owner or any person or persons interested in the proposed contract; that such bidder is the only party (or parties) who has an interest with the bidder in the profits of any contract which may result from the herein contained proposal; that no individual affiliated with the Owner, including but not limited to the head of any department, any employee, or any other official or officer of the Owner, is or will be directly or indirectly interested in this bid, and/or the profits from this bid if successful; that no individual affiliated with the Owner, including but not limited to the head of any department, any employee, or any other official or officer of the Owner, has or will receive anything of value as a result of the submission of this bid or its award; that no individual affiliated with the Owner, including but not limited to the head of any department, any employee, or any other official or officer of the Owner, has been solicited to provide assistance and/or provided assistance to the bidder which might give the bidder a competitive advantage or circumvent the competitive bidding process; and that all statements contained in said proposal are true; and further, that such bidder has not, directly or indirectly submitted this bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or

agent thereof.

- 11.3 Each bid must be accompanied by a completed Noncollusion Affidavit provided within the contract documents.
- 11.4 Where there is reason to believe collusion or combination among bidders exists, the Owner reserves the right to reject the bid of those concerned.

#### PART 12 DELINQUENT PERSONAL PROPERTY STATEMENT

- 12.1 Included with the contract documents is a Delinquent Personal Property Statement to be filled out by the successful Bidder.
- 12.2 The statement shall be sent to both the County Auditor and the County Treasurer. A signed copy shall remain in the contract documents as well.

#### PART 13 ORIGINAL DOCUMENTS

- 13.1 All bid forms, contract forms, bonds and any other bid documents or contract documents requiring signatures shall be submitted with original signatures. No photo copies or faxed copies of signed documents shall be accepted.

#### PART 14 ADDENDA

- 14.1 The bidder shall be responsible to obtain Addenda from the web at <https://bids.ctconsultants.com>.

END OF SECTION 10/31/23

# **BID FORMS**

The bid forms are not available online. The bid forms are available only by purchasing a set of plans and specifications at the location indicated in the Advertisement for Bids/Public Notice to Bidders.



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***SECTION 2***  
***CONTRACT FORMS***

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## NOTICE OF AWARD

TO: «ContractName»  
«ContractAddr»  
«ContractCity», «ContractState» «ContractZip»

PROJECT: «TitleCaps»

You are notified that your Bid which was opened on «Bidopening» has been accepted for items in the amount of «ContractDollars» at the unit bid prices as reflected in the bid tabulation contained herein for the *(fill in awarded parts, i.e. for Base Bid and Alternate C, ..... or delete)*.

You are required by the Instructions to Bidders to execute the Agreement and furnish the required Bonds, Certificates of Insurance, and other documents within 10 calendar days from the date of receipt of this Notice.

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

The Owner will return to you one (1) fully signed set of the contract documents.

«OwnerCaps»

---

«OwnerCEOFirst» «OwnerCEOLast», «OwnerCEOTitle»

---

Date

### ACKNOWLEDGMENT

«ContractCAPName»

**DO NOT SIGN THIS PAGE. FOR REFERENCE ONLY. OWNER  
WILL SEND SIGNED COPY.**

---

«ContractFirst» «ContractLast», «ContractTitle»

---

Date

## CONTRACT

FOR «TitleCaps»

THIS CONTRACT, made and entered into at «OwnerCity», «OwnerState», this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the «OwnerMuni» (“OWNER”), «OwnerState» and «ContractName» (“CONTRACTOR”).

WITNESSETH: That the said CONTRACTOR has agreed and by this presents does agree with the OWNER for the consideration hereinafter mentioned and contained, and under penalty expressed in a bond given with these presents, and herein contained or hereunto annexed, to furnish at its own cost and expense, all the necessary tools, equipment, materials, labor, and tests in an expeditious, substantial and workmanlike manner, the equipment and appurtenances herein contemplated, commencing work within 20 days from the date of the Notice to Proceed and executing the work within the time and in the manner specified and in conformity with the requirements set forth in this Contract.

The following form essential parts of the Contract (may vary with project).

1. Advertisement for Bids/Public Notice to Bidders
2. Instruction to Bidders
3. Bid Forms and Proposal
4. Contract Forms and Exhibits
5. Contract Bond – ORC 153.571 or ORC 153.57
6. Contract Provisions
7. General Conditions
8. Supplementary Conditions
9. Specifications
10. Specific Project Requirements
11. Prevailing Wage Rate Schedule
12. Contract Drawings; if any.
13. Addenda; if any.

The CONTRACTOR agrees and understands that the work on this contract shall be subject to the acceptance of the OWNER based upon and in accordance with the contract specifications and contract plans and drawings on file in the office of the OWNER.

The CONTRACTOR agrees that each individual employed by the CONTRACTOR or any Subcontractor and engaged in work on the project under this contract shall be paid by prevailing wage established by the Department of Industrial Relations of the State of Ohio or the U.S. Department of Labor (Davis-Bacon Act) as detailed in the section titled "Wage Rates." This shall occur regardless of any contractual relationship which may be said to exist between the Contractor or any Subcontractor and such individual. *(if a School District, delete this paragraph)*

The CONTRACTOR shall proceed with the said work in a prompt and diligent manner and shall do the several parts thereof. Further the CONTRACTOR shall complete the whole of said work in accordance with the specifications and contract drawings to the satisfaction of the OWNER on or before the time stated, and in default of completion within the time as fixed, the CONTRACTOR shall pay to the OWNER as liquidated damages, an amount equal to «Liquidated», for each and every day (Sundays and legal holidays excepted) the completion of the work may be delayed beyond the date fixed in the manner and as stipulated.

It is hereby mutually agreed that the OWNER is to pay and the CONTRACTOR is to receive, as full compensation for furnishing all materials and labor in building, constructing and testing and in all respect completing the herein described work and appurtenances in the manner and under the conditions herein specified, the prices stipulated in the proposal herein contained or hereto annexed and the total contract sum is «ContractDollars».

This Contract shall be in full force and effect from the date of execution by the OWNER and CONTRACTOR.

IN WITNESS WHEREOF: The OWNER and CONTRACTOR hereunto affixed their signature the day and year first mentioned above.

«ContractCAPName»

---

«ContractFirst» «ContractLast», «ContractTitle»

«OwnerCaps»

---

«OwnerCEOFirst» «OwnerCEOLast», «OwnerCEOTitle»

I hereby certify that funds in the amount of «ContractAmtwords» Dollars («ContractDollars») necessary for the foregoing Contract have been appropriated and are in the Treasury, or are in the process of collection, or are available through grants and/or loans from other funding sources.

---

«OwnerFiscalFirst» «OwnerFiscalLast», «OwnerFiscalTitle»

APPROVED AS TO FORM:

---

«OwnerLegalName», «OwnerLegalTitle»

**THE CONTRACTOR SHALL FURNISH THE FOLLOWING ITEMS  
WITHIN 10 DAYS OF NOTIFICATION OF AWARD:**

- A) **CERTIFICATE OF INSURANCE FOR  
CONTRACTOR'S PUBLIC LIABILITY INSURANCE POLICY  
AND AUTOMOTIVE INSURANCE POLICY**  
*Owner, Verdantas, LLC & CT Consultants Named as Additional Insured*
  
- B) **CERTIFICATE OF INSURANCE FOR  
OWNER'S AND CONTRACTOR'S PROTECTIVE POLICY**  
*Owner Named as Insured (No Additional Insured)*
  
- C) **CERTIFICATE OF WORKER'S COMPENSATION**
  
- D) **CONTRACT BOND THAT COMPLIES WITH ORC 153.54 AND 153.57**

\* D above is not required if a bond complying with ORC 153.54 and 153.571 (rollover bond) was submitted at time of bid.

DELINQUENT PERSONAL PROPERTY STATEMENT

STATE OF \_\_\_\_\_ )  
 ) SS  
COUNTY OF \_\_\_\_\_ )

«ContractName», having been awarded a contract by the «OwnerMuni», «OwnerState», hereby affirms under oath, pursuant to Ohio Revised Code Section 5719.042, that at the time the bid was submitted, my company **was / was not (CIRCLE ONE)** charged with delinquent personal property taxes on the General Tax List of Personal Property for «OwnerCounty» County, Ohio.

If such charge for delinquent personal property tax exists on the General Tax List of Personal Property for «OwnerCounty» County, Ohio, the amount of such due and unpaid delinquent taxes, including due and unpaid penalties and interest shall be set forth below.

A copy of this statement shall be transmitted by the Taxing District's Fiscal Officer to the County Treasurer within thirty days of the date it is submitted. A copy of this statement shall also be incorporated into the Contract made between «OwnerMuni», «OwnerState», and «ContractName», and no payment shall be made with respect to any Contract unless such statement has been so incorporated as a part thereof.

Delinquent Personal Property Tax	\$ _____
Penalties	\$ _____
Interest	\$ _____

«ContractCAPName»

\_\_\_\_\_  
«ContractFirst» «ContractLast», «ContractTitle»

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

**AFFIDAVIT**  
OF COMPLIANCE WITH OHIO REVISED CODE SECTION 3517.13

STATE OF \_\_\_\_\_ )  
 ) SS  
COUNTY OF \_\_\_\_\_ )

\_\_\_\_\_ being duly sworn deposes and states as follows:

1. I am duly authorized to make the statements contained herein on behalf of \_\_\_\_\_ (“the Contracting Party”).
2. The Contracting Party is a/an (select one):
  - ☐ Individual, partnership, or other unincorporated business association (including without limitation, a professional association organized under Ohio Revised Code Chapter 1787), estate, or trust
  - ☐ Corporation organized and existing under the laws of the State of \_\_\_\_\_
  - ☐ Labor organization
3. I hereby affirm that the Contracting Party and each of the individuals specified in R.C. 3517.13(I) (with respect to non-corporate entities and labor organizations) or R.C. 3517.13(J) (with respect to corporations) are in full compliance with the political contribution limitations set forth in R.C. 3517.13(I) and (J), as applicable.
4. I understand that a false representation on this certification will incur penalties pursuant to 3517.992(R).

Affiant further sayeth naught.

By: \_\_\_\_\_

Title: \_\_\_\_\_

SWORN TO BEFORE ME and subscribed in my presence this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

## ESCROW AGREEMENT FOR CONTRACTOR'S RETAINAGE

In accordance with a certain Contract between the «OwnerMuni», «OwnerState», (hereinafter referred to as "the Owner") and «ContractName», (hereinafter referred to as "the Contractor"), an Escrow Agent is hereby appointed to hold funds arising out of the Owner's agreement to pay retainage into an escrow fund, said Agent to be:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

All retained funds will be placed with the above Escrow Agent from the date your Contract is certified as being 50% complete pursuant to Sections 153.13, and 153.14 and 153.63 Ohio Revised Code.

During the time the aforementioned retained funds are in the custody of the Escrow Agent, the Escrow Agent has authority to invest the escrow funds in the classes of securities listed below which, in the judgment of the Escrow Agent, allow for the least risk to capital preservation and provide for a reasonable income. The income from investment of the escrowed funds shall be accumulated in the escrow account.

- (a) Obligation issued or guaranteed as to interest and principal by the government of the United States, or obligations of the State of Ohio or any political subdivision thereof;
- (b) Obligations including certificates of deposit of any national bank located in this State and/or any bank as defined by Section 1101.01, O.R.C.;
- (c) Repurchase agreements fully secured by obligations of any kind specified in clauses (a) and (b) above; or
- (d) Interest in any money market fund or trust, the investments of which are generally restricted to obligations of any of the kind specified in clauses (a) through (c) above.

The Escrow Agent shall hold the escrowed principal and interest until receipt of notice from the Owner, or until receipt of an Arbitration Order or an Order of the Court of Claims, or other appropriate courts, specifying the amount of the escrowed principal to be released and the person to whom it is to be released. Upon receipt of such a request or order, the Escrow Agent shall, within 30 days, pay such amount of principal and interest earned on the retainage to the Contractor less the Escrow Agent's fee.

It is understood that the Escrow Agent shall have no duties, obligations, or liabilities hereunder other than to hold and invest said funds and to deliver them in accordance with the provisions hereof.

«ContractCAPName»

\_\_\_\_\_  
«ContractFirst» «ContractLast», «ContractTitle»

«OwnerCaps»

\_\_\_\_\_  
«OwnerFiscalFirst» «OwnerFiscalLast», «OwnerFiscalTitle»



## ESCROW WAIVER

In accordance with a certain Contract between the «OwnerMuni», «OwnerState», (hereinafter referred to as "the Owner") and «ContractName», (hereinafter referred to as "the Contractor") it is mutually agreed by and between the parties hereto that because of the short-term duration of the within contract, no escrow account will be established pursuant to Sections 153.13, 153.14 and 153.63 of the Ohio Revised Code nor shall any interest be paid on any retainage.

«ContractCAPName»

---

«ContractFirst» «ContractLast», «ContractTitle»

«OwnerCaps»

---

«OwnerFiscalFirst» «OwnerFiscalLast», «OwnerFiscalTitle»

NOTICE TO PROCEED

Project: «Title»

Owner: «OwnerMuni»  
«OwnerAddr»  
«OwnerCity», «OwnerState» «OwnerZip»

To: «ContractName»  
«ContractAddr»  
«ContractCity», «ContractState» «ContractZip»

Date: \_\_\_\_\_

You are hereby notified to commence work in accordance with the Contract. All work shall be completed by «Completion\_Date».

«OwnerCaps»

\_\_\_\_\_  
«OwnerCEOFirst» «OwnerCEOLast», «OwnerCEOTitle»

**THE OWNER OR THEIR AUTHORIZED REPRESENTATIVE SHALL INSERT THE FOLLOWING CONTRACT DOCUMENTATION IN THE EXECUTED CONTRACT:**

**A) FINDINGS FOR RECOVERY – ORC 9.24**  
**(<http://ffr.ohioauditor.gov/> )**

**B1) CHECK FOR DEBARRED CONTRACTORS IN THE STATE OF OHIO**  
**(<https://www.sos.state.oh.us/records/debarred-contractors/> )**

**B2) CHECK FEDERAL SAM (System for Award Management) for  
FEDERAL FUNDING (including sub-contractors), (if applicable)**  
**(<https://www.sam.gov/SAM/> )**

**C) NOTIFICATION OF SURETY AND AGENT OF CONSTRUCTION  
CONTRACT AWARD – ORC 9.32 (if applicable)**

**D) NOTIFICATION TO UTILITY COMPANIES OF COMMENCEMENT  
OF CONTRACT EXECUTION – ORC 153.64 (if applicable)**

---

***SECTION 3***  
***GENERAL CONDITIONS***

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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

**ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE**

and

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Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## TABLE OF CONTENTS

	<b>Page</b>
Article 1 – Definitions and Terminology .....	1
1.01 Defined Terms.....	1
1.02 Terminology .....	5
Article 2 – Preliminary Matters .....	6
2.01 Delivery of Bonds and Evidence of Insurance.....	6
2.02 Copies of Documents.....	6
2.03 Commencement of Contract Times; Notice to Proceed.....	6
2.04 Starting the Work .....	7
2.05 Before Starting Construction .....	7
2.06 Preconstruction Conference; Designation of Authorized Representatives .....	7
2.07 Initial Acceptance of Schedules.....	7
Article 3 – Contract Documents: Intent, Amending, Reuse .....	8
3.01 Intent.....	8
3.02 Reference Standards.....	8
3.03 Reporting and Resolving Discrepancies.....	8
3.04 Amending and Supplementing Contract Documents.....	9
3.05 Reuse of Documents .....	10
3.06 Electronic Data.....	10
Article 4 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points.....	10
4.01 Availability of Lands .....	10
4.02 Subsurface and Physical Conditions .....	11
4.03 Differing Subsurface or Physical Conditions.....	11
4.04 Underground Facilities .....	13
4.05 Reference Points .....	14
4.06 Hazardous Environmental Condition at Site.....	14
Article 5 – Bonds and Insurance .....	16
5.01 Performance, Payment, and Other Bonds .....	16
5.02 Licensed Sureties and Insurers .....	16
5.03 Certificates of Insurance .....	16
5.04 Contractor’s Insurance.....	17
5.05 Owner’s Liability Insurance .....	18
5.06 Property Insurance .....	18
5.07 Waiver of Rights .....	20
5.08 Receipt and Application of Insurance Proceeds.....	21

5.09	Acceptance of Bonds and Insurance; Option to Replace .....	21
5.10	Partial Utilization, Acknowledgment of Property Insurer .....	21
Article 6 – Contractor’s Responsibilities .....		22
6.01	Supervision and Superintendence.....	22
6.02	Labor; Working Hours.....	22
6.03	Services, Materials, and Equipment .....	22
6.04	Progress Schedule .....	23
6.05	Substitutes and “Or-Equals” .....	23
6.06	Concerning Subcontractors, Suppliers, and Others.....	25
6.07	Patent Fees and Royalties .....	27
6.08	Permits.....	27
6.09	Laws and Regulations .....	27
6.10	Taxes .....	28
6.11	Use of Site and Other Areas .....	28
6.12	Record Documents.....	29
6.13	Safety and Protection .....	29
6.14	Safety Representative.....	30
6.15	Hazard Communication Programs .....	30
6.16	Emergencies .....	30
6.17	Shop Drawings and Samples .....	30
6.18	Continuing the Work.....	32
6.19	Contractor’s General Warranty and Guarantee.....	32
6.20	Indemnification .....	33
6.21	Delegation of Professional Design Services .....	34
Article 7 – Other Work at the Site.....		35
7.01	Related Work at Site .....	35
7.02	Coordination.....	35
7.03	Legal Relationships.....	36
Article 8 – Owner’s Responsibilities.....		36
8.01	Communications to Contractor.....	36
8.02	Replacement of Engineer.....	36
8.03	Furnish Data .....	36
8.04	Pay When Due .....	36
8.05	Lands and Easements; Reports and Tests.....	36
8.06	Insurance .....	36
8.07	Change Orders.....	36
8.08	Inspections, Tests, and Approvals .....	37
8.09	Limitations on Owner’s Responsibilities .....	37
8.10	Undisclosed Hazardous Environmental Condition .....	37
8.11	Evidence of Financial Arrangements .....	37
8.12	Compliance with Safety Program.....	37
Article 9 – Engineer’s Status During Construction .....		37
9.01	Owner’s Representative.....	37
9.02	Visits to Site .....	37



9.03	Project Representative .....	38
9.04	Authorized Variations in Work .....	38
9.05	Rejecting Defective Work .....	38
9.06	Shop Drawings, Change Orders and Payments.....	38
9.07	Determinations for Unit Price Work .....	39
9.08	Decisions on Requirements of Contract Documents and Acceptability of Work.....	39
9.09	Limitations on Engineer's Authority and Responsibilities .....	39
9.10	Compliance with Safety Program.....	40
Article 10 –	Changes in the Work; Claims .....	40
10.01	Authorized Changes in the Work .....	40
10.02	Unauthorized Changes in the Work .....	40
10.03	Execution of Change Orders.....	41
10.04	Notification to Surety.....	41
10.05	Claims.....	41
Article 11 –	Cost of the Work; Allowances; Unit Price Work .....	42
11.01	Cost of the Work .....	42
11.02	Allowances .....	45
11.03	Unit Price Work .....	45
Article 12 –	Change of Contract Price; Change of Contract Times .....	46
12.01	Change of Contract Price.....	46
12.02	Change of Contract Times .....	47
12.03	Delays.....	47
Article 13 –	Tests and Inspections; Correction, Removal or Acceptance of Defective Work .....	48
13.01	Notice of Defects .....	48
13.02	Access to Work .....	48
13.03	Tests and Inspections .....	48
13.04	Uncovering Work.....	49
13.05	Owner May Stop the Work.....	50
13.06	Correction or Removal of Defective Work .....	50
13.07	Correction Period.....	50
13.08	Acceptance of Defective Work.....	51
13.09	Owner May Correct Defective Work .....	51
Article 14 –	Payments to Contractor and Completion .....	52
14.01	Schedule of Values.....	52
14.02	Progress Payments .....	52
14.03	Contractor's Warranty of Title .....	55
14.04	Substantial Completion.....	55
14.05	Partial Utilization .....	56
14.06	Final Inspection.....	56
14.07	Final Payment.....	57
14.08	Final Completion Delayed.....	58
14.09	Waiver of Claims .....	58

Article 15 – Suspension of Work and Termination .....	58
15.01 Owner May Suspend Work .....	58
15.02 Owner May Terminate for Cause .....	58
15.03 Owner May Terminate For Convenience.....	60
15.04 Contractor May Stop Work or Terminate .....	60
Article 16 – Dispute Resolution .....	61
16.01 Methods and Procedures .....	61
Article 17 – Miscellaneous .....	61
17.01 Giving Notice .....	61
17.02 Computation of Times .....	61
17.03 Cumulative Remedies .....	62
17.04 Survival of Obligations .....	62
17.05 Controlling Law .....	62
17.06 Headings.....	62

## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.
  3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
  5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
  7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
  8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
  9. *Change Order*—A document recommended by Engineer 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, issued on or after the Effective Date of the Agreement.
  10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
  11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given 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 under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *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.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *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 at the Site.
44. *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 thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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 Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *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, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

## 1.02 Terminology

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

### B. *Intent of Certain Terms or Adjectives:*

1. 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 Paragraph 9.09 or any other provision of the Contract Documents.

### C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

### D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
  - a. does not conform to the Contract Documents; or
  - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
  - c. 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 14.04 or 14.05).

### E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean 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, shall mean 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, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
  4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. 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 Bonds and Evidence of Insurance***

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

### **2.02 *Copies of Documents***

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

### **2.03 *Commencement of Contract Times; Notice to Proceed***

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement 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 Agreement. 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 Agreement, whichever date is earlier.



## 2.04 *Starting the Work*

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

## 2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), 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 Documents;
  - 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 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.

## 2.06 *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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, 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 instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

## 2.07 *Initial 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 for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall 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 component parts of the Work.

### **ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE**

#### **3.01 *Intent***

- A. The Contract Documents are complementary; what is required by one 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. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

#### **3.02 *Reference Standards***

- A. Standards, Specifications, Codes, Laws, and Regulations
  1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

#### **3.03 *Reporting and Resolving Discrepancies***

- A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, 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) any standard, specification, manual, or code, or (c) 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
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 Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
  - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); 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 Amending and Supplementing Contract Documents**

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
  1. A Field Order;
  2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

### 3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier 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 editions; or
  2. 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.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

### 3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

## **ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS**

### 4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor 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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the

Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

- 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 the Work is to be performed 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.

#### 4.02 *Subsurface and Physical Conditions*

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

- 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
- 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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; or
- 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.

#### 4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

- 1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
- 2. is of such a nature as to require a change in the Contract Documents; or

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 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
  - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
  - 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 Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
  - a. Contractor knew of the existence of such conditions at the time Contractor made a final 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
  - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
  - a. reviewing and checking all such information and data;
  - b. locating all Underground Facilities shown or indicated in the Contract Documents;
  - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
  - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price

or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

#### 4.05 *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 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.

#### 4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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; or
  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 any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by



Paragraph 6.16.A); and (iii) 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 4.06.E.

- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. 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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. 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 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. 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 or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. 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 a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 5 – BONDS AND INSURANCE**

### **5.01   *Performance, Payment, and Other Bonds***

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds 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 shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

### **5.02   *Licensed Sureties and Insurers***

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

### **5.03   *Certificates of Insurance***

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

#### 5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
  - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
  - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
  - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
    - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
    - b. by any other person for any other reason;
  - 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
  - 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
  - a. Such insurance shall remain in effect for two years after final payment.
  - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

#### 5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

#### 5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
  2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
  3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
  4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
  5. allow for partial utilization of the Work by Owner;
  6. include testing and startup; and
  7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property

insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

#### 5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their 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 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 Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (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. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. 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:
  - 1. loss 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 perils whether or not insured by Owner; and
  - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery

against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, 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. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

## ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

### 6.01 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

### 6.02 *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 at all times maintain good discipline and order at the Site.
- B. 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 shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

### 6.03 *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.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall 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 shall 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.



#### 6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
  2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

#### 6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that:
      - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
      - 2) it 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; and
      - 3) it has a proven record of performance and availability of responsive service.
    - b. Contractor certifies that, if approved and incorporated into the Work:
      - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
      - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

## 2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
  - 1) shall certify that the proposed substitute item will:
    - a) perform adequately the functions and achieve the results called for by the general design,
    - b) be similar in substance to that specified, and
    - c) be suited to the same use as that specified;
  - 2) will state:
    - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
    - b) 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
    - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
  - 3) will identify:
    - a) all variations of the proposed substitute item from that specified, and
    - b) available engineering, sales, maintenance, repair, and replacement services; and

- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

#### 6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or

other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
  - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
  - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (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 any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

## 6.07 *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 a particular 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 shall be disclosed by Owner 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.

## 6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

## 6.09 *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. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

#### 6.10 *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.

#### 6.11 *Use of Site and Other Areas*

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

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. 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 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 by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall 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 all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading 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 property to stresses or pressures that will endanger it.

#### 6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

#### 6.13 *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. 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, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. 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. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

- D. 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.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.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 (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).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

#### 6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of 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.

#### 6.16 *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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

#### 6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.



1. *Shop Drawings:*
    - a. Submit number of copies specified in the General Requirements.
    - b. Data shown on the Shop Drawings will 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 6.17.D.
  2. *Samples:*
    - a. Submit number of Samples specified in the Specifications.
    - b. 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 6.17.D.
- B. 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. *Submittal Procedures:*
1. Before submitting each Shop Drawing or Sample, Contractor shall have:
    - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
    - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
    - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
    - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
  2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
  3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop

Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

*D. Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. 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, conform to the information given in 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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

*E. Resubmittal Procedures:*

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.

**6.18** *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

**6.19** *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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper 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.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
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 or the issuance of a notice of acceptability by Engineer;
  6. any inspection, test, or approval by others; or
  7. any correction of defective Work by Owner.

#### 6.20 *Indemnification*

- A. 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 performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury 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 6.20.A shall 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.

- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

## ARTICLE 7 – OTHER WORK AT THE SITE

### 7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
  - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
  - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. 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. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, 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.

### 7.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
  - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
  - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
  - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

### 7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

## **ARTICLE 8 – OWNER'S RESPONSIBILITIES**

### 8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

### 8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

### 8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

### 8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

### 8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

### 8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

### 8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

#### 8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

#### 8.09 *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.

#### 8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

#### 8.11 *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 Documents.

#### 8.12 *Compliance with Safety Program*

- 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 pursuant to Paragraph 6.13.D.

### **ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION**

#### 9.01 *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 Documents.

#### 9.02 *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 9.09. 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.

#### 9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

#### 9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

#### 9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

#### 9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.



- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. 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 thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 shall 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 Paragraph 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

#### 9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

### **ARTICLE 10 – CHANGES IN THE WORK; CLAIMS**

#### 10.01 *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

#### 10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

### 10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
  2. changes in the 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; and
  3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

### 10.04 *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.

### 10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The

opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
  2. approve the Claim; or
  3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

## **ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### **11.01 *Cost of the Work***

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on

Saturday, Sunday, or legal holidays, shall 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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall 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, who 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 shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including 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, and hand tools not owned by the workers, which are 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.
  - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the 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 property insurance established in accordance with Paragraph 5.06.D), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone 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 Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, 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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. 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.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

#### 11.02 *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:*

1. Contractor agrees that:

- a. 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
- b. 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 on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a 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 on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

#### 11.03 *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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- 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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
  2. there is no corresponding adjustment with respect to any other item of Work; and
  3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

## **ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES**

### **12.01 *Change of Contract Price***

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
  2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
  3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
    - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five 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 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

#### 12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

#### 12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the

control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

## **ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

### **13.01 *Notice of Defects***

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

### **13.02 *Access to Work***

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will 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 therewith as applicable.

### **13.03 *Tests and Inspections***

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
  - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
  - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
  - 3. as otherwise specifically provided in the Contract Documents.

- 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.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. 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.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

#### 13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. 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, or both, 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

### 13.05 *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, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall 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.

### 13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay 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 correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

### 13.07 *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 terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. repair such defective land or areas; or
  - 2. correct such defective Work; or
  - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If 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. 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

- C. 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.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, 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.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

#### 13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay 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) 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 pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

#### 13.09 *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 rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

## **ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION**

### **14.01 *Schedule of Values***

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

### **14.02 *Progress Payments***

#### **A. *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. 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 shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the

Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

*B. Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, 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 9.07, 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 Documents; 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.
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, or

- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
  - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
  - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

*C. Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

*D. Reduction in Payment:*

- 1. Owner may refuse to make payment of the full amount recommended by Engineer because:
  - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
  - b. 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;
  - c. there are other items entitling Owner to a set-off against the amount recommended; or



- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

#### 14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

#### 14.04 *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 (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities

pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

- E. 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 tentative list.

#### 14.05 *Partial Utilization*

- 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 significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
  - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and 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 14.04.A through D for that part of the Work.
  - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 14.04 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 5.10 regarding property insurance.

#### 14.06 *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 is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

## 14.07 *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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
  - b. consent of the surety, if any, to final payment;
  - c. a list of all Claims against Owner that Contractor believes are unsettled; and
  - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) 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.

### *B. Engineer's Review of Application and Acceptance:*

1. 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 Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. 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. Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

#### 14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

#### 14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
  1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
  2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

### **ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION**

#### 15.01 *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

#### 15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
  2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
  3. Contractor's repeated disregard of the authority of Engineer; or
  4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
  2. 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
  3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

#### 15.03 *Owner May Terminate For Convenience*

- A. Upon seven 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;
  3. 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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
  4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

#### 15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven 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 15.03.
- 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, seven 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 provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 – DISPUTE RESOLUTION**

### **16.01 *Methods and Procedures***

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
  - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
  - 2. agrees with the other party to submit the Claim to another dispute resolution process; or
  - 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

## **ARTICLE 17 – MISCELLANEOUS**

### **17.01 *Giving Notice***

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
  - 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
  - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

### **17.02 *Computation of Times***

- A. When any period of time is referred to in the Contract Documents 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.

### 17.03 *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 Documents. 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.

### 17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

### 17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

### 17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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## SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2007 ed.) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented herein or in the Specific Project Requirements remain in full force and effect.

SC-1.01            The terms used in these Supplementary Conditions which are defined in the General Conditions have the meaning assigned to them in the General Conditions.

SC-2.02            Delete paragraph 2.02(A) in its entirety and insert the following in its place:

Owner shall furnish one (1) printed/hard copy of the drawings and Project Manual which shall be an executed contract set and one set in electronic format (.pdf), if requested.

SC-2.03(A)        In the last sentence of 2.03A, change "sixtieth day" to "ninetieth day."

SC-4.02(A)        Change "Supplementary Conditions" to read "Specific Project Requirements."

SC-4.06(G)        Delete paragraph 4.06(G) in its entirety.

SC-5.03(A)(1)    The required Certificate of Insurance shall be in a form satisfactory to the Owner (most current version of ACORD 25 or approved equal). If the Contractor fails to procure and maintain any specified and/or required insurance, the Owner shall have the right to procure and maintain the said insurance for and in the name of the Contractor and the Contractor shall pay the cost thereof and shall furnish all necessary information to make effective and maintain such insurance.

SC-5.04(B)(1)    Change "Supplementary Conditions" to read "Specific Project Requirements."

SC-5.04(B)(2)    The limits of liability for the insurance required by paragraph 5.04(A) of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

All of the limits below may be satisfied with an Umbrella/Excess Liability as needed to increase the Primary Policy to required limits.

5.04(A)(1) and (2) Workers' Compensation, etc., under paragraphs 5.04(A)(1) and 5.04(A)(2) of the General Conditions:

(a) State	Statutory
(b) Applicable Federal (e.g., Longshoreman's):	Statutory
(c) Employer's Liability:	\$1,000,000

5.04(A)(3), (4) and (5). Contractor's Liability Insurance under paragraphs 5.04(A)(3) through 5.04(A)(5) of the General Conditions which shall also include completed operations and product liability coverage.

- (a) Bodily Injury and Property Damage, Combined Single Limit (CSL) (Except Products and Completed Operations) Property Damage liability insurance will provide Explosion, Collapse, and Underground coverage where applicable.

Each Occurrence	\$2,000,000
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General Aggregate	\$4,000,000
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- (b) Products and Completed Operations Aggregate \$1,000,000

Products and Completed Operations to be maintained for two (2) years after final payment and Contractor shall continue to provide evidence of such coverage to the Owner on an annual basis during the aforementioned period.

- (c) Personal and Advertising Injury (Per Person/Organization and per occurrence). \$1,000,000

- (d) Fire Damage \$100,000

- (e) If the General Liability Policy includes a General Aggregate, such policy shall be endorsed to have the General Aggregate Per Project Aggregate Limit.

5.04(A)(6) Automobile Liability - (Owned, Non-Owned, Hired)  
Contractor may provide split limits or combined single limit.

- (a) Split Limits:

Bodily Injury,	Each Person:	\$2,000,000
	Each Occurrence	\$2,000,000

Property Damage,	Each Occurrence	\$1,000,000
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**or**

- (b) Combined Single Limit

Bodily Injury and Property Damage,		
	Each Occurrence	\$2,000,000

SC-5.04(B)(3) Add the following to the end of the paragraph: “to the extent available in the insurance industry with industry standard exclusions and as allowed under the laws and regulations in the State of Ohio;”

SC-5.04(B)(4) Add the following:

Written notice of cancellation for non-payment of premium shall be at least 10 days.

Add the following section:

SC-5.04(C) Unless otherwise stated in Specific Project Requirements, the Contractor shall purchase and provide an "Owner's and Contractor's Protective Policy" with an immediate Effective Date and the Owner listed as the insured (No additional insureds) for the following limits:

Each Occurrence	\$1,000,000
General Aggregate	\$2,000,000

Add the following section:

SC-5.04(D) Unless otherwise stated in Specific Project Requirements the Contractor shall purchase and maintain during the Contract Time "All Risk Builders' Risk Insurance," and/or "Installation Floater Insurance," and/or "Boiler and Machinery Insurance," and any and all insurance requirements of section GC-5.06 of the General Conditions as applicable for the type of work to be performed upon the Project to the full insurable value thereof for the benefit of the Owner, the Contractor, Subcontractors and Suppliers as their interest may appear. This insurance shall cover the work until final acceptance and final payment by the Owner. This provision shall in no way release the Contractor or Contractor's Surety from obligations under the Contract Documents to fully complete the Project. The original policy(s) shall be filed with the Owner or his designated representative.

SC-5.05 *Owner's Liability Insurance*

See SC-5.04(C) above.

SC-5.06 *Property Insurance*

Unless otherwise stated in Specific Project Requirements, the Contractor, not the Owner, shall purchase and maintain during the Contract Time all property insurance required in section GC-5.06 of the General Conditions and as outlined in SC-5.04(D) above.

Add the following section:

SC-6.02(C) The Contractor shall be responsible for the Owner and/or Engineer's additional inspection and administrative costs for work performed beyond regular working hours as defined in this Section.

SC-6.07(B) Delete paragraph 6.07(B) in its entirety.

SC-6.09 (D) Add the following:

D. The contractor agrees to the requirements of RC 153.59, RC 153.591, and RC 153.60.

Add the following section:

SC-6.10(B) Add the following:

Should the Owner be exempt from Ohio State Sales and Use Taxes on materials and equipment to be incorporated in the Project, the Contractor may obtain a waiver and said taxes shall not be included in the Contract Price.

1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the work
2. Owner's exemption to Contractor does not apply to construction tools, machinery, equipment, or other property by or leased by Contractor, or to supplies or materials not incorporated into the work.

The Contractor shall withhold and/or pay all consumer, use, property, employment, income and other taxes in accordance with the laws and regulations of the United States, State of Ohio, Owner and other applicable agencies which are applicable during the performance of the work.

SC-6.17 *Shop Drawings and Samples*

Add the following new paragraphs immediately after paragraph 6.17(E):

- F. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three (3) submittals. Engineer will record Engineer's time for reviewing subsequent materials of shop drawings, samples, or other items requiring approval and Contractor shall reimburse Owner for Engineer's charges for such time.
- G. In the event that Contractor requests a substitution for a previously approved item, Contractor shall reimburse Owner for Engineer's charges for such time unless the need for such substitution is beyond the control of the Contractor.

SC-7.02 Delete Section 7.02 of the General Conditions in its entirety and insert the following:

SC-7.02(A) The General Construction Contractor shall be referred to and defined as the Construction Coordinator.

SC-7.02(B) Duties of the Construction Coordinator include the following:

1. Scheduling and coordinating the work of the Prime Contractors including submission and periodic updating of project schedule.
2. Establishing and administrating the site safety program and procedures for the project.
3. See that permits are applied for and obtained on a timely basis. Advise the Engineer of any problems related to permit approval.
4. Monitoring compliance with Laws and Regulations.
5. Maintain project site for dust, sedimentation, debris, waste, and general site cleanliness.
6. Coordinate location and use of temporary construction facilities including but not limited to sanitary, water, power, telephone, and parking.
7. Coordinate Owner interface for utility tie-ins/shut downs.
8. Monitor shop drawing submittal and coordination of submittal information between Prime Contractors.

SC-10.01 (A) Add the following:

The Owner may request from the Contractor and the Contractor shall provide within ten days of the request, a quote for all ordered changes in the work or work the Owner may be considering to be ordered. The quote shall be a line item, detailed, itemized breakdown of the work.

SC-11.01(A) For purposes of "Cost of the Work" delete Section 11.01(A), (B), and (C) of the General Conditions in their entirety and insert ODOT 109.05, in its place.

SC-13.07(A) In the First sentence of Section 13.07(A) remove "Substantial Completion" and insert "Final Acceptance of the entire project and final payment by the Owner."

SC-13.07(C) Remove 13.07(C) and replace with the following:

All materials and equipment shall be warranted by the respective material supplier or equipment manufacturer until the end of the Contractor's "correction period" (or longer if specified elsewhere in the contract) regardless of date of initial installation or operation of the material or equipment. The cost of such extended warranties as needed from material suppliers or equipment manufacturers to provide warranty coverage until the end of the "correction period" or other period as specified in the contract shall be the responsibility of the prime contractor and shall be assumed to have been included in his bid.

SC-14.02(A) (3) Delete Section 14.02(A) (3) of the General Conditions in its entirety and insert the following:

Until the job is 50% complete, the Contractor will be paid 92% of the estimated value of labor and material completed in acceptable form. After the work is 50% complete, no further funds shall be retained and the Contractor shall be paid 100% of the estimated value of the remaining labor and material completed in acceptable form, provided that the Contractor is making satisfactory progress and there is no specific cause for greater withholding. Upon the Owner's agreement that the project is substantially complete, the Retainage may be reduced to twice the value of the remaining punch list work subject to the recommendation of the Engineer and the approval by the Owner.

Add the following section:

SC-14.02(A) (4)

Payment for stored materials at invoice prices or at the unit price bid for materials, or the lesser value of the two, will be made for accepted nonperishable equipment and materials which are to be incorporated into the work, when accepted, delivered, properly stored, and protected upon the site and verified to the Engineer by a copy of the invoice. For materials and equipment meeting the foregoing conditions, the Owner will pay, when properly included in an approved estimate, 92% of the invoice value of the same. Subsequent to the inclusion of a payment for delivered materials in a progress payment, Contractor shall submit no later than the next payment submission, a partial waiver of lien from each and every supplier for whom delivered materials were paid. If no such waiver is submitted prior to or along with the next payment, the amount of delivered materials paid commensurate with that particular item will be deducted from future payments. No payment for delivered materials shall be made for any items that are scheduled to be incorporated in the work within 30 days of submission of the pay estimate. Delivered materials will not be paid in any given month for a total amount less than \$5,000.00. Payment for delivered materials for such items as pipe backfill and roadway subbase will not be routinely considered.

SC-16.01 Delete Article 16 in its entirety and replace with the following:

10/17

## **ARTICLE 16 - DISPUTE RESOLUTION AGREEMENT - MEDIATION/ARBITRATION**

OWNER and CONTRACTOR hereby agree that Article 16 of the General Conditions to the Agreement between OWNER and CONTRACTOR is amended to include the following agreement of the parties:

- 16.01 All claims, disputes, and other matters in question between OWNER and CONTRACTOR arising out of or relating to the Contract Documents or the breach thereof (except for claims which have been waived by the making or acceptance of final payment as provided by paragraph 14.09) will be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining, subject to the limitations of this Article 16. This agreement so to arbitrate and any other agreement or consent to arbitrate entered into in accordance herewith as provided in this Article 16 will be specifically enforceable under the prevailing law of any court having jurisdiction.
- 16.02 No demand for arbitration of any claim, dispute, or other matter that is required to be referred to Engineer initially for decision in accordance with paragraph 9.09 will be made until the earlier of (a) the date on which ENGINEER has rendered a written decision or (b) the thirty-first day after the parties have presented their evidence to ENGINEER if a written decision has not been rendered by ENGINEER before that date. No demand for arbitration of any such claim, dispute or other matter will be made later than thirty days after the date on which ENGINEER has rendered a written decision in respect thereof in accordance with paragraph 9.08 and the failure to demand arbitration within said thirty days' period will result in Engineer's decision being final and binding upon OWNER and CONTRACTOR. If ENGINEER renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede the arbitration proceedings, except where the decision is acceptable to the parties concerned. No demand for arbitration of any written decision of ENGINEER rendered in accordance with paragraph 9.08 will be made later than ten days after the part making such demand has delivered written notice of intention to appeal as provided in paragraph 10.05.
- 16.03 Notice of the demand for arbitration will be filed in writing with the other party to the Agreement and with the American Arbitration Association, and a copy will be sent to ENGINEER for information. The demand for arbitration will be made within the thirty-day or ten-day period specified in paragraph 16.02 as applicable, and in all other cases within a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.
- 16.04 Except as provided in paragraph 16.05 below, no arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder or in any other manner any other person or entity (including ENGINEER, ENGINEER's Consultant, and the officers, directors, agents, employees, or consultants of any of them) who is not a party to this contract unless:



- (A) the inclusion of such other person or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration, and
- (B) such other person or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings, and
- (C) the written consent of the other person or entity sought to be included and of OWNER and CONTRACTOR has been obtained for such inclusion, which consent shall make specific references to this paragraph; but no such consent shall constitute consent to arbitration of any dispute not specifically described in such consent or to arbitration with any party not specifically identified in such consent.

- 16.05 Notwithstanding paragraph 16.04 if a claim, dispute or other matter in question between OWNER and CONTRACTOR involves the Work of a Subcontractor, either OWNER or CONTRACTOR may join such Subcontractor as a party to the arbitration between OWNER and CONTRACTOR herein under. CONTRACTOR shall include in all subcontracts required by paragraph 6.06(G) a specific provision whereby the Subcontractor consents to being joined in an arbitration between OWNER and CONTRACTOR involving the Work and such Subcontractor. Nothing in this paragraph 16.05 nor in the provision of such subcontract consenting to joinder shall create any claim, right or cause of action in favor of Subcontractor and against OWNER, ENGINEER, or ENGINEER's Consultants that does not otherwise exist.
- 16.06 The award rendered by the arbitration will be final, judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal.
- 16.07 OWNER and CONTRACTOR agree that they shall first submit any and all unsettled claim, counterclaims, disputes and other matters in questions between them arising out of or relating to the Contract Documents or the breach thereof ("disputes"), to mediation by the American Arbitration Association under the Construction Industry Mediation Rules of the American Arbitration Association prior to either of them initiating against the other a demand for arbitration pursuant to paragraphs 16.01 through 16.06, unless delay in initiating arbitration would irrevocably prejudice one of the parties. The respective thirty and ten-day time limits within which to file a demand for arbitration as provided in paragraphs 16.02 and 16.03 above shall be suspended with respect to a dispute submitted to mediation within those same applicable time limits and shall remain suspended until ten days after the termination of the mediation. The mediator of any dispute submitted to mediation under this Agreement shall not serve as arbitrator of such dispute unless otherwise agreed.

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***SECTION 5***  
***SPECIFICATIONS***

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## SECTION 011100 - SUMMARY OF WORK

### PART 1 - GENERAL

#### 1.1 LOCATION OF THE PROJECT

- A. The project is located in the Village of Sunbury, Delaware County, Ohio.

#### 1.2 PROJECT DESCRIPTION

- A. The project consists of various upgrades to be performed on an existing sewage lift station.

#### 1.3 SPECIFICATIONS

- A. In general, these Specifications describe the work to be performed by the various trades, other than work specifically excluded. It shall be the responsibility of the Contractor and Subcontractors to perform all work incidental to their trade, whether or not specific mention is made of each item, unless such incidentals are included under another Item.
- B. It is advised that the Contractor and all Subcontractors familiarize themselves with the contents of the complete Specifications, particularly for the trades preceding, following, related or adjacent to their work.

#### 1.4 DRAWING SCHEDULE

- A. The work to be done under this Contract is shown on the following Drawings:

<u>Title</u>	<u>Sheet No.</u>
Cover Sheet	1
Legend and Abbreviations	2
General Notes	3
Lift Station Site Plan	4
Lift Station Pump Details	5
Electrical Legend and General Notes	6
Electrical Site Plan	7
Electrical Diagrams, Schedules, & Details	8

END OF SECTION 011100

## SECTION 011419 – USE OF SITE

### PART 1 - GENERAL

#### 1.1 GENERAL

- A. The Contractor will be allowed the use of as much of the site designated for the improvements as is necessary for his operation.
- B. Operation of the pump station shall be maintained at all times unless bypass pumping has been furnished and made operational.

#### 1.2 USE OF STREETS

- A. During the progress of the work, the Contractor shall make ample provisions for both vehicle and pedestrian traffic on any public street and shall indemnify and save harmless the Owner from any expense whatsoever due to their operations over said streets. The Contractor shall also provide free access to all the fire hydrants, water, and gas valves located along the line of his work. Gutters and waterways must be kept open or other provisions made for the removal of storm water. Street intersections may be blocked only one-half at a time, and the Contractor shall lay and maintain temporary driveways, bridges and crossings, such as in the opinion of the Engineer are necessary to reasonably accommodate the public.
- B. In the event of the Contractor's failure to comply with these provisions, the Owner may cause the same to be done, and may deduct the cost of such work from any monies due the Contractor under this Agreement, but the performance of such work by the Owner at its instance shall serve in no way to release the Contractor from his general or particular liability for the safety of the public or the work.
- C. The Contractor shall repair at no cost to the Owner, all existing roads, parking areas, grassed areas that are damaged due to the execution of his work. The Contractor shall remove daily all mud, soil and debris that may be tracked onto existing streets, drives, or walks by his equipment or that of subcontractors or suppliers.

#### 1.3 CLOSING STREETS TO TRAFFIC

The Contractor may with the approval of the Engineer, close streets, or parts of streets, to vehicular traffic. The streets are to remain closed as long as the construction work or the condition of the finished work requires or as determined by the Engineer. The Engineer shall be the judge of how many streets or parts of streets it is necessary for the Contractor to close at any time, and may refuse to permit the closing of additional streets to traffic until the majority of the work on the closed streets is completed and they are opened to traffic.

#### 1.4 RIGHTS-OF-WAY

- A. Whenever it is required to perform work within the limits of public or private property or in rights-of-way, such work shall be done in conformity with all agreements between the Owner and the owners of such. Care shall be taken to avoid injury to the premises entered, which premises shall be left in a neat and orderly condition by the removal of rubbish and the grading of surplus materials, and the restoration of said public or private property to the same general conditions as pertained at the time of entry for work to be performed under this contract.
- B. The Contractor shall not (except after consent from the proper parties) enter or occupy with men, tools or equipment, any land outside the rights-of-way or property of the Owner.
- C. When the Contractor performs construction within 10 ft. of a right-of-way or easement line, he shall place tall stakes properly identified at points of change in width or direction of the right-of-way or easement line and at points along the line so that at least two stakes can be seen distinctly from any point on the line.

#### 1.5 EASEMENTS

- A. Where the work is to be constructed upon easements, such easements will be secured by the Owner without cost to the Contractor. The Contractor shall not enter upon or occupy any private property outside of the limits of the easements furnished.
- B. Care shall be taken to avoid injury to the premises entered, which premises shall be left in a neat and orderly condition by the removal of rubbish and the grading of surplus materials, and the restoration of said public or private property to the same general conditions as pertained at the time of entry for work to be performed under this contract.

#### 1.6 PROTECTING EXISTING BUILDINGS, STRUCTURES AND ROADWAYS

- A. The Contractor shall, at his own expense, shore up and protect any buildings, roadways, utilities or other public or private structures which may be encountered or endangered in the prosecution of the work, and that may not be otherwise provided for, and he shall repair and make good any damages caused to any such property by reason of his operations. All existing fences removed due to the prosecution of the work shall be replaced by the Contractor. No extra payment will be made for said work or material, but the cost of this work must be included in the price stipulated for the work to be done under this contract.

#### 1.7 SITE FACILITIES

- A. The Contractor shall furnish and place sufficient quantities of portable toilet facilities at locations convenient for use by the Contractor's personnel, Subcontractors, the Engineer, and the Owner.

1.8 RESTORATION

- A. The contractor shall restore all areas per the plans and specifications and if not specified, at least to the condition existing prior to the start of work.

END OF SECTION 011419

## SECTION 013323 - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

### PART 1 - GENERAL

#### 1.1 GENERAL

- A. The Contractor shall submit detailed drawings, acceptable catalog data, specifications and material certifications for all equipment and materials specified or required for the proper completion of the work.
- B. The intent of these items is to demonstrate compliance with the design concept of the work and to provide the detailed information necessary for the fabrication, assembly and installation of the work specified. It is not intended that every detail of all parts of manufactured equipment be submitted, however sufficient detail will be required to ascertain compliance with the specifications and establish the quality of the equipment proposed.

Shop Drawings shall be sufficiently clear and complete to enable the Engineer/Architect and Owner to determine that items proposed to be furnished conform to the specifications and that items delivered to the site are actually those that have been reviewed.

- C. It is emphasized that the Engineer/Architect's review of Contractor's submitted data is for general conformance to the contract drawings and specifications but subject to the detailed requirements of drawings and specifications. Although the Engineer/Architect may review submitted data in detail, such review is an effort to discover errors and omissions in Contractor's drawings. The Engineer/Architect's review shall in no way relieve the Contractor of his obligation to properly coordinate the work and to Engineer/Architect the details of the work in such manner that the purposes and intent of the contract will be achieved. Such review by the Engineer/Architect shall not be construed as placing on him or on the Owner any responsibility for the accuracy and for proper fit, functioning or performance of any phase of the work included in the contract.
- D. Shop Drawings shall be submitted in proper sequence and with due regard to the time required for checking, transmittal and review so as to cause no delay in the work. The Contractor's failure to transmit appropriate submittals to the Engineer/Architect sufficiently in advance of the work shall not be grounds for time extension.
- E. The Contractor shall submit Shop Drawings for all fabricated work and for all manufactured items required to be furnished in the Contract in accordance with the General Provisions and as specified herein. Shop Drawings shall be submitted in sufficient time to allow at least twenty-one (21) calendar days after receipt of the Shop Drawings from the Contractor for checking and processing by the Engineer/Architect.
- F. It is the responsibility of each Prime Contractor to furnish to all other Prime Contractors and especially the General Construction Contractor reviewed Shop Drawings for guidance in interfacing the various trades; i.e., sleeves, inserts, anchor bolts, terminations, and space requirements.

- G. No work shall be performed requiring Shop Drawings until same have been reviewed by Engineer/Architect.
- H. Accepted and reviewed Shop Drawings shall not be construed as approval of changes from Contract plan and specification requirements.
- I. The Engineer/Architect will review the first and second Shop Drawing item submittals at no cost to the Contractor. Review of the third submittal and any subsequent submittal will be at the Contractor's expense. Payment will be deducted from the Contract amount at a rate of 2.8 times direct labor cost plus expenses.

## 1.2 SUBMITTAL PROCEDURE

- A. All required submissions shall be made to the Engineer/Architect by the Prime Contractor(s) only. Any data prepared by subcontractors and suppliers and all correspondence originating with subcontractors, suppliers, etc., shall be submitted through the Contractor.
- B. Contractor shall review and approve all Shop Drawings prior to submission. Contractor's approval shall constitute a representation to Owner and Engineer/Architect that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or assumes full responsibility for doing so, and that Contractor has reviewed or coordinated each Shop Drawing or sample with the requirements of the work and the Contract Documents.
- C. Submittal Preparation: Mark each submittal with a permanent label or page for identification. Provide the following information on the label for proper processing and recording of action taken:
  - 1. Location
  - 2. Project Name
  - 3. Contract
  - 4. Name and Address of Engineer/Architect
  - 5. Name and Address of Contractor
  - 6. Name and Address of Subcontractor
  - 7. Name and Address of Supplier
  - 8. Name of Manufacturer
  - 9. Number and Title of appropriate Specification Section
  - 10. Drawing Number and Detail References, as appropriate.
  - 11. Submittal Sequence or Log Reference Number.
  - a. Provide a space on the label for the Contractor's review and approval markings and a space for the Engineer/Architect's "Action Stamp".
- D. Each Shop Drawing, sample and product data submitted by the Contractor shall have affixed to it the following Certification Statement including the Contractor's Company name and signed by the Contractor:



Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company

- E. Shop Drawings shall be submitted in not less than six (6) copies to the Engineer/Architect at the address specified at the Preconstruction Conference. Single mylar or sepia reproducible copies of simple Shop Drawings may be submitted with prior approval of the Engineer/Architect.
- F. At the time of each submission, Contractor shall in writing identify any deviations that the Shop Drawings or samples may have from the requirements of the Contract Documents.
- G. Drawings shall be clean, legible and shall show necessary working dimensions, arrangement, material finish, erection data, and like information needed to define what is to be furnished and to establish its suitability for the intended use. Specifications may be required for equipment or materials to establish any characteristics of performance where such are pertinent. Suitable catalog data sheets showing all options and marked with complete model numbers may, in certain instances, be sufficient to define the articles which it is proposed to furnish.
- H. SAMPLES: For product which require submittal of samples, furnish samples so as not to delay fabrication, allowing the Engineer reasonable time for the consideration of the samples submitted. Properly label samples, indicating the material or product represented, its place of origin, the names of the vendor and Contractor and the name of the project for which it is intended. Ship samples prepaid. Accompany samples with pertinent data required to judge the quality and acceptability of the sample, such as certified test records and, where required for proper evaluation, certified chemical analyses.

### 1.3 REVIEW PROCEDURE

- A. Engineer/Architect will review with reasonable promptness all properly submitted Shop Drawings. Such review shall be only for conformance with the design concept of the Project and for compliance with the information given in the plans and specifications and shall not extend to means, methods, sequences, techniques or procedures of construction or to safety precautions or programs incident thereto.
- B. The review of a separate item as such will not constitute the review of the assembly in which the item functions. The Contractor shall submit entire systems as a package.
- C. All Shop Drawings submitted for review shall be stamped with the Engineer/Architect's action and associated comments.

- D. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Engineer/Architect will review each submittal, mark to indicate action taken, and return accordingly. Compliance with specified characteristics is the Contractor's responsibility.

Action Stamp: The Engineer/Architect will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:

1. If Shop Drawings are found to be in general compliance, such review will be indicated by marking the first statement.
  2. If only minor notes in reasonable number are needed, the Engineer/Architect will make same on all copies and mark the second statement. Shop Drawings so marked need not be resubmitted.
  3. If the submitted Shop Drawings are incomplete or inadequate, the Engineer/Architect will mark the third statement, request such additional information as required, and explain the reasons for revision. The Contractor shall be responsible for revisions, and/or providing needed information, without undue delay, until such Shop Drawings are acceptable. Shop Drawings marked with No. 3 shall be completed resubmitted.
  4. If the submitted Shop Drawings are not in compliance with the Contract Documents, the Engineer/Architect will mark the fourth statement. The Contractor will be responsible to submit a new offering conforming to specific products specified herein and/or as directed per review citations.
- E. No submittal requiring a Change Order for either value or substitution or both, will be returned until the Change Order is approved or otherwise directed by the Owner.

## APPLICATION FOR USE OF SUBSTITUTE ITEM

TO: \_\_\_\_\_

PROJECT: \_\_\_\_\_

SPECIFIED ITEM:

Page	Paragraph	Description
A.		The undersigned requests consideration of the following as a substitute item in accordance with Article 6.05 of the General Conditions.
B.		Change in Contract Price (indicate + or -) \$ _____
C.		Attached data includes product description, specifications, drawings, photographs, references, past problems and remedies, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified. For consideration of the attached data as SHOP DRAWINGS, submittal shall be in accordance with requirements of Section 013323.
D.		Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The undersigned certifies that the following paragraphs, unless modified by attachments are correct:

1. The proposed substitute does not affect dimensions shown on Drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing, and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse affect on other contractors, the construction schedule, or specified warranty requirements. (If proposed substitution affects construction schedule, indicate below using + or -)

\_\_\_\_\_ CONSECUTIVE CALENDAR DAYS

4. Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item and agrees to reimburse the OWNER for the charges of the ENGINEER for evaluating this proposed substitute item.

E. Signature:

Firm:

Address:

Telephone:

Date:

Attachments:

For use by ENGINEER:

\_\_\_\_\_ Accepted as evidenced by affixed SHOP DRAWING REVIEW stamp.

\_\_\_\_\_ Accepted as evidenced by included CHANGE ORDER.

\_\_\_\_\_ Not accepted as submitted. See Remarks.

\_\_\_\_\_ Acceptance requires completion of submittal as required for SHOP DRAWINGS.

\_\_\_\_\_ Not accepted. Do not resubmit.

By:

Date:

Remarks:

## APPLICATION FOR USE OF “OR-EQUAL” ITEM

TO: \_\_\_\_\_

PROJECT: \_\_\_\_\_

SPECIFIED ITEM:

Page	Paragraph	Description
A.		The undersigned requests consideration of the following as an “or-equal” item in accordance with Article 6.05 of the General Conditions.  _____
B.		Change in Contract Price (indicate + or -) \$ _____
C.		Attached data includes product description, specifications, drawings, photographs, references, past problems and remedies, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified. For consideration of the attached data as SHOP DRAWINGS, submittal shall be in accordance with requirements of Section 013323.
D.		Signature:  _____ Firm:  _____ Address:  _____  _____

Telephone: \_\_\_\_\_ Date: \_\_\_\_\_

Attachments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

For use by ENGINEER:

\_\_\_\_\_  
Accepted as evidenced by affixed SHOP DRAWING REVIEW stamp.  
\_\_\_\_\_  
Accepted as evidenced by included CHANGE ORDER.  
\_\_\_\_\_  
Not accepted as submitted. See Remarks.  
\_\_\_\_\_  
Acceptance requires completion of submittal as required for SHOP DRAWINGS.  
\_\_\_\_\_  
Not accepted. Do not resubmit.

By: \_\_\_\_\_ Date: \_\_\_\_\_

Remarks: \_\_\_\_\_  
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END OF SECTION 013323

## SECTION 016600 - PRODUCT HANDLING AND PROTECTION

### PART 1 - GENERAL

#### 1.1 DELIVERY AND STORAGE OF MATERIALS

- A. The Contractor shall be responsible for delivery and storage of all materials.
- B. The Contractor shall coordinate with the Engineer on the arrangement for storing construction materials and equipment. Deliveries of all construction materials and equipment should be made at suitable times.
- C. The Contractor shall store all materials required for the performance of this contract at sites designated by the Engineer.
- D. All stockpiles shall be neat, compact, completely safe, and barricaded with warning lights if necessary.
- E. Precautions shall be taken so that no shade trees, shrubs, flowers, sidewalks, driveways or other facilities will be damaged by the storage of materials. The Contractor shall be responsible for the restoration of all stockpile sites to their original condition.
- F. Materials, tools and machinery shall not be piled or placed against shade trees, unless they shall be amply protected against injury therefrom. All materials, tools, machinery, etc. stored upon public thoroughfares must be provided with red lights at night time so as to warn the traffic of such obstruction.
- G. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, shall again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. Approved portions of the construction site may be used for storage purposes and for the placing of the Contractor's plant and equipment, but any additional space required therefore must be provided by the Contractor at his expense. Private property shall not be used for storage purposes without written permission of the property owner or lessee, and copies of such written permission shall be furnished the Engineer. All storage sites shall be restored to their original condition by the Contractor at his expense.

END OF SECTION 016600

## SECTION 017800 - FINAL COMPLIANCE AND SUBMITTALS

### PART 1 - GENERAL

- 1.1 The following forms and related sign-offs shall be documented in accordance with provisions of the contract. These forms shall be completed by the Contractor and approved by the Owner before final retainer is approved for release. Forms for Items A to E will be attached to the Contractor's executed copy of the contract.
- A. Certificate of Substantial Completion (To be submitted at time of Substantial Completion).
  - B. Contractor's Certification of Completion.
  - C. Contractor's Affidavit of Prevailing Wage.
  - D. Consent of Surety Company for Final Payment.
  - E. Affidavit of Final Acceptance Date and Correction Period.
  - F. Before the OWNER will approve and accept the work and release the retainer, the CONTRACTOR will furnish the OWNER a written report indicating the resolution of any and all property damage claims filed with the CONTRACTOR by any party during the construction period. The information to be supplied shall include, but not be limited to, name of claimant, date filed with CONTRACTOR, name of insurance company and/or adjuster handling claim, how claim was resolved and if claim was not resolved for the full amount, a statement indicating the reason for such action.
  - G. DBE Subcontractor Participation Forms SR-EPA.7-8 (Applicable for WPCLF & WSRLA funded projects only).
  - H. Subcontractor List, Specification Section 011100 - 2 form (Applicable for CDBG funded projects only).

END OF SECTION 017800



## SECTION 017821 - CLEANING AND PROTECTION

### PART 1 - GENERAL

#### 1.1 GENERAL

- A. On or before the completion date for the work, the Contractor shall tear down and remove all temporary structures built by him, all construction plant used by him, and shall repair and replace all parts of existing embankments, fences or other structures which were removed or injured by his operations or by the employees of the Contractor. The Contractor shall thoroughly clean out all buildings, sewers, drains, pipes, manholes, inlets and miscellaneous and appurtenant structures, and shall remove all rubbish leaving the grounds in a neat and satisfactory condition.
- B. As circumstances require and when ordered by the Engineer, the Contractor shall clean the road, driveway, and/or sidewalk on which construction activity under this contract has resulted in dirt or any other foreign material being deposited with an automatic self-contained mechanical sweeper with integral water spray, vacuum and on-board or supplementary containment.
- C. Failure to comply with this requirement when ordered by the Engineer or his representative may serve as cause for the Engineer to stop the work and to withhold any monies due to the Contractor until such order has been complied with to the satisfaction of the Engineer.
- D. As the work progresses, and as may be directed, the Contractor shall remove from the site and dispose of debris and waste material resulting from his work. Particular attention shall be given to minimizing any fire and safety hazard from form materials or from other combustibles as may be used in connection with the work, which should be removed daily.
- E. The Contractor shall wash all windows and other glass surfaces, leaving all areas free from putty marks, paint, etc.
- F. During and after installation, the Contractor shall furnish and maintain satisfactory protection to all equipment against injury by weather, flooding or breakage thereby permitting all work to be left in a new condition at the completion of the contract.

END OF SECTION 017821

## SECTION 017823 – MAINTENANCE MANUALS

### PART 1 - GENERAL

#### 1.1 OPERATION AND MAINTENANCE MANUALS

- A. Operation and maintenance information shall be submitted for all manufactured items, i.e. equipment, hardware, pumps, valves, motors, etc.
- B. This manual will either contain or make reference to all information that has been issued during the construction and start-up periods, as well as information necessary for the proper operation and maintenance of equipment.
- C. It shall be the responsibility of the Contractor who supplies such equipment to obtain from his vendors the required information and submit to the Engineer. This information will be accepted only if properly identified and only after it has been revised, where necessary, to conform to previous transmittals of the same material that have been "approved as noted" by the Engineer. All submittals shall be on 8-1/2" X 11" size paper or folded to that size.
- D. In general and where applicable, the information shall consist of, but not be limited to, six (6) sets of the following:
  - 1. Descriptive literature, bulletins or other data covering equipment or system.
  - 2. Complete list of equipment and appurtenances included with system, complete with manufacturer and model number.
  - 3. Utility requirements.
  - 4. General arrangement drawing.
  - 5. Sectional assembly.
  - 6. Dimension print.
  - 7. Materials of construction.
  - 8. Certified performance curve.
  - 9. Performance guarantee.
  - 10. Parts list.
  - 11. Recommended spare parts list with part and catalog number.
  - 12. Lubrication recommendations and instructions.
  - 13. Schematic wiring diagrams.
  - 14. Schematic piping diagrams.
  - 15. Instrumentation data.
  - 16. Drive dimensions and data.
  - 17. Control data.
  - 18. Operating instructions.
  - 19. Maintenance instructions including troubleshooting guidelines and preventative maintenance instructions with task schedule.
  - 20. Required tools and equipment for operation and maintenance.
  - 21. Safety considerations for O & M procedures.

END OF SECTION 017823

## SECTION 017839 - PROJECT RECORDS, DRAWINGS

### PART 1 - GENERAL

#### 1.1 RECORD DRAWINGS

- A. The Contractor shall furnish an authentic set of marked-up drawings showing the installation insofar as the installation shall have differed from the Engineer's drawings. The drawings shall be delivered to the Engineer for making revisions to the original drawings immediately after final acceptance by the Owner.
- B. The Contractor shall furnish dimensioned drawings indicating locations of all underground mechanical and electrical facilities.

#### 1.2 SERVICE CONNECTION RECORDS

- A. The Contractor shall record the location of all service and property connections, new or existing, made to utilities constructed under this contract. Such records shall be turned over to the Owner upon completion of the work. The cost of making such records shall be included in the various unit or lump sum prices stipulated for the various items of the work.
- B. The location of each sewer connection as measured along the sewer from the nearest downstream manhole and its description with respect to the sewer shall be recorded. The record shall include the depth of new stubs for future connections and the depth of existing connections as measured from the surface grade. Also, the use of any vertical riser pipe shall be noted.
- C. The location of each water connection as measured along the water line from the nearest fire hydrant.

END OF SECTION 017839

## SECTION 024119 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

#### 1.2 DESCRIPTION OF WORK

- A. This section includes removal of pavement, piping, and equipment necessary to clear space for new construction and/or to rehabilitate existing construction.

#### 1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. State and local code requirements shall control the disposal of debris resulting from the removal operation.

#### 1.4 PROTECTION

- A. Structures shall be removed in such a manner as not to damage portions of the existing structure which are to remain in place.

### PART 2 - PRODUCTS (NOT APPLICABLE)

### PART 3 - EXECUTION

#### 3.1 PAVEMENTS, SIDEWALKS, CURBING, SIMILAR STRUCTURES

- A. Removal of existing pavements, sidewalks, curbing, and similar structures shall end at an existing joint or a sawed joint. Sawed joints shall be straight, neat and free from chipped or damaged edges.
- B. For removal of reinforced or non-reinforced concrete, the minimum depth of saw cut shall be 3 in.
- C. For removal of reinforced concrete, the depth of saw cut shall be sufficient to cut the steel.
- D. If the concrete is coated with a bituminous surface or other material, the depth shall be sufficient to cut into the concrete, not including the coating depth, as specified above.

### 3.2 EXCAVATION OF RIGID PAVEMENT

- A. The Contractor shall excavate rigid pavement, consisting of concrete or concrete base with a wearing surface of brick or bituminous concrete, wherever such excavation is required for the purpose of this Contract.
- B. Pavement shall be excavated to neat lines and, only to widths required for trenches, for pipe laying and for construction of structures. Adequate provision shall be made to prevent settlement and breakage of pavement beyond the approved limits of excavation.
- C. All pavement broken or damaged beyond the limits above stated, or the approved extension thereof, shall be replaced by the Contractor at his expense.

### 3.3 CATCH BASINS, INLETS AND SIMILAR STRUCTURES

- A. Existing drainage structure designated by the Engineer to be removed shall be completely removed.
- B. Abandoned sewers shall be sealed and made watertight with approved masonry bulkheads.
- C. All castings salvaged from abandoned or removed drainage structures shall remain the property of the Owner and shall be cleaned and transported by the Contractor to a site designated by the Engineer or incorporated in the work where called for on the Drawings, scheduled, or so directed.

### 3.4 FENCE

- A. Where so required by the Drawings, existing fence shall be carefully dismantled and stored for reuse or for salvage by the Owner.
- B. Wood posts and other materials not considered salvageable by the Engineer shall be disposed of by the Contractor.
- C. The Contractor will be required to replace, at no cost to the Owner, material lost or damaged by negligence or by the use of improper methods.

### 3.5 EQUIPMENT REMOVAL

- A. All equipment, valves, piping, fittings, and miscellaneous steel structures that are removed shall remain the property of the Owner and shall be stored at site selected by the Owner. The Owner reserves the right to require the Contractor to dispose of certain unwanted portions of removed equipment and materials. The Owner shall have the right to reject any or all materials removed during construction, and the Contractor shall haul away and dispose of these materials in a suitable manner at no additional cost to the Owner.

### 3.6 DISPOSAL OF DEBRIS

- A. All debris resulting from demolition operations; i.e., broken concrete, masonry, pipe, miscellaneous metal, trees and brush, equipment, etc., shall be disposed of offsite.
- B. The Contractor shall police the hauling of debris to insure that all spillage from haul trucks is promptly and completely removed.

END OF SECTION 024119

## SECTION 260500 - GENERAL REQUIREMENTS FOR ELECTRICAL WORK

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES:

- A. General
- B. Intent Of Drawings
- C. Interpretation Of Drawings
- D. Quality Control
- E. Submittals
- F. Location Environmental Considerations
- G. Products
- H. Coordination
- I. Demolition
- J. Electrical Installation
- K. Relocate or Make Modifications to Any Existing Electrical, Instrumentation or Control Systems Wiring
- L. Quality Assurance
- M. Examination
- N. Preparation And Storage
- O. Installation
- P. Field Quality Control
- Q. Painting
- R. Cleaning
- S. Operation - Maintenance And Spare Parts Data

#### 1.2 GENERAL

- A. The Electrical Contractor shall be responsible to check with the equipment manufactures of the physical size of the equipment that it will fit and that it can be moved into the indicated locations.
- B. Intent of Drawings – The Drawings are not intended to be used for construction purposes for the electrical work, but to supplement the Specifications as to the principal features of the electrical design. The intent of this section is that all equipment and electrical devices furnished and installed under this and other sections of the Specifications be properly interconnected to permit successful system operation regardless of whether all interconnections are specifically referenced in the Specifications and associated Drawings.
- C. Interpretation of Drawings
  - 1. The locations of equipment to which electrical connections are to be made are approximate as shown on the Drawings. It shall be the Electrical Contractor's responsibility to determine the exact conduit locations by reviewing shop drawings. The sizes of disconnect switches, motor starters, overload heaters, fuses or circuit breakers are approximate, and it shall be the Electrical

Contractors responsibility to obtain the correct sizes based on the actual installed equipment or items. The conduit and wire sizes shown on the Drawings are the minimum sizes required and shall not be reduced.

D. Quality Control

1. The Electrical Contractor shall maintain a level of quality of materials and installation means as to assure the completed electrical, instrumentation and control system will be completed in compliance with the Specifications.

E. Submittals

1. Shop Drawings - Submit shop drawings under provision of Section 01061 for all electrical equipment and devices.
2. Shop drawings shall include manufacturer's literature, specifications, schematic diagrams, field wiring interconnection diagrams and any other data necessary to indicate compliance with the Specifications
3. Final "Record" Contract Drawings - Drawings and information required shall include but not be limited to the following:
  - a. Conduit runs shall be shown and identified at each end of run, include where conduit originates and the termination. Each conduit shall have a pull string attached and fastened at each end.
  - b. Power Distribution Schematics - Show actual installed switching details, cable size and type, conduit size, locations and runs, fuse size and type, circuit breaker frame size, trip setting and type.
  - c. Details and Diagrams
    - 1) Elementary Wiring Diagrams – Show actual motor control wiring with wire numbers, telephone system cable routing and station identification with cable numbers.
    - 2) One Line Diagrams - Show equipment names, fuse sizes and types, heater sizes, conduit and wire sizes, motor FLA and horsepower. Include wire and cable numbers or identification.
    - 3) Instrumentation and control Diagrams - Show actual installed, wired instrumentation loop diagrams, include actual installed device Tag Nos, Model Nos, Scaling,
  - d. Lighting and Device Schedule
    - 1) Show actual manufacturers and model numbers.
    - 2) Lighting panel layouts
    - 3) Actual circuit No. circuit description, breaker size and type.
4. Payment for the Division 16 work and materials shall not exceed 90% of the total bid price until all Operations and Maintenance data and record as built drawings have been completed and received by the Owner.

G. Location Environmental Considerations

1. Provide satisfactory operation and maintenance under the following conditions
2. Temperature:
  - a. Outside: -20° to 110°F
  - b. Inside: +40° to 120°F



3. Relative Humidity: 100 percent
4. Process Temperature:
  - a. Liquid: 32° to 105°F
  - b. Air: -32° to 200°F
5. Atmosphere:
  - a. As indicated on the drawings
  - b. Corrosive atmosphere, Hydrogen Sulfide
  - c. Wet Locations
    - 1) As defined in NEC ART 100
    - 2) Outside exposed areas, areas indoors near pumps, frequent washdown areas.
  - d. The interiors of conduits and raceways located in wet areas shall also classified as wet areas.
  - e. Damp Locations
    - 1) As defined in NEC ART 100
    - 2) Areas under covered enclosures,
  - f. Wet and Corrosive areas
    - 1) Enclosures located in areas that are wet and corrosive shall be rated for NEMA 4X Stainless Steel or as noted on the drawings.
  - g. Hazardous Areas (Classified)
    - 1) Areas that are classified as hazardous are indicated on the drawings. All new equipment and installation methods shall conform to the requirements in the NEC.

#### H. Products

1. Electrical materials and equipment shall be new and shall be labeled by the Underwriters Laboratories, Inc. whenever standards have been established and the label service applies.
2. Wire and Terminal Labeling - Tag all wires, cables, and conduits at each end or termination with suitable permanent tags, printed, stamped, or engraved with the wire, cable, or conduit number. The figures on the tags shall be clear and legible.
3. Safety Signs - High voltage warning signs shall be provided and placed at all guarded locations as required by the NEC. The signs shall be permanent and conspicuous and shall be plainly visible even when doors are open or panels removed from compartments.
4. Engraved Nameplates - Identify all electrical enclosures with engraved phenolic nameplates. Engrave and mount nameplates for all switchgear, disconnect switches, and individual motor starter enclosures indicating equipment served. Nameplates shall be **white with black letters**. Minimum letter size shall be one-quarter inch.

#### I. Demolition

1. Electrical Contractor shall disconnect power from existing equipment to be removed. General Contractor to remove and dispose of actual equipment.

2. Electrical contractor shall perform the demolition of electrical equipment where indicated on the electrical contract drawings.

J. Electrical Installation

1. Electrical Contractor shall furnish and install, adjust, connect, and put into satisfactory operation all electrical equipment, control components, and instrumentation items as indicated on the Drawings and specified herein.

K. Coordination

1. Electrical Contractor shall review all Specifications and Drawings for the electrical work included under these sections and coordinate this work, investigate existing conditions in the field before submitting proposal, become acquainted with the conditions under which the work of this section of the Specifications will be performed, and accept all conditions as found.
2. Schedule and coordinate all relocations of, or modifications to, electrical instrumentation or control systems wiring, conduit equipment, or appurtenances to whatever extent is necessary and required in order to conform to structural and architectural conditions, duct work and piping interferences, etc. This shall be included under this section of the Specifications.
3. Coordinate with other trades on the project so that all trades install their work to avoid interference with each other. Arrangements made among the trades which result in deviations from Drawings and Specifications are subject to the approval of the Owner.
4. The control panels and/or equipment are to be provided by the equipment supplier, General Contractor, or Systems Integrator. These items will require power and/or interconnections from the disconnect switch to the control panel and/or field mounted devices or junction boxes for power and control. Specific details to be determined by the shop drawings.

### 1.3 REFERENCES

- A. American National Standards Institute (ANSI)
- B. Factory Mutual Engineering Division (FM)
- C. Illumination Engineering Society (IES)
- D. Institute of Electrical & Electronics Engineers (IEEE)
- E. Insulated Cable Engineers Association (ICEA)
- F. Instrumentation, Systems and Automation Society (ISA)
- G. Joint Industrial Council (JIC)
- H. National Electrical Code (NEC)
- I. National Electrical Manufacturers Association (NEMA)
- J. International Electrical Testing Association (NETA)
- K. National Fire Protection Association (NFPA)
- L. Occupational Safety and Health Administration (OSHA)
- M. Ohio Building Code (OBC)
- N. Underwriters' Laboratories Incorporated (UL)

- O. ANSI/NEMA 1-2000 Standard Practices for Good Workmanship in Electrical Contracting.
- P. Quality Assurance
  - 1. Regulatory requirements
    - a. The Contractor shall obtain and pay for all fees for permits and inspections as required.
  - 2. Installation Standards
    - a. NEC – installation of electrical items shall be in accordance with the NEC.
    - b. Instrumentation and control – Installation of the instrumentation, control system shall be in accordance with standards of the ISA.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Inspect all devices at delivery for damage.
- B. Confirm all devices at delivery are as required according to design and shop drawings.
- C. Examine the site and structures for any obstructions which may interfere with the electrical installation as planned.

### 3.2 PREPARATION AND STORAGE

- A. Provide a dry, heated storage area for all electrical and electronic equipment and devices.
- B. Electrical and electronic equipment devices shall be stored and heated to prevent condensation from forming. Electrical and electronic equipment found with condensation in the enclosure or condensation-caused damage will not be accepted.

### 3.3 INSTALLATION

- A. The locations of equipment to which electrical connections are to be made are approximate as indicated on the Drawings.
- B. It shall be the Contractor's responsibility to check shop drawings relating to equipment requiring electrical connections and to determine the exact conduit locations.
- C. Electrical and electronic equipment installed but not energized shall continue to have a heat source to keep the enclosure free of condensation. Electrical and electronic equipment found with condensation in the enclosure or condensation-caused damage will not be accepted.
- D. Contractor shall perform all chasing, channeling, drilling, and patching necessary to complete the work. Repair any damage to the building or any equipment. Replace damaged equipment if, in the Engineer's judgment, the repair would not be satisfactory.

- E. No work shall be covered or hidden from view until it has been inspected and approved by the Owner.
- F. Any workmanship or materials not meeting the requirements of the Specifications or Drawings shall be immediately replaced by the Contractor without cost to the Owner and to the satisfaction of the Owner.
- G. All wiring shall have permanent labels at all terminations and junctions and on all field wiring terminal strips.
- H. Safety signs shall be furnished and installed on or around all electrical equipment.
- I. Permanent marking labels shall be installed on exposed sides of each piece of electrical equipment, pull boxes, junction boxes, and terminal boxes stating the maximum voltage level involved with the associated equipment.
- J. Concrete equipment pads for electrical equipment shall be furnished and placed by the Electrical Contractor.

### 3.4 PAINTING

- A. All wood panel mounting boards shall be painted.
- B. All electrical enclosures shall undergo a phosphatizing prepainting treatment. Final paint coats shall be a polyester powder coating with ANSI 61 light gray color for enclosures mounted inside and with ANSI 24 medium gray color for enclosures mounted outside.
- C. Remove any rust and touch up any scratches on all new electrical devices or enclosures with matching touch-up paint as supplied by the manufacturer.

### 3.5 FIELD QUALITY CONTROL

- A. Major components of the Electrical System shall be tested per NETA standards. NETA's Standard Specification for Testing, Parts 1 to 5, shall govern all testing.
- B. The following tests are per NETA Acceptance Testing Specifications, Part 7, Inspection and Test Procedures. Visual and Mechanical Inspections shall be performed for all equipment.
  - 1. Cables - Low Voltage shall have the following tests: Insulation resistance, continuity.
  - 2. Circuit Breakers - Low Voltage (Molded Case) that are rated at over 100 amps shall have the following tests: Contact resistance, time-current characteristic, instantaneous pickup current, insulation resistance.
  - 3. Grounding Systems shall have the following test: Fall of potential.
  - 4. Surge Arresters shall have the following tests: 60 Hz sparkover, insulation power factor, ground continuity.
- C. After all testing has been completed to the satisfaction of the Owner, the entire Electrical (Power) System shall operate for a minimum test period of 30 days. Cumulative down time of all components furnished under Division 26 shall not exceed 1/2 hour as recorded by the Engineer during the test period. System documentation shall be delivered on the last day of the test period. Test period shall not end until system documentation has been delivered. If the cumulative downtime limit is exceeded, the Engineer shall have the following options:

1. Extend the test period as required until the cumulative downtime during the proceeding 30 days does not exceed 1/2 hour as recorded by the Engineer.
  2. Sub-systems which have no components contributing to the cumulative downtime will be approved as a partial acceptance.
- D. Sub-systems which have components that contributed to the cumulative downtime shall have their test period begin again after all repairs and adjustments have been made.

### 3.6 OPERATION - MAINTENANCE AND SPARE PARTS DATA

- A. Submit specific data and information required under individual Division 26 Sections.
1. Submit operation data as required.
  2. Submit maintenance data as required.
  3. Spare Parts Data - Submit as required. Include manufacturer's list of recommended spare parts.
  4. Parts and supplies judged to be necessary to keep equipment and control system operating successfully for first year of operation shall be furnished.
  5. Review individual sections for required lists of spare parts to be furnished.

### 3.7 CLEANING

- A. All areas are to be cleaned of construction debris and wire. Electrical equipment is to be cleaned of all construction dirt, dust, etc.
- B. All electrical and electronic equipment shall be kept clean and free of all dust, dirt, and debris at all times.
- C. All electrical and electronic boxes and enclosures shall have the covers of these boxes and enclosures closed and sealed except when actually working in these boxes and enclosures.

END OF SECTION 260500

## SECTION 260519 – CONDUCTORS AND CABLES

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Building wire and cable
- B. Wiring connectors and connections

#### 1.2 RELATED SECTIONS

- A. Section 260553 - Electrical Identification

#### 1.3 REFERENCES

- A. Quality Control: Follow requirements for references and standards.
- B. NECA Standard of Installation (National Electrical Contractors Association)
- C. NETA ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems (International Electrical Testing Association)
- D. NFPA 70 - National Electrical Code

#### 1.4 SUBMITTALS FOR REVIEW

- A. Submittals: Follow procedures for submittals.
- B. Product Data: Provide for each cable assembly type.

#### 1.5 SUBMITTALS AT PROJECT CLOSEOUT

- A. Contract Closeout Submittals – Follow as required.
- B. Project Record Documents: Record actual locations of components and circuits.

#### 1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years documented experience.

#### 1.7 REGULATORY REQUIREMENTS

- A. Conform to NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories Inc., or testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

## 1.8 PROJECT CONDITIONS

- A. Verify that field measurements are as indicated.
- B. Conductor sizes are based on copper only.
- C. Wire and cable routing indicated is approximate unless dimensioned.

## 1.9 COORDINATION

- A. Coordinate Work under provisions of Section 260500.
- B. Where wire and cable destination is indicated and routing is not shown, determine exact routing and lengths required.

# PART 2 - PRODUCTS

## 2.1 BUILDING WIRE

- A. Manufacturers:
  - 1. Okonite Company
  - 2. Alpha Wire Company
  - 3. Southwire
  - 4. Substitutions: Follow as required for Material and Equipment.
- B. Description: Multi-stranded insulated copper wire, #12 AWG minimum for feeders and branch circuits, and #14 AWG minimum for control circuits.
- C. Insulation Voltage Rating: 600 volts
- D. Insulation: NFPA 70; Type XHHW or THWN insulation for service, feeders and branch circuits and control circuits.

## 2.2 WIRING CONNECTORS

- A. Use split bolt connectors for copper conductor splices and taps #6 AWG and larger. Tape uninsulated conductors and connectors with electrical tape to 150 percent of insulation rating of conductor.
- B. Use solderless pressure connectors with insulating covers for copper conductor splices and taps #8 AWG and smaller. Buchanan crimp (Split cap and insulator) or Ideal crimp connector with wrap cap insulator.
- C. Use Adhesive-lined heat shrink tubing for watertight connections, T&B, 3M, or Raychem.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Verify that mechanical work likely to damage wire and cable has been completed.

### 3.2 PREPARATION

- A. Completely and thoroughly swab raceway before installing wire.

### 3.3 INSTALLATION

- A. Quality Control: Follow as required by manufacturer's instructions.
- B. Route wire and cable as required to meet Project Conditions.
- C. Install cable in accordance with the NECA "Standard of Installation."
- D. Use stranded conductors for control circuits.
- E. Use conductor not smaller than #12 AWG for power and lighting circuits.
- F. Use conductor not smaller than #14 AWG for control circuits.
- G. Use #10 AWG conductors for 20-ampere 120-volt branch circuits longer than 75 feet (25 m).
- H. Pull all conductors into raceway at same time.
- I. Use suitable wire pulling lubricant for building wire #4 AWG and larger.
- J. Protect exposed cable from damage.
- K. Use suitable cable fittings and connectors.
- L. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- M. Clean conductor surfaces before installing lugs and connectors.
- N. Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
- O. Use split bolt connectors for copper conductor splices and taps #6 AWG and larger. Tape un-insulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- P. Use solderless pressure connectors with insulating covers for copper conductor splices and taps #8 AWG and smaller.
- Q. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps #10 AWG and smaller.
- R. Identify and color code wire and cable under provisions of Section 260553. Identify each conductor with its circuit number or other designation indicated.
- S. Replace conductors damaged during installation.
- T. No splices are allowed in conduits or raceways.

### 3.4 FIELD QUALITY CONTROL

- A. Starting of Systems: Follow requirements for field inspection, testing, and adjusting.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.3.1.

END OF SECTION 260519



## SECTION 260520 – SHIELDED INSTRUMENTATION & VARIABLE FREQUENCY DRIVE CABLE

### PART 1 - GENERAL

#### 1.1 DESCRIPTION

- A. Scope: Furnish all labor, materials, equipment and incidentals required to provide shielded cable as shown and specified.

#### 1.2 SUBMITTALS

- A. Shop Drawings:
  - 1. Comply with Section 013323.
- B. Product data:
  - 1. Submit for review, copies of manufacturer's engineering data and technical information for shielded instrumentation cables proposed for use.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Instrumentation Cable
  - 1. Single Shielded Pair or Triad: 300 volt
    - a. Tinned copper, #18 AWG or larger, stranded, polyethylene insulated conductors twisted with aluminum-polyester shield, stranded tinned #20 AWG copper drain wire and overall chrome vinyl jacket, 100 percent shield cover, rated for 300 volts minimum
    - b. Products and Manufacturers:
      - 1) Belden No. 8760, No. 8770, No. 9318, or No. 9365
      - 2) Alpha No. 2422, No. 2432
  - 2. Multi-paired Shielded 300 volt:
    - a. Tinned copper, #18 AWG, stranded PVC insulated conductors, twisted in pairs with aluminum-polyester shield over each pair and its stranded drain wire (#20 AWG), overall chrome vinyl jacket, 100 percent shield cover
    - b. Products and Manufacturers:
      - 1) 3 pair - Belden No. 9369
      - 2) 6 pair - Belden No. 938
      - 3) 9 pair - Belden No. 9390
      - 4) 11 pair - Belden No. 9391
      - 5) 15 pair - Belden No. 9392
      - 6) Dekoron Poly-set
      - 7) Okonite type SP-OS

- B. Variable Frequency Drive Shielded Cable
  - 1. Four conductor shielded cable
    - a. Shielding to have an overall shield with an 85% tinned copper braided shield.
    - b. Cable to be Belden Variable Frequency Drive Cable 29502 through 29535, wire size as indicated or equal.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Delivery, Storage and Protection: Comply with Section 016600.

### 3.2 INSTALLATION

- A. Install in conduit separated from power cables unless otherwise shown on the Drawings.
- B. Install instrumentation cable conduits as far as possible from power cable conduit.
- C. Ground shield at one end only, as recommended by instrument manufacturer, and as approved by the Owner.
- D. Terminate stranded conductors with pre-insulated crimp type ring tongue terminals properly sized to fit fastening device and to fit wire size.
- E. Identification: Identify all conductors at each terminal and splice location. Identification number labels shall be Thomas & Betts type WSL cable markers or equal with clear heat shrink tubing over the marker.
- F. Install Cat 5e and Cat 6 cabling in accordance with Commercial Building Telecommunications Pathways and Spaces ANSI/TIA/EIA 569-A and Commercial Building Telecommunications Cabling Standard ANSI/TIA/EIA 568-A.

### 3.3 TESTING

- A. Test each circuit in the presence of the Owner after permanent cables are in place to demonstrate that the circuit and connected equipment perform satisfactorily and that they are free from improper grounds and short circuits.
- B. Maintain a written record of circuits being tested, marking down circuit number and descriptive function and results of each step in the test procedures including repeated tests.
- C. Any cable or a portion of the cable which fails when tested shall be replaced with a new cable for the full length and retested.

END OF SECTION 260520

## SECTION 260526 - GROUNDING AND BONDING

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Grounding electrodes and conductors
- B. Equipment grounding conductors
- C. Bonding

#### 1.2 RELATED SECTIONS (NOT USED)

#### 1.3 REFERENCES

- A. ANSI/NFPA 70 - National Electrical Code

#### 1.4 GROUNDING SYSTEM DESCRIPTION

- A. The system shall consist of a series of driven ground rod electrodes interconnected with bare stranded ground conductors.
- B. All building footer and slab rebar greater than ½" shall be bonded to the ground conductor. Bond at 20-ft intervals and at each corner. IAW NEC connections to rebar may be made with suitable sized ground clamps.
- C. All connections shall be exothermic welds (Cadweld or equal) installed according to the manufacturer's instructions.
- D. Tests shall be performed to determine the grounding grid resistance to ground. The test method shall be as described in NETA Standard ATS-1987, "Acceptance Testing Specification For Electrical Power Distribution Equipment and Systems." A three-point fall-of-potential test shall be used using two auxiliary electrodes for the measurement. Test reports shall be provided describing the testing procedure and results. The grid-to-ground resistance shall be no greater than 5 ohms. If necessary, additional rods shall be added to achieve the 5-ohm ground. When the Contractor has obtained satisfactory results, he shall submit test reports to the Engineer for approval. After approval, the contractor shall bond the service entrance ground grid to the service entrance enclosure ground bus. The Owner or Owner's representative shall have the opportunity to inspect all exothermic welds.
- E. All ground cables shall have a minimum of 24" of ground cover.

## 1.5 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 5 ohms maximum.

## 1.6 SUBMITTALS

- A. Product Data: Provide for grounding electrodes and connections.
- B. Test Reports: Indicate overall resistance to ground (and resistance of each electrode).
- C. Manufacturer's Instructions: Include instructions for storage, handling, protection, examination, preparation and installation of exothermic connectors.

## 1.7 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of Section 260500.
- B. Accurately record actual locations of grounding electrodes.

## 1.8 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

# PART 2 - PRODUCTS

## 2.1 ROD ELECTRODE

- A. Manufacturers:
  - 1. ITT Blackburn Co.
  - 2. Copperweld, Bimetallic
  - 3. American Electric - Blackburn
- B. Material: Copper-clad steel
- C. Diameter: 3/4 inch
- D. Length: 10 feet

## 2.2 MECHANICAL CONNECTORS

- A. Manufacturers:
  - 1. Burndy Corp
  - 2. O-Z/Gedney

- B. Material: Bronze

## 2.3 EXOTHERMIC CONNECTIONS

- A. Manufacturers:
  - 1. Cadweld

## 2.4 WIRE

- A. Material: Stranded copper
- B. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Verify that final backfill and compaction has been completed before driving rod electrodes.

## 3.2 INSTALLATION

- A. Install Products in accordance with manufacturer's instructions.
- B. Install rod electrodes at locations indicated. Install additional rod electrodes as required to achieve specified resistance to ground spaced at minimum 10 ft.
- C. Provide bonding to meet Regulatory Requirements.
- D. Equipment Grounding Conductor: Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

## 3.3 FIELD QUALITY CONTROL

- A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.
- B. Use suitable test instrument to measure resistance to ground of system. Perform testing in accordance with test instrument manufacturer's recommendations using the fall-of-potential method.

END OF SECTION 260526

## SECTION 260529 - SUPPORTING DEVICES

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Conduit and equipment supports
- B. Anchors and fasteners
- C. Concrete equipment supports

#### 1.2 REFERENCES

- A. NECA - National Electrical Contractors Association
- B. ANSI/NFPA 70 - National Electrical Code

#### 1.3 SUBMITTALS

- A. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, installation, and starting of Product.

#### 1.4 REGULATORY REQUIREMENTS

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

### PART 2 - PRODUCTS

#### 2.1 PRODUCT REQUIREMENTS

- A. Materials and Finishes: Provide adequate corrosion resistance.
- B. Provide materials, sizes, and types of anchors, fasteners and supports to carry the loads of equipment and conduit. Consider weight of wire in conduit when selecting products.

- C. Anchors and Fasteners:
  - 1. Concrete block walls: Use expansion anchors.
  - 2. Steel Structural Elements: Use welded fasteners.
  - 3. Concrete Surfaces: Use expansion anchors.

## 2.2 CHANNEL SYSTEMS

- A. Manufacturer:
  - 1. Unistrut, B-Line, Allied Power -Strut
  - 2. or Equal
- B. Description:
  - 1. Galvanized steel - General locations
  - 2. Aluminum - Wet, damp areas
  - 3. Stainless steel - Wet, damp, corrosive areas where compatible with chemicals
  - 4. Fiberglass - Wet, damp, corrosive areas where compatible with chemicals
- C. Size: 1-5/8" x 1-5/8"

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Provide anchors, fasteners, and supports in accordance with NECA "Standard of Installation".
- C. Do not fasten supports to pipes and conduit except as shown on Drawings.
- D. Obtain permission from Engineer before drilling or cutting structural members.
- E. Fabricate supports from structural steel, galvanized steel, aluminum, or stainless steel channel. Rigidly weld members or use stainless steel hex head bolts and hardware to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.
- F. Install surface-mounted cabinets and panel boards with minimum of four anchors.
- G. In wet and damp locations use stainless steel or aluminum channel supports with stainless steel fasteners.
- H. In wet and damp locations use stainless steel or aluminum spacers to stand cabinets and panel boards one inch off wall.
- I. Spray coat cut end of galvanized steel channel or rigid steel conduit with spray cold galvanizing.

- J. Galvanized pipe used as equipment supports are to have the open ends capped with galvanized end caps.
- K. Provide concrete equipment pad, housekeeping pads, for all equipment that will be floor mounted. Pads to be formed, chamfered edges, and have a troweled finish. Concrete shall be smoothed around conduits. Equipment panels shall be anchored using concrete anchors. Equipment pads for outdoor mounted panels shall extend from the front of the equipment panel 3'-6" min. to allow for opening and standing.

END OF SECTION 260529



## SECTION 260530 – ELECTRICAL DUCT BANK

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. PVC conduit
- B. Pull Boxes/Handhole Enclosures

#### 1.2 MEASUREMENT AND PAYMENT

- A. Duct bank:
  - 1. Basis of Payment: Includes purchase, delivery, and installation of duct, fittings, supports, accessories, trenching, aggregate bedding or concrete encasement (where required), and backfill.
- B. Pull Boxes/Handhole Enclosures
  - 1. Basis of Payment: Includes purchase, delivery, and installation of pull box.

#### 1.4 REFERENCES

- A. Quality Control: Follow requirements for references and standards.
- B. ASTM C857 - Minimum Structural Design Loading for Underground Precast Concrete Utility Structures
- C. ASTM C858 - Underground Precast Concrete Utility Structures
- D. STM C891 - Installation of Underground Precast Utility Structures
- E. ASTM C1037 - Inspection of Underground Precast Utility Structures
- F. IEEE C2 - National Electrical Safety Code
- G. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies
- H. NEMA TC 2 and TC3 - Schedule 40 PVC Conduit and PVC Fittings for Use with Rigid PVC Conduit and Tubing
- I. NFPA 70 - National Electrical Code
- J. UL 651A - Type EB and A PVC Conduit and HDPE Conduit
- K. ANSI/SCTE 77-2007 Specifications for Underground Enclosure Integrity

## 1.5 SUBMITTALS FOR REVIEW

- A. Submittals: Follow procedures for submittals.
- B. Product Data: Provide for manhole accessories.
- C. Shop Drawings: Indicate dimensions, reinforcement, size and locations of openings, and accessory locations for precast manholes.

## 1.6 SUBMITTALS FOR INFORMATION

- A. Follow requirements for submittals in general project requirements.
- B. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by Product testing agency specified under Regulatory Requirements. Include instructions for storage, handling, protection, examination, preparation, and installation of Product.

## 1.7 SUBMITTALS FOR CLOSEOUT

- A. Project Record Documents: Record actual routing and elevations of underground conduit and duct, and locations and sizes of manholes.

## 1.8 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Products: Listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

## 1.9 FIELD SAMPLES

- A. Provide as required.

## 1.10 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated.
- B. Verify routing and termination locations of duct bank prior to excavation for rough-in.
- C. Duct bank routing is shown in approximate locations unless dimensions are indicated. Route as required to complete duct system.
- D. Pull box locations and quantity are shown in approximate locations. Locate as required to complete duct bank system.

## PART 2 - PRODUCTS

### 2.1 PLASTIC CONDUIT

- A. Rigid Plastic Conduit: NEMA TC 2, Schedule 40 PVC, with fittings and conduit bodies to NEMA TC 3
- B. Rigid Plastic Underground Conduit: UL 651A, Type A PVC

### 2.2 DUCT BANK PULL BOXES

- A. Description: Pull boxes shall be as manufactured by Quazite.
  - 1. Load capacity of box to be as indicated on drawings or as indicated in ANSI SCTE-77-2007.
- B. Provide all necessary items for a complete installation.
- C. Pull boxes shown are approximate sizes. Size pull boxes as required for proper installation.
- D. Enclosure With Walls 48" or Shorter
  - 1. Enclosures, boxes and cover are required to conform to all test provisions of ANSI/SCTE 77 "Specifications For Underground Enclosure Integrity" for Tier as shown on Drawings. When multiple Tiers are specified, the boxes must physically accommodate and structurally support compatible covers while possessing the highest Tier rating. In no assembly can the cover design load exceed the design load of the box. All components in an assembly (box & cover) are manufactured using matched surface tooling. All covers are required to have a minimum coefficient of friction of 0.05 in accordance with ASTM C1028 and the corresponding Tier level embossed on the top surface. Independent third-party verification or test reports stamped by a registered Professional Engineer certifying that all test provisions of this specification have been met are required with each submittal.

### 2.3 ACCESSORIES

- A. Underground Warning Tape: 4-inch-wide plastic tape, metal-backed, colored red or yellow with suitable warning legend describing buried electrical lines
- B. Underground conduit PVC support chairs

## PART 3 - EXECUTION

### 3.1 DUCT BANK INSTALLATION

- A. Quality Control: Follow requirements in manufacturer's instructions.

- B. Install duct to locate top of duct bank at depths as indicated on drawings.
- C. Install duct with minimum slope of 4 inches per 100 feet. Slope duct away from building entrances.
- D. Cut duct square using saw or pipe cutter; de-burr cut ends.
- E. Insert duct to shoulder of fittings; fasten securely.
- F. Join nonmetallic duct using adhesive as recommended by manufacturer.
- G. Wipe nonmetallic duct dry and clean before joining. Apply full even coat of adhesive to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.
- H. Install no more than equivalent of three 90-degree bends between pull points.
- I. Use suitable separators and chairs installed not greater than 4 feet on centers.
- J. Conduit spacing shall be 12" minimum from 480/277-volt conduits to mA/communication signal conduits and 6" minimum from 120/240-volt conduits and mA/communication signal conduits.
- K. Provide suitable pull string in each empty duct.
- L. Swab duct with wire brush and mandrel. Use suitable caps to protect installed duct against entrance of dirt and moisture.
- M. Backfill as required in Backfill Section. Aggregate bedding shall be placed and tamped in layers. Bedding shall be placed in trench bottom prior to installation of the bottom ducts.
- N. Concrete encasement required where indicated. Ensure that concrete totally encases conduits in duct bank to eliminate any voids.
- O. Interface installation of underground warning tape with backfilling as required in Backfill Section. Install tape 6 inches below finished surface.
- P. Install a vertical two-foot length of #8 rebar to extend to 6" below finish grade at each duct bank intersection, bend and at 100 ft intervals of straight duct bank run for locating the duct bank.

### 3.3 PULL BOXES/HANDHOLE ENCLOSURES

- A. Quality Control: Follow requirements in manufacturer's instructions.
- B. Excavate for manhole installation under the provisions of Excavation Section.

- C. Excavate hole approximately 8" deeper than the depth of the pull box at finished grade and approximately 8" larger than the box. Provide minimum of six to eight inches of gravel in the excavation bottom. Compact gravel to minimize settling.
- D. Set box on compacted gravel and backfill to finished grade.
- E. Install in accordance with NEC 314.30.

END OF SECTION 260530

## SECTION 260533 - CONDUIT

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Metal conduit
  - 1. Rigid Galvanized Steel
  - 2. Aluminum
- B. PVC coated rigid galvanized steel
- C. Nonmetallic conduit
- D. Flexible metal conduit
- E. Liquid-tight flexible metal conduit
- F. Fittings and conduit bodies

#### 1.2 RELATED SECTIONS

- A. Section 260529 - Supporting Devices
- B. Sections 260534 – Pull, Junction Boxes and Enclosures

#### 1.3 REFERENCES

- A. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated
- B. ANSI C80.5 - Rigid Aluminum Conduit
- C. ANSI/NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies
- D. ANSI/NFPA 70 - National Electrical Code
- E. NECA "Standard of Installation"
- F. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit
- G. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing

#### 1.4 DESIGN REQUIREMENTS

- A. Conduit Size: ANSI/NFPA 70

#### 1.5 SUBMITTALS

- A. Submit under provisions of Section 012333.
- B. Product Data: Provide for metallic conduit, flexible metal conduit, liquid-tight flexible metal conduit, nonmetallic conduit, flexible nonmetallic conduit, fittings, conduit bodies of each type planned to be used.

#### 1.6 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of project general requirements.
- B. Accurately record actual routing of all conduits exposed and concealed on record drawings.

#### 1.7 REGULATORY REQUIREMENTS

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

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle Products to site under provisions of Section 016600.
- B. Accept conduit on site. Inspect for damage.
- C. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.
- D. Protect PVC conduit from sunlight.

#### 1.9 PROJECT CONDITIONS

- A. Verify routing and termination locations of conduit prior to rough-in.
- B. Conduit routing is shown on Drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

## PART 2 - PRODUCTS

### 2.1 CONDUIT REQUIREMENTS

- A. Minimum Size: 3/4 inch, unless otherwise specified
- B. Underground Installations:
  - 1. More than two feet from Foundation Wall: Use schedule 40 PVC conduit.
  - 2. Within two feet from Foundation Wall: Use plastic coated galv. rigid conduit.
  - 3. In or Under Slab on Grade: Use schedule 40 PVC conduit.
  - 4. When changing from underground to above ground, use PVC-coated galvanized rigid conduit to approximately two feet above finished grade.
  - 5. Conduits passing through poured concrete sidewalks, floating type slabs on grade shall be sleeved.
- C. Outdoor Locations, Above Grade: Use rigid galvanized steel conduit.
- D. In Slab Above Grade:
  - 1. Use schedule 40 PVC.
  - 2. Maximum Size Conduit in Slab: 3/4" for conduits crossing each other.
- E. Continuously Wet and Damp Locations: Use aluminum or PVC-coated rigid steel conduit.
- F. Corrosive Location: Use PVC-coated rigid steel or schedule 40 PVC.
- G. Dry Locations:
  - 1. Concealed in framed wall or above suspended ceilings: Use steel electrical metallic tubing or schedule 40 PVC conduit.
  - 2. Exposed: Use rigid galvanized steel or aluminum conduit or as noted on drawings.
  - 3. Flexible metal conduit can be used for equipment connections. Max length of 3 feet.
- H. Classified hazardous Class 1, Division 1 areas & Screen Rooms: PVC coated rigid steel conduit and explosion-proof flexible equipment connections.
- I. Equipment Connections:
  - 1. Use liquid-tight flexible metal conduit.
  - 2. In corrosive or chemical rooms use non-metallic flexible conduit and fittings.
- J. Flexible Conduits shall be limited to three feet or less.

### 2.2 METAL CONDUIT

- A. Rigid Steel Conduit: ANSI C80.1
- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1 all steel fittings



## 2.3 PVC COATED METAL CONDUIT

- A. Manufacturers:
  - 1. Robroy Industries "Plasti-Bond"
  - 2. Thomas & Betts "OCAL Blue"
- B. Description: NEMA RN 1; rigid steel conduit with external PVC coating, 40 mil thick
- C. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel fittings with external PVC coating to match conduit.

## 2.4 FLEXIBLE METAL CONDUIT

- A. Description: Interlocked aluminum construction
- B. Fittings: ANSI/NEMA FB 1

## 2.5 LIQUIDTIGHT FLEXIBLE METAL CONDUIT

- A. Manufacturers:
  - 1. Sealtight VA Anaconda Metal Hose Div.
  - 2. Liquidtight type L.A. Electric Flex Co.
- B. Description: Interlocked aluminum construction with PVC jacket
- C. Fittings: ANSI/NEMA FB 1

## 2.6 NONMETALLIC CONDUIT

- A. Manufacturers:
  - 1. Carlon Electrical Products Div.
  - 2. LCP
  - 3. Quil
- B. Description: NEMA TC 2; Schedule 40 PVC
- C. Fittings and Conduit Bodies: NEMA TC 3

# PART 3 - EXECUTION

## 3.1 INSTALLATION

- A. Install conduit in accordance with NECA "Standard of Installation".
- B. Install nonmetallic conduit in accordance with manufacturers' instructions.
- C. Arrange supports to prevent misalignment during wiring installation.

- D. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- E. Group related conduits; support using conduit rack. Construct rack using steel channel; provide space on each for 25 percent additional conduits.
- F. Fasten conduit supports to building structure and surfaces under provisions of Section 260529.
- G. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports.
- H. Do not attach conduit to ceiling support wires.
- I. Arrange conduit to maintain headroom and present neat appearance.
- J. Route exposed conduit parallel and perpendicular to walls.
- K. Route conduit in and under slab from point-to-point.
- L. Do not cross conduits in slab unless  $\frac{3}{4}$ " trade size.
- M. Maintain adequate clearance between conduit and piping.
- N. Maintain 12-inch clearance between conduit and surfaces with temperatures exceeding 104 °F.
- O. Cut conduit square using saw or pipe cutter; de-burr cut ends.
- P. Bring conduit to shoulder of fittings; fasten securely.
- Q. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.
- R. Use conduit hubs or sealing locknuts to fasten conduit to sheet metal boxes in damp and wet locations and to cast boxes.
- S. Install no more than equivalent of three 90-degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use factory elbows for bends in metal conduit larger than 2-inch trade size.
- T. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.
- U. Provide suitable fittings to accommodate expansion and deflection where conduit crosses, control and expansion joints.
- V. Conduits shall be sloped in such a manner that water may drain to the closest pull box if possible.

- W. Provide suitable pull string in each empty conduit except sleeves and nipples.
- X. Use suitable caps to protect installed conduit against entrance of dirt and moisture.
- Y. Ground and bond conduit under provisions of Section 260526.
- Z. Identify conduit under provisions of Section 260553.
- AA. Flexible conduit, non-metallic, liquid-tight, and metallic; shall not be used in lengths longer than 6 ft unless specifically approved. Flexible conduit is not to be used in place of neatly run rigid conduit.
- BB. Where called out on plans, provide cable terminators and/or sealing bushings, CRC by O-Z/Gedney or approved equal. Verify specific cable outside diameters and follow manufacturer's installation requirements.

END OF SECTION 260533

## SECTION 260534 - PULL, JUNCTION BOXES AND ENCLOSURES

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Pull Boxes
- B. Junction Boxes
- C. Accessories

#### 1.2 RELATED SECTIONS

- A. Section 260529 - Supporting Devices

#### 1.3 REFERENCES

- A. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum)
- B. NEMA ICS 4 - Terminal Blocks for Industrial Control Equipment and Systems
- C. ANSI/NFPA 70 - National Electrical Code

#### 1.4 SUBMITTALS

- A. Submit under provisions of general project requirements and Section 260500.
- B. Product Data: Provide manufacturer's standard data for boxes and enclosures.
- C. Junction box locations and details
  - 1. Terminal block layout
  - 2. Grounding

#### 1.5 REGULATORY REQUIREMENTS

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

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Hoffman
- B. Rittal
- C. Or Equal

### 2.2 PULL BOXES

- A. Construction:
  - 1. Outdoors, Wet Damp areas, Corrosive areas. NEMA Type 4/4X, sunlight resistant fiberglass, polycarbonate or SS as specified on Drawings, enclosure with continuous hinge covers.
    - a. Covers: Continuous SS hinge, held closed by SS screws
  - 2. Indoors exposed NEMA 12, 13 or as specified on Drawings.
  - 3. Indoors flush wall mounted NEMA 1 w/ flush covers
  - 4. Indoors concealed NEMA 1 w/ screw cover
  - 5. Indoor wet and damp NEMA 4XSS
  - 6. Indoor corrosive areas NEMA 4XSS or compatible with chemical
  - 7. Hazardous locations NEMA 7

### 2.3 TERMINAL HINGED COVER ENCLOSURES

- A. Construction:
  - 1. Outdoor, Wet Damp areas, Corrosive areas. NEMA 4/4X, sunlight resistant fiberglass or polycarbonate or SS as specified on Drawings, Type 4/4X enclosure with continuous hinge cover.
    - a. Covers: Continuous SS hinge, held closed by flush latch operable by screwdriver.
  - 2. Indoors exposed NEMA 12, 13
  - 3. Indoors flush wall mounted NEMA 1 w/ flush covers
  - 4. Indoors concealed NEMA 1 w/ screw cover
  - 5. Indoor wet and damp NEMA 4XSS
  - 6. Indoor corrosive areas NEMA 4XSS or compatible with chemical
  - 7. Hazardous locations NEMA 7
- B. Provide white enamel interior metal panel for mounting terminal blocks and electrical components.

### 2.4 CABINETS

- A. Provide metal barriers to form separate compartments containing control wiring at less than 50 volts from power wiring.

- B. Provide accessory feet for free-standing equipment.

## 2.5 TERMINAL BLOCKS

- A. Manufacturers:
  - 1. Weidmüller SAK 6, SAK 2.5, ASK 1
  - 2. Allen-Bradley
  - 3. Phoenix Contact
  - 4. Square D
  - 5. Or equal
- B. Terminal Blocks: ANSI/NEMA ICS 4
- C. Power Terminals: Unit construction type with closed back and tubular pressure screw connectors, rated 600 volts.
- D. Signal and Control Terminals: Modular construction type, suitable for channel mounting, with tubular pressure screw connectors, rated 300 volts. Ground terminal shall be green.
- E. Provide ground bus terminal block, with each connector bonded to enclosure.
- F. Provide a typed legend of cables and terminal numbers with origin and destination.
- G. Boxes where water may drain from the attached conduits shall have drains installed in the bottom or the lowest point of the box. Conduit penetration at such boxes shall be located along the sides or top of the box. Conduits shall not be installed in a manner that water can enter attached pull conduits.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install Products in accordance with manufacturer's instructions.
- B. Install enclosures and boxes plumb. Anchor securely to wall and structural supports at each corner.
- C. Do not attach boxes directly to masonry, concrete, or brick walls but provide a ¼" spacer of PVC, nylon, or stainless steel.
- D. Install enclosures and boxes using stainless steel fasteners.
- E. Provide supports where required when no wall or other adequate support is available.

END OF SECTION 260534

## SECTION 260553 - ELECTRICAL IDENTIFICATION

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Nameplates and labels
- B. Wire and cable markers
- C. Conduit markers

#### 1.2 REFERENCES

- A. NFPA 70 - National Electrical Code

#### 1.3 SUBMITTALS

- A. Submit under provisions of Section 260500.
- B. Product Data: Provide catalog data for nameplates, labels, and markers.

#### 1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc.

### PART 2 - PRODUCTS

#### 2.1 NAMEPLATES AND LABELS

- A. Nameplates:
  - 1. Equipment Identification: Engraved three-layer laminated plastic, black letters on white background
  - 2. Emergency Powered Equipment: Engraved three-layer laminated plastic, black letters on red background, as required by NEC
  - 3. Equipment power source identification: Engraved three-layer laminated plastic, black letters on yellow background
- B. Locations:
  - 1. Each electrical distribution and control equipment enclosure
  - 2. Junction box

- C. Letter Size:
  - 1. Use 1/8-inch letters for identifying individual equipment and loads.
  - 2. Use 1/4-inch letters for identifying grouped equipment and loads.
- D. Labels: Embossed adhesive tape, with 3/16-inch white letters on black background. Use only for identification of individual wall switches and receptacles, and control device stations.

## 2.2 WIRE MARKERS

- A. Manufacturers:
  - 1. T & B Shrink-Kon HVM wire markers
  - 2. Panduit - Pan Code HSDL
  - 3. Brady
- B. Description: Tubing type wire markers
- C. Locations: Each conductor at panelboard gutters, outlet and junction boxes, terminal strip and each load connection
- D. Legend:
  - 1. Power and Lighting Circuits: Branch circuit or feeder number indicated on Drawings.
  - 2. Control Circuits: Control wire number indicated on schematic and interconnection diagrams on drawings or on shop drawings.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Degrease and clean surfaces to receive nameplates and labels.

### 3.2 APPLICATION

- A. Install nameplate parallel to equipment lines.
- B. Secure nameplate to equipment front using stainless steel screws, rivets, or adhesive.
- C. Identify underground conduits using foil backed underground warning tape. Install one tape per trench at 6 inches below finished grade.

END OF SECTION 260553



## SECTION 262213 - DRY-TYPE TRANSFORMERS (600 V AND LESS)

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes the following types of dry-type transformers rated 600 V and less, with capacities up to 1000 kVA:
  - 1. Distribution transformers
  - 2. Control and signal transformers

#### 1.3 SUBMITTALS

- A. Product Data Include rated nameplate data, capacities, weights, dimensions, minimum clearances, installed devices and features, and performance for each type and size of transformer indicated.
- B. Shop Drawings: Wiring and connection diagrams
- C. Source quality-control test reports
- D. Output Settings Reports: Record of tap adjustments specified in Part 3

#### 1.4 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with IEEE C 57.12.91
- C. Energy-Efficient Transformers Rated 15 kVA and Larger: Certified as meeting NEMA TP 1, Class 1 efficiency levels when tested according to NEMA TP 2

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Temporary Heating: Apply temporary heat according to manufacturer's written instructions within the enclosure of each ventilated-type unit, throughout periods during which equipment is not energized and when transformer is not in a space that is continuously under normal control of temperature and humidity.

## 1.6 COORDINATION

- A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 3.
- B. Coordinate installation of wall-mounting and structure-hanging supports.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Eaton Electrical
  - 2. Siemens Energy & Automation, Inc.
  - 3. Square D / Schneider
  - 4. Engineer Approved Equal

### 2.2 MATERIALS

- A. Description: Factory-assembled and -tested, air-cooled units for 60 Hz service
- B. Cores: Grain-oriented, non-aging silicon steel
- C. Coils: Continuous windings without splices, except for taps
  - 1. Internal Coil Connections: Brazed or pressure type
  - 2. Coil Material: Copper

### 2.3 DISTRIBUTION TRANSFORMERS

- A. Comply with NEMA ST 20, and list and label as complying with UL 1561.
- B. Cores: One leg per phase
- C. Enclosure: Ventilated, drip-proof, NEMA 250, Type 2
- D. Indoor Transformer Enclosure Finish: Comply with NEMA 250 for "Indoor Corrosion Protection"
  - 1. Finish Color: Gray
- E. Insulation Class: 220°C, UL-component-recognized insulation system with a maximum of 150°C rise above 40°C ambient temperature
- F. Taps for Transformers Smaller Than 3 kVA: One 5-percent tap above normal full capacity
- G. Taps for Transformers 7.5 to 24 kVA: One 5-percent tap above and one 5-percent tap below normal full capacity

- H. Taps for Transformers 25 kVA and Larger: Two 2.5-percent taps above and four 2.5-percent taps below normal full capacity
- I. Select features from six paragraphs and associated subparagraphs below. Coordinate with Drawings.
- J. Electrostatic Shielding: Each winding shall have an independent, single, full-width copper electrostatic shield arranged to minimize interwinding capacitance.
  - 1. Arrange coil leads and terminal strips to minimize capacitive coupling between input and output terminals.
  - 2. Include special terminal for grounding the shield.
  - 3. Shield Effectiveness:
    - a. Capacitance between Primary and Secondary Windings: Not to exceed 33 picofarads over a frequency range of 20 Hz to 1 MHz
    - b. Common-Mode Noise Attenuation: -120 dBA minimum at 0.5 to 1.5 kHz; -65 dBA minimum at 1.5 to 100 kHz
    - c. Normal-Mode Noise Attenuation: -52 dBA minimum at 1.5 to 10 kHz
- K. Wall Brackets: Manufacturer's standard brackets

## 2.4 CONTROL AND SIGNAL TRANSFORMERS

- A. Description: Self-cooled, two-winding dry type, rated for continuous duty, complying with NEMA ST 1, and listed and labeled as complying with UL 506
- B. Ratings: Continuous duty. If rating is not indicated, provide at least 50 percent spare capacity above connected peak load.

## 2.5 SOURCE QUALITY CONTROL

- A. Test and inspect transformers according to IEEE C57.12.91.
- B. Factory Sound-Level Tests: Conduct sound-level tests on equipment for this Project.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine conditions for compliance with enclosure and ambient temperature requirements for each transformer.
- B. Verify that field measurements are as-needed to maintain working clearances required by NFPA 70 and manufacturer's written instructions.
- C. Examine walls and floors for suitable mounting conditions where transformers will be installed.

- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install wall-mounting transformers level and plumb with wall brackets fabricated by transformer manufacturer.
  - 1. Brace wall-mounting transformers as specified in Division 26 Section "Electrical Supports".
- B. Install floor-mounting transformers level on concrete bases not less than 2 inches larger in both directions than supported unit and 4 inches high.
  - 1. Anchor transformers to concrete bases according to manufacturer's written instructions.

### 3.3 CONNECTIONS

- A. Ground equipment according to Division 26 Section "Grounding and Bonding".
- B. Connect wiring according to Division 26 Section "Conductors and Cables".
- C. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

### 3.4 ADJUSTING

- A. Record transformer secondary voltage at each unit for at least 48 hours of typical occupancy period. Adjust transformer taps to provide optimum voltage conditions at secondary terminals. Optimum is defined as not exceeding nameplate voltage plus 10 percent and not being lower than nameplate voltage minus 5 percent. Submit recording and tap settings as test results.
- B. Output Settings Report: Prepare a written report recording output voltages and tap settings.

END OF SECTION 262213

## SECTION 262726 - WIRING DEVICES

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. Wall switches
- B. Receptacles
- C. Device plates

#### 1.2 REFERENCES

- A. NECA - Standard of Installation
- B. NEMA WD 1 - General Requirements for Wiring Devices
- C. NEMA WD 6 - Wiring Device -- Dimensional Requirements
- D. NFPA 70 - National Electrical Code

#### 1.3 SUBMITTALS FOR REVIEW

- A. Follow requirements for procedures for submittals.
- B. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

#### 1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Provide Products listed and classified by Underwriters Laboratories, Inc.

### PART 2 - PRODUCTS

#### 2.1 WALL SWITCHES

- A. Description: NEMA WD 1, Heavy-Duty, AC only general-use snap switch. Single Pole listed, 3 and 4-Way similar.
  - 1. Ratings:
    - a. Voltage: 120-277 volts, AC, 20 amperes

2. Type:
  - a. Body and Handle: Ivory plastic with toggle handle
    - 1) Manufacturers:
      - a) Hubbell – 1221I
      - b) Pass & Seymour – 20AC1-I
    - 2) Leviton
    - 3) Or approved equal
  - b. Indicator Light: Lighted handle type switch; RED handle or IVORY handle
    - 1) Manufacturers:
      - a) Hubbell – 1221PL, IL
      - b) Pass & Seymour – 20AC1-RPL , ISL
      - c) Leviton
      - d) Or approved equal

## 2.2 RECEPTACLES

- A. Two-pole, 3-wire Grounding, straight blade, heavy duty specification grade, duplex receptacle.
  1. Rating:
    - a. 120 volts AC, 20 amps
  2. Type:
    - a. Duplex Receptacle
      - 1) Manufacturers:
        - a) Hubbell 5362
        - b) Pass & Seymour 5362
        - c) Leviton
        - d) Or approved equal
  3. Ground Fault Circuit Interrupting two pole, 3-wire Grounding, 20-amp, 125-volt, heavy duty specification grade, duplex receptacle.
    - a. Manufacturers:
      - 1) Hubbell GF5362
      - 2) Pass & Seymour, 2091-S
      - 3) Leviton
      - 4) Or approved equal
  4. Pre-wired nonmetallic receptacle raceway: Six-foot, 3-wire, single circuit 20-receptacle on 12" c/c spacing.
    - a. Manufacturers:
      - 1) Hubbell PT6112
      - 2) Wiremold NM24GB612
      - 3) Or approved equal

## 2.3 WALL PLATES

- A. Receptacles
  1. Decorative Cover Plate: Smooth stainless steel
  2. Jumbo Cover Plate: Smooth stainless steel
  3. Weatherproof covers in use

- B. Wall Switches
  - 1. Decorative Cover Plate: Smooth stainless steel
  - 2. Jumbo Cover Plate: Smooth stainless steel
  - 3. Weatherproof covers for outdoor locations

## 2.4 TELEPHONE & DATA

- A. Jacks
  - 1. Hubbell Premise wiring FPL series with color coded HPW jacks
  - 2. Weatherproof covers

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify existing conditions prior to beginning work.
- B. Verify that outlet boxes are installed at proper height.

### 3.2 PREPARATION

- A. Clean debris from outlet boxes.

### 3.3 INSTALLATION

- A. Install in accordance with NECA "Standard of Installation".
- B. Install devices plumb and level.
- C. Install switches with OFF position down.
- D. Install receptacles with grounding pole on bottom.
- E. Connect wiring device grounding terminal to branch circuit equipment grounding conductor.
- F. Connect wiring devices by wrapping conductor around screw terminal.
- G. Install galvanized steel plates on junction boxes in unfinished areas, above accessible ceilings, and on surface mounted boxes.
- H. Install stainless steel plates on outlet boxes and switch boxes in unfinished areas and on surface mounted outlets.

### 3.4 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate locations of outlet boxes to obtain mounting heights.
- B. Install wall switch 48 inches above finished floor.
- C. Install convenience receptacle 18 inches above finished floor unless directed otherwise.

### 3.5 FIELD QUALITY CONTROL

- A. Follow requirements in general project requirements and Section 260500 for field inspection and testing.
- B. Inspect each wiring device for defects.
- C. Operate each wall switch with circuit energized and verify proper operation.
- D. Verify that each receptacle device is energized.
- E. Test each receptacle device for proper polarity.
- F. Test each GFCI receptacle device for proper operation.

### 3.6 CLEANING

- A. Follow requirements for Contract Closeout: Cleaning installed work.
- B. Clean exposed surfaces to remove splatters and restore finish.

END OF SECTION 262726



## SECTION 262923 - VARIABLE FREQUENCY DRIVES

### PART 1 - GENERAL

#### 1.1 DESCRIPTION

##### A. Scope:

1. CONTRACTOR shall provide all labor, materials, equipment, services, and incidentals as shown, specified, and required to furnish and install variable frequency drives, complete and operational.
2. Variable frequency drives required under this Section are low-voltage, voltage source inverter, pulse width modulated. Variable frequency drives shall be customized.

##### B. Where variable frequency drives are being provided by the vendor of the associated driven equipment, costs for variable frequency drives shall be included in the lump sum price for said equipment. Where variable frequency drives are not being provided by the vendor of the associated driven equipment, costs for variable frequency drives shall be included in the general contract price.

##### C. Related Sections:

1. Section 260553, Electrical Identification
2. Section 260520, Shielded Instrumentation & Variable Frequency Drive Cable

#### 1.2 REFERENCES

##### A. Standards referenced in this Section are:

1. IEEE 519, Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.
2. NEMA AB 1, Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures.
3. NEMA ICS 2, Industrial Control and Systems, Controllers, Contactors and Overload Relays Rated 600 Volts.
4. NEMA ICS 7, Industrial Control and Systems Adjustable Speed Drives.
5. NEMA MG 1, Motor and Generator Standard.
6. UL 508, Industrial Control Equipment.
7. ISO 9000, Quality Management Systems, Fundamentals and Vocabulary.
8. ISO 9001, Quality Management Systems, Requirements.
9. ISO 9002, Quality Systems, Model for Quality Assurance in Production, Installation and Servicing.

### 1.3 QUALITY ASSURANCE

#### A. Qualifications:

##### 1. Manufacturer:

- a. Variable frequency drive manufacturer shall have at least five years of experience designing and regularly manufacturing and servicing substantially similar equipment to that specified, and shall submit documentation upon request of at least five installations in satisfactory operation for at least five years.
- b. Manufacturer shall be certified under ISO 9000, ISO 9001, or ISO 9002 for materials and equipment specified.
- c. For all required factory tests, variable frequency drive manufacturer shall use a factory test facility that has calibrated its testing apparatus in the previous twelve months, and is staffed by qualified, experienced technicians.

#### B. Component Supply and Compatibility:

1. Drives specified under this Section shall employ a low switching frequency or pattern to minimize instantaneous rate of voltage change over time (dv/dt), and the adverse effects of potential bearing currents. Where alternate manufacturers are proposed, obtain manufacturer recommendations regarding bearing currents and provide equipment required at no additional cost to OWNER.
2. Each variable frequency drive shall be totally compatible with associated driven equipment and motors. Variable frequency drives shall be matched to specific load requirements for each system. Operation of variable frequency drive shall not overstress motor insulation.
3. Similar components of drives associated with each system shall be products of a single manufacturer.

### 1.4 SUBMITTALS

#### A. Action Submittals: Submit the following:

##### 1. Shop Drawings:

- a. Dimensional information and construction details of enclosures. Enclosure details shall consist of exterior and interior front door with nameplate legends, interior door front and rear views, and terminal block layout.
- b. Three-line power and control schematic diagrams.
- c. Wiring diagrams showing the interconnection of conductors to all devices with terminal assignments for remote devices.
- d. Functional description of system operation.
- e. VFD heat dissipation at full load, including heat rejection/cooling system.

- f. Preliminary Harmonic analysis shall utilize:
      - 1)  $I_L$  shall be 80% of the connected load.
      - 2) The point of common coupling (PCC) shall be the first main breaker of the motor control center which the VFD is powered from.
      - 3) The level of harmonics, at the PCC described above, shall not exceed IEEE 519 limits.
  - 2. Product Data:
    - a. Technical specifications.
    - b. Catalog cuts and product literature.
  - 3. Testing Plans:
    - a. At least thirty days prior to source quality control testing, submit descriptions of proposed shop testing methods, procedures, and apparatus.
    - b. At least thirty days prior to field quality control testing, submit descriptions of proposed field testing methods, procedures, and apparatus.
- B. Informational Submittals: Submit the following:
- 1. Certificates:
    - a. Certification letters from variable frequency drive manufacturer and motor manufacturer that the approved driven equipment has been reviewed and that variable frequency drive units and motors are compatible, and shall be provided in accordance with the Contract Documents and requirements of the driven equipment.
  - 2. Source Quality Control Submittals:
    - a. Within 14 days of completing source quality control tests and inspections, submit test results with indication of whether all criteria of the Contract Documents for the specified equipment were met.
  - 3. Field Quality Control Submittals:
    - a. Within 14 days of completing field quality control tests and inspections, submit test results with indication of whether all criteria of the Contract Documents for the specified equipment were met.
  - 4. Manufacturer Reports:
    - a. Preliminary and final harmonic analysis.
    - b. Within 14 days of each visit to the Site by manufacturer's representative, submit written report of reason for visit, problems encountered, solutions implemented, and remaining work.

5. Qualifications Statements:

- a. Manufacturer.

C. Closeout Submittals: Submit the following:

1. Operation and Maintenance Data:

- a. Submit complete installation, operation and maintenance manuals including test reports, maintenance data and schedules, description of operation, list of recommended spare parts, and spare parts ordering information.
- b. Manuals shall include record drawings of control schematics, including point-to-point wiring diagrams.
- c. Comply with Section: Operation and Maintenance Data.
- d. Field report of final harmonic testing.

D. Maintenance Materials Submittals: Submit the following:

1. Spare Parts and Extra Stock Materials:

- a. Furnish, tag, and box for shipment and long-term storage, spare parts and special tools for variable frequency drives. Each spare part set shall include manufacturer's recommended spare parts inventory for one year and include, at minimum, the following:

<b>Item</b>	<b>Quantity per Four VFDs per HP Rating</b>
1) Transistor and diode modules with accessories	One set
2) Power supply module	One
3) Fans	One set
4) Power fuses	One set of each size and type used
5) Control power fuses	Two sets of each size and type used
6) Pilot lights	Two per ten of each type used

2. Furnish a list of recommended spare parts for an operating period of one year. Describe each part, the quantity recommended, and current unit price.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Delivery:

1. Deliver materials to the Site to ensure uninterrupted progress of the Work.
2. Shipping containers shall be designed to be shipped by truck, rail, or ship. Indoor containers shall be bolted to skids.
3. Inspect variable frequency drive equipment for shipping damage or loose parts upon delivery. Check for evidence of water that may have entered equipment during transit.

B. Handling:

1. Lift, roll or jack variable frequency drive equipment into locations shown.
2. Variable frequency drives shall be equipped for handling required for installation. Handle equipment in accordance with manufacturer's requirements.

C. Storage:

1. Store variable frequency drive equipment in a clean, dry location with controlled, uniform temperature and humidity. Protect equipment with coverings and maintain environmental controls.

## PART 2 - PRODUCTS

### 2.1 EQUIPMENT PERFORMANCE

A. System Performance:

1. Driven equipment to be controlled by a variable frequency drive shall be provided with a customized variable frequency drive. Each drive unit shall include an adjustable frequency controller with associated controls for continuous speed adjustment and protection of the driven equipment. Output speed control of motor shall be continuous throughout speed range of two to 60 Hertz under variable torque load or constant torque as specified for the driven equipment.
2. Variable frequency drives associated with each set of driven equipment shall be similar to each other.
3. Variable frequency drives shall be UL-listed or ETL-listed and designed, built, and tested in accordance with NEMA AB 1, NEMA ICS 2, NEMA ICS 7, and UL 508.
4. The VFD shall not emit harmonics that exceed IEEE 519 limits at the PCC.
5. The point of common coupling for all VFDs to be tested and conform to IEEE 519 harmonic limits will be considered the first point of connection to the electrical system, be that the motor control center that the VFD power is being supplied from and not the utility connection point.

### 2.2 MANUFACTURERS

A. Provide variable frequency drives by one of the following:

1. Schneider Electric
2. ABB
3. Allen-Bradley
4. Eaton
5. Toshiba
6. Danfoss
7. Or equal

2.3 APPROVED EQUAL: OTHER MANUFACTURERS MUST BE PRE-QUALIFIED BEFORE ONE (1) WEEK PRIOR TO BID OPENING. PREQUALIFICATION SHALL CONSIST OF SUBMITTING INFORMATION LISTED IN PARAGRAPHS 1.3 AND 1.4 ABOVE TO THE ENGINEER A MINIMUM OF TWO (2) WEEKS PRIOR TO THE BID OPENING DATE. APPROVAL OF EQUAL MANUFACTURERS (IF ANY) WILL BE MADE BY ADDENDUM PRIOR TO THE BID OPENING.

- A. Provide each variable frequency drive with freestanding or wall hanging, front-access, NEMA 1, filtered and gasketed enclosure. Enclosure shall house all components required for the associated variable frequency drive.
- B. Enclosure shall provide adequate cooling for components within and include positive ventilation.
- C. Enclosure shall include circuit breaker disconnect switch. Circuit breakers shall be in accordance with NEMA AB 1. Switch handle shall be suitable for padlocking and be through-the-door type with handle height not exceeding six feet. Operation of switch shall remove the service supply from all internal components. Power devices shall be suitable for interrupting capacity matching that of the upstream Power source in symmetrical amperes. Include current limiting semi-conductor fuses where required for protection of solid-state components.
- D. Enclosure door shall include an operator interface for access to controller's digital keypad and display.
- E. Equip enclosure front with nameplates for identification of equipment and operating functions. Nameplates shall be in accordance with Section 260553, Electrical Identification.
- F. Equip enclosure with phenolic type terminal blocks suitably labeled for all internal and remote wiring requirements, plus twenty percent spare.
- G. Data shall be formatted as required to communicate with the plant SCADA system. The VFD's shall communicate via-Ethernet TCP/IP. The manufacturer shall coordinate with the plant integrator to map data for SCADA interface.

## 2.4 ADJUSTABLE FREQUENCY CONTROLLER

### A. General:

- 1. Adjustable frequency controller shall be microprocessor-based, pulse width modulated design, suitable for operation on a 480-volt, three-phase supply. Controller shall produce an adjustable AC voltage/frequency output to vary speed of driven equipment. Controller shall consist of the following sections:
  - a. The drive shall be a PWM (Pulse Width Modulated) inverter using IGBT transistors.

2. Controller switching frequency shall be adjustable and allow operation at 5,000 Hertz or less. Controller technology shall include a switching scheme that reduces the dV/dt of output supply.
3. Equip controller with a DC bus reactor or input line reactor as required to keep equipment line harmonics to a minimum.
4. Controller's solid-state converter input section switching devices shall have 1600-volt PIV rating.
5. Overload rating of 110 percent variable torque, 150 percent constant torque for one minute.
6. RMS harmonic content of output current shall be less than five percent of fundamental current.
7. Able to withstand output terminal line-to-line short circuits without component failure.

B. Operating Criteria:

1. Operating criteria shall be in accordance with the following:
  - a. Ambient temperature range of zero to 40 °C.
  - b. Operational humidity of up to 90 percent non-condensing.
  - c. Altitude up to 3,300 feet above sea level.
  - d. Nominal voltage of 480-volts plus or minus ten percent, three-phase, three-wire. Include an under-voltage feature to allow trip-free operation down to 35 percent undervoltage.
  - e. Nominal frequency of 60 Hertz plus or minus three Hertz.
  - f. Input power factor of 95 percent displacement power factor at all operating speeds.
  - g. Efficiency of 96 percent at full speed and full load.

C. Features:

1. Controller shall have the following features:
  - a. Digital keypad and display module shall provide parameter setting, adjustments, and monitoring of control functions and faults. Display messages shall be in English.
  - b. Serial communication port shall allow connecting to programmable controller interface using manufacturer standard protocol.
  - c. Independent acceleration/deceleration rates shall provide two to 600 seconds minimum. When called to stop, motor shall decelerate to minimum speed before stopping.
  - d. Power loss feature shall allow five cycle ride-through capability for input supply interruptions.
  - e. Time delay automatic restart shall allow restart after controller fault conditions have been cleared with programmable attempts.
  - f. Coasting motor restart shall allow controller to restart into a coasting motor without damage or tripping. Coasting motor restart feature shall allow switching from bypass mode to variable frequency drive mode while operating without shutdown.
  - g. Isolated control inputs and outputs.

D. Protection:

1. Controller shall have protective functions as follows:
  - a. Input line metal oxide varistor transient protection
  - b. Electronic over-current trip, instantaneous and inverse-time overload protection with thermal memory retention
  - c. Over-temperature trip temperature protection
  - d. Current limit trip protection
  - e. Input line over- and under-voltage trip protection
  - f. Ground fault trip protection
2. Power Line Considerations:
  - a. The drive shall be designed to operate in accordance with all performance requirements of the contract documents from a power source that contains a maximum of 5% total voltage harmonic distortion, meet current distortion as defined by IEEE-519-1992.
  - b. Each VFD or multiple sets of VFDs shall be designed and installed such that: the total voltage harmonic distortion reflected back to the power source is a maximum of 5%.
  - c. When line reactors and harmonic filters are required they shall be provided by VFD supplier and shall be rated for, and compatible with, each VFD. They shall function as a complete system. Additional harmonic filters beyond those shown on drawings may be required in order to comply with the above parameters. The line reactors and harmonic traps shall be mounted inside the respective VFD enclosures. Traps shall be current limiting and fuse-protected as a minimum and shall protect internal wiring and components on each phase. Data on these items shall be included with VFD shop drawings.
  - d. The VFD supplier shall perform a computer simulated power system study to verify compliance with the parameters as stated herein. The results of this study shall be submitted to the engineer. At a minimum, the submitted results of this study shall include:
    - 1) Results summary sheet which briefly describes the power system configuration analyzed and which states the calculated values of total harmonic distortion
    - 2) Detailed list of the amplitude of harmonic currents and voltages to the 50th harmonic
    - 3) If IEEE 519 is met and where on the power distribution
  - e. The contractor shall supply the VFD supplier with all power system data required to perform the above-described study. These data may include but are not limited to:
    - 1) A complete one-line diagram of the subject electrical distribution system
    - 2) Complete electrical data on all equipment shown on the one-line diagram is required. At a minimum, this data shall consist of:



- a) Transformers - kVA, Primary voltage, Secondary voltage, Short circuit capacity or impedance.
  - b) Motors - Horsepower, Base speed, Full load RMS current (FLA).
  - c) Generators - Short circuit capacity or Subtransient reactances ( $X_d$ ), Power factor, kW, X/R Ratio.
- 3) If the distribution system can function in more than one configuration, the configuration(s) to be analyzed shall be clearly defined. Any other information which may affect the behavior of the distribution system shall also be provided.

## 2.5 OUTPUT FILTER

### A. General:

1. Provide output filter to prevent overstressing motor insulation system. Provide output filter with each variable frequency drive when cable length between motor and variable frequency drive exceeds the following, based on noted switching frequencies:
  - a. One kHz switching frequency, 200 feet cable length
  - b. Three kHz switching frequency, 175 feet cable length
2. Provide output filters in all other cases based on recommendations of variable frequency drive and motor manufacturers when actual voltage peaks at motor terminals exceed NEMA MG 1 limits.

### B. Features and Criteria:

1. Filter shall be three-phase, 600-volt class motor-protecting type consisting of suitable values of inductance, capacitance, and resistance to form a damped low pass filter.
2. Filter shall be low-loss type specifically designed to reduce voltage waveform  $dV/dt$ . Filter shall allow cable minimum lengths exceeding actual application distances with waveforms resulting in voltage spikes at motor terminal that are within NEMA MG 1 Part 31 voltage stress levels.
3. Filter shall be suitable for mounting within variable frequency drive enclosure.

## 2.6 CONTROLS

### A. General:

1. Equip each variable frequency drive control system with relays, switches, fuses, indicating lights, and components required for a complete, functional system.
2. Variable frequency drive control shall be powered from a suitably sized and protected control power transformer.
3. Variable frequency drive control shall include status indicators, controller, and system fault condition displays and operating controls. Provide status indicators and operating controls associated with drive control on front door of enclosure.

4. Control arrangement shall be such that variable frequency drive internal electronic supply voltage is isolated from field wiring.

B. Control and Pilot Devices:

1. Relays shall be standard, latching type, and pneumatic or solid-state time-delay type. Provide relays with contacts rated for ten amps, quantity as required.
2. Pilot devices shall be heavy duty type, rated 10 amps continuous. Indicating lights shall be push-to-test transformer type with 12-volt secondaries.

C. Operation:

1. Controls for each variable frequency drive shall consist of all devices necessary for the following:
  - a. Stop/Start and Speed Control: Stop/start and speed control shall respond to drive-mounted selector switch. With switch in "REMOTE" position, stop/start and speed control shall be based on a stop/start contact and 4–20 mA DC speed signal from remote process control panel. With switch in "LOCAL" position, stop/start control shall be based on stop/start pushbuttons located adjacent to driven equipment, and speed control shall be based on drive-mounted speed potentiometer.
  - b. Emergency Stop Control: Emergency stop control shall respond to remote emergency stop pushbutton located adjacent to driven equipment. When activated, driven equipment shall stop immediately in all operating modes.
  - c. Motor Over-temperature Shutdown: Motor over-temperature control shall respond to remote contact that activates on motor over-temperature. When over-temperature is detected, driven equipment shall stop. Include provisions to remotely supply 120-volt power to thermistor control module located at motor.
  - d. Seal water control (required for pumps and other equipment that require seal water): Seal water control shall include provisions to supply 120-volt power to remote seal water solenoid. Seal water solenoid shall energize when equipment requiring seal water is enabled. Equipment requiring seal water shall have a delayed start until remote-located pressure switch verifies seal water flow. Upon loss of seal water, after an adjustable period, an alarm shall be initiated but equipment requiring seal water shall not shut down. When equipment requiring seal water is stopped, seal water solenoid shall remain energized for an adjustable period.

D. Auxiliary Features:

1. Provide each variable frequency drive with the following:
  - a. Status Indicators: Status indicators shall include separate pilot lights for indication of motor run (red), and bypass mode (blue).
  - b. Shutdown Indicators: Shutdown indicators shall include separate pilot lights (amber) for each shutdown condition. Arrange shutdown indication circuitry so that, when activated, indicator requires manual reset.

- c. Contact Outputs: Contact outputs shall include separate dry contacts for remote indication of motor run, seal water alarm for equipment with seal water systems, each shutdown condition, and controller faults.
- d. Speed Output: Speed output shall include 4–20 mADC signal for remote indication of motor speed.

E. Wiring and Device Identification:

- 1. Provide control wiring and device identification for each variable frequency drive:
  - a. Identify all control conductors with permanent type wire markers. Each wire shall be identified by a unique number and shall be attached to wire at each termination point.
  - b. Identify each control device with permanent type marker. Each device shall be identified by a unique number and shall be attached to each device.
  - c. Numbering system for each wire and control device shall be identified on wiring diagrams and shall reflect actual designations used in the Work.

## 2.7 SOURCE QUALITY CONTROL

A. Tests:

- 1. Perform factory tests on each variable frequency drive prior to shipping. Test shall consist of simulating expected load to be driven by operating load through speed ranges specified for driven equipment, for minimum of two hours per drive unit.
- 2. Provide factory control and alarm tests on each drive unit by simulating each control signal and each alarm function to verify proper and correct drive unit action.
- 3. Perform specified tests in addition to standard factory tests typically performed.

B. Factory tests as outlined above shall be witnessed by the OWNER's representative:

- 1. The manufacturer shall notify the OWNER two (2) weeks prior to the date the tests are to be performed.
- 2. The manufacturer shall include the cost of transportation and lodging for up to three (3) OWNER's representatives.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Examine conditions under which the Work will be installed and notify ENGINEER in writing of conditions detrimental to proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions are corrected.

### 3.2 INSTALLATION

- A. Install equipment in accordance with manufacturer's recommendations and instructions and in conformance with Laws and Regulations, and the Contract Documents.
- B. Unless otherwise shown or indicated, install equipment at existing location of drive unit being replaced.
- C. Install equipment with sufficient access and working space provided for ready and safe operation and maintenance.
- D. For installations against masonry walls, provide an insulation board, 1/4-inch minimum thickness, between equipment and wall for corrosion protection. Trim board neatly within outline of equipment.
- E. Install all terminations, lugs, and required appurtenances necessary to properly terminate power supplies.
- F. Install control wiring terminations and appurtenances necessary to complete installing control and monitoring devices.

### 3.3 FIELD QUALITY CONTROL

- A. Site Tests:
  - 1. After installation, inspect, adjust, and test each variable frequency drive at the Site. Testing and inspection shall be in accordance with manufacturer's recommendations and be performed by manufacturer's factory-trained representative. Through CONTRACTOR, manufacturer's factory-trained representative shall inform OWNER and ENGINEER when equipment is correctly installed and ready to be energized. Do not energize equipment without permission of OWNER.
  - 2. Perform the following equipment inspection and testing and provide reports documenting procedures and results.
    - a. Verify all device settings and drive adjustments.
    - b. Inspect all mechanical and electrical interlocks and controls for proper operation.
    - c. Test each drive through specified speed ranges and loads for a minimum of two hours per drive unit.
    - d. Test each drive by using actual control signal for remote and local operation.
    - e. Test each drive alarm function.
    - f. Perform other tests recommended by equipment manufacturer.
    - g. Perform Harmonics testing to confirm compliance with IEEE 519 limits.
      - 1) Testing of the Harmonic limits shall be per a VFD system as operating under natural conditions.
      - 2) Utilize the recorded maximum current recorded for the operating VFD system as I Load.
      - 3) Submit all calculations, all collected field data and graphs for review to Engineer.

- 4) If the VFD system fails to be at or below any or all of the IEEE 519 Harmonic acceptable levels the VFD manufacturer shall incur all costs associated with retesting, additional harmonic mitigation equipment, equipment installation and retesting expenses including costs associated with Engineer travel to witness any and all testing.

B. Manufacturer Services:

1. Unloading and Installation: Manufacturer's factory-trained representative shall be present during unloading of equipment and installation at equipment's final location. Representative shall train installing personnel in advance in the proper handling and rigging of equipment. Services by manufacturer's representative under this paragraph shall be at least 2 eight-hour days at the Site.
2. Post-installation Check: Manufacturer's factory-trained representative shall check and approve the installed equipment before initial operation. Manufacturer shall calibrate, set and program variable frequency drives provided. Services by manufacturer's representative under this paragraph shall be at least 2 eight-hour days at the Site.

Manufacturer's factory-trained representative shall adjust the system to final settings as specified in Article 3.5 of this section. Manufacturer's factory trained representative shall test as specified in section 3.3.A of this section. Representative shall operate and test the system in presence of ENGINEER and verify that equipment is in conformance with the Contract Documents. Services by manufacturer's representative under this paragraph shall be at least 2 eight-hour days at the site.

3. Representative shall revisit the Site as often as necessary until all deficiencies are corrected, prior to readiness for final payment.
4. Provide services of manufacturer's factory-trained representatives to correct defective Work within 72 hours of notification by OWNER during the correction period specified in the General Conditions as may be amended by the Supplementary Conditions.
5. Replacement parts or equipment provided during the correction period shall be equal to or better than original.
6. Training: Provide services of qualified factory trained specialists from manufacturer to instruct OWNER's operations and maintenance personnel in recommended operation and maintenance of equipment.

3.4 ADJUSTING

- A. Following Substantial Completion, when inspection and testing are complete and variable frequency drives are operating, manufacturer's representative shall return to the Site and make final adjustments as required to each variable frequency drive furnished under this Section.

END OF SECTION 262923

## SECTION 264313 - TRANSIENT VOLTAGE SUPPRESSION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes TVSSs for low-voltage power, control, and communication equipment.

#### 1.3 DEFINITIONS

- A. ATS: Acceptance Testing Specifications
- B. SVR: Suppressed voltage rating
- C. TVSS: Transient voltage surge suppressor

#### 1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating weights, operating characteristics, furnished specialties, and accessories.
- B. Product Certificates: For transient voltage suppression devices, signed by product manufacturer certifying compliance with the following standards:
  - 1. UL 1283
  - 2. UL 1449
- C. Qualification Data: For testing agency
- D. Field quality-control test reports, including the following:
  - 1. Test procedures used
  - 2. Test results that comply with requirements
  - 3. Failed test results and corrective action taken to achieve requirements
- E. Operation and Maintenance Data: For transient voltage suppression devices to include in emergency, operation, and maintenance manuals.
- F. Warranties: Special warranties specified in this Section.

## 1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain suppression devices and accessories through one source from a single manufacturer.
- B. Product Options: Drawings indicate size, dimensional requirements, and electrical performance of suppressors and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements"
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use
- D. Comply with IEEE C62.41, "IEEE Guide for Surge Voltages in Low Voltage AC Power Circuits," and test devices according to IEEE C62.45, "IEEE Guide on Surge Testing for Equipment Connected to Low-Voltage AC Power Circuits"
- E. Comply with NEMA LS 1, "Low Voltage Surge Protection Devices"
- F. Comply with UL 1283, "Electromagnetic Interference Filters," and UL 1449, "Transient Voltage Surge Suppressors"

## 1.6 PROJECT CONDITIONS

- A. Service Conditions: Rate surge protection devices for continuous operation under the following conditions, unless otherwise indicated:
  - 1. Maximum Continuous Operating Voltage: Not less than 115 percent of nominal system operating voltage.

## 1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of surge suppressors that fail in materials or workmanship within five years from date of Substantial Completion.

## 1.8 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Replaceable Protection Modules: One of each size and type installed.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Advanced Protection Technologies, Inc.
  - 2. Atlantic Scientific
  - 3. Current Technology, Inc.
  - 4. Cutler-Hammer, Inc.; Eaton Corporation
  - 5. Entrelec International
  - 6. General Electric Company
  - 7. Innovative Technology, Inc.
  - 8. Intermatic, Inc.
  - 9. LEA International
  - 10. Leviton Mfg. Company Inc.
  - 11. Liebert Corporation; a division of Emerson
  - 12. Northern Technologies, Inc.
  - 13. Siemens Energy & Automation, Inc.
  - 14. Square D; Schneider Electric
  - 15. Surge Suppression Incorporated
  - 16. Sutton Designs Inc.
  - 17. Transtector Systems, Inc.
  - 18. Tycor; Cutler-Hammer, Inc.
  - 19. United Power Corporation
  - 20. Zero Surge Inc.

### 2.2 SERVICE ENTRANCE SUPPRESSORS

- A. Surge Protection Device Description: Non-modular, sine-wave-tracking type with the following features and accessories:
  - 1. LED indicator lights for power and protection status
  - 2. Audible alarm, with silencing switch, to indicate when protection has failed
  - 3. One set of dry contacts rated at 5A and 250 VAC, for remote monitoring of protection status
- B. Surge Protection Device Description: Modular design with field-replaceable modules, sine-wave-tracking type with the following features and accessories:
  - 1. Fuses, rated at 200 kA interrupting capacity
  - 2. Fabrication using bolted compression lugs for internal wiring
  - 3. Integral disconnect switch
  - 4. Redundant suppression circuits
  - 5. Redundant replaceable modules



6. Arrangement with copper bus bars and for bolted connections to phase buses, neutral bus, and ground bus
  7. Arrangement with wire connections to phase buses, neutral bus, and ground bus
  8. LED indicator lights for power and protection status
  9. Audible alarm, with silencing switch, to indicate when protection has failed.
  10. One set of dry contacts rated at 5A and 250 VAC, for remote monitoring of protection status. Coordinate with building power monitoring and control system.
  11. Surge-event operations counter
- C. Peak Single-Impulse Surge Current Rating: 240 kA per phase
- D. Connection Means: Permanently wired
- E. Protection modes and UL 1449 SVR for grounded wye circuits with voltages of 480/277, 3-phase, 4-wire circuits shall be as follows:
1. Line to Neutral: 800V
  2. Line to Ground: 800V
  3. Neutral to Ground: 800V

## 2.3 PANELBOARD SUPPRESSORS

- A. Surge Protection Device Description: Non-modular, sine-wave-tracking type with the following features and accessories:
1. LED indicator lights for power and protection status.
  2. Audible alarm, with silencing switch, to indicate when protection has failed.
  3. One set of dry contacts rated at 5A and 250 VAC, for remote monitoring of protection status.
- B. Surge Protection Device Description: Modular design with field-replaceable modules, sine-wave-tracking type with the following features and accessories:
1. Fuses, rated at 200 kA interrupting capacity
  2. Fabrication using bolted compression lugs for internal wiring
  3. Integral disconnect switch
  4. Redundant suppression circuits
  5. Redundant replaceable modules
  6. Arrangement with wire connections to phase buses, neutral bus, and ground bus
  7. LED indicator lights for power and protection status
  8. Audible alarm, with silencing switch, to indicate when protection has failed
  9. One set of dry contacts rated at 5A and 250 VAC, for remote monitoring of protection status. Coordinate with building power monitoring and control system.
  10. Surge-event operations counter
- C. Peak Single-Impulse Surge Current Rating: 120 kA per phase

- D. Protection modes and UL 1449 SVR for grounded wye circuits with voltages of 208Y/120, 3-phase, 4-wire circuits shall be as follows:
  - 1. Line to Neutral: 400V
  - 2. Line to Ground: 400V
  - 3. Neutral to Ground: 400V
- E. Protection modes and UL 1449 SVR for 240/120V, single-phase, 3-wire circuits shall be as follows:
  - 1. Line to Neutral: 400V
  - 2. Line to Ground: 400V
  - 3. Neutral to Ground: 400V
- F. Protection modes and UL 1449 SVR for 240/120V, 3-phase, 4-wire circuits with high leg shall be as follows:
  - 1. Line to Neutral: 400V, 800V from high leg
  - 2. Line to Ground: 400V
  - 3. Neutral to Ground: 400V

## 2.4 ENCLOSURES

- A. NEMA 250, with type matching the enclosure of panel or device being protected.

## PART 3 - EXECUTION

### 3.1 INSTALLATION OF SURGE PROTECTION DEVICES

- A. Install devices at service entrance on load side, with ground lead bonded to service entrance ground.
- B. Install devices for panelboard, Motor Control Center, and auxiliary panels with conductors or buses between suppressor and points of attachment as short and straight as possible. Do not exceed manufacturer's recommended lead length. Do not bond neutral and ground.
  - 1. Provide multi-pole, 30A circuit breaker as a dedicated disconnect for suppressor, unless otherwise indicated.

### 3.2 PLACING SYSTEM INTO SERVICE

- A. Do not energize or connect panelboards, Motor Control Centers to their sources until surge protection devices are installed and connected.

### 3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test and adjust equipment installation, including connections, and to assist in field testing. Furnish all test results.
  - 1. Verify that electrical wiring installation complies with manufacturer's written installation requirements.
- B. Testing: Perform the following field tests and inspections and prepare test reports:
  - 1. After installing surge protection devices, but before electrical circuitry has been energized, test for compliance with requirements
  - 2. Complete startup checks according to manufacturer's written instructions.
  - 3. Perform each visual and mechanical inspection and electrical test stated in NETA ATS, "Surge Arresters, Low-Voltage Surge Protection Devices" Section. Certify compliance with test parameters.
- C. Remove and replace malfunctioning units and retest as specified above.

### 3.4 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain transient voltage suppression devices. Refer to Division 1 Section "Closeout Procedures."

END OF SECTION 264313

## SECTION 320190.33 – TREE AND SHRUB PRESERVATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

#### 1.2 DESCRIPTION OF WORK

- A. Furnish all labor, equipment and incidentals required to protect existing vegetation areas not to be disturbed.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Marking Tape
  - 1. Red and yellow nylon or approved equal.
- B. Fencing or other protective devices as approved by Engineer.

### PART 3 - EXECUTION

#### 3.1 PROTECTION

- A. Marking and Identification
  - 1. The extent of the area to be cleared and grubbed will be marked in the field by stakes and red fiberglass or nylon tape. Individual trees or shrubs to be removed from a location where most of the vegetation is to remain will also be marked by red tape. Any vegetation to remain within a larger area identified to be cleared and grubbed will be marked by yellow tape.

#### 3.2 PROTECTION AND CARE OF TREES AND SHRUBS

- A. Protect all other trees and shrubs from defacement, injury and destruction. Preserve trees within the right-of-way or construction area that are so delineated on the Drawings or are marked in the field.
- B. During work operations, protect the trunk, foliage, and root system of all trees to be saved with boards or other guards placed as required to prevent damage, injury and defacement. Do not pile excavated material adjacent to the base of any trees. Do not allow runoff to

accumulate around bases of trees. Do not fasten or attach ropes, cable or guy wires to trees without permission of the Engineer. Provide climbing ropes during trimming.

- C. All such trees, shrubs, and plants shall be carefully trimmed and protected from scarring, barking, or other injury during construction operations. All cuts and scars on trees shall be painted and treated with an approved wound dressing especially prepared for tree surgery, as directed by the Engineer.

### 3.3 TREE PRUNING

#### A. Pruning Existing Trees

1. Contractor shall prune all existing trees tagged or designated by the Engineer to remain.
2. Remove all dead, damaged and diseased wood completely. Do not leave stubs as it is unsightly and provides an entry point for disease spores. Also, remove crossed, girdling, or misplaced branches with care not to spoil the natural habit of the tree or shrub. The branch should always be removed flush with the trunk or parent branch while exposing the smallest area of cut surface possible without leaving an unnecessary stub.
3. Use the undercut method for the removal of all branches greater than 1/2". If necessary, cut a long, heavy branch into several convenient, manageable lengths to reduce the weight in easy stages. The undercut prevents any possible tearing of the bark below the branch. All wounds shall be carefully pared over with a sharp knife and covered with wound paint, approved by the Engineer, within 24 hours.
4. Trees and shrubs shall also be pruned in order to restore typical branching habits for that particular species, by trained and experienced personnel.
5. Prune existing mature trees in late autumn or early winter, particularly for those trees that produce large quantities of sap.

### 3.4 DISPOSAL OF MATERIALS

- A. All tree trunks, limbs, roots, stumps, brush, foliage and other vegetation shall become the property of the Contractor and shall be removed and disposed of by him off the project site in a manner complying with applicable local, State and Federal regulations. No burning will be allowed.

END OF SECTION 320190.33

## SECTION 329200.19 – SEEDING AND MULCHING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Installation of seeded areas shall be to the extent shown on Contract Drawings and shall include supplying all seed, topsoil, soil conditioning materials, mulching materials and watering, and the incorporation of these materials into the work as specified.
- B. The Contractor shall place topsoil at the depths specified in those areas requiring seeding. Topsoil shall be furnished by the Contractor.

#### 1.2 SUBMITTALS

- A. Product Data: For the following:
  - 1. Provide copies of soils tests for both new topsoil (provided) and onsite topsoil for review and approval. This applies to all areas that require seeding, including reconditioned areas.
  - 2. Provide location of properties from which topsoil is to be obtained, names and addresses of owners, depth to be stripped, and crops grown in the past 2 years.
  - 3. Provide the name of the seed supplier, name and phone number, list of the seed, including varieties of seed, labels, and an analysis of the seed for review, 4 weeks prior to the start of seeding.
  - 4. Provide soil amendments information based on soils test requirements.
  - 5. Hydroseed mixture, mulch and application rates prior to performing the work.

#### 1.1 QUALITY ASSURANCE

- A. Any subcontracted restoration work shall be performed by a qualified firm specializing in landscape work.
- B. The Contractor shall have a soils test done at his expense and analyzed by a state approved testing agency. Soil tests shall be done on both the topsoil stockpiled from the site and new topsoil brought to the site. A minimum of two (2) tests shall be done. The tests shall include percent organic matter, pH, Buffer pH, Phosphorus, Exchangeable Potassium, Calcium, Magnesium, Cation Exchange Capacity and Percent Base Saturation with recommendations for nitrogen, phosphate, potash, magnesium and lime based on plant type and use.
- C. Seed: All seed specified shall meet O.D.O.T. specifications as to the percentage purity, weed seed, and germination. All seed shall be approved by the State of Ohio, Department

of Agriculture, Division of Plant Industry, and shall meet the requirements of these specifications.

- D. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.

#### 1.4 PROJECT CONDITIONS

- A. Utilities: Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.
- B. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, such conditions shall be rectified by the Contractor before planting, with approval from the Owner's Representative.
- C. Soil Stabilization: The Contractor shall provide permanent or temporary soil stabilization to denuded areas within fifteen (15) days after final grade is reached on any portion of the site. Any such area which will not be regraded for longer than fifteen (15) days shall also be stabilized. Soil stabilization includes any measures which protect the soil from the erosive forces of raindrop impact and flowing water. Applications include seeding and/or mulching, or the use of other erosion control measures as directed by the Owner's Representative. If necessary, the Contractor shall coordinate soil stabilization practices with the local Soil and Water Conservation District.
- D. Spring-sown work shall be installed between April 1st and May 30th and Fall-sown work shall be installed between September 1st and October 15th. No permanent seeding shall take place between May 30th and September 1st and between October 15th and April 1st. The dates for seeding may be changed at the discretion of the Owner's Representative.

### PART 2 - PRODUCTS

#### 2.1 TOPSOIL

- A. Topsoil shall be furnished by the Contractor. Stockpiled material, if any, shall be utilized prior to obtaining additional topsoil.
- B. All topsoil shall conform to the U.S. Department of Agriculture soil texturing triangle and shall contain between 3% to 8% organic matter. Topsoil shall be loamy and not consist of more than 38% clay. New topsoil shall be screened to remove clay lumps, brush, weeds, litter, roots, stumps, stones larger than ½" in any dimension and any other extraneous or toxic matter harmful to plant growth.

New topsoil shall be obtained only from naturally well drained sites where topsoil occurs in a depth of not less than 4". Do not obtain from bogs or marshes.

- C. Soil amendments shall be added according to the soils test requirements. Amendments can include, but are not limited to fertilizer, lime, compost, sand, and organic matter. Organic matter shall consist of composted leaves or other approved material.

## 2.2 SEED

- A. Seed shall be vendor mixed, delivered in original bags and shall be proportioned as follows:

<u>Common Name</u>	<u>Proportion by Weight</u>
Kentucky Blue Grass	50%
Perennial Rye	50%

## 2.3 MULCH

- A. Mulch shall be clean straw free of seed and weed seed.
1. Anchoring for mulch shall be an ODOT specified SS-1 at 60 gal./ton non-toxic tackifier such as Hydro-stik, or equal, or by securing with a photo degradable netting.

- B. If hydroseeding is used, wood fiber mulching material shall be used and shall consist of virgin wood fibers manufactured expressly from whole wood chips and shall conform to the following specifications.

- Moisture content	10.0% $\pm$ 3.0%
- Organic content	99.2% $\pm$ 0.8% O.D. Basis
- pH	4.8 $\pm$ 0.5
- Water holding capacity, minimum (grams of water per 100 grams of fiber)	1,000

Wood fiber mulching material shall be processed in such a manner as to contain no growth or germination inhibiting factors, and must contain a biodegradable green dye to aid in visual metering during application.

## PART 3 - EXECUTION

### 3.1 PREPARATION - GENERAL

- A. Rough grading to a depth necessary to accept the specified thickness of topsoil must be approved prior to placing topsoil.
- B. Loosen subgrade, remove any stones greater than ½" in any dimension. Remove sticks, roots, rubbish, and other extraneous matter.
- C. Spread topsoil to a minimum depth of 4 inches, to meet lines, grades, and elevations shown on plan, after light rolling and natural settlement. Remove sticks, roots, rubbish, stones greater than 1/2" in any dimension, and other extraneous matter. Topsoil shall be tilled



thoroughly by plowing, disking, harrowing, or other approved methods. Add specified soil amendments and mix thoroughly into the topsoil.

- D. Preparation of Unchanged Grades: Where seed is to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for planting as follows: Till to a depth of not less than 6 inches. Apply soil amendments and initial fertilizers as specified. Remove high areas and fill in depressions. Till soil to a homogenous mixture of fine texture, free of lumps, clods, stones, roots and other extraneous matter. Soils test requirements apply here as well.

1. Prior to preparation of unchanged areas, remove existing grass, vegetation and turf. Dispose of such material outside of project limits. Do not turn existing vegetation over into soil being prepared for seed.

If necessary, supply and install topsoil in areas where there is no topsoil left after vegetation has been removed.

2. Apply specified soil amendments at rates specified in the soils test and thoroughly mix into upper 2 inches of topsoil. Add topsoil if existing grade has less than 4" of topsoil. Delay application of amendments if planting will not follow within two (2) days.

- E. Fine grade areas to smooth, even surface with loose, uniformly fine texture. Roll, rake, and drag lawn areas, remove ridges and fill depressions, as required to meet finish grades. Remove sticks, roots, rubbish, stones greater than 1/2" in any dimension, and other extraneous matter. Limit fine grading to areas which can be planted immediately after grading.
- F. Moisten prepared areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.
- G. Restore areas to specified condition, if eroded or otherwise disturbed, after fine grading and prior to planting.

### 3.2 SEEDING

- A. Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage. Seed shall not be sown when the ground is frozen, muddy, or when weather conditions prevent proper soil preparation, interference with sowing and/or proper incorporation of seed into the soil.
- B. Sow seed using a spreader or hydroseeder. Do not seed when wind velocity exceeds 5 miles per hour. Distribute seed evenly over entire area by sowing 3 lbs. per 1000 S.F. at right angles to each other. Total amount to equal a minimum of 6 lbs. per 1000 S.F.
- C. For seed sown with a spreader, mulch shall be spread uniformly to form a continuous blanket at a rate of 100 lbs. per 1,000 S.F. Mulch shall be 1 1/2" loose measurement over seeded areas and shall be anchored.

- D. Contractor has the option to hydroseed large lawn areas, using equipment specifically designed for such application. The rate of application of wood fiber mulching materials is 40 lbs./1,000 S.F. Contractor shall not hydroseed within close proximity to buildings and structures, or when unfavorable wind conditions may blow the hydroseed material onto the structure. Contractor shall clean all areas not to be seeded of overspray.
- E. The seeded area shall be watered, as soon as the seed is applied, at the rate of 120 gallons per 1000 square feet. The water shall be applied by means of a hydroseeder or a water tank under pressure with a nozzle that will produce a spray that will not dislodge the mulching material. Cost of this watering shall be included in the cost of seeding and mulching.

### 3.3 DORMANT SEEDING METHOD

- A. Seeding shall not take place from October 15 through November 20. During this period prepare the seed bed, add the required amounts of lime and fertilizer, and other amendments, then mulch and anchor.
- B. From November 20 through April 1, when soil conditions permit, prepare the seed bed, lime and fertilize, apply the selected seed mixture, mulch, and anchor. Increase the seeding rate by 50 percent.

### 3.4 RECONDITIONING EXISTING LAWNS

- A. A soils test shall be required for existing lawns prior to any reconditioning.
- B. Recondition all existing lawn areas damaged by Contractor's operations including storage of materials and equipment and movement of vehicles. Also recondition existing lawn areas where minor regrading is required.
- C. Provide soil amendments as called for in the soils test.
- D. Provide new topsoil, as required, to fill low spots and meet new finish grades.
- E. Cultivate bare and compacted areas according to the topsoil specifications.
- F. Remove diseased and unsatisfactory lawn areas; do not bury into soil. Remove topsoil containing foreign materials resulting from the Contractor's operations, including oil drippings, stone, gravel, and other loose building materials.
- G. All work shall be the same as for new seeding.
- H. Water newly planted seed areas. Maintenance of reconditioned lawns shall be the same as maintenance of new lawns.

### 3.5 ESTABLISHMENT

- A. Maintain work areas as long as necessary to establish a uniformly close stand of grass over the entire lawn area. A uniformly close stand of grass is defined as the seeded areas having

90%+ coverage of grass at 60 days after seeding. 90%+ coverage is defined as very little or no dirt showing when seeded area is viewed from directly overhead.

- B. Maintain lawns by watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading and replanting as required to establish a smooth acceptable lawn.
  - 1. Mowing
    - a. Mow lawn areas during the period of maintenance to a height of 2 inches whenever the height of the grass becomes 3 inches. A minimum of 3 mowings is required during the period of maintenance.
  - 2. Refertilizing
    - a. Distribute fertilizer on the seeded area between August 15 and October 15, during the period when grass is dry, and in accordance with the manufacturer's recommendations. The fertilizer shall be as specified in the soils test.
  - 3. Reseeding
    - a. Reseed with the seed specified for the original seeding, at the rate of 4 lbs. per 1,000 S.F. in a manner which will cause minimum disturbance to the existing stand of grass and at an angle of not less than 15 degrees from the direction of rows of prior seeding.
  - 4. Watering
    - a. The Contractor shall keep all work areas watered daily to achieve satisfactory growth. Water shall be applied at a rate of 120 gallons per 1,000 square feet. If water is listed as a pay item, it shall be separately paid for based on the actual amount of water used, measured in thousands of gallons.
  - 5. Any mulching which has been displaced shall be repaired immediately. Any seed work which has been disturbed or damaged from the displacement of mulch shall be repaired prior to remulching.

### 3.6 INSPECTION AND ACCEPTANCE

- A. When seeding work is complete and an acceptable stand of growth is attained, the Contractor shall request the Owner's Representative to make an inspection to determine final acceptance.
- B. Acceptance shall be based upon achieving a vigorous uniformly stand of the specified grasses. If some areas are satisfactory and some are not, acceptance may be made in blocks, provided they are definable or bounded by readily identified permanent surfaces, structures, or other reference means. Partial acceptance decisions may be made by the Owner's Representative. Excessive fragmentation into accepted and unaccepted areas shall not be allowed. Unaccepted areas shall be maintained by the Contractor until acceptable.
- C. No payment shall be made until areas are accepted.
- D. All seeded areas shall be guaranteed for one full growing season to commence upon final acceptance of the areas.

END OF SECTION 329200.19

## SECTION 330130 - MISCELLANEOUS TEMPORARY FACILITIES

### PART 1 - GENERAL

#### 1.1 MAINTENANCE OF SANITARY FLOWS

- A. The Contractor for this contract shall be responsible for maintaining all sanitary flows through the existing sanitary sewerage systems. Provisions shall be made for temporary pumping and/or storage of sanitary flows during periods of sewer and manhole reconstruction, or when flows must be interrupted to make connections to the new facilities as directed by the Engineer.

END OF SECTION 330130

SECTION 331443 – PUMPING SYSTEMS FOR WASTEWATER  
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. The Contractor shall furnish and install one (1) complete factory-built and tested duplex pump station, consisting of all piping and valves, NEMA 4X stainless steel control panel enclosure with alarms, pump, pump removal system, discharge assembly, level control system, and all necessary internal wiring and controls to form a complete packaged system.
- B. For ease of serviceability, all pumps and motor shall be of like type and horsepower throughout the system.
- C. The Contractor shall provide all labor, materials, tools and equipment required to furnish and install the pump station complete as shown on the Contract Drawings and as specified herein.
- D. The contract drawings and specifications were prepared based on the named manufacturer in this item and the Contractor shall include in his base bid proposal, equipment by the specified manufacturer.

1.3 QUALITY ASSURANCE

- A. All pump manufacturers must have been in the business of manufacturing complete pump stations for a minimum of five (5) years successful field operation of actual proposed equipment and minimum of 10 installations at equivalent application.
- B. The pump manufacturer shall be the entity that designs, machines, assembles, hydraulically tests and warranties the final product. Any entity that does not meet this definition will not be considered an acceptable supplier. For quality control reasons, future pump, and parts availability, all major castings of the pump shall be sourced and machined in North America.
- C. Supplier shall provide a list of names and dates of similar installations for verification by the engineer or Owner's Representative.
- D. Manufacturer must demonstrate to the satisfaction of engineer that the proposed pump equipment will meet system flows and heads required. In addition, pre-submittal must also demonstrate to the satisfaction of the engineer that the equipment being proposed meets or exceeds all performance and safety requirements, materials of construction, and user benefits of the specified equipment. Only pre-approved pump station manufacturers will be considered. All bids utilizing manufacturers not pre-approved will be considered non-responsive.
- E. Certified Pump Test
  - 1. Each pump shall be shop tested for capacity, head, speed, power and efficiency in accordance with Standards of the Hydraulic Institute.
  - 2. Certified copies of each test curve shall be furnished to the Engineer for approval.

3. Test shall consist of checking each pump at its rated speed, head, capacity, efficiency, and brake horsepower.
  4. The pumps shall not leave the manufacturer's plant until receipt of the Engineer's approval.
- F. In addition to requirements of these specifications, comply with manufacturer's instructions and recommendations for work.
- G. If Contractor chooses to submit a bid that does not meet all the requirements of this specification, the bid shall include a written description of the deviation with data that shows the magnitude of and justification for the deviation from this specification. The decision to accept material deviating from this specification shall be the responsibility of the SPECIFYING ENGINEER.

#### 1.4 SUBMITTALS

- A. The Contractor shall submit manufacturer's technical data and application instruction in accordance with the General and Supplementary Conditions and Division 1 specifications and any additional information listed herein.
- B. Product Data: Submit the manufacturer's technical data and installation instructions including certified pump curves with efficiency, capacity, head, speed, brake horsepower required, and operating point required for each pump. Submit all wiring diagrams.
- C. Manufacturer's Data:
1. The Contractor shall submit, as a minimum, the following information:
    - a. Motor data, including starting kVA, starting torque, full load current and torque efficiency curves, and power factor curves (typical motor test data from equivalent motors are acceptable).
    - b. Materials of construction for all components.
    - c. Details of the new pump installation.
  2. Manufacturer's Certificates, including certified test curves with the design points clearly marked (computer model printouts are not acceptable). Performance curves shall be submitted for each pump to be supplied to both the Engineer and Owner.
  3. The pump manufacturer must be certified to ISO 9001 by an accredited agency, with scope of registration including design control and service after sales activities.
- D. Warranty: The Equipment Manufacturer shall submit a (5) Five-year Full Coverage warranty certificate for review for all pump equipment. The date of the warranty begins after commissioning and operational demonstration.
- E. After receipt of notice to proceed, the contractor shall furnish the engineer the shop drawings detailing the equipment to be furnished for the pump station, including dimensional data and materials of construction.
- F. Prior to completion of equipment delivery, the contractor shall supply one (1) electronic digital copy in PDF format and three (3) paper copies of Operation and Maintenance instructions.

## 1.5 WARRANTY

- A. The manufacturer shall provide a warranty on any defective pump station part(s) and labor to replace defective parts for a period of Five years after date of manufacture. The pumps shall be warranted for a period of Five (5) years. The owner will return any equipment found to be defective to the manufacturer for inspection & validation of the defect. Defective equipment will be repaired or replaced & shipped back to customer at no charge.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Acceptable pump station manufacturer(s) are:
1. Buckeye Pumps, PH # 419-468-7866  
[john.miller@otcindustrial.com](mailto:john.miller@otcindustrial.com)
  2. Excel Fluid Group, LLC, PH # 216-854-4277 [derek.wootten@excelfluidgroup.com](mailto:derek.wootten@excelfluidgroup.com)
  3. Or Engineer pre-approved equal.

### 2.2 PUMP STATION

- A. Guide Rail Assembly:
1. Two (2) Cast Iron Base Elbow Stationary Fittings, Bolted to Wet Well Floor with Stainless Steel Studs with 4" Diameter Flanged Base Elbow Fittings.
  2. Two (2) Cast Iron Upper Guide Rail Brackets, Mounted on Wet Well Access Cover Frame.
  3. Four (4) 304 Stainless Steel Guide Pipes
  4. Two (2) Cast Iron Moveable Fittings, mounted on Pump Discharges, allowing Pumps to be removed without entering wet well.
  5. Two (2) 316 Stainless Steel Lifting Chains, attached to each Pump Lifting Handle.
  6. Include Intermediate Guide Rail Brackets if wet well depths are greater than 20' deep.
- B. Submersible Pumps:
1. Required Pump Models:
    - a. Two (2) Barnes Explosion-Proof Submersible Envie Sithe Sewage Chopper Pumps, 40 HP, 480 V, 3-Phase Electrical Motor with Cooling Jacket, Model 4XESCDI400N4.
    - b. Two (2) Flygt Explosion-Proof Submersible N-Series Pumps, 35 HP, 480 V, 3-Phase Electrical Motor with Cooling Jacket, Model NP3171.095
    - c. Engineer's pre-approved equal.
  2. The motor will be capable of operating continuously when fully submerged, partially submerged, or unsubmerged. The pumps shall be driven by a Premium Efficient/ IE3 motor capable of operating in a 40°C/104° F environment and handling liquids with temperatures to 40°C/104° F continuously.
  3. Two (2) 50' long Pre-Wired Power and Sensor Cords with Plugs to Connect to the Junction Box

4. Mechanical seals: Silicon Carbide double mechanical seal.
5. Heat and Seal Fail Alarm Sensors.
6. 3 Inch Solids Handling Ductile Iron Impeller
7. Slicing Blade & Striker Plate shall be manufactured of a minimum of ASTM A276 440C Stainless Steel heat treated to 53-60 HRC

C. Discharge Piping:

1. Socket or Flanged Pipe and Fittings, Ranging from 6" Diameter, C900 PVC.

D. Electrical and Controls:

1. One (1) Stainless Steel Panel Stand W/ NEMA 4X Stainless Steel Power Distribution & Control Panel Complete with Terminal Strips & Receptacles.
  - a. One (1) 480 , 3-Phase Circuit Breaker with Disconnect Switch Capable of External Operation
  - b. Transient Voltage Surge Suppressor (TVSS) with Dedicated Circuit Breaker
  - c. Phase Monitor
  - d. One (1) Duplex Arc Sentry Controller Set Complete with:
    - 1) Primary Level Transducer
    - 2) Float Switch Secondary Level Control
    - 3) For Each Pump:
      - a) Circuit Breaker
      - b) 3% Line Reactor
      - c) 40 hp Variable Frequency Drive
  - e. One (1) Pump Vision Touch Screen Controller PV600 for monitoring and adjustment of control settings.
  - f. One (1) Transformer with Primary and Secondary Overcurrent Protection and Circuit Breakers for Odor Controller, LED area light, GFI Receptacle, , and SCADA system..
  - g. HOA Switches, Run Lights, Alarm Lights, Seal Moisture Sensor and Motor Thermal Circuits, High Water Alarm Light and Audible Horn with Silence, Battery Operated Alarm Light, and Elapsed Time Meters for each pump.
  - h. One (1) Laminated Schematic mounted inside Panel Door.
  - i. One (1) installation of customer supplied SCADA system to communicate with Utility.
  - j. One (1) Omni-site style Auto-Dialer to call upon failure.
2. One (1) manual transfer switch with generator receptacle installed.
3. One (1) primary transducer level control with stilling tube.
4. Six (6) Float Switches with Stainless Steel Float Brackets for Backup with Plugs and Receptacles with 60' Cords.
5. One (1) Wet Well Aerator for Odor Control.

E. Performance and Pump Schedule

1. In order to ensure proper operation in all conditions, pump(s) must operate without overheating in continuous operation, maximum head condition required by the system. Pump(s) must also be capable of operating at zero or negative heads without damage to the pump(s).



2. Pump Summary Schedule:

<u>Pump Design Data</u>	
Pump Arrangement:	Duplex (Lead/Lag)
Pump Capacity:	600-GPM
Pump Head:	115-TDH
Maximum Motor Size:	40 HP
Voltage:	480-Volt
Phase:	Three-Phase

## PART 3 - EXECUTION

### 3.1 TESTING AND STARTUP

- A. The pumps provided shall be factory tested at three points to verify the pump performs at the design points.
  - 1. Tests shall consist of checking the unit at its rated speed, head, capacity, efficiency and brake horsepower, and at such other conditions of head and capacity to properly establish the performance curve.
  - 2. The standards of the Hydraulic Institute shall govern the procedures and calculations for these tests.
  - 3. All completed stations shall be factory leak tested to assure the integrity of all joints, seams and penetrations. All necessary penetrations such as inlets, discharge fittings and cable connectors shall be included in this test along with their respective sealing means (grommets, gaskets etc.).
- B. The Contractor shall test all power and control devices in Control Panel for proper operation.
- C. A factory trained service technician shall be provided for a minimum of one-half (1/2) day to test and make adjustments to the control panel and level system to place it into operation and provide training in operation and maintenance.
- D. After all testing has been completed to the satisfaction of the Owner and/or Engineer, the entire Lift Station and Control Panel System shall operate satisfactorily for a minimum test period of 30 days.
  - 1. Cumulative down time of all components furnished shall not exceed 1/2 hour as recorded by the Engineer during the test period.
  - 2. System documentation shall be delivered on the last day of test period. Test period shall not end until system documentation has been delivered.
- E. If the cumulative downtime limit is exceeded, the Engineer shall have the following options:
  - 1. Extend the test period as required until the cumulative downtime during the preceding 30 days does not exceed 1/2 hour as recorded by the Engineer.
  - 2. Subsystems which have no components contributing to the cumulative downtime will be approved as partial acceptance.
  - 3. Subsystems which have components that contributed to the cumulative downtime shall have their test period begin after all repairs and adjustments have been made.

### 3.2 FIELD TESTING

- A. Each pump shall be submerged, operated and tested for performance compliance to its respective curve.

END OF SECTION 331443

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***SECTION 6***  
***STANDARD SPECIFICATIONS***

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## **STANDARD SPECIFICATIONS**

1. The "Construction and Material Specifications" of the State of Ohio Department of Transportation (ODOT), 2023 edition, current ODOT supplemental specifications, and current ODOT standard drawings shall govern work and materials which are not specified or modified herein or on the project Contract Drawings. All references to "the Department" shall be changed to "the Owner or his Representative." The project Contract Drawings and Specifications, in the event of a discrepancy, shall supersede the ODOT Specifications.

The absence of an "As Per Plan" designation on some item descriptions in the proposal for which there are clear and controlling plan notes, specifications, or other requirements does not relieve the Contractor of the responsibility to read, bid and construct those particular items in accordance with the governing plan notes, specifications, or other requirements and the Contractor shall have no basis of claim based upon an "order of precedence".

ODOT 104.02 D., 611.04, 611.12, and 611.13 shall not apply to this project.

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***SECTION 7***  
***SPECIFIC PROJECT REQUIREMENTS***

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## **SPECIFIC PROJECT REQUIREMENTS**

### **1 - CONTACT DURING BIDDING**

- 1.1 All questions during bidding should be addressed to Manuel Aleman P.E., who can be reached at Verdantas, LLC., at (614) 779-0048 Ext. 584

### **2- CORRECTION PERIOD**

- 2.1 The Correction Period in Section 13.07 of the General Conditions shall be changed from a one (1) year to a two (2) year period.

### **3 - INSURANCE**

- 3.1 See the following Bid Set Sections for Insurance Requirements:
- A. Section 1, Instructions to Bidders, Part 10 Insurance
  - B. Section 3, General Conditions, Article 5 Bonds and Insurance (EJCDC) or Article 11 Insurance and Bonds (AIA), whichever is used in the Bid Set
  - C. Section 4, Supplemental Conditions

### **4 - WORKING HOURS**

- 4.1 No work shall be performed between the hours of 7:30 p.m. and 7:30 a.m. nor on Saturday, Sunday, or legal Holidays, without written permission of the Owner.

### **5 - PROJECT COMPLETION**

- 5.1 All work including restoration and clean-up shall be completed no later than the contract completion date. Failure to complete all work within the allotted time will result in assessment of liquidated damages. Upon completion of all work and written notification of same by the Contractor, the Engineer and Owner will compile a punch list. The punch list will be sent to the Contractor. All punch list work shall be completed to the satisfaction of the Engineer and the Owner within 14 days after receipt of the punch list. Failure to complete the punch list work within the allotted time will result in assessment of liquidated damages.

### **6- SITE ACCESS**

- 6.1 Access to the site for field investigation of existing conditions must be scheduled in advance with the Owner by contacting Mr. Dale Wampler , WWTP Superintendent, who can be reached at 740-965-5380

END OF SECTION

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***SECTION 8***  
***PREVAILING WAGE RATES***

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## **PREVAILING WAGES**

The Contractor agrees that each individual employed by the Contractor or any Subcontractor and engaged in work on the project under this Contract shall be paid the prevailing wage established by the Ohio Department of Commerce Division of Industrial Compliance (<https://wagehour.com.ohio.gov/w3/webwh.nsf/wrlogin/?openform>). This shall occur regardless of any contractual relationship which may be said to exist between the Contractor or any Subcontractor and such individual.

The Prevailing Wage Determination Schedule for this project is attached. If the Contractor needs a wage determination for any trade not included herein, he shall contact the Owner's Prevailing Wage Coordinator.



## Prevailing Wage Determination Cover Letter

County:

-Select- ▼

Determination Date:

Expiration Date:

THE FOLLOWING PAGES ARE PREVAILING RATES OF WAGES ON PUBLIC IMPROVEMENTS FAIRLY ESTIMATED TO BE MORE THAN THE AMOUNT IN O.R.C. SEC. 4115.03 (b) (1) or (2), AS APPLICABLE.

Section 4115.05 provides, in part: "Where contracts are not awarded or construction undertaken within ninety days from the date of the establishment of the prevailing wages, there shall be a redetermination of the prevailing rate of wages before the contract is awarded." The expiration date of this wage schedule is listed above for your convenience only. This wage determination is not intended as a blanket determination to be used for all projects during this period without prior approval of this Department.

Section 4115.04, Ohio Revised Code provides, in part: "Such schedule of wages shall be attached to and made a part of the specifications for the work, and shall be printed on the bidding blanks where the work is done by contract..."

The contract between the letting authority and the successful bidder shall contain a statement requiring that mechanics and laborers be paid a prevailing rate of wage as required in Section 4115.06, Ohio Revised Code.

The contractor or subcontractor is required to file with the contracting public authority upon completion of the project and prior to final payment therefore an affidavit stating that he has fully complied with Chapter 4115 of the Ohio Revised Code.

The wage rates contained in this schedule are the "Prevailing Wages" as defined by Section 4115.03, Ohio Revised Code (the basic hourly rates plus certain fringe benefits). These rates and fringes shall be a minimum to be paid under a contract regulated by Chapter 4115 of the Ohio Revised Code by contractors and subcontractors. The prevailing wage rates contained in this schedule include the effective dates and wage rates currently on file. In cases where future effective dates are not included in this schedule, modifications to the wage schedule will be furnished to the Prevailing Wage Coordinator appointed by the public authority as soon as prevailing wage rates increases are received by this office.

"There shall be posted in a prominent and accessible place on the site of work a legible statement of the Schedule of Wage Rates specified in the contract to the various classifications of laborers, workmen, and mechanics employed, said statement to remain posted during the life of such contract." Section 4115.07, Ohio Revised Code.

Apprentices will be permitted to work only under a bona fide apprenticeship program if such program exists and if such program is registered with the Ohio Apprenticeship Council.

Section 4115.071 provides that no later than ten days before the first payment of wages is due to any employee of any contractor or subcontractor working on a contract regulated by Chapter 4115, Ohio Revised Code, the contracting public authority shall appoint one of his own employees to act as the prevailing wage coordinator for said contract. The duties of the prevailing wage coordinator are outlined in Section 4115.071 of the Ohio Revised Code.

Section 4115.05 provides for an escalator in the prevailing wage rate. Each time a new rate is established, that rate is required to be paid on all ongoing public improvement projects.

A further requirement of Section 4115.05 of the Ohio Revised Code is: "On the occasion of the first pay date under a contract, the contractor shall furnish each employee not covered by a collective bargaining agreement or understanding between employers and bona fide organizations of Labor with individual written notification of the job classification to which the employee is assigned, the prevailing wage determined to be applicable to that classification, separated into the hourly rate of pay and the fringe payments, and the identity of the prevailing wage Coordinator appointed by the public authority. The contractor or subcontractor shall furnish the same notification to each affected employee every time the job classification of the employee is changed."

Work performed in connection with the installation of modular furniture may be subject to prevailing wage.

**THIS PACKET IS NOT TO BE SEPARATED BUT IS TO REMAIN COMPLETE AS IT IS SUBMITTED TO YOU. (Reference guidelines and forms are included in this packet to be helpful in the compliance of the Prevailing Wage law.)**  
wh1500

## PREVAILING WAGE THRESHOLD LEVELS IMPORTANT NOTICE

Before advertising for bids, contracting, or undertaking construction with its own forces, to construct a public improvement, the Public Authority shall have the Ohio Department of Commerce-Division of Industrial Compliance, Bureau of Wage and Hour Administration determine the prevailing rates of wages for workers employed on the public improvement. The wage determination must be included in the project specifications and printed on the bidding blanks where work is done by contract.

<b>"New" construction threshold for <i>Building Construction</i>:</b>	<b>\$250,000</b>
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<b>"Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" threshold level for <i>Building Construction</i>:</b>	<b>\$75,000</b>
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<b>As of January 1, 2024:</b>	
<b>"New" construction that involves <i>roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction</i> threshold level has been adjusted to:</b>	<b>\$98,974</b>
<b>"Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" that involves <i>roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction</i> threshold level has been adjusted to:</b>	<b>\$29,653</b>

- A) Thresholds are to be adjusted biennially by the Director of the Ohio Department of Commerce.
- B) Biennial adjustments to threshold levels are made according to the Building Cost for Skilled Labor Index published by McGraw-Hill's Engineering News-Record, but may not increase or decrease more than 3% for any year.

If there are questions concerning this notification, please contact:

Bureau of Wage and Hour Administration  
6606 Tussing Road, PO Box 4009  
Reynoldsburg, Ohio 43068-9009  
Phone: 614-644-2239  
Fax: 614-728-8639  
[www.com.ohio.gov](http://www.com.ohio.gov)



# Prevailing Wage Contractor Responsibilities



*This is a summary of prevailing wage contractors' responsibilities. For more detailed information please refer to [Chapter 4115 of the Ohio Revised Code](#)*

[Expand All Sections](#)

## General Information



Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$250,000 for new construction or \$75,000 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting.

Ohio's prevailing wage laws apply to all public improvements financed in whole or in part by public funds when the total overall project cost is fairly estimated to be more than \$98,974 for new construction that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction or \$29,653 for reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting of a public improvement that involves roads, streets, alleys, sewers, ditches and other works connected to road or bridge construction.

a. Thresholds are to be adjusted biennially by the Administrator of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration

b. Biennial adjustments to threshold levels are made according to the Price Deflator for Construction Index, United States Department of Commerce, Bureau of the Census\*, but may not increase or decrease more than 3% for any year

## Penalties for violation



Violators are to be assessed the wages owed, plus a penalty of 100% of the wages owed.

## Intentional Violations



If an intentional violation is determined to have occurred, the contractor is prohibited from contracting directly or indirectly with any public authority for the construction of a public improvement. Intentional violation means "a willful, knowing, or deliberate disregard for any provision" of the prevailing wage law and includes but is not limited to the following actions:

- Intentional failure to submit payroll reports as required, or knowingly submitting false or erroneous reports.
- Intentional misclassification of employees for the purpose of reducing wages.
- Intentional misclassification of employees as independent contractors or as apprentices.
- Intentional failure to pay the prevailing wage.
- Intentional failure to comply with the allowable ratio of apprentices to skilled workers as required by the regulations established by Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration.

- Intentionally employing an officer, of a contractor or subcontractor, that is known to be prohibited from contracting, directly or indirectly, with a public authority.

## Responsibilities



A. Pay the prevailing rate of wages as shown in the wage rate schedules issued by the Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration, for the classification of work being performed.

1. Wage rate schedules include all modifications, corrections, escalations, or reductions to wage rates issued for the project.
2. Overtime must be paid at time and one-half the employee's base hourly rate. Fringe benefits are paid at straight time rate for all hours including overtime.
3. Prevailing wages must be paid in full without any deduction for food, lodging, transportation, use of tools, etc.; unless, the employee has voluntarily consented to these deductions in writing. The public authority and the Director of Ohio Department of Commerce, Division of Industrial Compliance and Labor, Bureau of Wage and Hour Administration - must approve these deductions as fair and reasonable. Consent and approval must be obtained before starting the project.

B. Use of Apprentices and Helpers cannot exceed the ratios permitted in the wage rate schedules.

1. Apprentices must be registered with the U.S. Department of Labor Bureau of Apprenticeship and Training.
2. Contractors must provide the Prevailing Wage Coordinator a copy of the Apprenticeship Agreement for each apprentice on the project.

C. Keep full and accurate payroll records available for inspection by any authorized representative of the Ohio Department of Commerce, Division of Industrial Compliance, and Labor, Bureau of Wage and Hour Administration or the contracting public authority, including the Prevailing Wage Coordinator. Records should include but are not limited to:

1. Time cards, time sheets, daily work records, etc.
2. Payroll ledger\journals and canceled checks\check register.
3. Fringe benefit records must include program, address, account number, & canceled checks.

4. Records made in connection with the public improvement must not be removed from the State for one year following the completion of the project.

5. Out-of-State Corporations must submit to the Ohio Secretary of State the full name and address of their Statutory Agent in Ohio.

D. Prevailing Wage Rate Schedule must be posted on the job site where it is accessible to all employees.

E. Prior to submitting the initial payroll report, supply the Prevailing Wage Coordinator with your project dates to schedule reporting of your payrolls.

F. Supply the Prevailing Wage Coordinator a list of all subcontractors including the name, address, and telephone number for each.

1. Contractors are responsible for their subcontractors' compliance with requirements of Chapter 4115 of the Ohio Revised Code.

G. Before employees start work on the project, supply them with written notification of their job classification, prevailing wage rate, fringe benefit amounts, and the name of the Prevailing Wage Coordinator for the project. A copy of the completed signed notification should be submitted to Prevailing Wage Coordinator.

H. Supply all subcontractors with the Prevailing Wage Rates and changes.

I. Submit certified payrolls within two (2) weeks after the initial pay period. Payrolls must include the following information:

1. Employees' names, addresses, and social security numbers.

a. Corporate officers/owners/partners and any salaried personnel who do physical work on the project are considered employees. All rate and reporting requirements are applicable to these individuals.

2. Employees' work classification.

a. Be specific about the laborers and/or operators (Group)

b. For all apprentices, show level/year and percent of journeyman's rate

3. Hours worked on the project for each employee.

a. The number of hours worked in each day and the total number of hours worked each week.

4. Hourly rate for each employee.

a. The minimum rate paid must be the wage rate for the appropriate classification. The Department's Wage Rate Schedule sets this rate.

b. All overtime worked is to be paid at time and one-half for all hours worked more than forty (40) per week.

5. Where fringes are paid into a bona fide plan instead of cash, list each benefit and amount per hour paid to program for each employee.

a. When the amount contributed to the fringe benefit plan and the total number of hours worked by the employee on all projects for the year are documented, the hourly amount is calculated by dividing the total contribution of the employer by the total number of hours worked by the employee.

b. When the amount contributed to the fringe benefit is documented but not the total hours worked, the hourly amount is calculated by dividing the total yearly contribution by 2080.

6. Gross amount earned on all projects during the pay period.

7. Total deductions from employee's wages.

8. Net amount paid.

J. The reports shall be certified by the contractor, subcontractor, or duly appointed agent stating that the payroll is correct and complete; and that the wage rates shown are not less than those required by the O.R.C. 4115.

K. Provide a Final Affidavit to the Prevailing Wage Coordinator upon the completion of the project.

## INSTRUCTIONS FOR PREPARING CERTIFIED PAYROLL REPORTS

### General:

Contractors and subcontractors are required by law to submit certified payroll reports for work on projects covered by Ohio's Prevailing Wage Law. This form meets the reporting requirements established by Ohio Revised Code Chapter 4115. The use of this form is not mandatory; employers may submit their own forms if all of the required information is included. This form may be reproduced, or additional copies obtained from:

Ohio Department of Commerce  
Division of Industrial Compliance  
Bureau of Wage and Hour Administration  
6606 Tussing Road, P.O. Box 4009  
Reynoldsburg, Ohio 43068-9009  
614-644-2239  
[www.com.ohio.gov](http://www.com.ohio.gov)

### Certified Payroll Heading:

Employer name and address: Company's full name and address...Indicate if the company is a subcontractor.

Subcontractor: Check and list the name of the General Contractor or Prime.

Project: Name and location of the project, including county.

Contracting Public Authority: Name and address of the contracting public authority... (Owner of the project).

Week Ending: Month, day, and year for last day of reporting period.

Payroll #: Indicates first, second, third, etc. payroll filed by the company for the project.

Page indicator: number of pages included in the report.

Project Number: Determined by the public authority...If there is no number leave blank.

### Payroll Information by column:

1. Employee Name, Address and Social Security number: This information must be provided for all employees that perform physical labor on the project. The Social Security number is required; the last four digits may be permitted by the public authority. Corporate officers, partners, and salaried employees are considered employees and must be paid the prevailing rate. Individual sole proprietors do not have to pay themselves prevailing rate but must report their hours on the project.
2. Work Class: List classification of work performed by employee. If unsure of work classification, consult the Ohio Department of Commerce-Division of Industrial Compliance & Labor-Bureau of Wage and Hour Administration. Employees working more than one classification should have separate line entries for each classification. Indicate what year/level for Apprentices. Be specific when using laborer and operator classifications; for example, Backhoe Operator or Asphalt Laborer or by "Group".
3. Hours Worked, Day & Date: In the first row of column 3, enter days of the company's pay period for example; M T W TH F S S. The second row is for the date that corresponds with each day for the pay period. In the employee information section, enter the number of hours worked on the prevailing wage project and which day the hours were worked. Separate rows are labeled for (ST) straight time hours and (OT) overtime hours. All hours worked after 40, must be paid at the appropriate overtime rate.
4. Project Total Hours: Total the hours entered for pay period.
5. Base Rate: Enter actual rate per hour paid to the employee. The overtime hourly rate is time and one-half the base rate listed in the prevailing wage schedule plus fringe benefits at straight time rate. The prevailing wage schedule lists the base rate plus fringe benefit amounts. These amounts added together equal the total prevailing wage rate. Employers must pay this total amount in one of three ways.
  - 1) Total rate may be paid in entirety in the base rate to the employee; in which case, the cash designation will be checked for fringe benefits.
  - 2) Total rate may be paid as listed in prevailing wage rate schedule with total fringe amounts paid approved plans.
  - 3) Total rate may be paid with a combination of base rate and fringe payments to approved plans in amounts other than those listed in schedule.
6. Project Gross: Enter total gross wages earned on the project for straight time and overtime. Project hours "X" base rate should equal project gross.
7. Fringes: If fringe benefits are paid in the hourly base rate, indicate this by marking the **Cash** space. If fringe benefits are paid to approved plans as listed in the prevailing wage rate schedule, mark the space **Approved Plans**. If fringe benefits are paid partially in the base rate and partially to approved plans, mark the space **Cash & Approved Plans**. List the hourly amount paid to approved plans for each fringe. If payments are not made on a per hour basis, **calculate the hourly fringe credit by dividing the yearly employer contribution by** the lesser of: hours actually worked in the year (these must be documented) or **2080**. Fringe benefits include: **Employer's share** of health insurance, life insurance, retirement plan, bonus/profit sharing, sick pay, holiday pay, personal leave, vacation, and education/training programs. If unsure of a possible fringe benefit, contact the Ohio Department of Commerce-Division of Industrial Compliance & Labor-Bureau of Wage and Hour Administration.
8. Total Hours All Jobs: Total all hours worked during the pay period including non-prevailing wage jobs.
9. Total Gross All Jobs: Gross amount earned in the pay period for all hours worked.
10. Self-explanatory.
11. Self-explanatory.



# Certified Payroll Report

**Report for:**Company:<sup>1)</sup>

Address:

City, State, Zip

Phone No:

☐ Check if Subcontractor<sup>1)</sup>

If Sub, GC/Prime Contractor Name:

Project Name &amp; Location:

Public Authority (Owner):

Contract No:

Payroll No:

Week Ending:

Sheet:<sup>2)</sup> of

1. Employee Name, Address, & SS# (Last 4 digits if permitted)	2. Work Class <sup>3)</sup>	3. Prevailing Wage Project Hours Worked - Day & Date							4. Total Hours	5. Base Rate	6. Project Gross	7. Fringes:				Weekly Payroll Amount				
												Cash <input type="checkbox"/>	Approved Plans <input type="checkbox"/>	Cash & Approved Plans <input type="checkbox"/>	8. Total Hrs for all Jobs	9. Total Gross on All Jobs	10. Total Deductions	11. Net Pay on All Jobs		
														</						

1 ) By signing below, I certify that: (1) I pay, or supervise the payment of the employees shown above; (2) during the pay period reported on this form, all hours worked on this project have been paid at the appropriate prevailing wage rate for the class of work done; (3) the fringe benefits have been paid as indicated above; (4) no rebates or deductions have been or will be made, directly or indirectly from the total wages earned, other than permissible deductions as defined in ORC Chapter 4115; and (5) apprentices are registered with the U.S. Dept. of Labor, Bureau of Apprenticeship and Training. I understand that the willful falsification of any of the above statements may subject the Contractor or Subcontractor to civil or criminal prosecution.

Type or Print Name and Title

Signature

Date

11/14 jc

<sup>2)</sup>Attach additional sheets as necessary.<sup>3)</sup>Type in continuous line, text will wrap.



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## Ohio Department of Commerce

### Bureau of Wage & Hour Administration

[Consumers](#)
[Business](#)
[License/Permit Holders & Applicants](#)
[Other Government Agencies](#)

[Back to wage rate search](#) [Back to Home](#)

**Classification = All, County = DELAWARE, Union = All**

County	Classification	Effective	Posted	Union
<a href="#">DELAWARE</a>	<a href="#">Asbestos Worker</a>	<a href="#">7/24/2024</a>	<a href="#">7/24/2024</a>	<a href="#">Asbestos Local 207</a>
<a href="#">DELAWARE</a>	<a href="#">Asbestos Worker</a>	<a href="#">10/30/2024</a>	<a href="#">10/30/2024</a>	<a href="#">Asbestos Local 50 Heat &amp; Frost Insulators</a>
<a href="#">DELAWARE</a>	<a href="#">Boilermaker</a>	<a href="#">3/28/2012</a>	<a href="#">3/28/2012</a>	<a href="#">Boilermaker Local 85</a>
<a href="#">DELAWARE</a>	<a href="#">Bricklayer</a>	<a href="#">6/5/2024</a>	<a href="#">6/5/2024</a>	<a href="#">Bricklayer Local 23 Heavy Hwy (A)</a>
<a href="#">DELAWARE</a>	<a href="#">Bricklayer</a>	<a href="#">6/5/2024</a>	<a href="#">6/5/2024</a>	<a href="#">Bricklayer Local 23 Heavy Hwy (B)</a>
<a href="#">DELAWARE</a>	<a href="#">Bricklayer</a>	<a href="#">6/5/2024</a>	<a href="#">6/5/2024</a>	<a href="#">Bricklayer Local 23 (Columbus Tile Finisher)</a>
<a href="#">DELAWARE</a>	<a href="#">Bricklayer</a>	<a href="#">6/5/2024</a>	<a href="#">6/5/2024</a>	<a href="#">Bricklayer Local 23 (Columbus Tile Setter)</a>
<a href="#">DELAWARE</a>	<a href="#">Bricklayer</a>	<a href="#">6/5/2024</a>	<a href="#">6/5/2024</a>	<a href="#">Bricklayer Local 23 (Columbus)</a>
<a href="#">DELAWARE</a>	<a href="#">Carpenter</a>	<a href="#">5/8/2024</a>	<a href="#">5/8/2024</a>	<a href="#">Carpenter Millwright Local 1090 Columbus</a>
<a href="#">DELAWARE</a>	<a href="#">Carpenter</a>	<a href="#">11/1/2024</a>	<a href="#">10/30/2024</a>	<a href="#">Carpenter &amp; Pile Driver Local 200</a>
<a href="#">DELAWARE</a>	<a href="#">Carpenter</a>	<a href="#">5/8/2024</a>	<a href="#">5/8/2024</a>	<a href="#">Carpenter &amp; Piledriver SC District HevHwy</a>
<a href="#">DELAWARE</a>	<a href="#">Cement</a>	<a href="#">6/12/2024</a>	<a href="#">6/12/2024</a>	<a href="#">Cement Mason Local 132 (Columbus)</a>
<a href="#">DELAWARE</a>	<a href="#">Cement Mason</a>	<a href="#">5/1/2024</a>	<a href="#">5/1/2024</a>	<a href="#">Cement Mason Statewide HevHwy</a>
<a href="#">DELAWARE</a>	<a href="#">Electrical</a>	<a href="#">2/12/2025</a>	<a href="#">2/12/2025</a>	<a href="#">Electrical Local 683 Inside</a>
<a href="#">DELAWARE</a>	<a href="#">Electrical</a>	<a href="#">2/12/2025</a>	<a href="#">2/12/2025</a>	<a href="#">Electrical Local 683 Inside Lt Commercial South West</a>
<a href="#">DELAWARE</a>	<a href="#">Voice Data Video</a>	<a href="#">6/26/2024</a>	<a href="#">6/26/2024</a>	<a href="#">Electrical Local 683 Voice Data Video</a>
<a href="#">DELAWARE</a>	<a href="#">Lineman</a>	<a href="#">1/6/2025</a>	<a href="#">12/31/2024</a>	<a href="#">Electrical Local 71 High Tension Pipe Type Cable</a>
<a href="#">DELAWARE</a>	<a href="#">Lineman</a>	<a href="#">1/6/2025</a>	<a href="#">12/31/2024</a>	<a href="#">Electrical Local 71 Outside Utility Power</a>
<a href="#">DELAWARE</a>	<a href="#">Lineman</a>	<a href="#">2/9/2024</a>	<a href="#">2/9/2024</a>	<a href="#">Electrical Local 71 Outside (Central OH Chapter)</a>
<a href="#">DELAWARE</a>	<a href="#">Lineman</a>	<a href="#">1/6/2025</a>	<a href="#">12/31/2024</a>	<a href="#">Electrical Local 71 Underground Residential Distribution</a>
<a href="#">DELAWARE</a>	<a href="#">Voice Data Video</a>	<a href="#">3/6/2024</a>	<a href="#">3/6/2024</a>	<a href="#">Electrical Local 71 Voice Data Video Outside</a>
<a href="#">DELAWARE</a>	<a href="#">Elevator</a>	<a href="#">1/1/2024</a>	<a href="#">12/27/2023</a>	<a href="#">Elevator Local 37</a>
<a href="#">DELAWARE</a>	<a href="#">Glazier</a>	<a href="#">11/1/2024</a>	<a href="#">10/30/2024</a>	<a href="#">Glazier Local 372</a>
<a href="#">DELAWARE</a>	<a href="#">Ironworker</a>	<a href="#">8/28/2024</a>	<a href="#">8/28/2024</a>	<a href="#">Ironworker Local 172</a>
<a href="#">DELAWARE</a>	<a href="#">Laborer Group 1</a>	<a href="#">5/1/2024</a>	<a href="#">5/1/2024</a>	<a href="#">Labor HevHwy 3</a>
<a href="#">DELAWARE</a>	<a href="#">Laborer Group 1</a>	<a href="#">2/5/2025</a>	<a href="#">2/5/2025</a>	<a href="#">Labor Local 574</a>
<a href="#">DELAWARE</a>	<a href="#">Operating Engineer</a>	<a href="#">6/5/2024</a>	<a href="#">6/5/2024</a>	<a href="#">Operating Engineers - Building Local 18 - Zone III</a>
<a href="#">DELAWARE</a>	<a href="#">Operating Engineer</a>	<a href="#">6/5/2024</a>	<a href="#">6/5/2024</a>	<a href="#">Operating Engineers - HevHwy Zone II</a>
<a href="#">DELAWARE</a>	<a href="#">Drywall Finisher</a>	<a href="#">5/8/2024</a>	<a href="#">5/8/2024</a>	<a href="#">Painter Local 1275</a>
<a href="#">DELAWARE</a>	<a href="#">Painter</a>	<a href="#">5/8/2024</a>	<a href="#">5/8/2024</a>	<a href="#">Painter Local 1275</a>
<a href="#">DELAWARE</a>	<a href="#">Painter</a>	<a href="#">5/8/2024</a>	<a href="#">5/8/2024</a>	<a href="#">Painter Local 1275 HevHwy</a>
<a href="#">DELAWARE</a>	<a href="#">Painter</a>	<a href="#">5/8/2024</a>	<a href="#">5/8/2024</a>	<a href="#">Painter Local 1275 Industrial</a>
<a href="#">DELAWARE</a>	<a href="#">Painter</a>	<a href="#">6/10/2015</a>	<a href="#">6/10/2015</a>	<a href="#">Painter Local 639</a>
<a href="#">DELAWARE</a>	<a href="#">Painter</a>	<a href="#">3/22/2023</a>	<a href="#">3/22/2023</a>	<a href="#">Painter Local 639 Zone 2 Sign</a>
<a href="#">DELAWARE</a>	<a href="#">Plasterer</a>	<a href="#">6/1/2024</a>	<a href="#">5/29/2024</a>	<a href="#">Plasterer Local 132 (Columbus)</a>
<a href="#">DELAWARE</a>	<a href="#">Plumber Pipefitter</a>	<a href="#">8/21/2024</a>	<a href="#">8/21/2024</a>	<a href="#">Plumber Pipefitter Local 189</a>
<a href="#">DELAWARE</a>	<a href="#">Roofer</a>	<a href="#">9/13/2023</a>	<a href="#">9/13/2023</a>	<a href="#">Roofer Local 86</a>
<a href="#">DELAWARE</a>	<a href="#">Sheet Metal Worker</a>	<a href="#">11/13/2024</a>	<a href="#">11/13/2024</a>	<a href="#">Sheet Metal Local 24 (Columbus)</a>
<a href="#">DELAWARE</a>	<a href="#">Sprinkler Fitter</a>	<a href="#">1/1/2025</a>	<a href="#">12/31/2024</a>	<a href="#">Sprinkler Fitter Local 669</a>
<a href="#">DELAWARE</a>	<a href="#">Truck Driver</a>	<a href="#">5/1/2024</a>	<a href="#">5/1/2024</a>	<a href="#">Truck Driver Locals 20.40.92.92b.100.175.284.438.377.637.908.957 - Bldg &amp; HevHwy Class 1</a>
<a href="#">DELAWARE</a>	<a href="#">Truck Driver</a>	<a href="#">5/1/2024</a>	<a href="#">5/1/2024</a>	<a href="#">Truck Driver Locals 20.40.92.92b.100.175.284.438.377.637.908.957 - Bldg &amp; HevHwy Class 2</a>
<a href="#">DELAWARE</a>	<a href="#">Truck Driver</a>	<a href="#">5/1/2024</a>	<a href="#">5/1/2024</a>	<a href="#">Truck Driver Locals 20.40.92.92b.100.175.284.438.377.637.908.957 - Bldg &amp; HevHwy Class 3</a>

[Back to home](#)



# Prevailing Wage Rate Skilled Crafts

Name of Union: Asbestos Local 207

Change # : LCR01-2024ibLoc207

Craft : Asbestos Worker Effective Date : 07/24/2024 Last Posted : 07/24/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Asbestos Abatement	\$30.00		\$10.45	\$7.00	\$0.65	\$3.25	\$0.00	\$0.00	\$0.00	\$0.00	\$51.35	\$66.35
Trainee	Percent											
Trainee	65.15	\$19.55	\$10.45	\$1.60	\$0.65	\$1.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.25	\$43.02

## Special Calculation Note :

### Ratio :

3 Journeymen to 1 Trainee

### Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ASHLAND, ASHTABULA\*, ATHENS, AUGLAIZE, BROWN, BUTLER\*, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, ERIE\*, FAIRFIELD, FAYETTE, FRANKLIN, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARDIN, HARRISON, HIGHLAND, HOCKING, HOLMES, HURON, KNOX, LAKE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MIAMI, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PORTAGE, PREBLE, RICHLAND, ROSS, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN\*, WAYNE

**Special Jurisdictional Note :** Ashtabula County: (post offices & townships of Ashtabula, Austinburg, Geneva, Harperfield, Jefferson, Plymouth & Saybrook) (townships of Andover, Cherry Valley, Colbrook, Canneaut, Denmark, Dorset, East Orwell, Hartsgrove, Kingville, Lenox, Monroe, Morgan, New Lyme, North Kingsville, Orwell, Pierpoint, Richmond Rock Creek, Rome, Sheffield, Trumbull, Wayne, Williamsfield & Windsor)

Butler County: (townships of Fairfield, Hanover, Liberty, Milford, Morgan, Oxford, Ripley, Ross, St. Clair, Union & Wayne) (Lemon & Madison)

Erie County: (post offices & townships of Berlin, Berlin Heights, Birmingham, Florence, Huron, Milan, Shinrock & Vermilion)

Warren County: (townships of: Deerfield, Hamilton, Harlan, Salem, Union & Washington) (Clear Creek, Franklin, Mossie, Turtle Creek & Wayne)

### Details :

Asbestos & lead paint abatement including, but not limited to the removal or encapsulation of asbestos & lead paint, all work in conjunction with the preparation of the removal of same & all work in conjunction with the clean up after said removal. The removal of all insulation materials, whether they contain asbestos or not, from mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) is recognized as being the exclusive work of the Asbestos Abatement Workers.

On all mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) that are going to be demolished, the removal of all insulating materials whether they contain asbestos or not shall be the exclusive work of the Laborers.

An Abatement Journeyman is anyone who has more than 600 hours in the Asbestos Abatement field.

# Prevailing Wage Rate Skilled Crafts

**Name of Union:** Asbestos Local 50 Heat & Frost Insulators

**Change # :** LCN03-2024ibAsbLoc50

**Craft :** Asbestos Worker **Effective Date :** 10/30/2024 **Last Posted :** 10/30/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Asbestos Insulation Mechanic	\$38.56		\$9.20	\$8.85	\$0.50	\$0.00	\$3.75	\$0.00	\$0.00	\$0.00	\$60.86	\$80.14
Firestop Technician	\$38.56		\$9.20	\$8.85	\$0.50	\$0.00	\$3.75	\$0.00	\$0.00	\$0.00	\$60.86	\$80.14
Apprentice	Percent											
1st year	60.00	\$23.14	\$9.20	\$4.52	\$0.50	\$0.00	\$0.50	\$0.00	\$0.00	\$0.00	\$37.86	\$49.42
2nd year	70.00	\$26.99	\$9.20	\$4.52	\$0.50	\$0.00	\$0.85	\$0.00	\$0.00	\$0.00	\$42.06	\$55.56
3rd year	80.00	\$30.85	\$9.20	\$6.76	\$0.50	\$0.00	\$1.25	\$0.00	\$0.00	\$0.00	\$48.56	\$63.98
4th year	85.00	\$32.78	\$9.20	\$6.76	\$0.50	\$0.00	\$1.50	\$0.00	\$0.00	\$0.00	\$50.74	\$67.12

**Special Calculation Note :**

**Ratio :**

1 Journeymen to 1 Apprentice  
4 Journeymen to 1 Apprentice thereafter

**Jurisdiction ( \* denotes special jurisdictional note ) :**

ATHENS, AUGLAIZE, BUTLER\*, CHAMPAIGN, CLARK, CLINTON, CRAWFORD, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GREENE, GUERNSEY, HARDIN, HOCKING, KNOX, LICKING, LOGAN, MADISON, MARION, MIAMI, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PREBLE, ROSS, SHELBY, UNION, VINTON, WARREN\*

**Special Jurisdictional Note :** Township of Butler County: Townships of Lemon and Madison.  
Warren County: Township of Cleer Creek, Franklin, Massie, Turtle Creek and Wayne

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Boilermaker Local 85

Change # : LCN01-2012kpLoc85

Craft : Boilermaker Effective Date : 03/28/2012 Last Posted : 03/28/2012

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Boilermaker	\$31.01		\$6.97	\$10.77	\$0.35	\$0.00	\$3.00	\$2.09	\$0.00	\$0.00	\$54.19	\$69.69
Apprentice	Percent											
1st 6 months	70.00	\$21.71	\$6.97	\$0.25	\$0.35	\$0.00	\$0.25	\$2.09	\$0.00	\$0.00	\$31.62	\$42.47
2nd 6 months	72.50	\$22.48	\$6.97	\$0.25	\$0.35	\$0.00	\$0.25	\$2.09	\$0.00	\$0.00	\$32.39	\$43.63
3rd 6 months	75.00	\$23.26	\$6.97	\$0.25	\$0.35	\$0.00	\$0.25	\$2.09	\$0.00	\$0.00	\$33.17	\$44.80
4th 6 months	77.50	\$24.03	\$6.97	\$10.77	\$0.35	\$0.00	\$3.00	\$2.09	\$0.00	\$0.00	\$47.21	\$59.23
5th 6 months	80.00	\$24.81	\$6.97	\$10.77	\$0.35	\$0.00	\$3.00	\$2.09	\$0.00	\$0.00	\$47.99	\$60.39
6th 6 months	85.00	\$26.36	\$6.97	\$10.77	\$0.35	\$0.00	\$3.00	\$2.09	\$0.00	\$0.00	\$49.54	\$62.72
7th 6 months	90.00	\$27.91	\$6.97	\$10.77	\$0.35	\$0.00	\$3.00	\$2.09	\$0.00	\$0.00	\$51.09	\$65.04
8th 6 months	95.00	\$29.46	\$6.97	\$10.77	\$0.35	\$0.00	\$3.00	\$2.09	\$0.00	\$0.00	\$52.64	\$67.37

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

## Ratio :

5 Journeymen to 1 Apprentice  
10 Journeymen to 2 Apprentice  
15 Journeymen to 3 Apprentice

Helpers will be referred in the event that apprentices are NOT available.

## Jurisdiction ( \* denotes special jurisdictional note ) :

ALLEN, ASHLAND, AUGLAIZE, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FULTON, HANCOCK, HARDIN, HENRY, HURON, KNOX, LOGAN, LUCAS, MARION, MERCER, MORROW, OTTAWA, PAULDING, PUTNAM, RICHLAND, SANDUSKY, SENECA, SHELBY, UNION, VAN WERT, WILLIAMS, WOOD, WYANDOT

## Special Jurisdictional Note :

## Details :

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (A)

Change # : LCN01-2024ibLoc23HevHwyA

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason Bricklayer Sewer Water Works A	\$33.39		\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53.45	\$70.14
Apprentice	Percent											
1st year	70.00	\$23.37	\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.43	\$55.12
2nd year	80.00	\$26.71	\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.77	\$60.13
3rd year	90.00	\$30.05	\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.11	\$65.14

Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.

## Ratio :

3 Journeymen to 1 Apprentice  
6 Journeymen to 2 Apprentice  
9 Journeymen to 3 Apprentice  
12 Journeymen to 4 Apprentice  
15 Journeymen to 5 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE

## Special Jurisdictional Note :

## Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.

(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (B)

Change # : LCN01-2024ibLoc23HwyB

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason Bricklayer Power Plants Tunnels Amusement Parks B	\$34.39		\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$54.45	\$71.65
Apprentice	Percent											
1st year	70.00	\$24.07	\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.13	\$56.17
2nd year	80.00	\$27.51	\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.57	\$61.33
3rd year	90.00	\$30.95	\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.01	\$66.49

**Special Calculation Note :** NOT FOR BUILDING CONSTRUCTION.

## Ratio :

3 Journeymen to 1 Apprentice  
6 Journeymen to 2 Apprentice  
9 Journeymen to 2 Apprentice  
12 Journeymen to 4 Apprentice  
15 Journeymen to 5 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE

## Special Jurisdictional Note :

### Details :

(A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.  
(B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.



# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Columbus Tile Finisher)

Change # : LCN01-2024ibLoc23CbusTileFin

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Bricklayer Tile Marble Finisher	\$30.28		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.76	\$56.90
Terrazzo Finisher	\$30.53		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.01	\$57.28
Floor Grinder	\$30.83		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.31	\$57.73
Base Grinder	\$31.03		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.51	\$58.03
Apprentice	Percent											
1st Year	70.00	\$21.20	\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.68	\$43.27
2nd Year	80.00	\$24.22	\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.70	\$47.82
3rd Year	90.00	\$27.25	\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.73	\$52.36
Apprentice Improver	50.00	\$15.14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15.14	\$22.71

**Special Calculation Note :** Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.  
Note that the classification description is clarified after the local union number at the top of the page.

## Ratio :

1-2 Journeymen to 1 Apprentice  
3-5 Journeymen to 2 Apprentice

Crews larger than 5: 4 Journeymen to 1 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ATHENS, COSHOCTON, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, JACKSON, KNOX, LICKING, MADISON, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON, WASHINGTON

## Special Jurisdictional Note :

## Details :

# Prevailing Wage Rate Skilled Crafts

**Name of Union:** Bricklayer Local 23 (Columbus Tile Setter)

**Change # :** LCN01-2024ibLoc23CbusTileSet

**Craft :** Bricklayer **Effective Date :** 06/05/2024 **Last Posted :** 06/05/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Bricklayer Tile Setter	\$31.97		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.69	\$65.68
Marble Mason	\$31.97		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.69	\$65.68
Terrazzo Worker	\$32.22		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.94	\$66.05
Terrazzo Worker, Installation	\$32.22		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.94	\$66.05
Apprentice	Percent											
1st Year	70.00	\$22.38	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$40.10	\$51.29
2nd Year	80.00	\$25.58	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$43.30	\$56.08
3rd Year	90.00	\$28.77	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$46.49	\$60.88
4th Year	95.00	\$30.37	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$48.09	\$63.28

**Special Calculation Note :** Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

## Ratio :

1 - 3 Journeyman to 1 Apprentice  
4 - 8 Journeyman to 2 Apprentice  
9 - 13 Journeyman to 3 Apprentice  
14 - 18 Journeyman to 4 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ATHENS, COSHOCTON, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, JACKSON, KNOX, LICKING, MADISON, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON, WASHINGTON

**Special Jurisdictional Note :** Noble County: (Townships of Beaver, Buffalo, Seneca & Wayne)

## Details :

# Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Columbus)

Change # : LCN01-2024ibLoc23Cbus

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Bricklayer	\$35.43		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$55.86	\$73.57
Lay Out Man	\$35.93		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$56.36	\$74.32
Saw Man	\$35.93		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$56.36	\$74.32
Stone & Cement Mason	\$35.43		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$55.86	\$73.57
Pointer Caulker Cleaner Block Stone	\$35.43		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$55.86	\$73.57
Plaster	\$35.43		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$55.86	\$73.57
Swing Stage (Ground Floors thru 23 Floors)	\$36.43		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$56.86	\$75.07
Swing Stage (24th Floors and Above)	\$37.43		\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$57.86	\$76.57
Apprentice Bricklayers & Stone & Pointer Caulker Cleaner	Percent											
1st Year	70.00	\$24.80	\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$45.23	\$57.63
2nd Year	80.00	\$28.34	\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$48.77	\$62.95
3rd Year	90.00	\$31.89	\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$52.32	\$68.26
4th Year	95.00	\$33.66	\$9.68	\$9.04	\$0.71	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$54.09	\$70.92
MASON TRAINEES												
1-90 Days	50.02	\$17.72	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$17.72	\$26.58
90-365 Days	50.02	\$17.72	\$9.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$27.40	\$36.26
2nd Year	55.00	\$19.49	\$9.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.17	\$38.91

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**  
REQUIRED RATIO

**Jurisdiction ( \* denotes special jurisdictional note ) :**  
DELAWARE, FRANKLIN, MADISON, PICKAWAY, UNION

1-2 Journeyman to 1 Apprentice  
3- 6 Journeyman to 2 Apprentice  
7-10 Journeyman to 3 Apprentice  
1-15 Journeyman to 4 Apprentice

MASON TRAINEE REQUIRED RATIO

1 Apprentice permits 1 Mason Trainee  
2 Apprentice permits 1 Mason Trainee  
3 Apprentice permits 2 Mason Trainee  
4 Apprentice permits 2 Mason Trainee

**Special Jurisdictional Note :**

**Details :**

MASON TRAINEE: duties shall be to work in all aspects of Masonry construction taking direction from the employer and the Journeyman Bricklayer & Stone Mason's working on the job.

MASON TRAINEE may work on job site only when a registered apprentice is on job and the ratios in above table will be strictly enforced.

Above Journeyman Rate:  
Brick Power Saw Pay \$.50  
Designated layout person \$.50  
Swingstage Work \$1.00 at start, and additional \$2.00 at 24th floor

# Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Millwright Local 1090 Columbus

Change # : LCN01-2024ibLoc1090Columbus

Craft : Carpenter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Carpenter Millwright	\$33.28		\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$59.99	\$76.63
Apprentice	Percent											
1st 6 months	60.00	\$19.97	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$46.68	\$56.66
2nd 6 months	65.00	\$21.63	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$48.34	\$59.16
3rd 6 months	70.00	\$23.30	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$50.01	\$61.65
4th 6 months	75.00	\$24.96	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$51.67	\$64.15
5th 6 months	80.00	\$26.62	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$53.33	\$66.65
6th 6 months	85.00	\$28.29	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$55.00	\$69.14
7th 6 months	90.00	\$29.95	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$56.66	\$71.64
8th 6 months	95.00	\$31.62	\$8.20	\$10.99	\$0.60	\$0.00	\$6.76	\$0.16	\$0.00	\$0.00	\$58.33	\$74.13

Special Calculation Note : Other is for UBC National Fund.

## Ratio :

3 Journeymen to 1 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

DELAWARE, FAIRFIELD, FRANKLIN, GUERNSEY, LICKING, MADISON, MARION, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, UNION

## Special Jurisdictional Note :

## Details :

The term "Millwright and Machine Erectors'" jurisdiction shall mean the unloading, hoisting, rigging, skidding, moving, dismantling, aligning, erecting, assembling, repairing, maintenance and adjusting of all structures, processing areas either under cover, underground or elsewhere, required to process material, handle, manufacture or service, be it powered or receiving power manually, by steam, gas, electricity, gasoline, diesel, nuclear, solar, water, air or chemically, and in industries such as and including, which are identified for the purpose of description, but not limited to, the following: woodworking plants; canning industries; steel mills; coffee roasting plants; paper and pulp; cellophane; stone crushing; gravel and sand washing and handling; refineries; grain storage and handling; asphalt plants; sewage disposal; water plants; laundries; bakeries; mixing plants; can, bottle and bag packing plants; textile mills; paint mills; breweries; milk processing plants; power plants; aluminum processing or manufacturing plants; and amusement and entertainment fields. The installation of mechanical equipment in atomic energy plants; installation of reactors in power plants; installation of control rods and equipment in reactors; and installation of mechanical equipment in rocket missile bases, launchers, launching gantry, floating bases, hydraulic escape doors and any and all component parts thereto, either assembled, semi-assembled or disassembled. The installation of, but not limited to, the following: setting-up of all engines, motors, generators, air compressors, fans, pumps, scales, hoppers, conveyors of all types, sizes and their supports; escalators; man lifts; moving sidewalks; hosts; dumb waiters; all types of feeding machinery; amusement devices; mechanical pin setters and spotters in bowling alleys; refrigeration equipment; and the installation of all types of equipment necessary and required to process material either in the manufacturing or servicing. The handling and installation of pulleys, gears, sheaves, fly wheels, air and vacuum drives, worm drives and gear drivers directly or indirectly coupled to motors, belts, chains, screws, legs, boots, guards, booth tanks, all bin valves, turn heads and indicators, shafting, bearings, cable sprockets cutting all key seats in new and old work, troughs, chippers, filters, calendars, rolls, winders, rewinders, slitters, cutters, wrapping machines, blowers, forging machines, rams, hydraulic or otherwise, planning, extruder, ball, dust collectors, equipment in meat packing plants, splicing or ropes and cables. The laying-out, fabrication and installation of protection equipment including machinery guards, making and setting of templates for machinery, fabrication of bolts, nuts, pans, dripping of holes for any equipment which the Millwrights install regardless of materials; all welding and burning regardless of type, fabrication of all lines, hose or tubing used in lubricating machinery installed by Millwrights; grinding, cleaning, servicing and any machine work necessary for any part of any equipment installed by the Millwrights; and the break-in and trail run of any equipment or machinery installed by the Millwrights. It is agreed the Millwrights shall use the layout tools and optic equipment necessary to perform their work.

Prevailing Wage Rate

Skilled Crafts

Name of Union: Carpenter & Pile Driver Local 200

Change # : LCN02-2024ibLoc200

Craft : Carpenter Effective Date : 11/01/2024 Last Posted : 10/30/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)			
Classification													
Carpenter	\$33.85		\$8.20	\$10.78	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$56.19	\$73.12	
Pile Driver	\$33.00		\$8.20	\$10.78	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$55.34	\$71.84	
Apprentice paid at % of their rate above	Percent												
	1st 6 months	70.02	\$23.70	\$8.20	\$2.00	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$37.26	\$49.11
	2nd 6 months	70.02	\$23.70	\$8.20	\$2.00	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$37.26	\$49.11
	3rd 6 months	80.00	\$27.08	\$8.20	\$8.62	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$47.26	\$60.80
	4th 6 months	80.00	\$27.08	\$8.20	\$8.62	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$47.26	\$60.80
	5th 6 months	90.00	\$30.47	\$8.20	\$9.70	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$51.73	\$66.96
	6th 6 months	90.00	\$30.47	\$8.20	\$9.70	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$51.73	\$66.96
	7th 6 months	95.00	\$32.16	\$8.20	\$10.24	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$53.96	\$70.04
	8th 6 months	95.00	\$32.16	\$8.20	\$10.24	\$0.60	\$0.00	\$2.62	\$0.14	\$0.00	\$0.00	\$53.96	\$70.04

Special Calculation Note : Other is UBC National Fund.

Ratio :  
1 Journeyman to 1 Apprentice  
Thereafter  
2 Journeyman to 1 Apprentice

Jurisdiction ( \* denotes special jurisdictional note ) :  
DELAWARE, FAIRFIELD, FRANKLIN, GUERNSEY, LICKING, MADISON, MARION, MUSKINGUM, MORGAN, NOBLE, PERRY, PICKAWAY, UNION

The first carpenter on the job shall be a journeyman. The second carpenter employed may be an apprentice carpenter. After one (1) journeyman and one (1) apprentice are employed, each employer shall employ a ratio of one (1) apprentice, when available, to two (2) journeyman.

Special Jurisdictional Note :

**Details :**

CARPENTERS duties shall include but not limited to the milling, fashioning, joining, assembling, erecting, fastening, or dismantling of scaffolding and of material of wood, plastic, metal, fiber, cork and composition, and all other substitute materials. The handling, cleaning, erecting, installing and dismantling of machinery, equipment and all materials used by carpenters.

The building and setting of all concrete forms and decking, and dismantling the same; the setting of templates for anchor bolts for structural members and for machinery, and the placing, leveling and bracing of these bolts; the making of all forms for bulkheads, figures, post, balusters and ornaments. The erection and installation of cooling towers assembled onsite. The building of all barricades and handling of rough lumber and drywall. The installation of all required blocking and all toilet accessories, including but not limited to grab bars, napkin dispensers and receptacles, mirrors and soap dispensers. The installation of metal studs and the welding of studs and other fastenings to receive material being applied by carpenters. The installation of all material used in drywall construction such as plasterboard, transite and other composition boards. The installation of carpet, artificial turf, wood and Resilient floors shall consist of and include the laying of all special designs of wood, wood block, wood composition, cork, linoleum, asphalt, mastic, plastic and rubber tile, whether nailed or laid in, or with linoleum paste or glue compositions. The installation of garage and overhead doors. The installation of fixtures, cabinets, shelving, racks, louvers, etc. The assembling and setting of all seats in theaters, halls, churches, schools, auditoriums, grandstands and other buildings.

Our claim of jurisdiction, therefore, extends over the following subdivisions of the trade. Carpenters and Joiners; Bridge, Dock and Wharf Carpenters, Divers, Underpinners, Timbermen and Core Drillers; Shipwrights, Boat Builders, Ship Carpenters, Joiners and Caulkers, Cabinet Makers, Bench Hands, Stair Builders; Millmen; Wood and Resilient Floor Layers and Finishers; Carpet Layers; Shinglers; Siders; Insulators; Acoustic and Drywall Applicators; Shorers and House Movers; Loggers; Lumber and Sawmill Workers; Furniture Workers; Reed and Rattan Workers; Shingle Weavers; Casket and Coffin Makers; Box Makers; Railroad Carpenters; and Car Builders, regardless of material used; and all those engaged in the operation of woodworking or other machinery required in the fashioning, milling or manufacturing of products used in the trade, or engaged as helpers to any of the above divisions or subdivisions, and the handling, erecting and installing of material on any of the above divisions or subdivisions; burning welding, rigging and the use of any instrument or tool for layout work incidental to the trade. When the term “Carpenter” and “Joiner” is used, it shall mean all the subdivisions of the trade.

**PILEDRIIVER:**

Where piling is used in the construction and repair of all wharves, docks, piers, trestles, caissons, cofferdams, the erection of all sea walls and breakwaters.

The placing of all walling, bumper guards of wood or metal. The framing, boring, drilling or burning of all holes in the same, all tie and hog rods in connection with Piledrivers work.

The driving, bracing, plumbing, cutting-off and capping of all piling whether wood, steel sheeting, metal pipe piling, composite or concrete.

The heading and splicing of wood piling and the making of woodsheet piling. The welding, cutting or burning of any metal and wood piling and shoring and underpinning in connection with Piledriver work.

The loading and unloading of all piling and other material used in connection with Piledrivers work.

The loading, unloading, erecting, framing, dismantling, moving and handling of all drivers, derrick, cranes and other piledriving equipment used in the work. Drilling in piling or drilled in caissons where a steel liner is used.

All machinery used for handling spuds or anchors on floating equipment used in our work shall be operated by our members. Where swing lines or derricks are used, members shall be used as watchmen.

All underwater and marine work on all bulkheads, wharves, docks, shipyards, caissons, piers, bridges, pipeline work, viaducts, marine cable and trestles, as well as salvage and reclamation work where divers are employed. All clamming work that is done by floating derricks.

# Prevailing Wage Rate Skilled Crafts

Name of Union: **Cement Mason Local 132 (Columbus)**

Change # : **LCN02-2024ibLoc132Columbus**

Craft : **Cement** Effective Date : **06/12/2024** Last Posted : **06/12/2024**

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	\$33.27		\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$49.43	\$66.06
Apprentice	Percent											
1st Year	70.00	\$23.29	\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$39.45	\$51.09
2nd Year	80.00	\$26.62	\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$42.78	\$56.08
3rd Year	90.00	\$29.94	\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$46.10	\$61.07

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time. \*Other is International Training.

## Ratio :

3 Journeymen to 1 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ASHLAND, COSHOCTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, KNOX, LICKING, MADISON, MARION, MORROW, MUSKINGUM, PERRY, PICKAWAY, RICHLAND, ROSS, UNION, VINTON, WYANDOT

## Special Jurisdictional Note :

## Details :

Working on swing stage, slip scaffold or window jack scaffold shall receive the following rates:

\$0.50 above the regular rate for heights up to fifty (50) feet above grade level

\$1.00 above the regular rate for heights over fifty (50) feet above grade level

# Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Statewide HevHwy

Change # : LCN01-2024ibCementHevHwy

Craft : Cement Mason Effective Date : 05/01/2024 Last Posted : 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	\$34.74		\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$54.26	\$71.63
Apprentice	Percent											
1st Year	70.00	\$24.32	\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$43.84	\$56.00
2nd Year	80.00	\$27.79	\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$47.31	\$61.21
3rd Year	90.00	\$31.27	\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$50.79	\$66.42
4th Year	95.00	\$33.00	\$8.80	\$7.65	\$0.75	\$0.00	\$3.25	\$0.07	\$0.00	\$0.00	\$53.52	\$70.02

**Special Calculation Note :** Other \$0.07 is for International Training Fund

4th Year Apprentice Rate (95%) is only applicable to the jurisdiction of Local 404, this includes Ashtabula, Cuyahoga, Geauga, Lake, and Lorain counties.

## Ratio :

1 Journeymen to 1 Apprentice  
2 to 1 thereafter

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ASHTABULA\*, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA\*, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON\*, GALLIA, GEAUGA\*, GREENE, GUERNSEY, HAMILTON, HANCOCK\*, HARDIN, HARRISON, HENRY\*, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE\*, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS\*, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM\*, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD\*, WYANDOT

**Special Jurisdictional Note :** (A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site, Heavy Construction, Airport Construction Or Railroad Construction Work, Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facilities Construction.

\*For Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facility Construction work in the following Counties: Ashtabula, Cuyahoga, Fulton, Geauga, Hancock, Henry, Lake, Lucas, Putnam and Wood Counties, those counties will use the Cement Mason Statewide Heavy Highway Exhibit B District 1 Wage Rate.

## Details :

This rate replaces the previous Cement Mason Heavy Highway Statewide Rates (Exhibit A and Exhibit B rates), except for Cement Mason Statewide Heavy Highway Exhibit B Dist 1. sks

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 683 Inside

Change # : LCR01-2025ibLoc683In

Craft : Electrical Effective Date : 02/12/2025 Last Posted : 02/12/2025

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrician	\$40.50		\$11.55	\$8.49	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$65.70	\$85.95
Welding	\$41.50		\$11.55	\$8.52	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$66.73	\$87.48
Medium Voltage Splicing	\$41.50		\$11.55	\$8.52	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$66.73	\$87.48
Over 100 feet	\$60.75		\$11.55	\$9.09	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$86.55	\$116.92
Level 1 CW 0 to 2000 hours	\$15.29		\$6.83	\$0.46	\$0.92	\$0.00	\$0.46	\$0.10	\$0.00	\$0.00	\$24.06	\$31.71
Level 2 CW 2001 to 4000 hours	\$16.25		\$6.83	\$0.49	\$0.92	\$0.00	\$0.49	\$0.10	\$0.00	\$0.00	\$25.08	\$33.21
Level 3 CW 4001 to 6000 hours	\$17.20		\$6.83	\$0.52	\$0.92	\$0.00	\$0.52	\$0.10	\$0.00	\$0.00	\$26.09	\$34.69
Level 4 CW 6001 to 8000 hours	\$19.12		\$6.83	\$0.57	\$0.92	\$0.00	\$0.57	\$0.10	\$0.00	\$0.00	\$28.11	\$37.67
Level 1 CE 8001 to 10000 hours	\$21.03		\$6.83	\$0.63	\$0.92	\$0.00	\$0.63	\$0.10	\$0.00	\$0.00	\$30.14	\$40.66
Level 2 CE 10,001 to 12,000 hours	\$22.94		\$6.83	\$0.69	\$0.92	\$0.00	\$0.69	\$0.10	\$0.00	\$0.00	\$32.17	\$43.64
Level 3 CE 12,001 to 14,000 hours	\$28.67		\$6.83	\$0.86	\$0.92	\$0.00	\$0.86	\$0.10	\$0.00	\$0.00	\$38.24	\$52.58
Apprentice	Percent											
0-1000 hrs 1st Period	50.00	\$20.25	\$11.55	\$4.25	\$1.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.21	\$47.33
1001-2000 hrs 2nd Period	55.00	\$22.28	\$11.55	\$4.67	\$1.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.66	\$50.79
2001-3500 hrs 3rd Period	60.00	\$24.30	\$11.55	\$5.09	\$1.16	\$0.00	\$2.40	\$0.00	\$0.00	\$0.00	\$44.50	\$56.65
3501-5000 hrs 4th Period	65.02	\$26.33	\$11.55	\$5.52	\$1.16	\$0.00	\$2.60	\$0.00	\$0.00	\$0.00	\$47.16	\$60.33
5001-6500 hrs 5th Period	70.00	\$28.35	\$11.55	\$5.94	\$1.16	\$0.00	\$2.80	\$0.00	\$0.00	\$0.00	\$49.80	\$63.97
6501-8000 hrs 6th Period	80.00	\$32.40	\$11.55	\$6.79	\$1.16	\$0.00	\$3.20	\$0.00	\$0.00	\$0.00	\$55.10	\$71.30

Special Calculation Note : Other for CW/CE: Education Fund

## Ratio :

1 to 3 Journeyman to 2 Apprentices  
4 to 6 Journeyman to 4 Apprentices

## Jurisdiction ( \* denotes special jurisdictional note ) :

CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON, PICKAWAY\*, UNION

## Ratio

Construction Wireman and Construction Electrician  
1 Journeyman to 2 Apprentices to 2 CW/CE  
With a MAXIMUM of 12 CW/CE an on any jobsite

Construction Wireman and Construction Electricians may work on residential projects without working under the supervision of a Journeyman Wireman. On ALL other job sites, Construction Wireman and Construction Electricians CAN only be employed after an APPRENTICE IS EMPLOYED on the job site.

**Special Jurisdictional Note :** In Pickaway County the following townships: Circleville,Darby,Harrison,Jackson,Madison,Monroe,Muhlenberg,Scioto,Walnut,Washington.

## Details :



# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 683 Inside Lt Commercial South West

Change # : LCR01-2025ibLoc683InLtComm

Craft : Electrical Effective Date : 02/12/2025 Last Posted : 02/12/2025

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrician	\$40.50		\$11.55	\$8.49	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$65.70	\$85.95
Welding	\$41.50		\$11.55	\$8.52	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$66.73	\$87.48
Medium Voltage Splicing	\$41.50		\$11.55	\$8.52	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$66.73	\$87.48
Over 100 feet	\$60.75		\$11.55	\$9.09	\$1.16	\$0.00	\$4.00	\$0.00	\$0.00	\$0.00	\$86.55	\$116.92
Level 1 CW 0 to 2000 hours	\$15.29		\$6.83	\$0.46	\$0.92	\$0.00	\$0.46	\$0.10	\$0.00	\$0.00	\$24.06	\$31.71
Level 2 CW 2001 to 4000 hours	\$16.25		\$6.83	\$0.49	\$0.92	\$0.00	\$0.49	\$0.10	\$0.00	\$0.00	\$25.08	\$33.21
Level 3 CW 4001 to 6000 hours	\$17.20		\$6.83	\$0.52	\$0.92	\$0.00	\$0.52	\$0.10	\$0.00	\$0.00	\$26.09	\$34.69
Level 4 CW 6001 to 8000 hours	\$19.12		\$6.83	\$0.57	\$0.92	\$0.00	\$0.57	\$0.10	\$0.00	\$0.00	\$28.11	\$37.67
Level 1 CE 8001 to 10000 hours	\$21.03		\$6.83	\$0.63	\$0.92	\$0.00	\$0.63	\$0.10	\$0.00	\$0.00	\$30.14	\$40.66
Level 2 CE 10,001 to 12,000 hours	\$22.94		\$6.83	\$0.69	\$0.92	\$0.00	\$0.69	\$0.10	\$0.00	\$0.00	\$32.17	\$43.64
Level 3 CE 12,001 to 14,000 hours	\$28.67		\$6.83	\$0.86	\$0.92	\$0.00	\$0.86	\$0.10	\$0.00	\$0.00	\$38.24	\$52.58
Apprentice	Percent											
0-1000 hrs 1st Period	50.00	\$20.25	\$11.55	\$4.25	\$1.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.21	\$47.33
1001-2000 hrs 2nd Period	55.00	\$22.28	\$11.55	\$4.67	\$1.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.66	\$50.79
2001-3500 hrs 3rd Period	60.00	\$24.30	\$11.55	\$5.09	\$1.16	\$0.00	\$2.40	\$0.00	\$0.00	\$0.00	\$44.50	\$56.65
3501-5000 hrs 4th Period	65.02	\$26.33	\$11.55	\$5.52	\$1.16	\$0.00	\$2.60	\$0.00	\$0.00	\$0.00	\$47.16	\$60.33
5001-6500 hrs 5th Period	70.00	\$28.35	\$11.55	\$5.94	\$1.16	\$0.00	\$2.80	\$0.00	\$0.00	\$0.00	\$49.80	\$63.97
6501-8000 hrs 6th Period	80.00	\$32.40	\$11.55	\$6.79	\$1.16	\$0.00	\$3.20	\$0.00	\$0.00	\$0.00	\$55.10	\$71.30

Special Calculation Note : Other for CW/CE: Education Fund

## Ratio :

1 to 3 Journeyman to 2 Apprentices  
4 to 6 Journeyman to 4 Apprentices

## Jurisdiction ( \* denotes special jurisdictional note ) :

CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON, PICKAWAY\*, UNION

## Ratio

Construction Wireman and Construction Electrician  
1 Journeyman to 2 Apprentices to 2 CW/CE  
With a MAXIMUM of 12 CW/CE an on any jobsite

Construction Wireman and Construction Electricians may work on residential projects without working under the supervision of a Journeyman Wireman. On ALL other job sites, Construction Wireman and Construction Electricians CAN only be employed after an APPRENTICE IS EMPLOYED on the job site.

**Special Jurisdictional Note :** In Pickaway County the following townships: Circleville,Darby,Harrison,Jackson,Madison,Monroe,Muhlenberg,Scioto,Walnut,Washington.

## Details :

The scope of work for the light commercial agreement shall apply to the following facilities not to exceed 200,000 square feet; office buildings, shopping centers, auto sales agencies and garages, churches, funeral homes, nursing homes, hotels, retail and wholesale facilities, small stand-alone manufacturing facilities when free standing and not part of a larger facility (not to exceed 50,000 square feet), solar projects (500 panels or less) unless otherwise covered under the agreement, lighting retrofits (when not associated with remodels involving branch re-circuiting) lighting retrofits shall be defined as the changing of lamps and ballasts in existing light fixtures and shall also include the one for one replacement of existing fixtures, warehouses, gas stations, food service centers, restaurants, entertainment facilities, hospitals, clinics, motels, residential buildings.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 683 Voice Data Video

Change # : LCN01-2024ibLoc683VDV

Craft : Voice Data Video Effective Date : 06/26/2024 Last Posted : 06/26/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrical Installer Technician B	\$30.00		\$9.77	\$3.65	\$0.80	\$0.00	\$3.00	\$0.69	\$0.00	\$0.00	\$47.91	\$62.91
Installer Technician A	\$31.25		\$9.77	\$3.69	\$0.80	\$0.00	\$3.00	\$0.72	\$0.00	\$0.00	\$49.23	\$64.85
Cable Puller	\$15.00		\$9.77	\$0.45	\$0.80	\$0.00	\$3.00	\$0.35	\$0.00	\$0.00	\$29.37	\$36.87
Apprentices	Percent											
1st Period 0-1000 hours	55.00	\$16.50	\$9.77	\$3.25	\$0.80	\$0.00	\$3.00	\$0.38	\$0.00	\$0.00	\$33.70	\$41.95
2nd Period 1001- 2000 hours	60.00	\$18.00	\$9.77	\$3.29	\$0.80	\$0.00	\$3.00	\$0.42	\$0.00	\$0.00	\$35.28	\$44.28
3rd Period 2001-3000 hours	65.00	\$19.50	\$9.77	\$3.34	\$0.80	\$0.00	\$3.00	\$0.45	\$0.00	\$0.00	\$36.86	\$46.61
4th Period 3001-4000 hours	70.00	\$21.00	\$9.77	\$3.38	\$0.80	\$0.00	\$3.00	\$0.49	\$0.00	\$0.00	\$38.44	\$48.94
5th Period 4001-5000 hours	75.00	\$22.50	\$9.77	\$3.43	\$0.80	\$0.00	\$3.00	\$0.52	\$0.00	\$0.00	\$40.02	\$51.27
6th Period 5001-6000 hours	80.00	\$24.00	\$9.77	\$3.47	\$0.80	\$0.00	\$3.00	\$0.55	\$0.00	\$0.00	\$41.59	\$53.59

**Special Calculation Note :** Other is Holiday Pay. Vacation applies only to employees who work for one employer for a period of one year.

## Ratio :

1 Apprentice for every 1 Installer Technician

## Jurisdiction ( \* denotes special jurisdictional note ) :

CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON, PICKAWAY\*, UNION

Cable Pullers can only be employed after an apprentice is employed on the job

**Special Jurisdictional Note :** In Pickaway County the following townships: Circleville, Darby, Harrison, Jackson, Madison, Monroe, Muhlenberg, Scioto, Walnut, Washington.

## Details :

An employee who is required to wear an electronic device after hours will receive an additional 1.00 per hour for all hours worked.

HOLIDAYS: Memorial Day, 4th of July, Labor Day, Thanksgiving Day, Christmas Day, New Years Day.

The following work is EXCLUDED from the Teledata Technician work scope:

- Installation of computer systems in industrial applications such as assembly lines, robotics, computer controller manufacturing systems.

- Installation of conduit &/or raceways shall be installed by Inside Wireman . On sites where there is no Inside Wireman employed, the Teledata Technician may install raceway, or conduit not greater than 10 foot.

- Fire Alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit

- All HVAC control work.

TECHNICIAN (A) is a Technician B who holds a current Technician Certification from BICSI (Building Industry Consulting Service International, Inc.)

CABLE PULLERS are for the installation of cable from one termination point to another.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Elevator Local 37

Change # : LCN01-2023ibLoc37

Craft : Elevator Effective Date : 01/01/2024 Last Posted : 12/27/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Elevator Mechanic	\$54.93		\$16.17	\$10.86	\$0.75	\$4.39	\$10.10	\$0.00	\$0.00	\$0.00	\$97.20	\$124.66
Helper	\$38.45		\$16.17	\$10.86	\$0.75	\$3.07	\$10.10	\$0.00	\$0.00	\$0.00	\$79.40	\$98.62
Apprentice	Percent											
Probationary Apprentice	50.01	\$27.47	\$0.00	\$0.00	\$0.00	\$1.64	\$0.00	\$0.00	\$0.00	\$0.00	\$29.11	\$42.85
1st Year	55.00	\$30.21	\$16.17	\$10.86	\$0.75	\$1.81	\$10.10	\$0.00	\$0.00	\$0.00	\$69.90	\$85.01
2nd Year	65.00	\$35.70	\$16.17	\$10.86	\$0.75	\$2.14	\$10.10	\$0.00	\$0.00	\$0.00	\$75.72	\$93.58
3rd Year	70.00	\$38.45	\$16.17	\$10.86	\$0.75	\$2.30	\$10.10	\$0.00	\$0.00	\$0.00	\$78.63	\$97.86
4th Year	80.00	\$43.94	\$16.17	\$10.86	\$0.75	\$2.63	\$10.10	\$0.00	\$0.00	\$0.00	\$84.45	\$106.43
Assistant Mechanic	80.00	\$43.94	\$16.17	\$10.86	\$0.75	\$3.51	\$10.10	\$0.00	\$0.00	\$0.00	\$85.33	\$107.31

## Special Calculation Note :

### Ratio :

1 Journeyman to 1 Apprentice\*\*

1 Journeyman to 1 Helper\*\*

1 Journeyman to 1 Assistant Mechanic\*\*

### Jurisdiction ( \* denotes special jurisdictional note ) :

ATHENS, CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GUERNSEY, HOCKING, JACKSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON

## Special Jurisdictional Note :

### Details :

\*\*Art. 10 Par. 2 Apprentice Work Qualifications:

Par 2- The total number of Helpers and Apprentices employed shall not exceed the number of Mechanics on any one job, except on jobs where two teams or more are working, one extra Helper or Apprentice may be employed for the first two teams and an extra Helper or Apprentice for each additional three teams.

Further, the Company may use as many Helpers and Apprentices as best suits his convenience under the direction of a Mechanic in wrecking old plants and in handling and hoisting material, and on foundation work. When removing old and installing new cable on existing elevator installations, the Company may use two Helpers or Apprentices to one Mechanic.

# Prevailing Wage Rate Skilled Crafts

Name of Union: **Glazier Local 372**

Change # : **LCN02-2024ibLoc372**

Craft : **Glazier** Effective Date : **11/01/2024** Last Posted : **10/30/2024**

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Glazier	\$33.82		\$6.20	\$10.14	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.61	\$67.52
Apprentice	Percent											
1st Year	70.00	\$23.67	\$6.20	\$2.84	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.16	\$45.00
2nd Year	75.00	\$25.37	\$6.20	\$2.84	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.86	\$47.54
3rd Year	85.00	\$28.75	\$6.20	\$6.55	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.95	\$56.32
4th Year	95.00	\$32.13	\$6.20	\$6.55	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.33	\$61.39

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**  
1 Journeyman to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**  
DELAWARE, FAIRFIELD, FAYETTE\*, FRANKLIN, HOCKING,  
JACKSON, KNOX, LICKING, MADISON, MARION, MORROW,  
MUSKINGUM, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON

**Special Jurisdictional Note :** Fayette County - locations west of State Route 62 ONLY.

## Details :

A premium of one dollar (\$1.00) per hour above regular hourly rate of pay shall be paid for each hour worked by every employee from any mechanical lift or scaffold, either suspended or supported including the Hex type scaffolding.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Ironworker Local 172

Change # : OCR01-2024ibLoc172

Craft : Ironworker Effective Date : 08/28/2024 Last Posted : 08/28/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Ironworker	\$36.77		\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$60.24	\$78.62
Rigger Welder Reinforcing Sheeter Fence Erector Machinery Mover	\$36.77		\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$60.24	\$78.62
Apprentice	Percent											
1st Year 0-1500 Hours	70.00	\$25.74	\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$49.21	\$62.08
2nd Year 1501-3000 Hours	80.00	\$29.42	\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$52.89	\$67.59
3rd Year 3001-4500 Hours	90.02	\$33.10	\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$56.57	\$73.12

**Special Calculation Note :** Other is for Safety & Training Fund (\$0.06) and Building and Maintenance Fund (\$0.50)

## Ratio :

Rod Work  
3 Journeymen to 1 Apprentice

Structural Work  
3 Journeymen to 1 Apprentice

Finishing, Steel Sash, Stairway and Ornamental  
1 Journeymen to 1 Apprentice

Sheet Gang  
1 Apprentice for every sheeting gang per project

## Jurisdiction ( \* denotes special jurisdictional note ) :

CHAMPAIGN\*, CLARK, CRAWFORD\*, DELAWARE, FAIRFIELD, FAYETTE\*, FRANKLIN, HARDIN\*, HIGHLAND\*, HOCKING, JACKSON\*, KNOX, LICKING, LOGAN\*, MADISON\*, MARION, MORROW, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON, WYANDOT\*

**Special Jurisdictional Note :** Champaign County Twps included: Wayne, Rush, Goshen. Crawford County Twps included: Bucyrus, Dallas, Jefferson, Jackson, Whetstone, Polk, Sandusky. Fayette County Twps included: Paint, Marion, Perry, Madison, Wayne, Union. Hardin County Twps included: McDonald, Taylorcreek, Hale, Dudley, Pleasant, Goshen, Blanchard, Lynn, Jackson, Buck, Cessna, Marion, Washington. Highland County Twps included: Madison. Jackson County Twps included: Liberty, Washington, Milton, Jackson, Coal, Wilkesville. Logan County Twps included: Monroe, Zane, Jefferson, Perry, Rush Creek, Bokes Creek. Madison County Twps included: Range, Paint, Fairfield, Sommerford, Jefferson, Pike, Canaan, Pleasant, Oak Run, Union, Deer Creek, Monroe, Darby. Pike County Twps included: Perry, Benton, Mifflin, Sunfish, Newton, Prebble, Pee Pee, Seal, Beaver, Jackson. Wyandot County Twps included: Jackson, Marseilles, Mifflin, Pitt, Antrim. Muskingum County includes: Jackson, Licking, Hope Well, Newton, Clay, Cass, Muskingum falls, Springfield, Madison, Washington, Wayne, Brush Creek.

## Details :

# Prevailing Wage Rate Skilled Crafts

Name of Union: Labor HevHwy 3

Change # : LCN01-2024ibLocalHevHwy3

Craft : Laborer Group 1 Effective Date : 05/01/2024 Last Posted : 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Laborer Group 1	\$35.52		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.12	\$67.88
Group 2	\$35.69		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.29	\$68.13
Group 3	\$36.02		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.62	\$68.63
Group 4	\$36.47		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$51.07	\$69.30
Watch Person	\$28.25		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$42.85	\$56.98
Apprentice	Percent											
0-1000 hrs	60.00	\$21.31	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$35.91	\$46.57
1001-2000 hrs	70.00	\$24.86	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$39.46	\$51.90
2001-3000 hrs	80.00	\$28.42	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$43.02	\$57.22
3001-4000 hrs	90.00	\$31.97	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$46.57	\$62.55
More than 4000 hrs	100.00	\$35.52	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.12	\$67.88

**Special Calculation Note** : Watchmen have no Apprentices. Tunnel Laborer rate with air-pressurized add \$1.00 to the above wage rate.

## Ratio :

1 Journeymen to 1 Apprentice  
3 Journeymen to 1 Apprentice thereafter

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SCIOTO, SENECA, SHELBY, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

**Special Jurisdictional Note** : Hod Carriers and Common Laborers - Heavy, Highway, Sewer, Waterworks, Utility, Airport, Railroad, Industrial and Building Site, Sewer Plant, Waste Water Treatment Facilities Construction

## Details :

Group 1  
Laborer (Construction); Plant Laborer or Yardman, Right-of-way Laborer, Landscape Laborer, Highway Lighting Worker, Signalization Worker, (Swimming) Pool Construction Laborer, Utility Man, \*Bridge Man, Handyman, Joint Setter, Flagperson, Carpenter Helper, Waterproofing Laborer, Slurry Seal, Seal Coating, Surface Treatment or Road Mix Laborer, Riprap Laborer & Grouter, Asphalt Laborer, Dump Man (batch trucks), Guardrail & Fence Installer, Mesh Handler & Placer, Concrete Curing Applicator, Scaffold Erector, Sign Installer, Hazardous Waste (level D), Diver Helper, Zone Person and Traffic Control.

\*Bridge Man will perform work as per the October 31, 1949, memorandum on concrete forms, by and between the United Brotherhood of Carpenters and Joiners of America and the Laborers' International Union of North America, which states in; "the moving, cleaning, oiling and carrying to the next point of erection, and the stripping of forms which are not to be re-used, and forms on all flat arch work shall be done by members of the Laborers' International Union of North America."

Group 2  
Asphalt Raker, Screwwoman or Paver, Concrete Puddler, Kettle Man (pipeline), All Machine-Driven Tools (Gas, Electric, Air), Mason Tender, Brick Paver, Mortar Mixer, Skid Steer, Sheeting & Shoring Person, Surface Grinder Person, Screedperson, Water Blast, Hand Held Wand, Power Buggy or Power Wheelbarrow, Paint Striper, Plastic fusing Machine Operator, Rodding Machine Operator, Pug Mill Operator, Operator of All Vacuum Devices Wet or Dry, Handling of all Pumps 4 inches and under (gas, air or electric), Diver, Form Setter, Bottom Person, Welder Helper (pipeline), Concrete Saw Person, Cutting with Burning Torch, Pipe Layer, Hand Spiker (railroad), Underground Person (working in sewer and waterline, cleaning, repairing and reconditioning). Tunnel Laborer (without air), Caisson, Cofferdam (below 25 feet deep), Air Track and Wagon Drill, Sandblaster Nozzle Person, Hazardous Waste (level B), \*\*\*Lead Abatement, Hazardous Waste (level C)

\*\*\*Includes the erecting of structures for the removal, including the encapsulation and containment of Lead abatement process.

Group 3  
Blast and Powder Person, Muckers will be defined as shovel men working directly with the miners, Wrencher (mechanical joints & utility pipeline), Yarnier, Top Lander, Hazardous Waste (level A), Concrete Specialist, Curb Setter and Cutter, Grade Checker, Concrete Crew in Tunnels. Utility pipeline Tappers, Waterline, Caulker, Signal Person will receive the rate equal to the rate paid the Laborer classification for which the Laborer is signaling.

Group 4  
Miner, Welder, Gunite Nozzle Person

A.) The Watchperson shall be responsible to patrol and maintain a safe traffic zone including but not limited to barrels, cones, signs, arrow boards, message boards etc. The responsibility of a watchperson is to see that the equipment, job and office trailer etc. are secure.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Labor Local 574

Change # : LCN01-2025ibLoc574

Craft : Laborer Group 1 Effective Date : 02/05/2025 Last Posted : 02/05/2025

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Laborer Group A	\$30.50		\$8.40	\$4.15	\$0.40	\$0.00	\$0.50	\$0.00	\$0.10	\$0.00	\$44.05	\$59.30
Group B	\$31.00		\$8.40	\$4.15	\$0.40	\$0.00	\$0.50	\$0.00	\$0.10	\$0.00	\$44.55	\$60.05
Apprentice	Percent											
1st Year	70.00	\$21.35	\$8.40	\$4.15	\$0.40	\$0.00	\$0.50	\$0.00	\$0.10	\$0.00	\$34.90	\$45.57
2nd Year	80.00	\$24.40	\$8.40	\$4.15	\$0.40	\$0.00	\$0.50	\$0.00	\$0.10	\$0.00	\$37.95	\$50.15
3rd Year	90.00	\$27.45	\$8.40	\$4.15	\$0.40	\$0.00	\$0.50	\$0.00	\$0.10	\$0.00	\$41.00	\$54.72
4th Year	95.02	\$28.98	\$8.40	\$4.15	\$0.40	\$0.00	\$0.50	\$0.00	\$0.10	\$0.00	\$42.53	\$57.02
5th Year	100.00	\$30.50	\$8.40	\$4.15	\$0.40	\$0.00	\$0.50	\$0.00	\$0.10	\$0.00	\$44.05	\$59.30

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**

1 Journeymen to 1 Apprentice  
3 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**

DELAWARE, HANCOCK, HARDIN, MARION, SENECA, WYANDOT

**Special Jurisdictional Note :**

## Classification Description

## Group A:

General Laborer including but not limited to: Signalman, Watchman, Flagman, Tool Cribman, Carpenter Tenders, Finisher Tenders, Concrete Handler, Utility Construction Laborer, Guard Rail Erectors, Fence Installer, Caulker, Water Truck, Landscaper and irrigation, Hazardous Waste (Level A of Exhibit A), Swimming Pools, Pool Decks, Parking Garage and Surrounding Sidewalks, Mucker, Caisson Worker, Creosote Workers, Form Setter, Pumps (3 inch or under), Off-road Trucks, Skid Steer, Tamp Person

## Group B:

Pipelay (Bottom person), Powder Men and Dynamite Blasters, Laser Beam Set-Up Man, Grade Checker, Concrete Saws, Fork Lift, Concrete Specialist, Vibrator and Hazardous Waste (Level B, C & D of Exhibit A), Mason Tender (Brick/Hod Carrier, Cement/ Concrete, Stone), Scaffold Builder, Mortar Mixer, Plasterer Tender, Gunite Operator

## Hazardous Waste Removal and Lead Abatement:

## Level A

Only in established "safe zones" may consist of, from normal work clothes to normal skin protection such as gloves, face shields goggles, coveralls and occasionally respiratory protection.

## Level B

Protective equipment includes a protective suit and an air purifying respirator (APR) with the appropriate filter canisters. The ensemble is used when the contaminants are reliably known not to be hazardous to the skin and not IDLH (Immediately Dangerous to Life or Health) and correct filter protection is available.

## Level C

Protective equipment includes a chemically resistant splash suit and a SCBA or Airline Fed Respirator. This ensemble is required when the situation is very hazardous, such as oxygen deficient atmospheres, IDLH atmospheres, or confined space entries.

## Level D

Protective equipment is required when the area has been determined to contain extremely toxic contaminants or contaminants unknown but may be expected to be extremely toxic and/or immediately dangerous to life and health.

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - Building Local 18 - Zone III

Change # : LCN01-2024ibLoc18zone3

Craft : Operating Engineer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Operator Group A	\$44.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.74	\$82.81
Operator Group B	\$44.02		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.62	\$82.63
Operator Group C	\$42.98		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$59.58	\$81.07
Operator Group D	\$41.80		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$58.40	\$79.30
Operator Group E	\$36.34		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$52.94	\$71.11
Master Mechanic	\$45.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Cranes & Mobile Concrete Pumps 150'-180'	\$44.64		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.24	\$83.56
Cranes & Mobile Concrete Pumps 180'-249'	\$45.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Cranes & Mobile Concrete Pumps 249' and over	\$45.39		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.99	\$84.69
Apprentice	Percent											
1st Year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$38.67	\$49.71
2nd Year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$43.08	\$56.33
3rd Year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$47.50	\$62.95
4th Year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$51.91	\$69.57
Field Mechanic Trainee												
1st Year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$38.67	\$49.71
2nd Year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$43.08	\$56.33
3rd Year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$47.50	\$62.95
4th Year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$51.91	\$69.57

Special Calculation Note : Other: Education & Safety

Misc: National Training

## Ratio :

For every (3) Operating Engineer Journeymen employed by the company there may be employed (1) Registered Apprentice or trainee Engineer through the referral when they are available. An apprenice, while employed as part of a crew per Article VIII, paragraph 78, will not be subject to the apprenticeship ratios in this collective bargaining agreement

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note :



**Details :**

Note: There will be a 10% increase for the apprentices on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if required to have CDL

Group A- Barrier Moving Machines; Boiler Operators or Compressor Operators, when compressor or boiler is mounted on crane (Piggyback Operation); Boom Trucks (all types); Cableways Cherry Pickers; Combination - Concrete Mixers & Towers; All Concrete Pumps with Booms; Cranes (all types); Compact Cranes, track or rubber over 4,000 pounds capacity; Cranes self-erecting, stationary, track or truck (all configurations); Derricks (all types); Draglines; Dredges (dipper, clam or suction) 3-man crew; Elevating Graders or Euclid Loaders; Floating Equipment; Forklift (rough terrain with winch/hoist); Gradalls; Helicopter Operators, hoisting building materials; Helicopter Winch Operators, Hoisting building materials; Hoes (All types); Hoists (with two or more drums in use); Horizontal Directional Drill; Hydraulic Gantry (lift system); Laser Finishing Machines; Laser Screed and like equipment; Lift Slab or Panel Jack Operators; Locomotives (all types); Maintenance Operator/Technician(Mechanic Operator/Technician and/or Welder); Mixers, paving (multiple drum); Mobile Concrete Pumps, with booms; Panelboards, (all types on site); Pile Drivers; Power Shovels; Prentice Loader; Rail Tamper (with automatic lifting and aligning device); Rotary Drills (all), used on caissons for foundations and sub-structure; Side Booms; Slip Form Pavers; Straddle Carriers (Building Construction on site); Trench Machines (over 24" wide); Tug Boats.

Group B - Articulating/end dumps (minus \$4.00/hour from Group B rate); Asphalt Pavers; Bobcat-type and/or skid steer loader with hoe attachment greater than 7000 lbs.; Bulldozers; CMI type Equipment; Concrete Saw, Vermeer-type; Endloaders; Hydro Milling Machine; Kolman-type Loaders (Dirt Loading); Lead Greasemen; Mucking Machines; Pettibone-Rail Equipment; Power Graders; Power Scoops; Power Scrapers; Push Cats, Rotomills (all), grinders and planers of all types.

Group C - A-Frames; Air Compressors, Pressurizing Shafts or Tunnels; All Asphalt Rollers; Bobcat-type and/or Skid Steer Loader with or without attachments; Boilers (15 lbs. pressure and over); All Concrete Pumps (without booms with 5 inch system); Fork Lifts (except masonry); Highway Drills - all types (with integral power); Hoists (with one drum); House Elevators (except those automatic call button controlled), Buck Hoists, Transport Platforms, Construction Elevators; Hydro Vac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Man Lifts; Material hoist/elevators; Mud Jacks; Pressure Grouting; Pump Operators (installing or operating Well Points or other types of Dewatering Systems); Pumps (4 inches and over discharge); Railroad Tie (Inserter/Remover); Rotovator (Lime-Soil Stabilizer); Submersible Pumps (4"and over discharge); Switch & Tie Tampers (without lifting and aligning device); Trench Machines (24" and under); Utility Operators.

Group D - Backfillers and Tampers; Ballast Re-locator; Batch Plant Operators; Bar and Joint Installing Machines; Bull Floats; Burlap and Curing Machines; Clefplanes; Compressors, on building construction; Concrete Mixers, more than one bag capacity; Concrete Mixers, one bag capacity (side loaders); All Concrete Pumps (without boom with 4" or smaller system); Concrete Spreader; Conveyors, used for handling building materials; Crushers; Deckhands; Drum Fireman (in asphalt plants); Farm type tractors pulling attachments; Finishing Machines; Form Trenchers; Generators; Gunite Machines; Hydro-seeders; Pavement Breakers (hydraulic or cable); Post Drivers; Post Hole Diggers; Pressure Pumps (over 1/2") discharge); Road Widening Trenchers; Rollers (except asphalt); Self-propelled sub-graders; Shotcrete Machines; Tire Repairmen; Tractors, pulling sheepsfoot post roller or grader; VAC/ALLS; Vibratory Compactors, with integral power; Welders.

Group E – Allen Screed Paver (concrete); Boilers (less than 15 lbs. pressure); Cranes-Compact, track or rubber (under 4,000 pounds capacity); Directional Drill "Locator"; Fueling and greasing +\$3.00; Inboard/outboard Motor Boat Launches; Light Plant Operators; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson, Submersible Pumps (under 4" discharge).

Master Mechanics - Master Mechanic

Cranes 150' – 180' - Boom & Jib 150 - 180 feet

Cranes 180' – 249' - Boom & Jib 180 - 249 feet

Cranes 250' and over - Boom & Jib 250-feet or over

# Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - HevHwy Zone II

Change # : LCN01-2024ibLoc18hevhwyll

Craft : Operating Engineer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Operator Class A	\$44.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.74	\$82.81
Operator Class B	\$44.02		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.62	\$82.63
Operator Class C	\$42.98		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$59.58	\$81.07
Operator Class D	\$41.80		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$58.40	\$79.30
Operator Class E	\$36.34		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$52.94	\$71.11
Master Mechanic	\$45.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Crane and Mobile Concrete Pump 150' - 179'	\$44.64		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.24	\$83.56
Crane and Mobile Concrete Pump 180' - 249'	\$45.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Crane and Mobile Concrete Pump 250' and Over	\$45.39		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.99	\$84.69
Apprentice	Percent											
1st Year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$38.67	\$49.71
2nd Year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$43.08	\$56.33
3rd Year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$47.50	\$62.95
4th Year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$51.91	\$69.57
Field Mech Trainee Class 2												
1st year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$38.67	\$49.71
2nd year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$43.08	\$56.33
3rd year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$47.50	\$62.95
4th year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$51.91	\$69.57

Special Calculation Note : Other: Education & Safety Fund

Misc: National Training

## Ratio :

For every (3) Operating Engineer Journeymen employed by the company, there may be employed (1) Registered Apprentice or Trainee Engineer through the referral when they are available. An Apprentice, while employed as part of a crew per Article VIII, paragraph 65 will not be subject to the apprenticeship ratios in this collective bargaining agreement

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

## Special Jurisdictional Note :

**Details :**

**\*\*Apprentices** will receive a 10% increase on top of the percentages listed above provided they are operating mobile equipment. **Mechanic Trainees** will receive 10% increase if they are required to have CDL.

**Class A - Air Compressors on Steel Erection; Asphalt Plant Engineers (Cleveland District Only); Barrier Moving Machine; Boiler Operators, Compressor Operators, or Generators, when mounted on a rig; Boom Trucks (all types); Cableways; Cherry Pickers; Combination- Concrete Mixers & Towers; Concrete Plants (over 4 yd capacity); Concrete Pumps; Cranes (all types); Compact Cranes track or rubber over 4,000 pounds capacity; Cranes self-erecting stationary, track or truck; Derricks (all types); Draglines; Dredges dipper, clam or suction; Elevating Graders or Euclid Loaders; Floating Equipment (all types); Gradalls; Helicopter Crew (Operator-hoist or winch); Hoes (all types); Hoisting Engines; Hoisting Engines, on shaft or tunnel work; Hydraulic Gantry (lifting system); Industrial-type Tractors; Jet Engine Dryer (D8 or D9) diesel Tractors; Locomotives (standard gauge); Maintenance Operators/Technicians (class A); Mixers, paving (single or double drum); Mucking Machines; Multiple Scrapers; Piledriving Machines (all types); Power Shovels, Prentice Loader; Quad 9 (double pusher); Rail Tamper (with automatic lifting and aligning device); Refrigerating Machines (freezer operation); Rotary Drills, on caisson work; Rough Terrain Fork Lift with winch/hoist; Side Booms; Slip Form Pavers; Survey Crew Party Chiefs; Tower Derricks; Tree Shredders; Trench Machines (over 24" wide); Truck Mounted Concrete Pumps; Tug Boats; Tunnel Machines and /or Mining Machines; Wheel Excavators.**

**Class B - Asphalt Pavers; Automatic Subgrade Machines, self-propelled (CMI-type); Bobcat-type and /or Skid Steer Loader with hoe attachment greater than 7000 lbs.; Boring Machine Operators (more than 48 inches); Bulldozers; Concrete Saws, Vermeer type; Endloaders; Horizontal Directional Drill (50,000 ft. lbs. thrust and over); Hydro Milling Machine; Kolman-type Loaders (production type-dirt); Lead Greasemen; Lighting and Traffic Signal Installation Equipment includes all groups or classifications; Maintenance Operators/Technicians, Class B; Material Transfer Equipment (shuttle buggy) Asphalt; Pettibone-Rail Equipment; Power Graders; Power Scrapers; Push Cats; Rotomills (all), Grinders and Planners of all types, Groovers (excluding walk-behinds); Trench Machines (24 inch wide and under).**

**Class C - A-Frames; Air Compressors, on tunnel work (low Pressure); Articulating/straight bed end dumps if assigned (minus \$4.00 per hour); Asphalt Plant Engineers (Portage and Summit Counties only); Bobcat-type and/or skid steer loader with or without attachments; Drones; Highway Drills (all types); HydroVac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Locomotives (narrow gauge); Material Hoist/Elevators; Mixers, concrete (more than one bag capacity); Mixers, one bag capacity (side loader); Power Boilers (over 15 lbs. pressure); Pump Operators (installing or operating well Points); Pumps (4 inch and over discharge); Railroad Tie Insert/Remover; Rollers, Asphalt; Rotovator (lime-soil Stabilizer); Switch & Tie Tampers (without lifting and aligning device); Utilities Operators, (small equipment); Welding Machines and Generators.**

**Class D – Backfillers and Tampers; Ballast Re-locator; Bar and Joint Installing Machines; Batch Plant Operators; Boring Machine Operators (48 inch or less); Bull Floats; Burlap and Curing Machines; Concrete Plants (capacity 4 yds. and under); Concrete Saws (multiple); Conveyors (highway); Crushers; Deckhands; Farm type tractors, with attachments (highway); Finishing Machines; Firemen, Floating Equipment (all types); Fork Lifts (highway), except masonry; Form Trenchers; Hydro Hammers; Hydro Seeders; Pavement Breakers (hydraulic or cable); Plant Mixers; Post Drivers; Post Hole Diggers; Power Brush Burners; Power Form Handling Equipment; Road Widening Trenchers; Rollers (brick, grade, macadam); Self-Propelled Power Spreaders; Self-Propelled Sub-Graders; Steam Firemen; Survey Instrument men; Tractors, pulling sheepsfoot rollers or graders; Vibratory Compactors, with integral power.**

**Class E - Compressors (portable, Sewer, Heavy and Highway); Cranes-Compact, track or rubber under 4,000 pound capacity; Drum Firemen (asphalt plant); Fueling and greasing (Primary Operator with Specialized CDL Endorsement Add \$3.00/hr); Generators; Inboard-Outboard Motor Boat Launches; Masonry Fork Lifts; Oil Heaters (asphalt plant); Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson; Survey Rodmen or Chairmen; Tire Repairmen; VAC/ALLS.**

**Master Mechanic - Master Mechanic**

**Cranes and Mobile Concrete Pumps 150' -179' - Boom & Jib 150 - 179 feet**

**Cranes and Mobile Concrete Pumps 180' - 249' - Boom & Jib 180 - 249 feet**

**Cranes and Mobile Concrete Pumps 250' and over - Boom & Jib 250 feet or over**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275

Change # : LCN01-2024ibLoc1275

Craft : Drywall Finisher Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Painter Drywall Finisher	\$30.85		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.11	\$61.54
Drywall Taper	\$30.85		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.11	\$61.54
Drywall Sanders	\$30.20		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.46	\$60.56
Drywall, Use of Mechanical or Pneumatic Tools	\$31.60		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.86	\$62.66
Apprentice	Percent											
1st 0-1500 hrs	80.00	\$24.68	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.40	\$44.74
2nd 1501-3000 hrs	85.00	\$26.22	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.94	\$47.05
3rd 3001-4500 hrs	90.00	\$27.76	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.49	\$49.37
4th 4501-6000 hrs	95.00	\$29.31	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.03	\$51.68

Special Calculation Note :

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction ( \* denotes special jurisdictional note ) :

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

Special Jurisdictional Note :

Details :

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275

Change # : LCN01-2024ibLoc1275

Craft : Painter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Painter Brush Roll	\$29.20		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.46	\$59.06
Wall Washer	\$29.20		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.46	\$59.06
Spray	\$29.70		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.96	\$59.81
Structural Steel Swing Stage	\$29.50		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.76	\$59.51
Sandblast, Steam Clean, Water Blasting (3500 PSI and Over) and Hazardous	\$29.90		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.16	\$60.11
Vinyl Hanging	\$29.70		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.96	\$59.81
Apprentice	Percent											
0-1500 hrs	80.00	\$23.36	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.08	\$42.76
1501-3000 hrs	85.00	\$24.82	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.54	\$44.95
3001-4500 hrs	90.00	\$26.28	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.00	\$47.14
4501-6000 hrs	95.00	\$27.74	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.46	\$49.33

## Special Calculation Note :

### Ratio :

1 Journeyman to 1 Apprentice

### Jurisdiction ( \* denotes special jurisdictional note ) :

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

## Special Jurisdictional Note :

### Details :

Heavy Highway Class 1 are qualified painters, blasters, riggers.

Class 2 Equipment Tenders /or containment Builders are hired to tend employers equipment also engage in the building & moving of containment systems.

Class 3 support personnel will perform Quality control duties, clean abrasive blast materials, load and unload trucks, handle all materials, man safety boats, & handle traffic control.

All Tanks 50,000 gallon capacity or more will be at the tank stated rate.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275 HevHwy

Change # : LCN01-2024ibLoc1275

Craft : Painter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Painter Bridge Class 1	\$39.26		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$54.52	\$74.15
Painter Bridges Class 2 Rigger, Containment Builder, Spot Blaster	\$36.26		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.52	\$69.65
Painter Bridges Class 3 Equipment Operator/Field Mechanic, Grit Reclamation, Paint Mix, Traffic Control, Boat Person, Driver (0-5 Years Exp.)	\$29.26		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.52	\$59.15
Painter Bridges Class 3 Equipment Operator/Field Mechanic, Grit Reclamation, Paint Mix, Traffic Control, Boat Person, Driver (plus 5 Years Exp.)	\$32.26		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.52	\$63.65
Painter Bridges Class 4 Concrete Sealing, Concrete Blasting Power Washing	\$28.26		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.52	\$57.65
Painter Bridges Class 5 Quality Control, Quality Assurance, Traffic Safety Competent Person	\$32.26		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.52	\$63.65
<b>Apprentice</b>	<b>Percent</b>											
1st 0-1500 hrs	80.00	\$31.41	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.13	\$54.83
2nd 1501-3000 hrs	85.00	\$33.37	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.09	\$57.78
3rd 3001-4500 hrs	90.00	\$35.33	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.05	\$60.72
4th 4501-6000 hrs	95.00	\$37.30	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.02	\$63.67

Special Calculation Note :

Ratio :  
1 Journeyman to 1 Apprentice

Jurisdiction ( \* denotes special jurisdictional note ) :  
DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

Special Jurisdictional Note :

Details :

Heavy Highway Class 1 are qualified painters,blasters,riggers. Class 2 Equipment Tenders /or containment Builders are hired to tend employers equipment also engage in the building & moving of containment systems. Class 3 support personnel will perform Quality control duties,clean abrasive blast materials, load and unload trucks, handle all materials, man safety boats, & handle traffic control.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275 Industrial

Change # : LCN01-2023ibLoc1275

Craft : Painter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Painter Brush Roll	\$30.65		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.91	\$61.24
Power Tool Cleanergr	\$30.65		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.91	\$61.24
Spray Painting	\$31.15		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.41	\$61.99
Sand Blast, Steam Clean & Pressure Washing Above 3500 PSI	\$31.35		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.61	\$62.29
Stacks and towers	\$33.46		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.72	\$65.45
Tanks - All Tanks 50,000 gallon capacity or more	\$33.46		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.72	\$65.45
Apprentice	Percent											
0-1500 hrs	80.00	\$24.52	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.24	\$44.50
1501-3000 hrs	85.00	\$26.05	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.77	\$46.80
3001-4500 hrs	90.00	\$27.58	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.31	\$49.10
4501-6000 hrs	95.00	\$29.12	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.84	\$51.40

## Special Calculation Note :

### Ratio :

1 Journeyman to 1 Apprentice

### Jurisdiction ( \* denotes special jurisdictional note ) :

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

## Special Jurisdictional Note :

### Details :

Definition of Industrial Classification:

Industrial Facilities to be included in the Industrial Classification shall include; Water Treatment, Waste Water Treatment, Natural Gas and related facilities, refineries, transmission pipe lines, electrical transmission towers and or switching /sub stations and Power Plants.

Exclusions from the industrial classification are Power Plants that generate power to a single customer; such as an emergency power supplier or a Hospital, Information Technology Facility, Sporting/Event or Arena/Stadium type facility. This exclusion would also be given to any commercial office space located within the facilities property. The excluded spaces shall be done under the Commercial Wage rates.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639

Change # : LCNO1-2015fbLoc639

Craft : Painter Effective Date : 06/10/2015 Last Posted : 06/10/2015

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Metal Finisher/Helpers											
Top Helper Class A	\$19.09	\$3.65	\$0.00	\$0.00	\$0.66	\$0.00	\$0.00	\$0.00	\$0.00	\$23.40	\$32.94
Top Helper Class B	\$19.09	\$3.65	\$0.65	\$0.00	\$1.03	\$0.00	\$0.37	\$0.00	\$0.00	\$24.79	\$34.33
Top Helper Class C	\$19.09	\$3.65	\$1.00	\$0.00	\$1.76	\$0.00	\$0.37	\$0.00	\$0.00	\$25.87	\$35.41
Helper Class A	\$14.69	\$3.65	\$0.00	\$0.00	\$0.51	\$0.00	\$0.00	\$0.00	\$0.00	\$18.85	\$26.19
Helper Class B	\$14.69	\$3.65	\$0.65	\$0.00	\$0.79	\$0.00	\$0.28	\$0.00	\$0.00	\$20.06	\$27.40
Helper Class C	\$14.69	\$3.65	\$1.00	\$0.00	\$1.64	\$0.00	\$0.28	\$0.00	\$0.00	\$21.26	\$28.60
New Hire 90 Days	\$11.00	\$3.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.65	\$20.15

Special Calculation Note : Other is Sick and Personal Time

Ratio :

Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Top Helper: Shall perform the responsibilities of a Helper and be responsible for the setup, break down, safety and quality of the company's product.

Helper : Shall be responsible for performing tasks in refinishing, compliance with safety procedures, setting up and breaking down job sites, scaffolding and swing stages and preparing surfaces for refinishing including but not limited to, masking and stripping and cleaning, oxidizing, polishing and scratch removal on various surfaces

.

Class A Workers: Less than 1 Year of Service.

Class B Workers: More than 1 and less than 8 Years of Service.

Class C Workers: More than 8 Years of Service.

Metal Polisher Scope of Work: Polishing, buffing, stripping, coloring, lacquering, spraying, cleaning and maintenance of ornamental and architectural metals, iron, bronze, nickel, aluminum and stainless steel and in mental specialty work, various stone finishes, stone specialty work and any other work pertaining to the finishing of metal, stones, woods, and any window washing/cleaning done in conjunction with this work, using chemicals, solvents, coatings and hand applied lacquer thinner, removing scratches from mirror finished metals, burnishing of bronze, statuary finishes on exterior and interior surfaces and the use of all tools required to perform such work, including but not limited to polishes, spray equipment and scaffolding.

Swing State Rate: All work on scaffold 4 sections or higher, including any boom lifts and swing stage scaffolds including the rigging and derigging of hanging/suspended swing stage systems and rappelling/bolson chair work, ADD \$1.50 per hour.



# Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639 Zone 2 Sign

Change # : LCN01-2023ibLoc639

Craft : Painter Effective Date : 03/22/2023 Last Posted : 03/22/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Sign Journeyman Tech/Team Leader Class A	\$25.28	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.68	\$0.00	\$0.00	\$27.87	\$40.51
Painter Sign Journeyman Tech/Team Leader Class B	\$25.28	\$1.70	\$0.21	\$0.00	\$0.49	\$0.00	\$0.68	\$0.00	\$0.00	\$28.36	\$41.00
Painter Sign Journeyman Tech/Team Leader Class C	\$25.28	\$1.70	\$0.21	\$0.00	\$0.97	\$0.00	\$0.68	\$0.00	\$0.00	\$28.84	\$41.48
Painter Sign Journeyman Tech/Team Leader Class D	\$25.28	\$1.70	\$0.21	\$0.00	\$1.46	\$0.00	\$0.68	\$0.00	\$0.00	\$29.33	\$41.97
Sign Journeyman Class A	\$25.00	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.67	\$0.00	\$0.00	\$27.58	\$40.08
Sign Journeyman Class B	\$25.00	\$1.70	\$0.21	\$0.00	\$0.48	\$0.00	\$0.67	\$0.00	\$0.00	\$28.06	\$40.56
Sign Journeyman Class C	\$25.00	\$1.70	\$0.21	\$0.00	\$0.96	\$0.00	\$0.67	\$0.00	\$0.00	\$28.54	\$41.04
Sign Journeyman Class D	\$25.00	\$1.70	\$0.21	\$0.00	\$1.44	\$0.00	\$0.67	\$0.00	\$0.00	\$29.02	\$41.52
Tech Sign Fabrication/Erector Class A	\$19.67	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$22.11	\$31.95
Tech Sign Fabrication/Erector Class B	\$19.67	\$1.70	\$0.21	\$0.00	\$0.38	\$0.00	\$0.53	\$0.00	\$0.00	\$22.49	\$32.33
Tech Sign Fabrication/Erector Class C	\$19.67	\$1.70	\$0.21	\$0.00	\$0.76	\$0.00	\$0.53	\$0.00	\$0.00	\$22.87	\$32.71
Tech Sign Fabrication/Erector Class D	\$19.67	\$1.70	\$0.21	\$0.00	\$1.13	\$0.00	\$0.53	\$0.00	\$0.00	\$23.24	\$33.08

Special Calculation Note : Other is for paid holidays.

Ratio :

Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, AUGLAIZE, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GREENE, HAMILTON, HANCOCK, HARDIN, HENRY, HIGHLAND, HOLMES, HURON, JACKSON, KNOX, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MERCER, MIAMI, MONTGOMERY, MORROW, MUSKINGUM, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, WARREN, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Class A: less that 1 year.

Class B: 1-3 years.

Class C: 3-10 years.

Class D: More than 10 years.

# Prevailing Wage Rate Skilled Crafts

Name of Union: Plasterer Local 132 (Columbus)

Change # : LCN01-2024ibLoc132

Craft : Plasterer Effective Date : 06/01/2024 Last Posted : 05/29/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Plasterer	\$30.54		\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$45.14	\$60.41
Apprentice	Percent											
1st 800 hrs	70.00	\$21.38	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$35.98	\$46.67
2nd 800 hrs	74.00	\$22.60	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$37.20	\$48.50
3rd 800 hrs	78.00	\$23.82	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$38.42	\$50.33
4th 800 hrs	82.00	\$25.04	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$39.64	\$52.16
5th 800 hrs	86.00	\$26.26	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$40.86	\$54.00
6th 800 hrs	90.00	\$27.49	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$42.09	\$55.83
7th 800 hrs	94.00	\$28.71	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$43.31	\$57.66
8th 800 hrs	98.00	\$29.93	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$44.53	\$59.49

Special Calculation Note : \*Other is International Training Fund

## Ratio :

3 Journeymen to 1 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ASHLAND, COSHOCTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, KNOX, LICKING, MADISON, MARION, MORROW, MUSKINGUM, PERRY, PICKAWAY, RICHLAND, ROSS, UNION, VINTON, WYANDOT

## Special Jurisdictional Note :

### Details :

#### PLASTERER IMPROVERS:

Is a person who has skills between an Apprentice and a Journeyman can be signed in as an Improver. An Improver receives 85% of the current wage and pension. All other benefits are same as Journeyman. The Improver has the opportunity to advance to Journeyman level by:

- (1) Working through a trial period of no more than 2,000 hrs.
- (2) Attending all safety and upgrading classes held or required.

Working on swing stage, slip scaffold or window jack scaffold shall receive the following rates:

\$ .50 above the regular rate for heights up to fifty (50) feet above grade level

\$1.00 above the regular rate for heights over fifty (50) feet above grade level

Prevailing Wage Rate  
Skilled Crafts

Name of Union: Plumber Pipefitter Local 189

Change # : LCN01-2024ibLoc189

Craft : Plumber Pipefitter Effective Date : 08/21/2024 Last Posted : 08/21/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Plumber Pipefitter	\$49.00		\$10.39	\$7.49	\$1.45	\$0.00	\$8.26	\$0.00	\$0.00	\$0.00	\$76.59	\$101.09
Heating Piping Refrigeration, Temperature Control, Air Conditioning Welder	\$49.00		\$10.39	\$7.49	\$1.45	\$0.00	\$8.26	\$0.00	\$0.00	\$0.00	\$76.59	\$101.09
1st Year	45.00	\$22.05	\$5.00	\$0.00	\$1.45	\$0.00	\$0.00	\$0.10	\$0.00	\$0.00	\$28.60	\$39.63
2nd Year	50.00	\$24.50	\$10.39	\$5.60	\$1.45	\$0.00	\$0.00	\$0.10	\$0.00	\$0.00	\$42.04	\$54.29
3rd Year	55.00	\$26.95	\$10.39	\$5.60	\$1.45	\$0.00	\$0.00	\$0.10	\$0.00	\$0.00	\$44.49	\$57.97
4th Year	65.00	\$31.85	\$10.39	\$5.60	\$1.45	\$0.00	\$6.26	\$0.10	\$0.00	\$0.00	\$55.65	\$71.57
5th Year	80.00	\$39.20	\$10.39	\$5.60	\$1.45	\$0.00	\$8.26	\$0.10	\$0.00	\$0.00	\$65.00	\$84.60

Special Calculation Note : \*Other is International Training

Ratio :

Employees-----Journeyman to Apprentice

per Job

1) 1-0

2) 1-1

3) 2-1

4) 2-2

5) 3-2

6) 4-2

7) 4-3

8) 5-3

9) 6-3

10) 6-4

11) 7-4

12) 8-4

13) 8-5

14) 9-5

15) 10-5

16) 10-6

17) 11-6

18) 12-6

19) 12-7

20) 13-7

21) 14-7

22) 14-8

23) 15-8

24) 16-8

25) 16-9

Heating Piping refrigeration, Temperature Control, Air Conditioning Ratio

(1) Additional Apprentice to (3) Journeymen thereafter

Employees Journeyman to Apprentice

per Job

1) Employee 1-0

2) Employees 1-1

3) Employees 2-1

4) Employees 2-2

5) Employees 3-2

6) Employees 4-2

7) Employees 5-2

8) Employees 5-3

9) Employees 6-3

10) Employees 7-3

11) Employees 8-3

12) Employees 8-4

13) Employees 9-4

14) Employees 10-4

15) Employees 11-4

16) Employees 11-5

17) Employees 12-5

18) Employees 13-5

19) Employees 14-5

20) Employees 14-6

21) Employees 15-6

22) Employees 17-5

23) Employees 18-5

24) Employees 18-6

25) Employees 19-6

26) Employees 20-6

28) Employees 22-6

29) Employees 22-7

30) Employees 23-7

31) Employees 23-7

32) Employees 25-7

33) Employees 26-7

34) Employees 26-8

Special Jurisdictional Note :

Details :

# Prevailing Wage Rate Skilled Crafts

Name of Union: Roofer Local 86

Change # : LCN01-2023ibLoc86

Craft : Roofer Effective Date : 09/13/2023 Last Posted : 09/13/2023

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Roofer	\$33.17		\$8.20	\$7.40	\$0.54	\$0.00	\$0.30	\$0.06	\$0.00	\$0.00	\$49.67	\$66.26
Apprentice	Percent											
1st YEAR	65.00	\$21.56	\$0.00	\$0.00	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$22.41	\$33.19
2nd YEAR	70.00	\$23.22	\$8.20	\$1.85	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$34.12	\$45.73
3rd YEAR	75.00	\$24.88	\$8.20	\$3.33	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$37.26	\$49.70
4th YEAR	85.00	\$28.19	\$8.20	\$4.81	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$42.05	\$56.15

**Special Calculation Note :** International Training/Education/Research Fund.

**Ratio :**  
1 Journeymen to 1 Apprentices  
per job site

**Jurisdiction ( \* denotes special jurisdictional note ) :**  
CHAMPAIGN, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN,  
HARDIN, HOCKING, KNOX, LICKING, LOGAN, MADISON, MARION,  
MORROW, PERRY, PICKAWAY, PIKE, ROSS, UNION, WYANDOT

**Special Jurisdictional Note :**

**Details :**

# Prevailing Wage Rate Skilled Crafts

Name of Union: Sheet Metal Local 24 (Columbus)

Change # : LCN02-2024ibLoc24Col

Craft : Sheet Metal Worker Effective Date : 11/13/2024 Last Posted : 11/13/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Sheet Metal Worker	\$38.85		\$10.08	\$12.28	\$1.24	\$0.00	\$3.82	\$0.00	\$0.00	\$0.00	\$66.27	\$85.69
Apprentice	Percent											
1st Year	57.02	\$22.15	\$8.27	\$2.14	\$1.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.59	\$44.67
2nd Year	65.00	\$25.25	\$9.46	\$7.98	\$1.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.72	\$56.35
3rd Year	75.00	\$29.14	\$9.69	\$9.21	\$1.24	\$0.00	\$2.87	\$0.00	\$0.00	\$0.00	\$52.15	\$66.72
4th Year	85.00	\$33.02	\$9.84	\$10.44	\$1.24	\$0.00	\$3.25	\$0.00	\$0.00	\$0.00	\$57.79	\$74.30

**Special Calculation Note :** No special calculations for this skilled craft wage rate required at this time.

## Ratio :

1 Journeyman to 1 Apprentice  
 2-8 Journeymen to 2 Apprentices  
 9-11 Journeymen to 3 Apprentices  
 12-14 Journeymen to 4 Apprentices  
 15-17 Journeymen to 5 Apprentices  
 18-20 Journeymen to 6 Apprentices  
 21-23 Journeyman to 7 Apprentices  
 24-26 Journeyman to 8 Apprentices  
 27-29 Journeymen to 9 Apprentices  
 30-32 Journeymen to 10 Apprentices  
 33-35 Journeymen to 11 Apprentices  
 36-38 Journeymen to 12 Apprentices  
 39-41 Journeymen to 13 Apprentices  
 42-44 Journeymen to 14 Apprentices  
 45-47 Journeymen to 15 Apprentices  
 48-50 Journeymen to 16 Apprentices  
 and so on

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ATHENS, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GUERNSEY, HOCKING, JACKSON, KNOX, LAWRENCE, LICKING, MADISON, MARION, MEIGS, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, SCIOTO, UNION, VINTON

## Special Jurisdictional Note :

## Details :

# Prevailing Wage Rate Skilled Crafts

Name of Union: Sprinkler Fitter Local 669

Change # : LCN01-2024ibLoc669

Craft : Sprinkler Fitter Effective Date : 01/01/2025 Last Posted : 12/31/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Sprinkler Fitter	\$47.73		\$12.40	\$7.40	\$0.54	\$0.00	\$7.74	\$0.00	\$0.00	\$0.00	\$75.81	\$99.68
Apprentice	Percent											
CILASS 1	45.00	\$21.48	\$9.03	\$0.00	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.05	\$41.79
CLASS 2	50.02	\$23.87	\$9.03	\$0.00	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.44	\$45.38
CLASS 3	54.47	\$26.00	\$12.40	\$7.40	\$0.54	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$47.49	\$60.49
CLASS 4	59.48	\$28.39	\$12.40	\$7.40	\$0.54	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$49.88	\$64.07
CLASS 5	64.46	\$30.77	\$12.40	\$7.40	\$0.54	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$52.51	\$67.89
CLASS 6	69.47	\$33.16	\$12.40	\$7.40	\$0.54	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$54.90	\$71.48
CLASS 7	74.48	\$35.55	\$12.40	\$7.40	\$0.54	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$57.29	\$75.06
CLASS 8	79.46	\$37.93	\$12.40	\$7.40	\$0.54	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$59.67	\$78.63
CLASS 9	84.47	\$40.32	\$12.40	\$7.40	\$0.54	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$62.06	\$82.22
CLASS 10	89.49	\$42.71	\$12.40	\$7.40	\$0.54	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$64.45	\$85.81

Special Calculation Note :

## Ratio :

1 Journeyman to 1 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

## Details :

Sprinkler Fitter work shall consist of the installation, dismantling, maintenance, repairs, adjustments, and corrections of all fire protection and fire control systems including the unloading, handling by hand, power equipment and installation of all piping or tubing, appurtenances and equipment pertaining thereto, including both overhead and underground water mains, fire hydrants and hydrant mains, standpipes and hose connections to sprinkler systems used in connection with sprinkler and alarm systems. Also all tanks and pumps connected thereto, also included shall be CO-2 and Cardox Systems, Dry Chemical Systems, Foam Systems and all other fire protection systems.

# Prevailing Wage Rate Skilled Crafts

**Name of Union:** Truck Driver Bldg & HevHwy Class 1  
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

**Change # :** LCN01-2024ibBldgHevHwy

**Craft :** Truck Driver **Effective Date :** 05/01/2024 **Last Posted :** 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 1 4 wheel service, dump, and batch trucks; drivers on tandems; truck sweepers (not to include power sweepers & scrubbers)	\$31.84		\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.84	\$65.76
Apprentice	Percent											
First 6 months	80.00	\$25.47	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.47	\$56.21
7-12 months	85.00	\$27.06	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.06	\$58.60
13-18 months	90.00	\$28.66	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.66	\$60.98
19-24 months	95.00	\$30.25	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.25	\$63.37
25-30 months	100.00	\$31.84	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.84	\$65.76

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

**Ratio :**  
3 Journeymen to 1 Apprentice

**Jurisdiction ( \* denotes special jurisdictional note ) :**  
ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

**Special Jurisdictional Note :**

**Details :**

# Prevailing Wage Rate Skilled Crafts

**Name of Union:** Truck Driver Bldg & HevHwy Class 2  
**Locals** 20,40,92,92b,100,175,284,438,377,637,908,957

**Change # :** LCN01-2024ibBldgHevHwy

**Craft :** Truck Driver **Effective Date :** 05/01/2024 **Last Posted :** 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 2 Tractor Trailer-Semi Tractor Trucks; Pole Trailers; Ready Mix Trucks; Fuel Trucks; 5 Axle & Over; Belly Dumps; Low boys - Heavy duty Equipment(irrespective of load carried) when used exclusively for transportation; Truck Mechanics (when needed)	\$32.26		\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.26	\$66.39
Apprentice	Percent											
First 6 months	80.00	\$25.81	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.81	\$56.71
7-12 months	85.00	\$27.42	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.42	\$59.13
13-18 months	90.00	\$29.03	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.03	\$61.55
19-24 months	95.00	\$30.65	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.65	\$63.97
25-30 months	100.00	\$32.26	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.26	\$66.39

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

## Ratio :

3 Journeymen to 1 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

## Special Jurisdictional Note :

## Details :



# Prevailing Wage Rate Skilled Crafts

**Name of Union:** Truck Driver Bldg & HevHwy Class 3  
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

**Change # :** LCN01-2024ibBldgHevHwy3

**Craft :** Truck Driver **Effective Date :** 05/01/2024 **Last Posted :** 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 3 Articulated Dump Trucks; Ridge-Frame Rock Trucks; Distributor Trucks)	\$33.26		\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.26	\$67.89
Apprentice	Percent											
First 6 months	80.00	\$26.61	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.61	\$57.91
7-12 months	85.00	\$28.27	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.27	\$60.41
13-18 months	90.00	\$29.93	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.93	\$62.90
19-24 months	94.96	\$31.58	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.58	\$65.38
25-30 months	100.00	\$33.26	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.26	\$67.89

**Special Calculation Note :** No special calculations for this skilled craft wage rate are required at this time.

## Ratio :

3 Journeymen to 1 Apprentice

## Jurisdiction ( \* denotes special jurisdictional note ) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

## Special Jurisdictional Note :

## Details :