VILLAGE OF CALDWELL
NOBLE COUNTY, OHIO

CONTRACT #1 – WATER TREATMENT PLANT IMPROVEMENTS

ADDENDUM #4

MAY 17, 2024

THRASHER PROJECT #T10-11021

TO WHOM IT MAY CONCERN:

The following are clarifications and responses to questions posed by contractors for the above-referenced project.

A. GENERAL

1. The Bid Form has been revised. The revised Bid Form is included with this Addendum #4. **YOU MUST USE THE ATTACHED BID FORM INCLUDED WITH THIS ADDENDUM No. 4 WHEN PREPARING YOUR BID PACKAGE.**

2. Updated Wage Rates are included with this Addendum #4. **YOU MUST USE THE ATTACHED WAGE RATES INCLUDED WITH THIS ADDENDUM No. 4 WHEN PREPARING YOUR BID PACKAGE.**

3. Bids will be opened at 2:00 p.m. on Thursday, May 23, 2024, at 215 West Street, Caldwell, OH.

B. SPECIFICATIONS

1. **REPLACE** Section C-410 – Bid Form for Construction Contract included with this Addendum No. 4.
2. **REPLACE** Section 012000 – Price and Payment Procedures included with this Addendum No. 4.
3. **ADD** Section 034200 – Precast, Post-Tensioned, Concrete Tanks – Rectangular (ACI 350) included with this Addendum No. 4.
4. **DELETE** Section 071416 – Cold Fluid-Applied Waterproofing.
5. Reference Section 333217 – Non-Clog Submersible Pumps, Part 2.3 – Requirements. **CHANGE** pump HP to 25.

6. **REPLACE** Section 407113 – Magnetic Flow Meters included with this Addendum #4.
7. Reference Section 463442 – Vertical Turbine Pumps, Part 2.3 – Performance Criteria. **CHANGE** Total Pump Length for filter wet well turbine pumps and high service turbine pumps to 96.5" and 124.9" respectively.

C. DRAWINGS

ADD "Typical Conduit Trench Detail" included with this Addendum #4.

D. QUESTIONS AND RESPONSES

QUESTION

1. Will the Village Modify Section 4.05 of the Form 520 Contract (EJCDC 520) to include the following language "Liquidated Damages Shall not Be assessed when the delay or impossibility of performance is a result of, or occasioned by a Force Majeure Event, or circumstance beyond the control of the Contractor."

RESPONSE

No. This language will not be added to the Contract Documents.

QUESTION

2. Will the Village agree to add the following Language as Section 4.06 C of the EJCDC 520 Document and Section 18.04B of the EJCDC Form 700 (Mutual Waiver of consequential and Punitive Damages):

   "4.06 (18.04.B) – Mutual Waiver of Consequential and Punitive Damages – Neither party shall be liable for consequential or punitive damages on any claims arising out of the performance or non-performance of obligations under the Contract."

RESPONSE

No. This language will not be added to the Contract Documents.

QUESTION

3. Contractor requests that the Village amend Contract Section 12.03 (F) 1 of the Agreement (Liquidated Damages) to include the following language:

   "Liquidated damages shall not be assessed if the delay of performance, or failure to perform was as a result of, or occasioned by a Force Majeure Event, or uncontrollable circumstances not the fault of the Contractor."

RESPONSE

No. This language will not be added to the Contract Documents.

QUESTION

4. Contractor requests the Village make an addition to the Form 700 Sample Contract Section 12.03(A) 1 expanding the definitions of Force Majeure / Circumstances beyond the control of the Contractor to include, "A change in Federal, State, or local law or ordinance; orders or judgements of any Federal, State, or local court, administrative agency, or governmental body, or a change in permit conditions."

RESPONSE

No. This language will not be added to the Contract Documents.

QUESTION

5. Will the Village agree to add the following language as Section 6.20 (E) for Indemnification and as Section 5.04 (a) 8 Insurance Requirements of the EJCDC Form 700 Agreement:

   "**Claims by Provider's Employees.** As to any claim made against the Contractor, City waives any insulation from liability or immunity from suit with respect to injuries to City's employees that may be extended to City as a result of any payments made by City to such employees or under any applicable worker's compensation statute or similar law or judicial decision. City hereby indemnifies and holds harmless Contractor from and against any claims made by any of City's employees, contractors or representatives working in the course and scope of their employment by City unless such claim was the sole and proximate result of the gross negligence or willful misconduct of Contractor. Contractor will be held harmless from any worker's compensation liens incurred from City's insurance carrier, third party administrator or self-administered, self-insured claims programs."

RESPONSE

No. This language will not be added to the Contract Documents.

QUESTION

6. Will the Village agree to add the following language as Section 16.01 (A) 3 (Dispute Resolution) of the EJCDC Form 700 Contract:

"16.01 (A) 3 – Mutual Waiver of Consequential and Punitive Damages – Neither party shall be liable for consequential or punitive damages on any claims arising out of the performance or non-performance of obligations under the Contract."

RESPONSE

No. This language will not be added to the Contract Documents.

QUESTION

7. The flow meter schedule in spec section 40 71 13 does not appear to be accurate. There are flow meter sizes for 14 inch and 20 inch pipe. Can you review and revise this list to reflect what's required for this project?

RESPONSE

Revised Section 407113 – Magnetic Flow Meters is included with this Addendum #4.

QUESTION

8. Section 333217 lists the performance of the non-clog pumps as 650 gpm @ 100 ft. using 4 HP. This does not compute. Is it actually 650 gpm @ 10 ft. or does it need a 40 HP motor.

RESPONSE

Actual pump horsepower is 25 HP. Refer to Item #2 in the Specifications section of this Addendum #4.

QUESTION

9. Regarding the responses to questions 10 and 28 in addendum #3:
    a. It is understood that the plant must stay in operation. For the scope of work on the filters and piping and the allowable plant shut-down time given, a plan is needed to keep water going to and from the filters that will be online during this work. The contractor is not responsible for treatment operations, so this goes beyond means and methods.
    b. There will be multiple shutdowns to replace valves that can work within an 8-hour window. Replacing the pipe and valves for the backwash influent and filtered water lines will require much more time (days) as this work will not be able to be done in sections at a time since there are diameter and alignment changes.
    c. With the limit of having 1 filter at a time off-line, there are no issues with replacing the underdrains and media. However, there will be periods when 2

filters will be affected during the time of combining 2 filters controls into 1 console.

d. Please consider adding an allowance for a temporary filter system that can be determined post-bid. This again is not a means and methods issue with many design factors and information needed to specify such a system.

RESPONSE

The contractor is responsible for the means and methods required to complete the work. The project constraints allow for only one (1) filter at a time to be off-line. The existing plant operations allow for a maximum plant shut down period of 4 hours. An allowance for a temporary filtration system (if needed) has been added to the bid form. The allowance for the temporary treatment system will be for a period of 4 months.

QUESTION

10. Regarding addendum 3, question 29: We cannot find spec section 331217 referred to in the response. Please issue the flow rate information for the pump station.

RESPONSE

Previous response included a typo in specification section designation. Flow requirements are given in Section 333217 – Non-Clog Submersible Pumps.

QUESTION

11. Clarification for question 12 in addendum #3. Is the Contractor to provide the prefabricated aluminum carport? If so, please provide a specification for this that includes the manufacturer and model number.

RESPONSE

Yes. Contractor shall provide the proposed prefabricated carport as manufactured by VersaTube or Engineer's approved equal.

QUESTION

12. I did not see a specification or a detail on the drawings for electrical conduit trenching. Please provide and let me know if this includes concrete duct bank.

RESPONSE

Refer to attached conduit trenching detail included with this Addendum #4.

QUESTION

13. The controls for the clarifier are not included in the clarifier specification. Please update the specification to include them being provided by the clarifier equipment supplier.

RESPONSE

Controls for the clarifier shall be provided by the equipment manufacturer and as shown on Sheet E5 & E6.

QUESTION

14. On this contract, is 100% of the sludge to be removed from the lagoon or can some small quantity remain? If all the sludge must be removed, we will likely need to figure out some bulking agent and mechanical removal for the last bit that gets mixed up with the clay bottom. Just need to know if we need to add the extra cost of removing the last bit or if we will be allowed to leave some on the bottom to spread out.

RESPONSE

6" of material may remain in the bottom of the lagoon prior to backfilling.

QUESTION

15. Spec section 463383.1 section 2.2 notes chemical storage tanks are to be equipped with leak detection sensors. On the plans, the day tank is not noted as a double wall tank. Is the day tank to be double wall to include leak sensors or is this just a single wall tank?

RESPONSE

The day tank shall be a double wall tank equipped with leak detection sensor.

QUESTION

16. Is Elcon Technologies and approved integrator / SCADA contractor / supplier? If not, can they be added to the list? Can you provide an updated list or updated Division 27 specification?

RESPONSE

Yes. Elcon Technologies shall be considered an approved SCADA integrator and supplier for the project.

QUESTION

17. The specification 071416 Cold Fluid Applied Waterproofing is provided in the bid documents. I cannot seem to find where this would be used on the job. Please specify the structures that are to receive cold fluid applied waterproofing.

RESPONSE

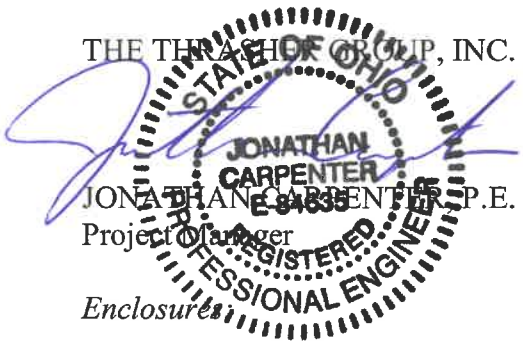
Section 071416 has been deleted. Refer to Item #1 in the Specifications section of this Addendum #4.

E. CLARIFICATIONS

1. The Engineer's estimate of probable construction cost has been revised to $16,000,000.00.
2. Pre-cast post tensioned concrete shall be considered an acceptable alternative to cast-in place concrete for the proposed clearwell structure.

If you have any questions or comments, please feel free to contact me at your earliest convenience. As a reminder, bids will be received until 2:00 p.m. on Thursday, May 23, 2024, at 215 West Street, Caldwell, OH. Good luck to everyone and thank you for your interest in the project.

THE THRASHER GROUP, INC.



JONATHAN CARPENTER, P.E.
Project Manager

Enclosures

BID FORM FOR CONSTRUCTION CONTRACT

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

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

Village of Caldwell
215 West Street
Caldwell, OH 43724

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

ARTICLE 2—ATTACHMENTS TO THIS BID

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

A. Bid Opening Requirements

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

GENERAL

The Bidder shall take notice of and shall be responsible for any local or state taxes levied and applicable, and the cost for the same shall be included as part of the submitted Bid.

The total Bid cost stated includes a complete operating installation including furnishing and installation of any and all changes or additions in plans, piping, mechanical work, additional electrical work, accessories, controls, etc. necessary to accommodate alternative equipment systems or materials used in construction.

BID PROPOSAL

The Bidder agrees to perform all required Work described in the detailed Specifications and as shown on the Plans for the complete construction and placing in satisfactory operation the Contract #1 – Water Treatment Plant Improvements. The Project "Sequence of Construction" has been detailed in the Drawings and Specification Division 1, Project Summary, Section 011000. The Bidder agrees to perform all the Work proposed for the total of the following Bid prices.

3.01 *Lump Sum Bids*

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

B. Lump Sum Bids may be one of the following:

1. Lump Sum Price (Single Lump Sum)

2. Lump Sum Price (Base Bid and Alternates)

3. Lump Sum Price (Sectional Lump Sum Bids)

C. All specified cash allowance(s) are included in the price(s) set forth in the bid schedule, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

D. All specified contingency allowances are included in the price(s) set forth in the bid schedule, and have been computed in accordance with Paragraph 13.02 of the General Conditions.

3.02 *Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices as shown in the Bid Schedule.

B. Bidder acknowledges that:

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

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

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

PROPOSED
CONTRACT #1 – WATER TREATMENT PLANT IMPROVEMENTS
FOR THE
VILLAGE OF CALDWELL
NOBLE COUNTY, OHIO

THRASHER PROJECT #T10-11021

BID SCHEDULE

NOTE: Bid Unit Price amounts are to be shown in both words and figures. In case of discrepancy, the Bid Unit Price shown in words will govern. Bids shall include applicable taxes and fees.

Bid Item	Qty	Unit	Description with Unit Price Written In Words	Unit Price (In Figures)	Total Price (In Figures)
1	1	LS	Mobilization/Demobilization _____ Dollars _____ Cents	$ _____	$ _____
2	1	LS	Video Taping of Project Area _____ Dollars _____ Cents	$ _____	$ _____
3	1	LS	Sediment and Erosion Control _____ Dollars _____ Cents	$ _____	$ _____
4	1	LS	Upgrade of the existing water treatment plant to increase the treatment capacity from 1.4 MGD to 2.16 MGD with improvements consisting of: upgrades to the existing flow splitter box, construction of one (1) new solids contact clarifier, demolition and reconstruction of the existing conventional gravity sand filters, removal and replacement of two (2) existing filter wet well pumps, expansion of the existing GAC building to house two (2) new GAC pressure filters, construction of one (1) new concrete clearwell structure, construction of a new chlorine feed building with all associated chemical feed equipment, removal and replacement of three (3) high service pumps, decommissioning of the existing washwater waste lagoon, and replacement of two (2) existing waste sludge pumps. The work also includes all required site electrical service improvements, site piping, paving, and lighting, ancillary mechanical, electrical, instrumentation, controls, and spare parts, and other items needed to provide a fully-tested, complete, and operational system. _____ Dollars _____ Cents	$ _____	$ _____

Bid Item	Qty	Unit	Description with Unit Price Written In Words	Unit Price (In Figures)	Total Price (In Figures)
5	250	DRY TONS	To provide all necessary equipment, material, labor and appurtenances required for the removal, dewatering and disposal of existing lagoon sludge. _____ Dollars _____ Cents	$ _____	$ _____
6	1	LS	To provide all necessary equipment, material, labor and appurtenances required for a temporary water filtration system. Two Hundred Thousand Dollars Zero Cents	$200,000.00	$200,000.00

TOTAL BID: _____
(Words)

_____ ($_____)
(Words) (Figures)

(Bid Unit Price amounts are to be shown in both words and figures. In case of discrepancy, the Bid Unit Price shown in words will govern.)

3.04 *Method of Award*

If at the time this contract is to be awarded, the lowest total bid submitted by a qualified, responsive, responsible Bidder does not exceed the amount of funds then estimated by the Owner, as available to finance the contract, the construction contract will be awarded. If such bids exceeds such amount, the owner may reject all bids.

A. Unit prices have been computed in accordance with paragraph 13.03.A of the General Conditions.

B. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

~~**ARTICLE 4 – BASIS OF BID – COST PLUS FEE**~~

4.01 ~~The Contract Price will be the Cost of the Work, determined as provided in Paragraph 13.01 of the General Conditions, together with the following fee, and subject to the Guaranteed Maximum Price.~~

4.02 ~~*Contractor's Fee*~~

~~A. Contractor's fee will be **[number]** percent of the Cost of the Work. No fee will be payable on the basis of costs itemized as excluded in Paragraph 13.01.C of the General Conditions.~~

~~1. The maximum amount payable by Owner as a percentage fee (Guaranteed Maximum Fee) will not exceed $**[insert cap amount]**, subject to increases or decreases for changes in the Work.~~

B. Contractor's fee will be determined by applying the following percentages to the various portions of the Cost of the Work as defined in Article 13 of the General Conditions. No fee will be payable on the basis of costs itemized as excluded in Paragraph 13.01.C of the General Conditions:

Costs	**Percent**
Payroll costs (See Paragraph 13.01.B.1, General Conditions)	
Materials and Installed Equipment cost (GC-13.01.B.2)	
Amounts to be paid to Subcontractors (GC-13.01.B.3)	
Amount to be paid to special consultants (GC-13.01.B.4)	
Other costs (GC-13.01.B.5)	

1. The maximum amount payable by Owner as a percentage fee (Guaranteed Maximum Fee) will not exceed $**[insert cap amount]**, subject to increases or decreases for changes in the Work.

C. Contractor's fee will be the fixed sum of $**[number]**.

4.03 *Guaranteed Maximum Price*

A. The Guaranteed Maximum Price to Owner of the Cost of the Work including Contractor's Fee will not exceed $**[Bidder fill in GMP]**.

Deleted

ARTICLE 5 – PRICE-PLUS-TIME BID

5.01 *Price-Plus-Time Contract Award (Stipulated Price Contract)*

A. The Bidder to which an award of the Contract will be made will be determined in part on the basis of the Total Bid Price and the total number of calendar days to substantially complete the Work, in accordance with the following:

	Description		**Amount**
A	1. Total Bid Price		$**[number]**
	2. Total number of calendar days to substantially complete the Work	**[number]** days	
	3. Liquidated Damages Rate (from Agreement)	$**[number]**/day	
B	4. Adjustment Amount (2 x 3)		$**[number]**
A+B	5. Amount for Comparison of Bids		$**[number]**

B. The purpose of the process in the table above is only to calculate the lowest price-plus-time (A+B) bid amount for bid comparison purposes. The price for completion of the Work (the Contract Price) is the Total Bid Price.

C. Bonds required under Paragraph 6.01 of the General Conditions will be based on the Contract Price.

5.02 *Price-Plus-Time Contract Award (Cost Plus Fee with Guaranteed Maximum Price Contract)*

A. The Bidder to which an award of Contract will be made will be determined in part on the basis of the Guaranteed Maximum Price and the total number of calendar days to substantially complete the Work, in accordance with the following:

	Description		**Amount**
A	1. Guaranteed Maximum Price		$**[number]**
	2. Total number of calendar days to substantially complete the Work	**[number]** days	
	3. Liquidated Damages Rate (from Agreement)	$**[number]**/day	

~~B~~	~~4. Adjustment Amount (2 x 3)~~		~~$**[number]**~~
~~A+B~~	~~5. Amount for Comparison of Bids~~		~~$**[number]**~~

~~B. The purpose of the process in the table above is only to calculate the lowest price plus time (A+B) bid amount for bid comparison purposes. The price for completion of the Work (the Contract Price) is based on the cost of the Work, plus a fee, subject to a guaranteed maximum price, as set forth in the Agreement.~~

~~C. Bonds required under Paragraph 6.01 of the General Conditions will be based on the Contract Price.~~

Deleted

ARTICLE 6—TIME OF COMPLETION

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

6.02 ~~Bidder agrees that the Work will be substantially complete on or before **[Bidder inserts date]**, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **[Bidder inserts date]**.~~

Deleted

6.03 ~~Bidder agrees that the Work will be substantially complete within **[Bidder inserts number]** calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within **[Bidder inserts number]** calendar days after the date when the Contract Times commence to run.~~

Deleted

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

ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

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

7.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 8—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

8.01 *Bidder's Representations*

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

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

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

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

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
    a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
    b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
    c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
    d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

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

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

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

"General Decision Number: OH20240065 04/05/2024

Superseded General Decision Number: OH20230065

State: Ohio

Construction Type: Building

Counties: Coshocton, Guernsey, Harrison, Morgan, Noble and Perry Counties in Ohio.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0	01/05/2024
1	01/19/2024
2	03/08/2024
3	04/05/2024

ASBE0002-003 08/01/2023

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR	$ 42.40	28.93

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* BROH0009-004 06/01/2023

COSHOCTON, GUERNSEY, MORGAN, NOBLE, AND PERRY COUNTIES

	Rates	Fringes
BRICKLAYER	$ 31.55	17.92

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* BROH0010-001 07/01/2023

HARRISON COUNTY

	Rates	Fringes
BRICKLAYER	$ 33.62	21.94

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* BROH0055-007 06/01/2023

	Rates	Fringes
TILE FINISHER	$ 28.31	10.45
TILE SETTER	$ 29.92	16.77

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* ELEC0246-003 10/30/2023

HARRISON COUNTY

	Rates	Fringes
ELECTRICIAN (Low Voltage Wiring Only)	$ 28.00	9.72

ELEC0540-002 08/28/2023

COSHOCTON, GUERNSEY, MORGAN, NOBLE, and PERRY COUNTIES

	Rates	Fringes
ELECTRICIAN (Low Voltage Wiring Only)	$ 25.15	17.44

ELEC0972-006 06/01/2023

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring)	$ 35.45	30.25

ENGI0018-025 05/01/2018

	Rates	Fringes
POWER EQUIPMENT OPERATOR		

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     Backhoe/Excavator/Trackhoe;
     Crane.....................$ 35.89            15.09
     Bobcat/Skid Steer/Skid
     Loader; Bulldozer.........$ 35.77            15.09
     Forklift..................$ 34.73            15.09
----------------------------------------------------------------
 IRON0550-008 05/01/2023

                                  Rates          Fringes

IRONWORKER (Ornamental and
Structural).....................$ 33.00            22.27
----------------------------------------------------------------
 LABO0083-004 05/01/2021

                                  Rates          Fringes

LABORER
     Mason Tender -
     Cement/Concrete...........$ 37.52            11.80
----------------------------------------------------------------
 LABO0134-002 05/01/2023

                                  Rates          Fringes

LABORER
     Mason Tender - Brick......$ 30.71            12.65
----------------------------------------------------------------
 PAIN0093-003 12/01/2023

                                  Rates          Fringes

PAINTER (Brush and Roller).....$ 29.29            23.69
----------------------------------------------------------------
 PLAS0132-011 01/01/2024

                                  Rates          Fringes

CEMENT MASON/CONCRETE FINISHER...$ 31.87          15.45
----------------------------------------------------------------
 PLUM0495-007 06/01/2023

                                  Rates          Fringes

PIPEFITTER (Includes HVAC
Pipe Installation).............$ 32.23            35.40
PLUMBER (Excludes HVAC Pipe
Installation)..................$ 32.23            35.40
----------------------------------------------------------------
 SFOH0669-009 01/01/2024

                                  Rates          Fringes

SPRINKLER FITTER (Fire
Sprinklers).....................$ 43.08            27.49
----------------------------------------------------------------
 SHEE0024-024 06/01/2022

                                  Rates          Fringes

SHEET METAL WORKER (HVAC Duct
Installation Only).............$ 33.53            26.36
----------------------------------------------------------------
 SHEE0033-015 07/01/2023
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	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct Installation)	$ 34.17	29.27

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* UAVG-OH-0016 01/01/2018

	Rates	Fringes
IRONWORKER, REINFORCING	$ 29.10	19.73

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* UAVG-OH-0017 01/01/2019

	Rates	Fringes
ROOFER	$ 29.59	15.17

SUOH2012-067 08/29/2014

	Rates	Fringes
CARPENTER	$ 25.75	12.99
LABORER: Common or General	$ 24.62	8.51
LABORER: Pipelayer	$ 18.37	4.79
OPERATOR: Loader	$ 22.69	8.01
OPERATOR: Paver (Asphalt, Aggregate, and Concrete)	$ 23.91	10.42
TRUCK DRIVER: Dump (All Types)	$ 19.33	6.55

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of

each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

"General Decision Number: OH20240001 04/05/2024

Superseded General Decision Number: OH20230001

State: Ohio

Construction Types: Heavy and Highway

Counties: Ohio Statewide.

Heavy and Highway Construction Projects

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2024
1	01/26/2024
2	03/08/2024

* BROH0001-001 06/01/2023

DEFIANCE, FULTON (Excluding Fulton, Amboy & Swan Creek Townships), HENRY (Excluding Monroe, Bartlow, Liberty, Washington, Richfield, Marion, Damascus & Townships & that part of Harrison Township outside corporate limits of city of Napoleon), PAULDING, PUTNAM and WILLIAMS COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

* BROH0001-004 06/01/2023

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 32.40	19.30

* BROH0003-002 06/01/2023

FULTON (Townships of Amboy, Swan Creek & Fulton), HENRY (Townships of Washington, Damascus, Richfield, Bartlow, Liberty, Harrison, Monroe, & Marion), LUCAS and WOOD (Townships of Perrysburg, Ross, Lake, Troy, Freedom, Montgomery, Webster, Center, Portage, Middleton, Plain, Liberty, Henry, Washington, Weston, Milton, Jackson & Grand Rapids) COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

BROH0005-003 06/01/2020

CUYAHOGA, LORAIN & MEDINA (Hinckley, Granger, Brunswick, Liverpool, Montville, York, Homer, Harrisville, Chatham, Litchfield & Spencer Townships and the city of Medina)

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS; CAULKERS; CLEANERS; POINTERS; & STONEMASONS	$ 36.64	17.13
SANDBLASTERS	$ 36.39	17.13
SEWER BRICKLAYERS & STACK BUILDERS	$ 36.64	17.13
SWING SCAFFOLDS	$ 37.14	17.13

* BROH0006-005 06/01/2023

CARROLL, COLUMBIANA (Knox, Butler, West & Hanover Townships), STARK & TUSCARAWAS

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

* BROH0007-002 06/01/2023

LAWRENCE

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

* BROH0007-005 06/01/2023

PORTAGE & SUMMIT

	Rates	Fringes
BRICKLAYER	$ 32.40	19.30

* BROH0007-010 06/01/2023

PORTAGE & SUMMIT

	Rates	Fringes
MASON - STONE	$ 32.40	19.30

* BROH0008-001 06/01/2023

COLUMBIANA (Salem, Perry, Fairfield, Center, Elk Run, Middleton, & Unity Townships and the city of New Waterford), MAHONING & TRUMBULL

	Rates	Fringes
BRICKLAYER	$ 32.40	19.30

* BROH0009-002 06/01/2023

BELMONT & MONROE COUNTIES and the Townships of Warren & Mt. Pleasant and the Village of Dillonvale in JEFFERSON COUNTY

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30
Refractory	$ 31.45	19.01

* BROH0010-002 06/01/2023

COLUMBIANA (St. Clair, Madison, Wayne, Franklin, Washington, Yellow Creek & Liverpool Townships) & JEFFERSON (Brush Creek & Saline Townships)

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

* BROH0014-002 06/01/2023

HARRISON & JEFFERSON (Except Mt. Pleasant, Warren, Brush Creek, Saline & Salineville Townships & the Village of Dillonvale)

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

* BROH0016-002 06/01/2023

ASHTABULA, GEAUGA, and LAKE COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

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* BROH0018-002 06/01/2023

BROWN, BUTLER, CLERMONT, HAMILTON, PREBLE (Gasper, Dixon, Israel, Lanier, Somers & Gratis Townships) & WARREN COUNTIES:

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

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* BROH0022-004 06/01/2023

CHAMPAIGN, CLARK, CLINTON, DARKE, GREENE, HIGHLAND, LOGAN, MIAMI, MONTGOMERY, PREBLE (Jackson, Monroe, Harrison, Twin, Jefferson & Washington Townships) and SHELBY COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

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* BROH0032-001 06/01/2023

GALLIA & MEIGS

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

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* BROH0035-002 06/01/2023

ALLEN, AUGLAIZE, MERCER and VAN WERT COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

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* BROH0039-002 06/01/2023

ADAMS & SCIOTO

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

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* BROH0040-003 06/01/2023

ASHLAND, CRAWFORD, HARDIN, HOLMES, MARION, MORROW, RICHLAND, WAYNE and WYANDOT (Except Crawford, Ridge, Richland & Tymochtee Townships) COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

FOOTNOTE: Layout Man and Sawman rate: $1.00 per hour above

journeyman rate.
Free standing stack work ground level to top of stack; Sandblasting and laying of carbon masonry material in swing stage and/or scaffold; Ramming and spading of plastics and gunniting: $1.50 per hour above journeyman rate.
""Hot"" work: $2.50 above journeyman rate.

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* BROH0044-002 06/01/2023

	Rates	Fringes
Bricklayer, Stonemason COSHOCTON, FAIRFIELD, GUERNSEY, HOCKING, KNOX, KICKING, MORGAN, MUSKINGUM, NOBLE (Beaver, Buffalo, Seneca & Wayne Townships) & PERRY COUNTIES:	$ 32.40	19.30

BROH0045-002 06/01/2021

FAYETTE, JACKSON, PIKE, ROSS and VINTON COUNTIES

	Rates	Fringes
Bricklayer, Stonemason	$ 30.40	17.66

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* BROH0046-002 06/01/2023

ERIE, HANCOCK, HURON, OTTAWA, SANDUSKY, SENECA, WOOD (Perry & Bloom Townships) and WYANDOT (Tymochtee, Crawford, Ridge & Richland Townships) COUNTIES & the Islands of Lake Erie north of Sandusky

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

FOOTNOTE: Layout Man and Sawman rate: $1.00 per hour above journeyman rate.
Free standing stack work ground level to top of stack; Sandblasting and laying of carbon masonry material in swing stage and/or scaffold; Ramming and spading of plastics and gunniting: $1.50 per hour above journeyman rate.
""Hot"" work: $2.50 above journeyman rate.

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* BROH0052-001 06/01/2023

ATHENS COUNTY

	Rates	Fringes
Bricklayer, Stonemason	$ 32.40	19.30

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* BROH0052-003 06/01/2023

NOBLE (Brookfield, Noble, Center, Sharon, Olive, Enoch, Stock, Jackson, Jefferson & Elk Townships) and WASHINGTON COUNTIES

	Rates	Fringes

Bricklayer, Stonemason.....$ 32.40 19.30

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* BROH0055-003 06/01/2023

DELAWARE, FRANKLIN, MADISON, PICKAWAY and UNION COUNTIES

	Rates	Fringes
Bricklayer, Stonemason.....	$ 32.40	19.30

CARP0003-004 05/01/2017

MAHONING & TRUMBULL

	Rates	Fringes
CARPENTER.....	$ 26.20	17.42

CARP0069-003 05/01/2017

CARROLL, STARK, TUSCARAWAS & WAYNE

	Rates	Fringes
CARPENTER.....	$ 25.98	15.98

CARP0069-006 05/01/2017

COSHOCTON, HOLMES, KNOX & MORROW

	Rates	Fringes
CARPENTER.....	$ 24.04	15.29

CARP0171-002 05/01/2019

BELMONT, COLUMBIANA, HARRISON, JEFFERSON & MONROE

	Rates	Fringes
CARPENTER.....	$ 27.37	20.02

CARP0200-002 05/01/2023

ADAMS, ATHENS, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GUERNSEY, HIGHLAND, HOCKING, JACKSON, LAWRENCE, LICKING, MADISON, MARION, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, SCIOTO, UNION, VINTON and WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER.....	$ 32.42	21.42
Diver.....	$ 39.41	10.40
PILEDRIVERMAN.....	$ 32.42	21.42

CARP0248-005 07/01/2008

LUCAS & WOOD

	Rates	Fringes
CARPENTER.....	$ 27.27	14.58

CARP0248-008 07/01/2008

	Rates	Fringes
CARPENTER DEFIANCE, FULTON, HANCOCK, HENRY, PAULDING & WILLIAMS COUNTIES	$ 23.71	13.28

CARP0254-002 05/01/2017

ASHTABULA, CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
CARPENTER	$ 32.40	16.97

CARP0372-002 05/01/2023

ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM & VAN WERT

	Rates	Fringes
CARPENTER	$ 28.85	24.59

CARP0639-003 05/01/2017

MEDINA, PORTAGE & SUMMIT

	Rates	Fringes
CARPENTER	$ 30.42	16.99

CARP0735-002 05/01/2023

ASHLAND, ERIE, HURON, LORAIN & RICHLAND

	Rates	Fringes
CARPENTER	$ 31.62	21.63

CARP1311-001 05/01/2017

BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY & WARREN

	Rates	Fringes
Carpenter & Piledrivermen	$ 29.34	15.95
Diver	$ 40.58	9.69

CARP1393-002 07/01/2008

CRAWFORD, DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
Piledrivermen & Diver's Tender	$ 27.30	16.05

DIVERS - $250.00 per day

CARP1393-003 07/01/2008

ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM, VAN WERT & WYANDOT

	Rates	Fringes
Piledrivermen & Diver's Tender	$ 25.15	15.92

DIVERS - $250.00 per day

CARP1871-006 05/01/2017

BELMONT, HARRISON, & MONROE

	Rates	Fringes
Diver, Wet	$ 48.11	17.33
Piledrivermen; Diver, Dry	$ 32.07	17.33

CARP1871-008 05/01/2017

ASHLAND, ASHTABULA, CUYAHOGA, ERIE, GEAUGA, HURON, LAKE, LORAIN, MEDINA, PORTAGE, RICHLAND & SUMMIT

	Rates	Fringes
Diver, Wet	$ 45.80	18.84
Piledrivermen; Diver, Dry	$ 30.53	18.84

CARP1871-014 05/01/2017

CARROLL, STARK, TUSCARAWAS & WAYNE

	Rates	Fringes
Diver, Wet	$ 38.34	16.95
Piledrivermen; Diver, Dry	$ 25.56	16.95

CARP1871-015 05/01/2017

COSHOCTON, HOLMES, KNOX & MORROW

	Rates	Fringes
Diver, Wet	$ 37.34	16.07
Piledrivermen; Diver, Dry	$ 24.89	16.07

CARP1871-017 05/01/2017

MAHONING & TRUMBULL

	Rates	Fringes
Diver, Wet	$ 40.65	17.62
Piledrivermen; Diver, Dry	$ 27.10	17.62

CARP2235-012 01/01/2014

COLUMBIANA & JEFFERSON

	Rates	Fringes
PILEDRIVERMAN	$ 31.74	16.41

CARP2239-001 07/01/2008

CRAWFORD, OTTAWA, SANDUSKY, SENECA & WYANDOT

	Rates	Fringes
CARPENTER	$ 23.71	13.28

ELEC0008-002 05/29/2023

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
CABLE SPLICER	$ 38.98	18.96
ELECTRICIAN	$ 46.38	4.5%+21.96

ELEC0032-003 12/04/2023

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY, VAN WERT & WYANDOT (Crawford, Jackson, Marseilles, Mifflin, Ridgeland, Ridge & Salem Townships)

	Rates	Fringes
ELECTRICIAN	$ 35.17	22.82

ELEC0038-002 04/24/2023

CUYAHOGA, GEAUGA (Bainbridge, Chester & Russell Townships) & LORAIN (Columbia Township)

	Rates	Fringes
ELECTRICIAN		
Excluding Sound & Communications Work	$ 43.13	23.31

FOOTNOTES;
a. 6 Paid Holidays: New Year's Day; Memorial Day; July 4th; Labor Day; Thanksgiving Day; & Christmas Day
b. 1 week's paid vacation for 1 year's service; 2 weeks' paid vacation for 2 or more years' service

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ELEC0038-008 04/24/2023

CUYAHOGA, GEAUGA (Bainbridge, Chester & Russell Townships) & LORAIN (Columbia Township)

	Rates	Fringes
Sound & Communication Technician		
Communications Technician	$ 29.80	13.80
Installer Technician	$ 28.55	13.76

FOOTNOTES;
a. 6 Paid Holidays: New Year's Day; Memorial Day; July 4th;

Labor Day; Thanksgiving Day; & Christmas Day
b. 1 week's paid vacation for 1 year's service; 2 weeks' paid vacation for 2 or more years' service

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ELEC0064-003 11/27/2023

COLUMBIANA (Butler, Fairfield, Perry, Salem & Unity Townships) MAHONING (Austintown, Beaver, Berlin, Boardman, Canfield, Ellsworth, Coitsville, Goshen, Green, Jackson, Poland, Springfield & Youngstown Townships), & TRUMBULL (Hubbard & Liberty Townships)

	Rates	Fringes
ELECTRICIAN	$ 37.90	20.08

ELEC0071-001 01/01/2019

ASHLAND, CHAMPAIGN, CLARK, COSHOCTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HIGHLAND, HOCKING, JACKSON (Coal, Jackson, Liberty, Milton, Washington & Wellston Townships), KNOX, LICKING, MADISON, MARION, MONROE, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE (Beaver, Benton, Jackson, Mifflin, Pebble, Peepee, Perry & Seal Townships), RICHLAND, ROSS, TUSCARAWAS (Auburn, Bucks, Clay, Jefferson, Oxford, Perry, Salem, Rush, Washington & York Townships), UNION, VINTON (Clinton, Eagle, Elk, Harrison, Jackson, Richland & Swan Townships), and WASHINGTON COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operators	$ 33.62	13.40
Groundmen	$ 24.17	11.32
Linemen & Cable Splicers	$ 38.27	14.42

ELEC0071-004 01/01/2019

AUGLAIZE, CLINTON, DARKE, GREENE, LOGAN, MERCER, MIAMI, MONTGOMERY, PREBLE, and SHELBY COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator	$ 33.62	13.40
Groundman	$ 24.17	11.32
Lineman & Cable Splicers	$ 38.27	14.42

ELEC0071-005 12/31/2018

ASHTABULA, CUYAHOGA, GEAUGA, LAKE & LORAIN

	Rates	Fringes
LINE CONSTRUCTION: Equipment Operator		
DOT/Traffic Signal & Highway Lighting Projects	$ 32.44	14.10
Municipal Power/Transit Projects	$ 40.10	16.42
LINE CONSTRUCTION: Groundman		

DOT/Traffic Signal &
Highway Lighting Projects...$ 25.06 12.26
Municipal Power/Transit
Projects.....$ 31.19 14.11
LINE CONSTRUCTION:
Linemen/Cable Splicer
DOT/Traffic Signal &
Highway Lighting Projects...$ 36.13 15.03
Municipal Power/Transit
Projects.....$ 44.56 17.58

ELEC0071-008 01/01/2019

COLUMBIANA, MAHONING, and TRUMBULL COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator.....	$ 33.62	13.40
Groundman.....	$ 24.17	11.32
Lineman & Cable Splicers....	$ 38.27	14.42

ELEC0071-010 01/01/2019

BELMONT, CARROLL, HARRISON, HOLMES, JEFFERSON, MEDINA, PORTAGE, STARK, SUMMIT, and WAYNE COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator.....	$ 33.62	13.40
Groundman.....	$ 24.17	11.32
Lineman & Cable Splicers....	$ 38.27	14.42

ELEC0071-013 01/01/2019

BROWN, BUTLER, CLERMONT, HAMILTON, and WARREN COUNTIES

	Rates	Fringes
Line Construction		
Equipment Operator.....	$ 33.62	13.40
Groundman.....	$ 24.17	11.32
Lineman & Cable Splicers....	$ 38.27	14.42

ELEC0071-014 01/01/2019

ADAMS, ATHENS, GALLIA, JACKSON (Bloomfield, Franklin, Hamilton, Lick, Jefferson, Scioto & Madison Townships), LAWRENCE, MEIGS, PIKE (Camp Creek, Marion, Newton, Scioto, Sunfish & Union Townships), SCIOTO & VINTON (Brown, Knox, Madison, Vinton & Wilkesville Townships)

	Rates	Fringes
Line Construction		
Equipment Operator.....	$ 33.62	13.40
Groundman.....	$ 24.17	11.32
Lineman & Cable Splicers....	$ 38.27	14.42

ELEC0082-002 12/04/2023

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE & WARREN

(Wayne, Clear Creek & Franklin Townships)

	Rates	Fringes
ELECTRICIAN	$ 36.00	21.99

* ELEC0082-006 11/28/2022

CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE & WARREN
(Wayne, Clear Creek & Franklin Townships)

	Rates	Fringes
Sound & Communication Technician		
Cable Puller	$ 13.10 **	4.76
Installer/Technician	$ 26.20	13.89

* ELEC0129-003 02/26/2024

LORAIN (Except Columbia Township) & MEDINA (Litchfield & Liverpool Townships)

	Rates	Fringes
ELECTRICIAN	$ 41.40	18.36

* ELEC0129-004 02/26/2024

ERIE & HURON (Lyme, Ridgefield, Norwalk, Townsend, Wakeman, Sherman, Peru, Bronson, Hartland, Clarksfield, Norwich, Greenfield, Fairfield, Fitchville & New London Townships)

	Rates	Fringes
ELECTRICIAN	$ 41.40	18.36

ELEC0141-003 06/01/2023

BELMONT COUNTY

	Rates	Fringes
CABLE SPLICER	$ 30.63	25.87
ELECTRICIAN	$ 35.70	28.87

ELEC0212-003 11/26/2018

BROWN, CLERMONT & HAMILTON

	Rates	Fringes
Sound & Communication Technician	$ 24.35	10.99

ELEC0212-005 06/05/2023

BROWN, CLERMONT, and HAMILTON COUNTIES

	Rates	Fringes

ELECTRICIAN.....$ 34.41 21.55

ELEC0245-001 08/29/2022

ALLEN, HARDIN, VAN WERT & WYANDOT (Crawford, Jackson, Marseilles, Mifflin, Richland, Ridge & Salem Townships)

	Rates	Fringes
Line Construction		
Equipment Operator	$ 32.37	26.5%+7.25
Groundman Truck Driver	$ 19.35	7.00+27.25%
Lineman	$ 44.22	7.00+27.25%

FOOTNOTE: a. Half day's Paid Holiday: The last 4 hours of the workday prior to Christmas or New Year's Day

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ELEC0245-003 01/01/2024

DEFIANCE, FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, and WOOD COUNTIES

	Rates	Fringes
Line Construction		
Cable Splicer	$ 52.53	7.75+27%
Groundman/Truck Driver	$ 19.99	7.75+27%
Heli-arc Welding	$ 45.98	7.75+27%
Lineman	$ 45.68	7.75+27%
Operator - Class 1	$ 36.54	7.75+27%
Operator - Class 2	$ 31.98	7.75+27%
Traffic Signal & Lighting Technician	$ 41.11	7.75+27%

FOOTNOTE: a. 6 Observed Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; & Christmas Day. Employees who work on a holiday shall be paid at a rate of double their applicable classified straight-time rates for the work performed on such holiday.

ELEC0245-004 08/28/2023

ERIE COUNTY

	Rates	Fringes
Line Construction		
Cable Splicer	$ 49.14	26.75%+6.75
Cablesplicer	$ 52.76	27%+7.50
Groundman/Truck Driver	$ 20.07	27%+7.50
Lineman	$ 45.88	27%+7.50
Operator - Class 1	$ 36.70	27%+7.50
Operator - Class 2	$ 32.12	27%+7.50

FOOTNOTE: a. 6 Observed Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; & Christmas Day. Employees who work on a holiday shall be paid at a rate of double their applicable classified straight-time rates for the work performed on such holiday.

ELEC0246-001 10/30/2023

	Rates	Fringes
ELECTRICIAN	$ 42.50	55%+13.88

FOOTNOTE: a. 1 1/2 Paid Holidays: The last scheduled workday prior to Christmas & 4 hours on Good Friday.

ELEC0306-005 05/29/2023

MEDINA (Brunswick, Chatham, Granger, Guilford, Harrisville, Hinckley, Homer, Lafayette, Medina, Montville, Sharon, Spencer, Wadsworth, Westfield & York Townships), PORTAGE (Atwater, Aurora, Brimfield, Deerfield, Franklin, Mantua, Randolph, Ravenna, Rootstown, Shalersville, Streetsboro & Suffield Townships), SUMMIT & WAYNE (Baughman, Canaan, Chester, Chippewa, Congress, Green, Milton, & Wayne Townships)

	Rates	Fringes
CABLE SPLICER	$ 36.87	16.56
ELECTRICIAN	$ 40.15	5.25%+20.85

ELEC0317-002 05/29/2023

GALLIA & LAWRENCE

	Rates	Fringes
CABLE SPLICER	$ 32.68	18.13
ELECTRICIAN	$ 37.15	28.48

ELEC0540-005 01/01/2024

CARROLL (Northern half, including Fox, Harrison, Rose & Washington Townhships), COLUMBIANA (Knox Township), HOLMES, MAHONING (Smith Township), STARK, TUSCARAWAS (North of Auburn, Clay, Rush & York Townships), and WAYNE (South of Baughman, Chester, Green & Wayne Townships) COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 36.96	28.18

ELEC0573-003 11/27/2023

ASHTABULA (Colebrook, Wayne, Williamsfield, Orwell & Windsor Townships), GEAUGA (Auburn, Middlefield, Parkman & Troy Townships), MAHONING (Milton Township), PORTAGE (Charlestown, Edinburg, Freedom, Hiram, Nelson, Palmyra, Paris & Windham Townships), and TRUMBULL (Except Liberty & Hubbard Townships)

	Rates	Fringes
ELECTRICIAN	$ 40.40	22.08

ELEC0575-001 05/29/2023

ADAMS, FAYETTE, HIGHLAND, HOCKING, JACKSON (Bloomfield, Franklin, Hamilton, Jefferson, Lick, Madison, Scioto, Coal,

Jackson, Liberty, Milton & Washington Townships), PICKAWAY (Deer Creek, Perry, Pickaway, Salt Creek & Wayne Townships), PIKE (Beaver, Benton, Jackson, Mifflin, Pebble, PeePee, Perry, Seal, Camp Creek, Newton, Scioto, Sunfish, Union & Marion Townships), ROSS, SCIOTO & VINTON (Clinton, Eagle, Elk, Harrison, Jackson, Richland & Swan Townships)

	Rates	Fringes
ELECTRICIAN	$ 37.00	22.26

ELEC0648-001 08/29/2023

BUTLER and WARREN COUNTIES (Deerfield, Hamilton, Harlan, Massie, Salem, Turtle Creek, Union & Washington Townships)

	Rates	Fringes
CABLE SPLICER	$ 30.50	18.23
ELECTRICIAN	$ 34.00	21.98

ELEC0673-004 01/01/2024

ASHTABULA (Excluding Orwell, Colebrook, Williamsfield, Wayne & Windsor Townships), GEAUGA (Burton, Chardon, Claridon, Hambden, Huntsburg, Montville, Munson, Newbury & Thompson Townships) and LAKE COUNTIES

	Rates	Fringes
CABLE SPLICER	$ 33.81	21.47
ELECTRICIAN	$ 37.38	23.75

ELEC0683-002 05/29/2023

CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON, PICKAWAY (Circleville, Darby, Harrison, Jackson, Madison, Monroe, Muhlenberg, Scioto, Walnut & Washington Townships), and UNION COUNTIES

	Rates	Fringes
CABLE SPLICER	$ 38.75	24.19
ELECTRICIAN	$ 37.75	24.16

ELEC0688-003 05/30/2022

ASHLAND, CRAWFORD, HURON (Richmond, New Haven, Ripley & Greenwich Townships), KNOX (Liberty, Clinton, Union, Howard, Monroe, Middleberry, Morris, Wayne, Berlin, Pike, Brown & Jefferson Townships), MARION, MORROW, RICHLAND and WYANDOT (Sycamore, Crane, Eden, Pitt, Antrim & Tymochtee Townships) COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 32.30	21.83

ELEC0972-002 06/01/2023

ATHENS, MEIGS, MONROE, MORGAN, NOBLE, VINTON (Brown, Knox, Madison, Vinton & Wilkesville Townships), and WASHINGTON COUNITES

	Rates	Fringes
CABLE SPLICER	$ 35.70	30.26
ELECTRICIAN	$ 35.45	30.25

ELEC1105-001 05/29/2023

COSHOCTON, GUERNSEY, KNOX (Jackson, Clay, Morgan, Miller, Milford, Hilliar, Butler, Harrison, Pleasant & College Townships), LICKING, MUSKINGUM, PERRY, and TUSCARAWAS (Auburn, York, Clay, Jefferson, Rush, Oxford, Washington, Salem, Perry & Bucks Townships) COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 36.45	24.22

ENGI0018-003 05/01/2019

ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, and SUMMIT COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 38.63	15.20
GROUP 2	$ 38.53	15.20
GROUP 3	$ 37.49	15.20
GROUP 4	$ 36.27	15.20
GROUP 5	$ 30.98	15.20
GROUP 6	$ 38.88	15.20
GROUP 7	$ 39.13	15.20

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24"" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; Wheel

Excavator; and Asphalt Plant Engineer (Cleveland District Only).

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48""; Bulldozer; Endloader; Horizontal Directional Drill (Over 50,000 ft lbs thrust); Hydro Milling Machine; Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24"" wide & under); Vermeer type Concrete Saw; and Maintenance Operators (Portage and Summit Counties Only).

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer (Portage and Summit Counties Only); Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4"" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); Welding Machines; and Railroad Tie Inserter/Remover; Articulating/straight bed end dumps if assigned (minus $4.00 per hour.

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48"" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway); Finishing Machine; Fireperson, Floating Equipment (all types); Forklift; Form Trencher; Hydro Hammer expect masonary; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); and Vibratory Compactor with Integral Power.

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt Plant); Generator; Masonry Fork Lift; Inboard-Outboard Motor Boat Launch; Oil Heater (asphalt plant); Oiler/Helper; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4"" discharge); Signalperson; Tire Repairperson; VAC/ALLS; Cranes - Compact, track or rubber under 4,000 pound capacity; fueling and greasing; and Chainmen.

GROUP 6 - Master Mechanic & Boom from 150 to 180.

GROUP 7 - Boom from 180 and over.

ENGI0018-004 05/01/2019

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, and YANDOT COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 37.14	15.20
GROUP 2	$ 37.02	15.20
GROUP 3	$ 35.98	15.20
GROUP 4	$ 34.80	15.20
GROUP 5	$ 29.34	15.20
GROUP 6	$ 37.39	15.20
GROUP 7	$ 37.64	15.20

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver; Tower Derrick; Tree Shredder; Trench Machine (Over 24"" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; and Wheel Excavator.

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48""; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 50,000 ft. lbs. thrust);Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24"" wide & under); and Vermeer type Concrete Saw.

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4"" & over discharge); Railroad Tie Inserter/Remover; Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); and Welding Machines; Artiaculating/straight bed end dumps if assigned (minus $4.00 per hour.

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48"" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift; Form Trencher; Hydro Hammer expect masonary; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); and Vibratory Compactor with Integral Power.

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt Plant); Generator; Masonary Forklift; Inboard-Outboard Motor Boat Launch; Oil Heater (asphalt plant); Oiler/Helper; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4"" discharge); Signalperson; Tire Repairperson; VAC/ALLS; Cranes - Compact, track or rubber under 4,000 pound capacity; fueling and greasing; and Chainmen.

GROUP 6 - Master Mechanic & Boom from 150 to 180.

GROUP 7 - Boom from 180 and over.

ENGI0066-023 06/01/2017

COLUMBIANA, MAHONING & TRUMBULL COUNTIES

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 1 - A & B	$ 39.23	19.66
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 2 - A & B	$ 38.90	19.66
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 3 - A & B	$ 34.64	19.66
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 4 - A & B	$ 30.70	19.66
ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS		

GROUP 5 - A & B	$ 27.30	19.66
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 1 - C & D	$ 35.96	19.66
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 2 - C & D	$ 35.66	19.66
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 3 - C & D	$ 31.76	19.66
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 4 - C & D	$ 28.14	19.66
HAZARDOUS/TOXIC WASTE PROJECTS		
GROUP 5 - C & D	$ 25.03	19.66
ALL OTHER WORK		
GROUP 1	$ 32.69	19.66
ALL OTHER WORK		
GROUP 2	$ 32.42	19.66
ALL OTHER WORK		
GROUP 3	$ 28.87	19.66
ALL OTHER WORK		
GROUP 4	$ 25.58	19.66
ALL OTHER WORK		
GROUP 5	$ 22.75	19.66

GROUP 1 - Rig, Pile Driver or Caisson Type; & Rig, Pile Hydraulic Unit Attached

GROUP 2 - Asphalt Heater Planer; Backfiller with Drag Attachment; Backhoe; Backhoe with Shear attached; Backhoe-Rear Pivotal Swing; Batch Plant-Central Mix Concrete; Batch Plant, Portable concrete; Berm Builder-Automatic; Boat Derrick; Boat-Tug; Boring Machine Attached to Tractor; Bullclam; Bulldozer; C.M.I. Road Builder & Similar Type; Cable Placer & Layer; Carrier-Straddle; Carryall-Scraper or Scoop; Chicago Boom; Compactor with Blade Attached; Concrete Saw (Vermeer or similar type); Concrete Spreader Finisher; Combination, Bidwell Machine; Crane; Crane-Electric Overhead; Crane-Rough Terrain; Crane-Side Boom; Crane-Truck; Crane-Tower; Derrick-Boom; Derrick-Car; Digger-Wheel (Not trencher or road widener); Double Nine; Drag Line; Dredge; Drill-Kenny or Similar Type; Easy Pour Median Barrier Machine (or similar type); Electromatic; Frankie Pile; Gradall; Grader; Gurry; Self-Propelled; Heavy Equipment Robotics Operator/Mechanic; Hoist-Monorail; Hoist-Stationary & Mobile Tractor; Hoist, 2 or 3 drum; Horizontal Directional Drill Operator; Jackall; Jumbo Machine; Kocal & Kuhlman; Land-Seagoing Vehicle; Loader, Elevating; Loader, Front End; Loader, Skid Steer; Locomotive; Mechanic/Welder; Metro Chip Harvester with Boom; Mucking Machine; Paver-Asphalt Finishing Machine; Paver-Road Concrete; Paver-Slip Form (C.M.I. or similar); Place Crete Machine with Boom; Post Driver (Carrier mounted); Power Driven Hydraulic Pump & Jack (When used in Slip Form or Lift Slab Construction); Pump Crete Machine; Regulator-Ballast; Hydraulic Power Unit not attached to Rig for Pile Drillings; Rigs-Drilling; Roto Mill or similar Full Lane (8' Wide & Over); Roto Mill or similar type (Under 8'); Shovel; Slip Form Curb Machine; Speedwing; Spikemaster; Stonecrusher; Tie Puller & Loader; Tie Tamper; Tractor-Double Boom; Tractor with Attachments; Truck-Boom; Truck-Tire; Trench Machine; Tunnel Machine (Mark 21 Java

or similar); & Whirley (or similar type)

GROUP 3 - Asphalt Plant; Bending Machine (Pipeline or similar type); Boring machine, Motor Driven; Chip Harvester without Boom; Cleaning Machine, Pipeline Type; Coating Machine, Pipeline Type; Compactor; Concrete Belt Placer; Concrete Finisher; Concrete Planer or Asphalt; Concrete Spreader; Elevator; Fork Lift (Home building only); Fork lift & Lulls; Fork Lift Walk Behind (Hoisting over 1 buck high); Form Line Machine; Grease Truck operator; Grout Pump; Gunnite Machine; Horizontal Directional Drill Locator; Single Drum Hoist with or without Tower; Huck Bolting Machine; Hydraulic Scaffold (Hoisting building materials); Paving Breaker (Self-propelled or Ridden); Pipe Dream; Pot Fireperson (Power Agitated); Refrigeration Plant; Road Widener; Roller; Sasgen Derrick; Seeding Machine; Soil Stabilizer (Pump type); Spray Cure Machine, Self-Propelled; Straw Blower Machine; Sub-Grader; Tube Finisher or Broom C.M.I. or similar type; & Tugger Hoist

GROUP 4 - Air Curtain Destructor & Similar Type; Batch Plant-Job Related; Boiler Operator; Compressor; Conveyor; Curb Builder, self-propelled; Drill Wagon; Generator Set; Generator-Steam; Heater-Portable Power; Hydraulic Manipulator Crane; Jack-Hydraulic Power driven; Jack-Hydraulic (Railroad); Ladavator; Minor Machine Operator; Mixer-Concrete; Mulching Machine; Pin Puller; Power Broom; Pulverizer; Pump; Road Finishing Machine (Pull Type); Saw-Concrete-Self-Propelled (Highway Work); Signal Person; Spray Cure Machine-Motor Powered; Stump Cutter; Tractor; Trencher Form; Water Blaster; Steam Jenny; Syphon; Vibrator-Gasoline; & Welding Machine

GROUP 5 - Brakeperson; Fireperson; & Oiler

IRON0017-002 05/01/2023

ASHTABULA (North of Route 6, starting at the Geauga County Line, proceeding east to State Route 45), CUYAHOGA, ERIE (Eastern 2/3), GEAUGA, HURON (East of a line drawn from the north border through Monroeville & Willard), LAKE, LORAIN, MEDINA (North of Old Rte. #224), PORTAGE (West of a line from Middlefield to Shalersville to Deerfield), and SUMMIT (North of Old Rte. #224, including city limits of Barberton) COUNTIES

	Rates	Fringes
IRONWORKER		
Ornamental, Reinforcing, & Structural	$ 35.83	28.01

IRON0017-010 05/01/2023

ASHTABULA (Eastern part from Lake Erie on the north to route #322 on the south to include Conneaut, Kingsville, Sheffield, Denmark, Dorset, Cherry Valley, Wayne, Monroe, Pierpont, Richmond, Andover & Williamsfield Townships)

	Rates	Fringes
IRONWORKER		
Structural, including		

metal building erection & Reinforcing	$ 35.83	28.01

IRON0044-001 06/01/2022

ADAMS (Western Part), BROWN, BUTLER (Southern Part), CLERMONT, CLINTON (South of a line drawn from Blanchester to Lynchburg), HAMILTON, HIGHLAND (Excluding eastern one-fifth & portion of county inside lines drawn from Marshall to Lynchburg from the northern county line through E. Monroe to Marshall) and WARREN (South of a line drawn from Blanchester through Morrow to the west county line) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING	$ 32.37	22.30
Beyond 30-mile radius of Hamilton County Courthouse	$ 28.67	21.20
Up to & including 30-mile radius of Hamilton County Courthouse	$ 27.60	20.70

IRON0044-002 06/01/2023

CLINTON (South of a line drawn from Blanchester to Lynchburg), HAMILTON, HIGHLAND (Excluding eastern one-fifth & portion of county inside lines drawn from Marshall to Lynchburg from the northern county line through E. Monroe to Marshall) & WARREN (South of a line drawn from Blanchester through Morrow to the west county line)

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 30.75	23.30
Ornamental; Structural	$ 32.37	23.30

IRON0055-003 07/01/2023

CRAWFORD (Area Between lines drawn from where Hwy #598 & #30 meet through N. Liberty to the northern border & from said Hwy junction point due west to the border), DEFIANCE (S. of a line drawn from where Rte. #66 meets the northern line through Independence to the eastern county border), ERIE (Western 1/3), FULTON, HANCOCK, HARDIN (North of a line drawn from Maysville to a point 4 miles south of the northern line on the eastern line), HENRY, HURON (West of a line drawn from the northern border through Monroeville & Willard), LUCAS, OTTAWA, PUTNAM (East of a line drawn from the northern border down through Miller City to where #696 meets the southern border), SANDUSKY, SENECA, WILLIAMS (East of a line drawn from Pioneer through Stryker to the southern border), WOOD & WYANDOT (North of Rte. #30)

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 25.40	23.87
Flat Road Mesh	$ 29.77	21.30
Tunnels & Caissons Under Pressure	$ 29.77	21.30
All Other Work	$ 34.25	28.20

IRON0147-002 06/01/2023

ALLEN (Northern half), DEFIANCE (Northern part, excluding south of a line drawn from where Rte. #66 meets the northern line through Independence to the eastern county border), MERCER (Northern half), PAULDING, PUTNAM (Western part, excluding east of a line drawn from the northern border down through Miller City to where #696 meets the southern border), VAN WERT, and WILLIAMS (Western part, excluding east of a line drawn from Pioneer through Stryker to the southern border) COUNTIES

	Rates	Fringes
IRONWORKER	$ 33.00	25.59

IRON0172-002 06/01/2023

CHAMPAIGN (Eastern one-third), CLARK (Eastern one-fourth), COSHOCTON (West of a line beginning at the northwestern county line going through Walhonding & Tunnel Hill to the southern county line), CRAWFORD (South of Rte. #30), DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, HARDIN (Excluding a line drawn from Roundhead to Maysville), HIGHLAND (Eastern one-fifth), HOCKING, JACKSON (Northern half), KNOX, LICKING, LOGAN (Eastern one-third), MADISON, MARION, MORROW, MUSKINGUM (West of a line starting at Adams Mill going to Adamsville & going from Adamsville through Blue Rock to the southern border), PERRY, PICKAWAY, PIKE (Northern half), ROSS, UNION, VINTON and WYANDOT (South of Rte. #30) COUNTIES

	Rates	Fringes
IRONWORKER	$ 34.07	22.55

IRON0207-004 06/01/2023

ASHTABULA (Southern part starting at the Geauga County line), COLUMBIANA (E. of a line from Damascus to Highlandtown), MAHONING (N. of Old Route #224), PORTAGE (E. of a line from Middlefield to Shalersville to Deerfield) & TRUMBULL

	Rates	Fringes
IRONWORKER		
Layout; Sheeter	$ 34.00	27.16
Ornamental; Reinforcing; Structural	$ 33.00	27.16
Ornamental; Reinforcing	$ 28.92	25.61

IRON0290-002 06/01/2023

ALLEN (Southern half), AUGLAIZE, BUTLER (North of a line drawn from east to the west county line going through Oxford, Darrtown & Woodsdale), CHAMPAIGN (Excluding east of a line drawn from Catawla to the point where #68 intersects the northern county line), CLARK (Western two-thirds), CLINTON (Excluding south of a line drawn from Blanchester to Lynchburg), DARKE, GREENE, HIGHLAND (Inside lines drawn from Marshall to Lynchburg & from the northern county line through East Monroe to Marshall), LOGAN (West of a line drawn from West Liberty to where the northern county line meets the

western county line of Hardin), MERCER (Southern half), MIAMI, MONTGOMERY, PREBLE, SHELBY & WARREN (Excluding south of a line drawn from Blanchester through Morrow to the western county line) COUNTIES

	Rates	Fringes
IRONWORKER	$ 32.69	24.05

IRON0549-003 12/01/2022

BELMONT, GUERNSEY, HARRISON, JEFFERSON, MONROE & MUSKINGUM (Excluding portion west of a line starting at Adams Mill going to Adamsville and going from Adamsville through Blue Rock to the south border)

	Rates	Fringes
IRONWORKER	$ 35.19	25.66

IRON0550-004 05/01/2023

ASHLAND, CARROLL, COLUMBIANA (W. of a line from Damascus to Highlandtown), COSHOCTON (E. of a line beginning at NW Co. line going through Walhonding & Tunnel Hill to the South Co. line), HOLMES, HURON (S. of Old Rte. #224), MAHONING (S. of Old Rte. #224), MEDINA (S. of Old Rte. #224), PORTAGE (S. of Old Rte. #224), RICHLAND, STARK, SUMMIT (S. of Old Rte. #224, Excluding city limits of Barberton), TUSCARAWAS, & WAYNE

	Rates	Fringes
Ironworkers:Structural, Ornamental and Reinforcing	$ 33.00	22.27

IRON0769-004 06/01/2023

ADAMS (Eastern Half), GALLIA, JACKSON (Southern Half), LAWRENCE & SCIOTO

	Rates	Fringes
IRONWORKER	$ 36.16	28.34

IRON0787-003 12/01/2023

ATHENS, MEIGS, MORGAN, NOBLE, and WASHINGTON COUNTIES

	Rates	Fringes
IRONWORKER	$ 33.30	23.95

LABO0265-008 05/01/2023

	Rates	Fringes
LABORER ASHTABULA, ERIE, HURON, LORAIN, LUCAS, MAHONING, MEDINA, OTTAWA, PORTAGE, SANDUSKY, STARK, SUMMIT,		

TRUMBULL & WOOD COUNTIES		
GROUP 1	$ 35.05	13.70
GROUP 2	$ 35.22	13.70
GROUP 3	$ 35.55	13.70
GROUP 4	$ 36.00	13.70
CUYAHOGA AND GEAUGA COUNTIES ONLY: SEWAGE PLANTS, WASTE PLANTS, WATER TREATMENT FACILITIES, PUMPING STATIONS, & ETHANOL PLANTS CONSTRUCTION	$ 37.66	13.70
CUYAHOGA, GEAUGA & LAKE COUNTIES		
GROUP 1	$ 36.28	13.70
GROUP 2	$ 36.45	13.70
GROUP 3	$ 36.78	13.70
GROUP 4	$ 37.23	13.70
REMAINING COUNTIES OF OHIO		
GROUP 1	$ 34.62	13.70
GROUP 2	$ 34.79	13.70
GROUP 3	$ 35.12	13.70
GROUP 4	$ 35.57	13.70

LABORER CLASSIFICATIONS

GROUP 1 - Asphalt Laborer; Carpenter Tender; Concrete Curing Applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Mesh Handlers & Placer; Right-of-way Laborer; Riprap Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (level D); Diver Tender; Zone Person & Traffic Control

GROUP 2 - Asphalt Raker; Concrete Puddler; Kettle Man Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Paint Striper; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4"" & Under (Gas, Air or Electric) & Hazardous Waste (level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer and Waterline, Cleaning, Repairing & Reconditioning); Sandblaster Nozzle Person; & Hazardous Waste (level B)

GROUP 3 - Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (level A); Concrete Specialist; Concrete Crew in Tunnels (With Air-pressurized - $1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker

GROUP 4 - Miner (With Air-pressurized - $1.00 premium); & Gunite Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID

THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

PAIN0006-002 05/01/2023

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. of the East-West Turnpike) & SUMMIT (N. of the East-West Turnpike)

	Rates	Fringes
PAINTER		
COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS		
GROUP 1	$ 30.75	18.95
GROUP 2	$ 31.15	18.95
GROUP 3	$ 31.45	18.95
GROUP 4	$ 37.01	18.95
COMMERCIAL REPAINT		
GROUP 1	$ 29.25	18.95
GROUP 2	$ 29.65	18.95
GROUP 3	$ 29.95	18.95

PAINTER CLASSIFICATIONS - COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS

GROUP 1 - Brush; & Roller

GROUP 2 - Sandblasting & Buffing

GROUP 3 - Spray Painting; Closed Steel Above 55 feet; Bridges & Open Structural Steel; Tanks - Water Towers; Bridge Painters; Bridge Riggers; Containment Builders

GROUP 4 - Bridge Blaster

PAINTER CLASSIFICATIONS - COMMERCIAL REPAINT

GROUP 1 - Brush; & Roller

GROUP 2 - Sandblasting & Buffing

GROUP 3 - Spray Painting

PAIN0007-002 07/01/2023

FULTON, HENRY, LUCAS, OTTAWA (Excluding Allen, Bay, Bono, Catawba Island, Clay Center, Curtice, Danbury, Eagle Beach, Elliston, Elmore, Erie, Fishback, Gem Beach & Genova) & WOOD

	Rates	Fringes
PAINTER		
NEW COMMERCIAL WORK		
GROUP 1	$ 28.59	20.04
GROUP 2	$ 29.59	20.04
GROUP 3	$ 29.59	20.04
GROUP 4	$ 29.59	20.04
GROUP 5	$ 29.59	20.04
GROUP 6	$ 29.59	20.04
GROUP 7	$ 29.59	20.04
GROUP 8	$ 29.59	20.04
GROUP 9	$ 29.59	20.04

REPAINT IS 90% OF JR

PAINTER CLASSIFICATIONS

GROUP 1 - Brush; Spray & Sandblasting Pot Tender

GROUP 2 - Refineries & Refinery Tanks; Surfaces 30 ft. or over where material is applied to or labor performed on above ground level (exterior), floor level (interior)

GROUP 3 - Swing Stage & Chair

GROUP 4 - Lead Abatement

GROUP 5 - All Methods of Spray

GROUP 6 - Solvent-Based Catalized Epoxy Materials of 2 or More Component Materials, to include Solvent-Based Conversion Varnish (excluding water based)

GROUP 7 - Spray Solvent Based Material; Sand & Abrasive Blasting

GROUP 8 - Towers; Tanks; Bridges; Stacks Over 30 Feet

GROUP 9 - Epoxy Spray (excluding water based)

PAIN0012-008 05/01/2019

BUTLER COUNTY

	Rates	Fringes
PAINTER		
GROUP 1	$ 21.95	10.20
GROUP 2	$ 25.30	10.20
GROUP 3	$ 25.80	10.20
GROUP 4	$ 26.05	10.20
GROUP 5	$ 26.30	10.20

PAINTER CLASSIFICATIONS

GROUP 1: Bridge Equipment Tender; Bridge/Containment Builder

GROUP 2: Brush & Roller

GROUP 3: Spray

GROUP 4: Sandblasting; & Waterblasting

GROUP 5: Elevated Tanks; Steeplejack Work; Bridge; & Lead Abatement

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PAIN0012-010 05/01/2019

BROWN, CLERMONT, CLINTON, HAMILTON & WARREN

	Rates	Fringes
PAINTER		
HEAVY & HIGHWAY BRIDGES-		

GUARDRAILS-LIGHTPOLES-
STRIPING
Bridge Equipment Tender
and Containment Builder....$ 21.95 10.20
Bridges when highest
point of clearance is 60
feet or more; & Lead
Abatement Projects.....$ 26.30 10.20
Brush & Roller.....$ 25.30 10.20
Sandblasting & Hopper
Tender; Water Blasting.....$ 26.05 10.20
Spray.....$ 25.80 10.20

PAIN0093-001 12/01/2023

ATHENS, GUERNSEY, HOCKING, MONROE, MORGAN, NOBLE and
WASHINGTON COUNTIES

	Rates	Fringes
PAINTER		
Bridges; Locks; Dams; Tension Towers; & Energized Substations	$ 35.45	23.69
Power Generating Facilities	$ 32.30	23.69

PAIN0249-002 05/01/2023

CLARK, DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE

	Rates	Fringes
PAINTER		
GROUP 1 - Brush & Roller	$ 26.23	12.56
GROUP 2 - Swing, Scaffold Bridges; Structural Steel; Open Acid Tank; High Tension Electrical Equipment; & Hot Pipes	$ 26.23	12.56
GROUP 3 - Spray; Sandblast; Steamclean; Lead Abatement	$ 26.98	12.56
GROUP 4 - Steeplejack Work	$ 27.18	12.56
GROUP 5 - Coal Tar	$ 27.73	12.56
GROUP 6 - Bridge Equipment Tender & or Containment Builder	$ 34.94	12.56
GROUP 7 - Tanks, Stacks & Towers	$ 29.87	12.56
GROUP 8 - Bridge Blaster, Rigger	$ 37.94	12.56

PAIN0356-002 09/01/2009

KNOX, LICKING, MUSKINGUM, and PERRY

	Rates	Fringes
PAINTER		
Bridge Equipment Tenders and Containment Builders	$ 27.93	7.25
Bridges; Blasters; andRiggers	$ 34.60	7.25
Brush and Roller	$ 20.93	7.25

Sandblasting; Steam Cleaning; Waterblasting; and Hazardous Work	$ 25.82	7.25
Spray	$ 21.40	7.25
Structural Steel and Swing Stage	$ 25.42	7.25
Tanks; Stacks; and Towers	$ 28.63	7.25

PAIN0438-002 12/01/2023

BELMONT, HARRISON and JEFFERSON COUNTIES

	Rates	Fringes
PAINTER		
Bridges, Locks, Dams, Tension Towers & Energized Substations	$ 36.09	19.49
Power Generating Facilities	$ 32.94	19.49

PAIN0476-001 06/01/2023

COLUMBIANA, MAHONING, and TRUMBULL COUNITES

	Rates	Fringes
PAINTER		
GROUP 1	$ 27.49	17.06
GROUP 2	$ 34.12	17.06
GROUP 3	$ 27.70	17.06
GROUP 4	$ 27.99	17.06
GROUP 5	$ 28.14	17.06
GROUP 6	$ 28.39	17.06
GROUP 7	$ 29.49	17.06

PAINTER CLASSIFICATIONS:

GROUP 1: Painters, Brush & Roller

GROUP 2: Bridges

GROUP 3: Structural Steel

GROUP 4: Spray, Except Bar Joist/Deck

GROUP 5: Epoxy/Mastic; Spray- Bar Joist/Deck; Working Above 50 Feet; and Swingstages

GROUP 6: Tanks; Sandblasting

GROUP 7: Towers; Stacks

PAIN0555-002 11/01/2023

ADAMS, HIGHLAND, JACKSON, PIKE & SCIOTO

	Rates	Fringes
PAINTER		
GROUP 1	$ 32.18	20.29
GROUP 2	$ 33.81	20.29
GROUP 3	$ 35.44	20.29
GROUP 4	$ 38.63	20.29

PAINTER CLASSIFICATIONS

GROUP 1 - Containment Builder

GROUP 2 - Brush; Roller; Power Tools, Under 40 feet

GROUP 3 - Sand Blasting; Spray; Steam Cleaning; Pressure Washing; Epoxy & Two Component Materials; Lead Abatement; Hazardous Waste; Toxic Materials; Bulk & Storage Tanks of 25,000 Gallon Capacity or More; Elevated Tanks

GROUP 4 - Stacks; Bridges

PAIN0639-001 05/01/2011

	Rates	Fringes
Sign Painter & Erector	$ 20.61	3.50+a+b+c

FOOTNOTES: a. 7 Paid Holidays: New Year's Day; Memorial Day; July 4th; Labor Day; Thanksgiving Day; Christmas Day & 1 Floating Day
b. Vacation Pay: After 1 year's service - 5 days' paid vacation; After 2, but less than 10 years' service - 10 days' paid vacation; After 10, but less than 20 years' service - 15 days' paid vacation; After 20 years' service - 20 days' paid vacation
c. Funeral leave up to 3 days maximum paid leave for death of mother, father, brother, sister, spouse, child, mother-in-law, father-in-law, grandparent and inlaw provided employee attends funeral

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PAIN0788-002 06/01/2023

ASHLAND, CRAWFORD, ERIE, HANCOCK, HURON, MARION, MORROW, OTTAWA (Allen, Bay, Bono, Catawba Island, Clay Center, Curtice, Danbury, Eagle Beach, Elliston, Elmore, Erie, Fishback, Gem Beach & Genoa), RICHLAND, SANDUSKY, SENECA & WYANDOT

	Rates	Fringes
PAINTER		
Brush & Roller	$ 25.78	17.12
Structural Steel	$ 27.38	17.12

WINTER REPAINT: Between December 1 to March 31 - 90%JR

$.50 PER HOUR SHALL BE ADDED TO THE RATE OF PAY FOR THE CLASSIFICATION OF WORK:

While working swingstage, boatswain chair, needle beam and horizontal cable. While operating sprayguns, sandblasting, cobblasting and high pressure waterblasting (4000psi).

$1.00 PER HOUR SHALL BE ADDED TO THE RATE OF PAY FOR THE CLASSIFICATION OF WORK:

For the application of catalized epoxy, including latex epoxy that is deemed hazardous, lead abatement, or for work or material where special precautions beyond normal work duties must be taken. For working on stacks, tanks, and towers over 40 feet in height.

PAIN0813-005 12/01/2008

GALLIA, LAWRENCE, MEIGS & VINTON

	Rates	Fringes
PAINTER		
Base Rate	$ 24.83	10.00
Bridges, Locks, Dams & Tension Towers	$ 27.83	10.00

PAIN0841-001 06/01/2023

MEDINA, PORTAGE (South of and including Ohio Turnpike), and SUMMIT (South of and including Ohio Turnpike) COUNTIES

	Rates	Fringes
Painters:		
GROUP 1	$ 30.18	15.50
GROUP 2	$ 30.83	15.50
GROUP 3	$ 30.93	15.50
GROUP 4	$ 31.03	15.50
GROUP 5	$ 31.43	15.50
GROUP 6	$ 39.20	11.75
GROUP 7	$ 31.68	15.50

PAINTER CLASSIFICATIONS:

GROUP 1 - Brush, Roller & Paperhanger

GROUP 2 - Epoxy Application

GROUP 3 - Swing Scaffold, Bosum Chair, & Window Jack

GROUP 4 - Spray Gun Operator of Any & All Coatings

GROUP 5 - Sandblast, Painting of Standpipes, etc. from Scaffolds, Bridge Work and/or Open Structural Steel, Standpipes and/or Water Towers

GROUP 6 - Public & Commerce Transportation, Steel or Galvanized, Bridges, Tunnels & Related Support Items (concrete)

GROUP 7 - Synthetic Exterior, Drywall Finisher and/or Taper, Drywall Finisher and Follow-up Man Using Automatic Tools

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PAIN0841-002 06/01/2022

CARROLL, COSHOCTON, HOLMES, STARK, TUSCARAWAS & WAYNE

	Rates	Fringes
PAINTER		
Bridges; Towers, Poles & Stacks; Sandblasting Steel; Structural Steel & Metalizing	$ 23.50	15.45
Brush & Roller	$ 28.18	15.45
Spray; Tank Interior &		

Exterior	$ 23.50	15.45

PAIN1020-002 07/01/2023

ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY, VAN WERT, and WILLIAMS COUNTIES

	Rates	Fringes
PAINTER		
Brush & Roller	$ 26.64	15.56
Drywall Finishing & Taping	$ 27.39	15.56
Lead Abatement	$ 28.39	15.56
Spray, Sandblasting Pressure Cleaning, & Refinery	$ 27.39	15.56
Swing Stage, Chair, Spiders, & Cherry Pickers	$ 26.89	15.56
Wallcoverings	$ 27.39	15.56

All surfaces 40 ft. or over where material is applied to or labor performed on, above ground level (exterior), floor level (interior) - $.50 premium

Applying Coal Tar Products - $1.00 premium

PAIN1275-002 11/01/2023

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS & UNION

	Rates	Fringes
PAINTER		
Bridges	$ 35.01	15.16
Brush; Roller	$ 29.40	15.16
Sandblasting; Steamcleaning; Waterblasting (3500 PSI or Over)& Hazardous Work	$ 30.10	15.16
Spray	$ 29.90	15.16
Stacks; Tanks; & Towers	$ 32.21	15.16
Structural Steel & Swing Stage	$ 28.25	15.16

PLAS0109-001 05/01/2023

MEDINA, PORTAGE, STARK, and SUMMIT COUNTIES

	Rates	Fringes
PLASTERER	$ 33.74	19.02

PLAS0109-003 05/01/2023

CARROLL, HOLMES, TUSCARAWAS, and WAYNE COUNTIES

	Rates	Fringes
PLASTERER	$ 33.74	19.02

PLAS0132-002 07/01/2023

BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN COUNTIES

	Rates	Fringes
PLASTERER	$ 28.40	16.24

PLAS0404-002 05/01/2018

ASHTABULA, CUYAHOGA, GEAUGA, AND LAKE COUNTIES

	Rates	Fringes
PLASTERER	$ 29.63	17.11

PLAS0404-003 05/01/2018

LORAIN COUNTY

	Rates	Fringes
PLASTERER	$ 28.86	17.11

PLAS0526-022 05/01/2018

COLUMBIANA, MAHONING, and TRUMBULL COUNTIES

	Rates	Fringes
PLASTERER	$ 28.86	17.11

PLAS0526-023 05/01/2018

BELMONT, HARRISON, and JEFFERSON COUNTIES

	Rates	Fringes
PLASTERER	$ 28.21	17.11

PLAS0886-001 05/01/2023

FULTON, HANCOCK, HENRY, LUCAS, PUTNAM, and WOOD COUNTIES

	Rates	Fringes
PLASTERER	$ 33.74	18.95

PLAS0886-003 05/01/2023

DEFIANCE, ERIE, HURON, OTTAWA, PAULDING, SANDUSKY, and SENECA COUNTIES

	Rates	Fringes
PLASTERER	$ 33.74	18.95

PLAS0886-004 05/01/2023

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, and VAN WERT COUNTIES

	Rates	Fringes
PLASTERER	$ 33.74	18.95

PLUM0042-002 07/01/2023

ASHLAND, CRAWFORD, ERIE, HURON, KNOX, LORAIN, MORROW, RICHLAND & WYANDOT

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 37.62	25.47

PLUM0050-002 07/03/2023

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 47.15	30.21

PLUM0055-003 05/01/2023

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, MEDINA (N. of Rte. #18 & Smith Road) & SUMMIT (N. of Rte. #303, including the corporate limits of the city of Hudson)

	Rates	Fringes
PLUMBER	$ 41.11	29.88

PLUM0083-001 07/01/2017

BELMONT & MONROE (North of Rte. #78)

	Rates	Fringes
Plumber and Steamfitter	$ 32.16	31.51

PLUM0094-002 05/01/2023

CARROLL (Northen Half), STARK, and WAYNE COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 38.03	23.09

PLUM0120-002 05/01/2023

ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN (the C.E.I. Power House in Avon Lake), MEDINA (N. of Rte. #18) & SUMMIT (N. of #303)

	Rates	Fringes
PIPEFITTER	$ 45.62	27.30

PLUM0162-002 06/01/2023

CHAMPAIGN, CLARK, CLINTON, DARKE, FAYETTE, GREENE, MIAMI, MONTGOMERY & PREBLE

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 40.00	26.87

PLUM0168-002 06/01/2023

MEIGS, MONROE (South of Rte. #78), MORGAN (South of Rte. #78) & WASHINGTON

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 38.95	34.97

PLUM0189-002 06/01/2022

DELAWARE, FAIRFIELD, FRANKLIN, HOCKING, LICKING, MADISON, MARION, PERRY, PICKAWAY, ROSS & UNION

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 43.25	26.94

PLUM0219-002 06/01/2023

MEDINA (Rte. #18 from eastern edge of Medina Co., west to eastern corporate limits of the city of Medina, & on the county road from the west corporate limits of Medina running due west to and through community of Risley to the western edge of Medina County - All territory south of this line), PORTAGE, and SUMMIT (S. of Rte. #303) COUNTIES

	Rates	Fringes
Plumber and Steamfitter	$ 43.22	27.29

PLUM0392-002 06/01/2023

BROWN, BUTLER, CLERMONT, HAMILTON & WARREN

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 38.62	25.83

PLUM0396-001 06/01/2023

COLUMBIANA (Excluding Washington & Yellow Creek Townships & Liverpool Twp. - Secs. 35 & 36 - West of County Road #427), MAHONING and TRUMBULL COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 37.10	28.51

PLUM0495-002 06/01/2023

CARROLL (Rose, Monroe, Union, Lee, Orange, Perry & Loudon Townships), COLUMBIANA (Washington & Yellow Creek Townships & Liverpool Township, Secs. 35 & 36, West of County Rd. #427),

COSHOCTON, GUERNSEY, HARRISON, HOLMES, JEFFERSON, MORGAN (South to State Rte. #78 & from McConnelsville west on State Rte. #37 to the Perry County line), MUSKINGUM, NOBLE, and TUSCARAWAS COUNTIES

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 32.23	35.40

PLUM0577-002 06/01/2023

ADAMS, ATHENS, GALLIA, HIGHLAND, JACKSON, LAWRENCE, PIKE, SCIOTO & VINTON

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 39.98	26.48

PLUM0776-002 07/01/2023

ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY and VAN WERT COUNTIES

	Rates	Fringes
Plumber, Pipefitter, Steamfitter	$ 40.07	28.95

TEAM0377-003 05/01/2023

STATEWIDE, EXCEPT CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
TRUCK DRIVER		
GROUP 1	$ 31.49	16.40
GROUP 2	$ 31.91	16.40

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Asphalt Distributor; Batch; 4- Wheel Service; 4-Wheel Dump; Oil Distributor & Tandem

GROUP 2 - Tractor-Trailer Combination: Fuel; Pole Trailer; Ready Mix; Semi-Tractor; & Asphalt Oil Spraybar Man When Operated From Cab; 5 Axles & Over; Belly Dump; End Dump; Articulated Dump; Heavy Duty Equipment; Low Boy; & Truck Mechanic

TEAM0436-002 05/01/2023

CUYAHOGA, GEAUGA & LAKE

	Rates	Fringes
TRUCK DRIVER		
GROUP 1	$ 31.00	18.95
GROUP 2	$ 32.50	18.95

GROUP 1: Straight & Dump, Straight Fuel

GROUP 2: Semi Fuel, Semi Tractor, Euclids, Darts, Tank, Asphalt Spreaders, Low Boys, Carry-All, Tourna-Rockers, Hi-Lifts, Extra Long Trailers, Semi-Pole Trailers, Double Hook-Up Tractor Trailers including Team Track & Railroad Siding, Semi-Tractor & Tri-Axle Trailer, Tandem Tractor & Tandem Trailer, Tag Along Trailer, Expandable Trailer or Towing Requiring Road Permits, Ready-Mix (Agitator or Non-Agitator), Bulk Concrete Driver, Dry Batch Truck, Articulated End Dump

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.20) or 13658 ($12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

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SECTION 012000 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Schedule of Values.

B. Application for Payment.

C. Change procedures.

D. Defect assessment.

E. Measurement and Payment.

F. Unit prices.

1.2 SCHEDULE OF VALUES

A. Submit Schedule of Values on Contractor’s Application for Payment Form EJCDC C-620 or Contractor's standard form.

B. Submit Schedule of Values within twenty (20) days after date established in Notice to Proceed.

C. Format: Use Table of Contents of this Project Manual. Identify each line item with number and title of major Specification Section.

D. Include within each line item, direct proportional amount of Contractor's overhead and profit.

E. Revise schedule to list approved Change Orders with each Application for Payment.

1.3 APPLICATION FOR PAYMENT

A. Submit five (5) copies of each Application for Payment on EJCDC C-620 - Contractor's Application for Payment.

B. Content and Format: Use Schedule of Values for listing items in Application for Payment.

C. Submit updated construction schedule with each Application for Payment.

D. Payment Period: Submit at intervals stipulated in the Agreement.

E. Submit submittals with transmittal letter as specified in Section 013300 - Submittal Procedures.

F. Substantiating Data: When Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:

1. Current construction photographs.
2. Partial release of liens from major Subcontractors and vendors.
3. Record Documents as specified in Section 017000 - Execution and Closeout Requirements, for review by Owner, which will be returned to Contractor.
4. Affidavits attesting to off-Site stored products.
5. Construction Progress Schedule, revised and current as specified in Section 013300 - Submittal Procedures.

1.4 CHANGE PROCEDURES

A. Submittals: Submit name of individual who is authorized to receive change documents and is responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.

B. Carefully study and compare Contract Documents before proceeding with fabrication and installation of Work. Promptly advise Engineer of any error, inconsistency, omission, or apparent discrepancy.

C. Requests for Interpretation (RFI) and Clarifications: Allot time in construction scheduling for liaison with Engineer; establish procedures for handling queries and clarifications.

1. Use Request for Information Form for requesting interpretations (provided by Engineer upon request).
2. Engineer may respond with a direct answer on the Request for Information form, separate Engineer Response, EJCDC C-942 - Field Order, or EJCDC C-940 - Work Change Directive Form.

D. Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on EJCDC C-942.

E. Engineer may issue Notice of Change including a detailed description of proposed change with supplementary or revised Drawings and Specifications, a change in Contract Time for executing the change with stipulation of overtime work required and with the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within 10 days.

F. Contractor may propose changes by submitting a request for change to Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change and the effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on the Work by separate or other Contractors.

G. Stipulated Sum/Price Change Order: Based on Proposal Request or Word Change Directive and Contractor's maximum price quotation or Contractor's request for Change Order as approved by Engineer.

H. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of that which are not predetermined, execute Work under Work Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

I. Work Directive Change: Engineer may issue directive, on EJCDC C-940 - Work Change Directive, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.

J. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.

K. Maintain detailed records of Work done on time and material basis. Provide full information required for evaluation of proposed changes and to substantiate costs for changes in the Work.

L. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.

M. Change Order Forms: EJCDC C-941 - Change Order.

N. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

O. Correlation of Contractor Submittals:

1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
2. Promptly revise Progress Schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of Work affected by the change, and resubmit.
3. Promptly enter changes in Record Documents.

1.5 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of Engineer or Owner, it is not practical to remove and replace the Work, Engineer or Owner will direct appropriate remedy or adjust payment.

C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Owner.

D. Defective Work will be partially repaired according to instructions of Engineer, and unit sum/price will be adjusted to new sum/price at discretion of Owner.

E. Individual Specification Sections may modify these options or may identify specific formula or percentage sum/price reduction.

F. Authority of Owner to assess defects and identify payment adjustments is final.

G. Nonpayment for Rejected Products: Payment will not be made for rejected products for any of the following reasons:

1. Products wasted or disposed of in a manner that is not acceptable.

2. Products determined as unacceptable before or after placement.
3. Products not completely unloaded from transporting vehicle.
4. Products placed beyond lines and levels of the required Work.
5. Products remaining on hand after completion of the Work.
6. Loading, hauling, and disposing of rejected products.

1.6 MEASUREMENT AND PAYMENT

A. General Requirements:

1. Contractor shall take measurements and compute quantities. Engineer will verify measurements and quantities.
2. Unit Quantities: Quantities and measurements indicated on Bid Form are for Contract purposes only. Actual quantities provided shall determine payment.
   a. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at contracted unit sum/prices.
   b. When actual Work requires 25 percent or greater change in quantity than those quantities indicated, Owner or Contractor may claim a Contract Price adjustment.
3. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application, or installation of item of the Work; overhead and profit.
4. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.

B. Measurement of Quantities:

1. Measurement by Area: Measured by square dimension using mean length and width or radius.
2. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
3. Lump Sum Measurement: Items measured by weight, volume, area, linear means, or a combination thereof, as appropriate, for completed item of the Work.

C. Unit Price Schedule:

1. Bid Item 1 – Mobilization/Demobilization

   a. This Bid item shall include all costs associated with the performance of construction preparatory operations including, but not limited to, the movement of equipment and personnel to and from the Project Site; establishing and decommissioning the Field Office, storage buildings, and other facilities necessary to conduct Work under this Contract; payment of all bonding costs incurred by the Contractor; all materials and equipment required for unloading and reloading; and all costs associated with demobilization.
   b. This Bid Item shall also include any and all costs associated with the following Specification Sections:

      1) Section 012600 – Contract Modification Procedures
      2) Section 013000 – Administrative Requirements
      3) Section 013216 – Construction Progress Schedule

4) Section 013300 – Submittal Procedures
5) Section 015000 – Temporary Facilities and Controls
6) Section 017000 – Execution and Closeout Requirements
7) Section 017839 – Project Record Documents

c. Payment shall be made at the lump sum (LS) price Bid for Mobilization/Demobilization, but in no case shall the total lump sum Bid Price exceed 5% of the total Bid.
d. The payment request for mobilization on the first estimate shall not exceed 3% of the total bid price for this contract. The balance of the lump sum bid item shall be considered demobilization and shall be paid at project closeout.

2. Bid Item 2 – Video Taping of Project Area

a. This Bid item shall include all costs associated with documenting pre-construction site conditions through a video recording of the project area. Work shall conform to the requirements of Section 024010 – Video Recording.
b. Videotaping shall include the entire construction area affected, including any Contractor secured waste site and material storage or staging areas. The measurement for this bid item shall be based on a complete video recording of the entire project area.

3. Bid Item 3 – Sediment and Erosion Control

a. This Bid Item shall include any and all costs associated with Erosion and Sediment Controls

1) Such payment shall constitute full compensation for labor, materials, equipment and other associated costs to provide a complete installation and maintenance of erosion and sediment control measures.
2) This Bid Item shall also include any and all costs associated with the following Specification Sections:

a) Section 312500 – Erosion and Sedimentation Controls
b) Section 329119 – Landscaping

b. Erosion and Sediment Control shall include the entire construction area affected, as required, including any Contractor secured waste site and material storage or staging areas.

4. Bid Item 4 – Water Treatment Plant Improvements

a. The work includes the upgrade of the existing water treatment plant to increase the treatment capacity from 1.4 MGD to 2.16 MGD with improvements consisting of: upgrades to the existing flow splitter box, construction of one (1) new solids contact clarifier, demolition and reconstruction of the existing conventional gravity sand filters, removal and replacement of two (2) existing filter wet well pumps, expansion of the existing GAC building to house two (2) new GAC pressure filters, construction of one (1) new concrete clearwell structure, construction of a new chlorine feed building with all associated chemical feed equipment, removal and replacement of three (3) high service pumps, decommissioning of the existing

washwater waste lagoon, and replacement of two (2) existing waste sludge pumps. The work also includes all required site electrical service improvements, site piping, paving, and lighting, ancillary mechanical, electrical, instrumentation, controls, and spare parts, and other items needed to provide a fully-tested, complete, and operational system. Payment for this Bid Item shall be based on the lump sum bid price and shall be paid to the Contractor based on the approved schedule of values.

b. This Bid Item shall also include all costs associated with installing, maintaining, and removing the Project Sign.

5. Bid Item 5 – To provide all necessary equipment, material, labor and appurtenances required for the removal, dewatering and disposal of existing lagoon sludge.

   a. The costs for this work shall be included in the unit bid price given to provide all necessary equipment, material, labor and appurtenances required for the removal, dewatering and disposal of existing lagoon sludge.
   b. Payment for this bid item shall be based on the measured and weighed dry ton disposed of at a permitted landfill. Certified landfill disposal tickets shall be provided as documentation with contractors monthly pay applications.

6. Bid Item 6 – To provide all necessary equipment, material, labor and appurtenances required for a temporary water filtration system.

   a. The costs for this work shall be included in the unit bid price given to provide all necessary equipment, material, labor and appurtenances required for a temporary water filtration system for a period of four (4) months.
   b. Payment for this bid item shall be based on invoices provided to the Engineer as part of the contractors monthly pay applications.

PART 2 - PRODUCTS - Not Used

PART 3 - EXECUTION - Not Used

END OF SECTION 012000

SECTION 034200 - PRECAST, POST-TENSIONED, CONCRETE TANKS – RECTANGULAR (ACI 350)

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes the performance criteria, materials, design, production, and erection of rectangular precast, post-tensioned, concrete tanks for the entire project. The work performed under this Section includes all labor, material, equipment, related services, and supervision required for the manufacture and erection of the rectangular precast, post-tensioned, concrete tanks shown on the Contract Drawings.

B. Work includes, but is not limited to:

1. Pre-Equalization Basin

C. Related Sections include the following:

1. Section 312000 “Earth Moving” for preparing the subgrade to support the tanks and for backfilling requirements.
2. Section 033100 “Cast-in-Place Concrete for Precast, Post-tensioned Tanks” for concrete for the Precast, Post-tensioned Tank base slab.
3. Section 055000 “Metal Fabrications” for furnishing and installing loose hardware items.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture. Include minimum required compressive strength.

C. Shop (Erection) Drawings:

1. Indicate configuration, thickness, dimensions, and details of cast-in-place concrete base slab.
2. Indicate size, spacing and details of all necessary base slab reinforcing.
3. Indicate plan views, elevations, sections, and details necessary to install the tank.
4. Indicate locations of all post-tensioned tendons.
5. Indicate tendon stressing sequence and force, and theoretical elongations for all post-tensioned tendons.
6. Include and locate all pipe penetrations. Indicate all penetration styles.
7. Coordinate and indicate openings required by other trades.

8. Indicate location of each precast concrete member by same identification mark placed on unit.
9. Indicate relationship of structural precast concrete members to adjacent materials.
10. Indicate locations and details of joint treatment.
11. Indicate shim sizes and grout requirements.
12. Indicate bearing pad sizes and materials.

D. Comprehensive engineering design signed and sealed by a qualified professional engineer responsible for its preparation licensed in the State of West Virginia.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Tank Supplier and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include list of completed projects with project names and addresses, names and addresses of engineers and owners, and other information specified.

B. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements.

1. Cementitious materials.
2. Aggregates.
3. Reinforcing materials and post-tensioning strands.
4. Admixtures.
5. Bearing pads.
6. Other components specified in Contract Documents with applicable standards.

C. Provide handling procedures, erection sequences, and temporary bracing as required for special conditions.

D. Field quality-control test reports.

1.4 QUALITY ASSURANCE

A. Tank Supplier Qualifications: A firm that complies with the following requirements and is experienced in producing rectangular precast, post-tensioned, concrete tanks that have a record of successful in-service performance.

1. Assumes responsibility for engineering rectangular precast, post-tensioned, concrete tanks to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.

2. Precast Tank Engineer Qualifications: A professional engineer licensed in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for designs and installations of rectangular precast, post-tensioned, concrete tanks.

3. Participates in PCI's Plant Certification program and is designated a PCI-certified plant for Group C, Category C3.

   a. Certification shall be maintained throughout the production of the precast concrete units. Production shall immediately stop if at any time the fabricator's certification is revoked, regardless of the status of completion of contracted work. Production will not be allowed to re-start until the necessary corrections are made and certification has been re-established. In the event certification cannot be re-established in a timely manner to avoid project delays, the fabricator, at no additional cost, will contract out the remainder of the units to be manufactured at a PCI certified plant.

4. Has sufficient production capacity to produce required members to meet the project schedule.

B. Tank Supplier: Subject to compliance with requirements, provide rectangular precast, post-tensioned, concrete tanks by Dutchland, Inc. located in Gap, Pennsylvania, or pre-approved equal.

C. Alternate Tank Supplier Pre-Approval Qualifications: Alternate Tank Suppliers wishing to become pre-approved shall comply with the Tank Supplier Qualifications listed above, and the following requirements.

1. The firm shall have a minimum of 15 consecutive years in designing, producing, and installing tanks of similar arrangement, size and complexity using the precast, post-tensioned system.
2. The firm shall document the successful installation and performance of a minimum of ten similar facilities, and certify compliance of those structures will all applicable provisions of ACI 350 for a precast, post-tensioned structure.
3. The firm shall employ a full-time engineer on staff who meets the Precast Tank Engineer Qualifications listed above and who has served as the engineer in responsible charge of at least ten similar structures.
4. The firm shall submit with its bid a summary sheet documenting compliance with these qualifications.
5. The firm shall submit with its bid a reference sheet listing contact names and telephone numbers of at least five similar structures built by the firm.

D. Post-Tensioning Manufacturer Qualifications: Fabricating plant certified by PTI according to procedures set forth in PTI's "Manual for Certification of Plants Producing Unbonded Single Strand Tendons."

E. Post-Tensioning Installer Qualifications: A qualified installer whose full-time Project superintendent has successfully completed PTI's Level 1 Unbonded PT - Field Installation course.

1. Superintendent must receive training from post-tensioning supplier in the operation of stressing equipment to be used on Project.

F. Post-Tensioning Inspector Qualifications: Personnel performing field inspections and measuring elongations shall have successfully completed PTI's Level 2 Unbonded PT - Inspector course.

G. Design Standards: Comply with ACI 350, "Code Requirements for Environmental Concrete Structures" and the design recommendations of PCI MNL 120, "PCI Design Handbook – Precast and Prestressed Concrete," applicable to types of structural precast concrete members indicated.

H. Quality-Control Standard: For manufacturing procedures and testing requirements and quality control recommendations for types of members required, comply with PCI MNL 116, "Manual for Quality Control for Plants and Production of Structural Concrete Products."

1. Comply with dimensional tolerances of PCI MNL 135, "Tolerance Manual for Precast and Prestressed Concrete Construction."

I. Referenced Standards:
1. ACI 117, "Standard Specifications for Tolerances for Concrete Construction and Materials"
2. ACI 301, "Specifications for Structural Concrete"
3. ACI 318, "Building Code Requirements for Structural Concrete"
4. ACI 350, "Code Requirements for Environmental Engineering Concrete Structures"
5. ACI 350.1, "Specification for Tightness Testing of Environmental Engineering Concrete Containment Structures"
6. ACI 350.3, "Seismic Design of Liquid-Containing Concrete Structures"
7. ACI 350.4R, "Design Considerations for Environmental Engineering Concrete Structures"
8. ACI 350.5, "Specifications for Environmental Concrete Structures"
9. ACI 423.7, "Specification for Unbonded Single-Strand Tendon Materials and Commentary"
10. ASCE 7, "Minimum Design Loads for Buildings and Other Structures"
11. AWS D1.4, "Structural Welding Code – Reinforcing Steel"
12. PCI MNL-116, "Manual for Quality Control for Plants and Production of Structural Concrete Products"
13. PCI MNL-120, "PCI Design Handbook – Precast and Prestressed Concrete"
14. PCI MNL-135, "Tolerance Manual for Precast and Prestressed Concrete Construction"
15. PTI TAB.1, "Post-Tensioning Manual"
16. PTI M10.2, "Specification for Unbonded Single Strand Tendons"

17. PTI M10.3, “Field Procedures Manual for Unbonded Single Strand Tendons”
18. PTI M55.1, “Specification for Grouting of Post-Tensioned Structures”

J. Tank designs that rely on bolted or welded connections, or ship-lap joints, for primary, fluid-retaining walls shall not be allowed.

K. Shotcrete shall not be allowed.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle post-tensioning materials according to PTI's "Field Procedures Manual for Unbonded Single Strand Tendons.”

B. Deliver all precast concrete members in such quantities and at such times to assure compliance with the agreed upon project schedule and setting sequence to ensure continuity of installation.

C. Handle and transport precast concrete members in a manner to avoid excessive stresses that could cause cracking or other damage.

D. Store precast concrete members with adequate dunnage and bracing, and protect units to prevent contact with soil, staining, and to control cracking, distortion, warping or other physical damage.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain post-tensioning materials and equipment from single source.

2.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Providing rectangular precast, post-tensioned, concrete tanks capable of withstanding the following design loads within limits and under conditions indicated:

1. Refer to Structural General Notes on Sheet Nos. SG1, SG2 and SG3.

B. General Tank Design Criteria:

1. Wall thickness shall be as required by ACI 350.
2. Backfill shall not be used to offset fluid loads.
3. The tank walls shall be post-tensioned in accordance with ACI 350.
   a. Tank walls shall have horizontal post-tensioned tendons to provide residual compression stress.

b. Minimum residual compression shall be 125 psi after allowance for all prestress losses.

4. Comply with ACI 350 requirements including, but not limited to:
   a. Load factors.
   b. Limits on stresses at transfer of prestress and under service load.
   c. Minimum bonded reinforcement.
   d. Concrete cover over reinforcement.
5. Flotation safety factors:
   a. Worst case condition with flood to the top of the structure and only using dead load to resist flotation, minimum factor of safety shall be 1.10.
   b. All other cases not included above, whether due to flood or natural groundwater, minimum factor of safety shall be 1.25.
6. The tank structure shall be designed for normal environmental exposure.
7. Design rectangular precast, post-tensioned, concrete tanks to allow for fabrication and construction tolerances, and to accommodate deflection, shrinkage and creep of primary tank structure. Maintain structural precast concrete deflections within limits of ACI 350.

C. Basic Slab Design Criteria:

1. Design the base slab to resist all imposed loads within the allowable bearing capacity listed below:
   a. Allowable Bearing Capacity: 3,000 psf.
   b. Refer to Geotechnical Engineering Reports by NGE dated November 2015 and April 2016 for additional foundation design recommendations.
2. Minimum reinforcement in each orthogonal direction shall be in accordance with ACI 350.

2.3 FORM MATERIALS

A. Forms: Rigid, dimensionally stable, nonabsorptive material, warp and buckle free, that will provide precast concrete surfaces within fabrication tolerances indicated; nonreactive with concrete and suitable for producing required surface finishes.

1. Form-Release Agent: Commercially produced form-release agent that will not bond with, stain, or affect hardening of precast concrete surfaces and will not impair subsequent surface or joint treatments of precast concrete.

2.3 NON-PRESTRESSED REINFORCING STEEL

A. Reinforcing Bars: ASTM A 615, Grade 60, deformed.

B. Low-Alloy-Steel Reinforcing Bars: ASTM A 706, deformed.

C. Welded Wire Reinforcement: ASTM A 1064, plain or deformed, flat sheet.

D. Supports: Use bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place according to PCI MNL 116.

2.4 PRESTRESSING TENDONS

A. ACI Publications: Comply with ACI 423.7, "Specification for Unbonded Single Strand Tendon Materials and Commentary."

B. Prestressing Strand: ASTM A 416, Grade 270, 7-wire, low-relaxation, 0.6-inch-diameter strand with corrosion inhibitor conforming to ACI 423.7, with polypropylene tendon sheathing.

C. Post-Tensioning Coating: Compound with friction-reducing, moisture-displacing, and corrosion-inhibiting properties; chemically stable and nonreactive with prestressing steel, nonprestressed reinforcement, sheathing material, and concrete.

D. Tendon Sheathing:

1. Virgin high-density polyethylene or polypropylene with a minimum thickness of 50 mils.
2. Continuous over the length of tendon to provide watertight encapsulation of strand.

E. Anchorage Device and Coupler Assembly: Assembly of strand, wedges, and anchorage device or coupler complying with static and fatigue testing requirements and capable of developing 95 percent of actual breaking strength of strand.

1. Anchorage devices and coupler assemblies shall be fully encapsulated with either plastic or epoxy coating.

F. Encapsulation System: Watertight encapsulation of prestressing strand consisting of the following:

1. Wedge-Cavity Caps: Attached to anchorages with a positive mechanical connection and completely filled with post-tensioning coating.
2. Sleeves: Attached to anchorage device with positive mechanical connection; overlapped a minimum of 4 inches with sheathing and completely filled with post-tensioning coating.
3. The encapsulation system shall meet the hydrostatic pressure testing requirements of ACI 423.7, except with a hydrostatic pressure of 10 psi, instead of the specified 1.25 psi.

2.5 ACCESSORIES

A. Sheathing Repair Tape: Elastic, self-adhesive, moisture proof tape with minimum width of 2 inches (50 mm), in contrasting color to tendon sheathing; nonreactive with sheathing, coating, or prestressing steel.

2.6 CONCRETE MATERIALS

A. Portland Cement: ASTM C 150, Type II or Type I/II.

1. For surfaces exposed to view in finished structure, use same type, brand, and mill source throughout the precast concrete production.

B. Supplementary Cementitious Materials

1. Fly Ash: ASTM C 618, Class F with maximum loss on ignition of 6%.
2. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.

C. Normal weight Aggregates: Except as modified by PCI MNL 116, ASTM C 33, with coarse, non-reactive aggregates. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project.

D. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 116.

E. Air Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.

F. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride or more than 0.15 percent chloride ions or other salts by weight of admixture.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
2. Retarding Admixture: ASTM C 494/C 494M, Type B.
3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
4. Water-Reducing and Accelerating Admixture ASTM C494/C 494M, Type E.
5. High Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type A and F.
6. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
7. Plasticizing Admixture for Flowable Concrete: ASTM C 1017/C 1017M.

2.6 STEEL EMBEDDED MATERIALS

A. Carbon-Steel Shapes and Plates: ASTM A 36/A 36M

B. Carbon-Steel Headed Studs: ASTM A 108, Grades 1010 through 1020, cold finished, AWS D1.1/D1.1M, Type A or B, with arc shields and with the minimum mechanical properties of PCI MNL 116, Table 3.2.3.

C. Deformed-Steel Wire or Bar Anchors: ASTM A 496 or ASTM A 706/A 706M.

D. Zinc-Coated Finish: For exterior steel items and items indicated for galvanizing, apply zinc coating by hot-dip process according to ASTM A 123, after fabrication.

1. Galvanizing Repair Paint: Zinc paint with dry film containing not less than 94 percent zinc dust by weight and complying with DOD-P-21035B or SSPC-Paint 20.

2.7 STAINLESS-STEEL EMBEDDED MATERIALS

A. Stainless-Steel Plate: ASTM A 666, Type 304, Type 316, or Type 201, of grade suitable for application.

B. Stainless-Steel Bolts and Studs: ASTM F 593, alloy 304 or 316, hex-head bolts and studs; stainless-steel nuts; and flat, stainless-steel washers.

C. Stainless-Steel Headed Studs: ASTM A 276, with minimum mechanical properties for studs as indicated under MNL 116, Table 3.2.3.

2.8 BEARING PADS AND OTHER ACCESSORIES

A. Provide one of the following bearing pads for structural precast concrete members as recommended by tank supplier for application:

1. Elastomeric Pads: AASHTO M 251, plain, vulcanized, 100 percent polychloroprene (neoprene) elastomer, molded to size or cut from a molded sheet, 50 to 70 Shore A durometer according to ASTM D 2240, minimum tensile strength 2250 psi per ASTM D 412.
2. Random-Oriented, Fiber-Reinforced Elastomeric Pads: Preformed, randomly oriented synthetic fibers set in elastomer. Surface hardness of 70 to 90 Shore A durometer according to ASTM D2240. Capable of supporting a compressive stress of 3000 psi with no cracking, splitting, or delaminating in the internal portions of the pad.
3. High-Density Plastic: Multimonomer, nonleaching, plastic strip capable of supporting loads with no visible overall expansion.

B. Erection Accessories: Provide steel plates and brackets, clips, hangers, high density plastic shims, and other accessories required to install precast concrete members.

2.9 GROUT MATERIALS

A. Nonshrink Grout: Premixed, prepackaged, non-metallic, shrink-resistant grout complying with ASTM C 1107, Grade C. Grout shall not contain chlorides.

1. Acceptable Products:
   a. SikaGrout 212®, or equal.
   b. SikaGrout 328®, or equal.

2.10 PATCHING MATERIALS

A. One-component, polymer-modified, premixed patching material containing selected silica aggregates and portland cement, suitable for vertical and overhead applications. Do not use material containing chlorides or other chemicals known to be deleterious to prestressing steel or material that is reactive with prestressing steel, anchorage device material, or concrete.

1. Acceptable Products:
    a. ProSpec® BlendCrete, or equal.

2.11 CONCRETE MIXTURES

A. Prepare design mixtures for each type of concrete required.

1. Limit use of fly ash to 25 percent replacement of portland cement by weight.
2. Limit use of ground granulated blast-furnace slag to 40 percent replacement of portland cement by weight.

B. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at Tank Supplier's option.

C. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 350 or PCI MNL 116 when tested in accordance with ASTM C 1218/C 1218M.

D. Normalweight Concrete Mixtures: Proportion mixtures by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normalweight concrete.

E. Precast Concrete:
1. Compressive Strength (28 Days): 5,000 psi minimum.
2. Maximum Water-Cementitious Materials Ratio: 0.40.

F. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content complying with PCI MNL 116.

G. When included in design mixtures, add other admixtures to concrete mixtures according to manufacturer's written instructions.

H. Concrete Mixture Adjustments: Concrete mixture design adjustments may be made if characteristics of materials, Project conditions, weather, test results, or other circumstances warrant.

2.12 FORM FABRICATION

A. Form: Accurately construct forms, mortar tight, of sufficient strength to withstand pressures due to concrete placement and vibration operations and temperature changes, and for prestressing and detensioning operations. Coat contact surfaces of forms with release agent before reinforcement is placed. Avoid contamination of reinforcement and prestressing tendons by release agent.

B. Maintain forms to provide completed structural precast concrete members of shapes, lines, and dimensions within fabrication tolerances specified.

1. Edge and Corner Treatment: Uniformly chamfered or as built-in on standard forms.

2.13 FABRICATION

A. Cast-in Plates, Inserts, Angles, and Other Hardware: Fabricate hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position for attachment of loose hardware and secure in place during precasting operations. Locate hardware where it does not affect position of main reinforcement or concrete placement.

1. Weld headed studs and deformed bar anchors used for anchorage according to AWS D1.1/D1.1M and AWS C5.4, “Recommended Practices for Stud Welding.”

B. Reinforcement: Comply with recommendations in PCI MNL 116 for fabricating, placing, and supporting reinforcement.

1. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete. When damage to epoxy coated reinforcing exceeds limits specified in ASTM A 775, repair with patching material compatible with coating material and epoxy coat bar ends after cutting.
2. Accurately position, support, and secure reinforcement against displacement during concrete-placement and consolidation operations. Locate and support reinforcement by plastic tipped or corrosion resistant metal or plastic chairs, runners, bolsters, spacers, hangers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place according to PCI MNL 116.
3. Provide cover requirements in accordance with ACI 350. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete.
4. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces in accordance with ACI 350 and wire tie laps, where required by design. Offset laps of adjoining widths to prevent continuous laps in either direction.

C. Reinforce structural precast concrete members to resist handling, transportation, and erection stresses, and specified in-place loads, whichever governs.

D. Comply with requirements in PCI MNL 116 and in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.

E. Place concrete in a continuous operation to prevent cold joints or planes of weakness from forming in precast concrete members.

F. Place self-consolidating concrete with minimal vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing or entrapped air voids on surfaces. Use equipment and procedures complying with PCI MNL 116.

G. Comply with PCI MNL 116 procedures for hot and cold-weather concrete placement.

H. Identify pickup points of precast concrete members and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings. Imprint or permanently mark casting date on each precast concrete member on a surface that will not show in finished structure.

I. Cure concrete, according to requirements in PCI MNL 116, by moisture retention without heat or by accelerated heat curing using live steam or radiant heat and moisture. Cure members until compressive strength is high enough to ensure that stripping does not have an effect on the performance of final product.

2.14 WATERSTOPS

A. Flexible PVC Waterstops: Corp of Engineers CRD-C 572 for embedding in concrete construction joints to prevent the passage of fluids through joints. Factory-fabricate corners, intersections, and directional changes.

1. Profile: Ribbed without center bulb.
2. Dimensions: 9 inches by 3/8-inch-thick, non-tapered.
3. Acceptable Products:
    a. Greenstreak PVC Waterstop #646, or equal.

B. Self-Expanding Rubber Strip Waterstops: Manufactured rectangular or trapezoidal strip, bentonite-free, hydrophilic polymer modified chloroprene rubber, for adhesive bonding to concrete.

1. Acceptable Products:
    a. Greenstreak Hydrotite® CJ-1030-4M, or equal.

C. Self-Expanding Extrudable Waterstops: Extrudable, swelling, bentonite-free, one-part polyurethane.

1. Acceptable Products:
    a. SikaSwell® S-2, or equal

2.15 RELATED MATERIALS

A. Joint/Crack Filler: ASTM C 920, Type S, Grade NS, Class 35 one-part polyurethane, elastomeric sealant, for sealing precast panel joints and minor cracks.

1. Acceptable Products:
    a. Sikaflex®-1a+, or equal

B. High-Performance Joint Filler: ASTM C 920, Type S, Grade NS, Class 100/20 low-modulus, high-performance, one-part polyurethane-based, elastomeric sealant, for sealing precast panel joints subject to movement.

1. Acceptable Products:
    a. Sikaflex®-15 LM, or equal

C. Sealant/Adhesive Primer: Specially formulated primer to promote adhesion of sealants and adhesives to concrete.

1. Acceptable Products:
    a. Sikaflex® 429/202, or equal

D. Joint Sealant, Epoxy: High-build, two-part, protective, solvent-free epoxy.

1. Acceptable Products:
    a. Sikagard® 62, or equal

E. Joint Sealant, Urethane: Liquid-applied, elastomeric, urethane.

1. Acceptable Products:
    a. CIM 1000, or equal

F. Epoxy Injection Adhesive: Two-part, moisture-tolerant, epoxy injection adhesive.

1. Acceptable Products:
    a. Sikadur® 52, or equal

G. Chemical Grout: Expanding, polyurethane, chemical grout.

1. Acceptable Products:
    a. SikaFix® HH+, or equal
    b. SikaFix® HH Hydrophilic, or equal

2.16 FABRICATION TOLERANCES

A. Fabricate structural precast concrete members of shapes, lines and dimensions indicated, so each finished member complies with PCI MNL 135 product tolerances as well as position tolerances for cast-in items.

2.17 FINISHES

A. Form Finish:

1. Standard Grade: Normal plant-run finish produced in forms that impart a smooth finish to concrete. Surface holes smaller than 1/2 inch caused by air bubbles, normal color variations, form joint marks, and minor chips and spalls are acceptable. Fill air holes greater than 1/4 inch in width that occur in high concentration (more than one per 2 square inches). Major or unsightly imperfections, honeycombs, or structural defects are not permitted. Allowable joint offset limited to 1/8 inch.

B. Smooth steel-trowel finish unformed surfaces. Consolidate concrete, bring to proper level with straightedge, float, and trowel to a smooth, uniform finish.

2.18 SOURCE QUALITY CONTROL

A. Quality-Control Testing: Test and inspect precast concrete according to PCI MNL 116 requirements. If using self-consolidating concrete also test and inspect according to ASTM C 1611, ASTM C 1712, ASTM 1610, and ASTM C 1621.

B. Strength of precast concrete members will be considered deficient if units fail to comply with ACI 350 concrete strength requirements.

C. Testing: If there is evidence that strength of precast concrete members may be deficient or may not comply with ACI 350 requirements, fabricator shall employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C 42 and ACI 350.

a. Test results shall be reported in writing on the same day that tests are performed, with copies to Architect, Contractor, and precast concrete fabricator. Test reports shall include the following:

1. Project identification name and number.
2. Date when tests were performed.
3. Name of Tank Supplier.
4. Name of concrete testing agency.
5. Identification letter, name, and type of precast concrete member(s) represented by core tests; design compressive strength; type of failure; actual compressive strength at breaks, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.

D. Patching: If core test results are satisfactory and precast concrete members comply with requirements, clean and dampen core holes and solidly fill with precast concrete mixture or repair material, and finish to match adjacent precast concrete surfaces.

E. Acceptability. Structural precast concrete members that do not comply with acceptability requirements in PCI MNL 116, including concrete strength, and manufacturing tolerances, are unacceptable. Chipped, spalled or cracked members may be repaired. Replace unacceptable units with precast concrete members that comply with requirements.

PART 3 – EXECUTION

3.1 PREPARATION

A. General Contractor shall prepare subgrade in accordance with Section 312000 “Earth Moving”.

3.2 EXAMINATION

A. Owner’s Geotechnical Engineer shall inspect and approve the subgrade supporting the tank.

B. Unsatisfactory conditions shall be corrected to the satisfaction of the Owner’s Geotechnical Engineer.

C. General Contractor shall notify Tank Supplier in writing that supporting subgrade has been approved by the Owner’s Geotechnical Engineer.

D. Proceed with base slab construction only after unsatisfactory conditions have been corrected.

E. The stone sub-base shall be prepared, leveled, and graded to within ± one inch of stone grade, as indicated on the approved Tank Supplier’s Shop (Erection) drawings.

F. Excavation shall include a minimum of four feet in plan beyond the perimeter of the approved exterior wall line.

G. Site access roads:

1. Shall be provided and maintained by the General Contractor throughout the installation of the base slab and precast tank structure.
2. Shall be cleared, leveled, stoned, and free of mud to provide 14-feet of vertical clearance and 14-feet of horizontal clearance.
3. Shall support live loaded trucks operating under their own power.

H. Crane and concrete pump pads:

1. Shall be provided and maintained by the General Contractor.
2. Shall be cleared, leveled, stoned, and free of mud.
3. Tank Supplier shall communicate the required locations and sizes of the pads with the General Contractor.

3.3 CAST-IN-PLACE CONCRETE BASE SLAB

A. Install the base slab in accordance with Section 033100 “Cast-in-Place Concrete for Precast, Post-tensioned Tanks.”

3.4 ERECTION

A. Erect structural precast concrete level, plumb and square within the specified allowable erection tolerances. Provide temporary bracing as required to maintain position, stability, and alignment of members until permanent connections are completed.

1. Install temporary plastic spacing shims as necessary as precast concrete members are being erected.
2. Use patching material to fill voids within recessed lifting devices flush with surface of adjacent precast concrete surfaces when recess is exposed.

B. Install post-tensioning tendons as soon as practical.

C. Grouting or Dry-Packing Connections and Joints: Indicate joints to be grouted and any critical grouting sequences on Shop (Erection) Drawings. Grout open spaces at keyways, connections and joints where required or indicated with non-shrink, non-metallic grout. Retain flowable grout in place until it gains sufficient strength to support itself. Fill joints completely without seepage to other surfaces. Alternatively, pack spaces with stiff dry pack grout material, tamping until voids are completely filled. Promptly remove grout material from exposed surfaces before it hardens.

D. Field cutting of precast concrete members is not permitted without approval of the Precast Tank Engineer.

3.5 ERECTION TOLERANCES

A. Erect structural precast concrete members level, plumb, square and in alignment without exceeding the noncumulative erection tolerances of PCI MNL 135.

3.6 TENDON INSTALLATION

A. Inspect sheathing for damage before installing tendons. Repair damaged areas by restoring post-tensioning coating and repairing or replacing tendon sheathing.

a. Ensure that sheathing is watertight and there are no air voids.
b. Follow tape repair procedures in PTI's "Field Procedures Manual for Unbonded Single Strand Tendons."

B. Immediately remove and replace tendons that have damaged strand.

3.7 TENDON STRESSING

A. Stressing jacks and gauges shall be individually identified and calibrated to known standards at intervals not exceeding six months. Exercise care in handling stressing equipment to ensure that proper calibration is maintained.

B. Stress tendons only under supervision of a qualified post-tensioning superintendent.

C. Tendon stressing shall not begin until grout strength in the joints has attained at least 2,500 psi compressive strength.

D. Tendon stressing shall be performed in the sequence indicated on the Shop (Erection) Drawings.

E. Mark and measure elongations according to PTI's "Field Procedures Manual for Unbonded Single Strand Tendons." Measure elongations to closest 1/8-inch.

F. Tendon elongations shall be recorded and compared to the theoretical elongations indicated on the Shop (Erection) Drawings. Prestressing will be considered acceptable if gage pressures shown on stressing record correspond to required stressing force and theoretical and measured elongations agree.

G. In the event that measured elongations exceed the tolerances indicated on the Shop (Erection) Drawings, the Precast Tank Engineer shall be notified for resolution.

3.8 TENDON FINISHING

A. Strand tails may be cut once prestressing has been deemed acceptable.

B. Do not cut strand tails or cover anchorages of tendons where elongations exceed tolerances until all discrepancies have been resolved to the satisfaction of the Precast Tank Engineer.

C. Cut strand tails as soon as possible after approval of elongations.

D. The tendon tails shall be cut using hydraulic shears.

E. The strand length protruding beyond the wedges after cutting of the tendon tail shall be between 0.5-inch and 0.75-inch.

F. Wedge-cavity caps shall be installed within one working day after cutting tendon tails.

G. Patch stressing pockets within one day of cutting strand tail. Clean inside surface of pocket to remove laitance or post-tensioning coating before installing patch material. Finish patch material flush with adjacent concrete.

H. If stressing pockets are not able to be filled within ten days after tendon tail cutting, then temporary protection shall be provided.

3.9 FIELD QUALITY CONTROL

A. Place no concrete for the base slab until the subgrade has been inspected and approved by the Owner's Geotechnical Engineer.

B. Testing: Owner will engage accredited independent testing and inspecting agency to perform field tests and prepare reports.

1. Testing agency will report test results promptly and in writing to Contractor, Engineer of Record and Tank Supplier.

C. Repair or remove and replace work where tests and inspections indicate that it does not comply with specified requirements.

3.10 PROTECTION OF PRESTRESSED REINFORCEMENT

A. Do not expose tendons to electric ground currents, welding sparks, or temperatures that would degrade components.

B. Prevent water from entering tendons during installation and stressing.

C. Provide weather protection to stressing-end anchorages if strand tails are not cut within 10 days of stressing the tendons.

3.11 REPAIRS

A. Repairs will be permitted provided structural adequacy, serviceability and durability of members are not impaired.

B. Prepare and repair damaged galvanized coatings with galvanizing repair paint according to ASTM A 780.

C. Repair base slab shrinkage cracks as required for watertightness. Rout a ¼-inch vee-notch along the crack and fill the crack with epoxy injection adhesive.

D. Surface chips or spalls shall be cleaned and then patched with patching material.

E. Misaligned grout ports or connection ports in walkways may be repaired by either enlarging the existing port, or drilling a new one, as required. Coordinate with the Precast Tank Engineer to avoid internal reinforcing and hardware.

F. Damage that occurs during the shipping, installation or construction process shall be brought to the attention of the Precast Tank Engineer for resolution.

G. Additional repairs, if necessary, shall be performed as directed by the Precast Tank Engineer.

H. Remove and replace damaged structural precast concrete members when repairs do not comply with specified requirements.

3.12 CLEANING

A. Clean grout and any other deleterious material from concrete surfaces and adjacent materials immediately.

B. Clean exposed surfaces of precast concrete members after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.

1. Perform cleaning procedures, if necessary, according to precast concrete fabricator's recommendations. Protect adjacent work from staining or damage due to cleaning operations.
2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.

3.13 TIGHTNESS TESTING

A. Each cell of multi-cell tanks shall be considered a single containment structure and shall be tested individually, unless otherwise specified.

B. The General Contractor shall commence tightness testing within five business days of notification that the structure is ready for testing.

C. Testing shall be performed using the hydrostatic tightness test, which consists of two parts. Part 2 may be waived if approved by the Project Engineer-of-Record.

1. Part 1 shall be a qualitative criterion.
2. Part 2 shall be a quantitative criterion expressed as a maximum allowable volume loss of 0.05 percent per 24-hour period.

D. No backfill may be placed against the walls or on the wall footings of the containment structures to be tested, unless otherwise specified.

E. The initial filling of a new containment structure shall not exceed four feet per hour. Filling shall be continued until the water surface is at the design maximum liquid level, or either one

inch below any fixed overflow level in covered containment structures or four inches in open containment structures, whichever is lower.

F. Water for the initial filling shall be provided by the General Contractor. Use potable water unless otherwise specified.

G. Part 1 – Qualitative criteria

1. If any water is observed on the containment structure exterior wall surfaces where moisture can be picked up on a dry hand, the containment structure shall be considered to have failed Part 1 of the hydrostatic test.
2. Wet areas on top of the wall footing shall not be cause to fail Part 1 unless the water can be observed to be flowing.
3. Although Part 2 of the test may begin prior to completion of repairs for Part 1, all defects causing the failure of Part 1 shall be repaired before acceptance of the containment structure.
4. The standard repair procedure for areas failing Part 1 is to inject chemical grout into the affected area. Consult with the Precast Tank Engineer before commencing any such repairs.

H. Part 2 – Quantitative criteria

1. Part 2 of the hydrostatic tightness test shall not be scheduled for a period when the forecast is for a difference of more than 35°F between the ambient temperature readings at the times of the initial and final level measurements of the water surface. The test shall also not be scheduled when the weather forecast indicates the water surface could freeze before the test is completed.
2. The vertical distance to the water surface shall be measured to within 1/16 inch from a fixed point on the containment structure above the water surface. The initial measurement shall not be taken until at least 24 hours after the tank is completely filled. Measurements shall be recorded at 24-hour intervals.
3. The test period shall be the theoretical time required to lower the water surface 3/8 inch, assuming a loss of water at the maximum allowable rate. However, the test period shall not be longer than five days.
4. In uncovered containment structures, evaporation and precipitation shall be measured.
5. At the end of the test period, the water surface shall be recorded to within 1/16 inch at the location of the original measurements. The water temperature and precipitation measurements shall be recorded.
6. The change in water volume in the containment structure shall be calculated and corrected, if necessary, for evaporation, precipitation, and temperature. If the loss exceeds the required criterion, the containment shall be considered to have failed Part 2 of the test.

I. Retesting

1. A restart of the test shall be required when test measurements become unreliable due to unusual precipitation or other external factors.
2. It shall be permitted to immediately retest a containment structure failing Part 2 of the hydrostatic test when Part 1 is passed. If the containment structure fails the second test or if not immediately retested after the first test failure, the interior of the containment structure shall be observed for probable problem areas by the Tank Supplier. The containment structure shall only be retested after the probable problem areas are repaired.
3. Containment structures shall be retested until they meet the required Part 1 and Part 2 criteria. Repairs shall be made before each retest.

J. The containment structure shall be deemed substantially complete upon successful completion of tightness testing. All final payments, including retainage, for all structural elements related to the precast, post-tensioned tank, including the foundation system and cast-in-place base slab, shall be made in accordance with the Contract Documents.

3.14 SPECIAL WARRANTY

A. The Tank Supplier shall provide a two-year structural warranty to the Owner. The warranty shall at minimum include the following items:

1. The Tank Supplier shall provide a corporate guarantee not covered by any form of insurance or bond as a warranty for the precast tank that warrants the tank is free from structural defect due to faulty design, workmanship, or structural materials.

2. The Tank Supplier shall warrant the structural aspects of the tank for a period of two years from the substantial completion date of the precast tank.

3. The Owner must report in a timely manner any claim to the warranty in writing to the tank manufacturer within the effective coverage dates of the warranty.

4. The Tank Supplier shall furnish, without charge to the Owner, all necessary labor and materials required to repair all structural defects subject to this warranty with a maximum cost of repair not exceeding the Tank Supplier’s contract value of the tank and under the condition that the Tank Supplier has been paid in full for the project.

B. Specific Exclusions from Warranty:

1. Maintenance items (sealants, coatings, equipment, plumbing, etc.), all non-structural items.

2. Consequential damages, punitive damages, incidental costs, bodily injury, death, and damage to the property other than the tank.

3. Emptying of tanks, inspection of tanks, processing of the water/wastewater, drying or cleaning of the tanks, filling of tanks, etc. complete in preparation for, and completion of repairs.

4. Defects or issues caused by accident, abuse, misuse, storage or processing of corrosive liquids, improper maintenance, negligence, modifications, additions, or deletions not made by tank manufacturer, improper or defective application, acts of God, force majeure, untimely action by Owner to minimize damage or losses, unstable or improperly designed or constructed soil/subgrade, or defects caused by work supplied by any party other than the Tank Supplier.

5. A loss or defect that is covered by insurance.

C. All materials and labor for work performed by the Tank Supplier which is not covered under the standard two-year limited structural warranty shall be warranted for a period of one (1) year from substantial completion of the tank per the Contract Documents.

3.15 BACKFILL

A. General Contractor shall place and compact backfill in accordance with Section 312000 “Earth Moving”.

B. Do not commence backfilling around the tank until the tank has been examined and approved by the Engineer of Record.

C. The General Contractor shall be responsible to protect the tank from damage by construction activity, equipment, and vehicles. Damaged structures shall be repaired or replaced to the satisfaction of the Tank Supplier.

D. When backfilling against the tank, place backfill material in equal lifts and to similar elevations on opposite sides of structures in order to equalize opposing horizontal pressures, except where required for final grading.

E. The excavation shall be kept free of water by the General Contractor at all times.

END OF SECTION 034200

SECTION 407113 - MAGNETIC FLOW METERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Magnetic flow meters.
2. Transmitters.
3. Indicators.
4. Recorders.
5. Integrators.

B. Related Requirements:

1. Section 260523 – Conductors and Cables: Control power wiring requirements.

1.2 REFERENCE STANDARDS

A. American Water Works Association:

1. AWWA M6 - Water Meters - Selection, Installation, Testing, and Maintenance.
2. AWWA M33 - Flowmeters in Water Supply.

B. ASME International:

1. ASME B16.1 - Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125, and 250.

C. NSF International:

1. NSF 61 - Drinking Water System Components - Health Effects.
2. NSF 372 - Drinking Water System Components - Lead Content.

1.3 COORDINATION

A. Section 013000 - Administrative Requirements: Requirements for coordination.

B. Coordinate Work of this Section with piping Work.

1.4 SUBMITTALS

A. Section 013300 - Submittal Procedures: Requirements for submittals.

B. Product Data: Submit manufacturer information for system materials and component equipment, including connection requirements.

C. Shop Drawings:

1. Indicate system materials and component equipment.
2. Submit installation requirements and other details.

D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

E. Source Quality-Control Submittals: Indicate results of factory tests and inspections.

F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

G. Manufacturer Reports: Certify that equipment has been installed according to manufacturer instructions.

H. Qualifications Statement:

1. Submit qualifications for manufacturer.

1.5 CLOSEOUT SUBMITTALS

A. Section 017000 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents: Record actual locations and final orientation of equipment and accessories.

1.6 QUALITY ASSURANCE

A. Ensure that materials of construction of wetted parts are compatible with process liquid.

B. Materials in Contact with Potable Water: Certified to NSF 61 and NSF 372.

1.7 QUALIFICATIONS

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

1.8 DELIVERY, STORAGE, AND HANDLING

A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.

C. Store equipment according to manufacturer instructions.

D. Protection:

1. Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.
2. Provide additional protection according to manufacturer instructions.

PART 2 - PRODUCTS

2.1 SYSTEM DESCRIPTION

A. Furnish sensors, field preamplifiers, signal conditioners, offset and span adjustments, amplifiers, transducers, transmitters, control devices, interconnecting cables, and unit conversions and algorithms as required for application.

2.2 MAGNETIC FLOW METERS

A. Manufacturers:

1. The Owner and Engineer believe the following manufacturers are capable of producing equipment and products which shall satisfy the requirements of this Section. This statement, however, shall not be construed as an endorsement of a particular manufacturer's products, nor shall it be construed that a named manufacturer's standard product will comply with the requirements of this Section. It shall be the responsibility of the Contractor to coordinate with the selected equipment manufacturer by use of this specification and all related design drawings for any necessary adjustments, modifications, or alterations to standard products to ensure that the product complies with all sections of this specification. Candidate manufacturers include Endress Hauser, Rosemount, ABB, or Engineer's Approved Equal.

B. Description: Low-frequency, electromagnetic induction-type flow meter, producing a linear signal directly proportional to flow rate, consisting of flow tube, signal cable, and transmitter.

C. Performance and Design Criteria:

1. Design: According to AWWA M33.
2. Flow meters must support installation in the configurations shown on the Contract Drawings, including restricted straight lengths of pipe on the inlet and outlet of the meter.

D. Flow Rate Range:

1. Intake and Distribution Meters: 100 to 2,000 GPM.

2. Backwash Meter: 0 to 5,000 GPM.

E. Size: As indicated in schedule in Part 3.5.

F. Flow Tubes:

1. Material: Type 304 stainless steel with polyurethane liner.
2. Length: As indicated on Drawings.

3. End Connections: Flanged, ASME B16.1, carbon steel.

G. Electrodes:

1. Type 316L stainless steel.
2. Self-cleaning.

H. Accuracy: Plus or minus 1 percent of actual flow rate over a 10:1 range.

I. Provide adjustment for zero and span.

J. Accessories:

1. Provide automatic, nonmechanical electrode cleaning system without taking meter out of service.
2. Furnish cable between transmitter and receiver.

2.3 TRANSMITTERS

A. Transmitter Output:

1. 4- to 20-mA dc analog signal.
2. Accuracy: Plus or minus 5 percent of full scale.

B. Housing Material: Cast aluminum.

C. HMI:

1. Touch-screen programming, functioning through enclosure window without opening enclosure.
2. Display:

a. Size: Four lines by 16 characters.
b. Type: Backlit digital display.
c. User-selectable engineering units.
d. Readout of diagnostic error messages.

D. Mounting:

1. Mounting Locations Less Than 4 Feet above Grade: Provide stainless-steel mounting posts.

E. Accessories:

1. Current signal output simulation.
2. Empty pipe detection.
3. Self-diagnostics.
4. Automatic zero adjustment.
5. Stainless-steel sunshield.
6. Signal Cable: Provided by flow meter manufacturer.

2.4 INDICATORS

A. Description:

1. Integrally mounted in transmitter housing.
2. Scale: Graduated.
3. Length: As indicated on Drawings.
4. Units: gpm.
5. Mounting: Wall mounted as indicated on Drawings.

2.5 RECORDERS

A. Description:

1. Minimum Diameter: 10 inches.
2. Rotation Cycle: Once per week.
3. Drive Mechanism:

a. Synchronous motor.
b. 115-V ac, 60 Hz.

2.6 INTEGRATORS

A. Description:

1. Totalize flow in specified units.
2. Interface with specified flow meter assembly.
3. Accuracy: Plus or minus 0.25 percent of full scale.

2.7 OPERATION

A. Control Power:

1. Wiring: As specified in Section 260583 - Wiring Connections.
2. 120-V ac, single phase, 60 Hz.
3. Furnish local transformers as required.

B. Enclosures: NEMA 250 Type 4X or as indicated on Drawings.

2.8 SOURCE QUALITY CONTROL

A. Section 014000 - Quality Requirements: Requirements for testing, inspection, and analysis.

B. Provide shop inspection and testing of meters according to AWWA M6.

C. Certificate of Compliance:

1. If manufacturer is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at manufacturer's facility conforms to Contract Documents.
2. Specified shop tests are not required for Work performed by approved manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.

B. Verify that items provided by other Sections of Work are ready to receive Work of this Section.

3.2 INSTALLATION

A. Coordinate location and orientation of flow meter with final equipment installations.

B. Ensure that instruments are located to be easily accessible for maintenance.

3.3 FIELD QUALITY CONTROL

A. Section 014000 - Quality Requirements: Requirements for inspecting and testing.

B. Testing:

1. Test and calibrate flow meter to demonstrate that it meets specified accuracy requirements.
2. Comply with AWWA M6.

C. Manufacturer Services: Furnish services of manufacturer's representative experienced in installation of products furnished under this Section for not less than one day on Site for installation, inspection, startup, field testing, and instructing Owner's personnel in operation and maintenance of equipment.

D. Equipment Acceptance:

1. Adjust, repair, modify, or replace components failing to perform as specified and rerun tests.
2. Make final adjustments to equipment under direction of manufacturer's representative.

E. Furnish installation certificate from equipment manufacturer's representative attesting that equipment has been properly installed and is ready for startup and testing.

3.4 DEMONSTRATION

A. Section 017000 - Execution and Closeout Requirements: Requirements for demonstration and training.

B. Demonstrate equipment startup, shutdown, routine maintenance, and emergency repair procedures to Owner's personnel.

3.5 ATTACHMENTS

A. Flow Meter Schedule:

1. Filter Effluent Mag Meters (Provided by manufacturer under Section 465000 – Filter Equipment)

   a. Location: Gravity filter gallery. One per filter for a total of four.
   b. Type: Magnetic flow meter.
   c. Size: 8 inches.
   d. Flow Rate Range: 100 to 2,000 GPM.
   e. Output Signal: 4-20 mA.
   f. Process Fluid: Gravity filter effluent.

2. Backwash Flow Meter (Provided by manufacturer under Section 465000 – Filter Equipment)
   a. Location: Gravity filter gallery.
   b. Type: Magnetic flow meter.
   c. Size: 10 inches.
   d. Flow Rate Range: 100 to 2,000 GPM.
   e. Output Signal: 4-20 mA.
   f. Process Fluid: Backwash water.

3. GAC Influent Flow Meter (for measurement of net flow to GAC filters)

   a. Location: Metering vault adjacent to GAC filter building.
   b. Type: Magnetic flow meter.
   c. Size: 8 inches.
   d. Flow Rate Range: 100 to 2,000 GPM.
   e. Output Signal: 4-20 mA.
   f. Process Fluid: Gravity filter effluent.

4. GAC Inlet Flow Meters (for flow splitting between GAC filters)

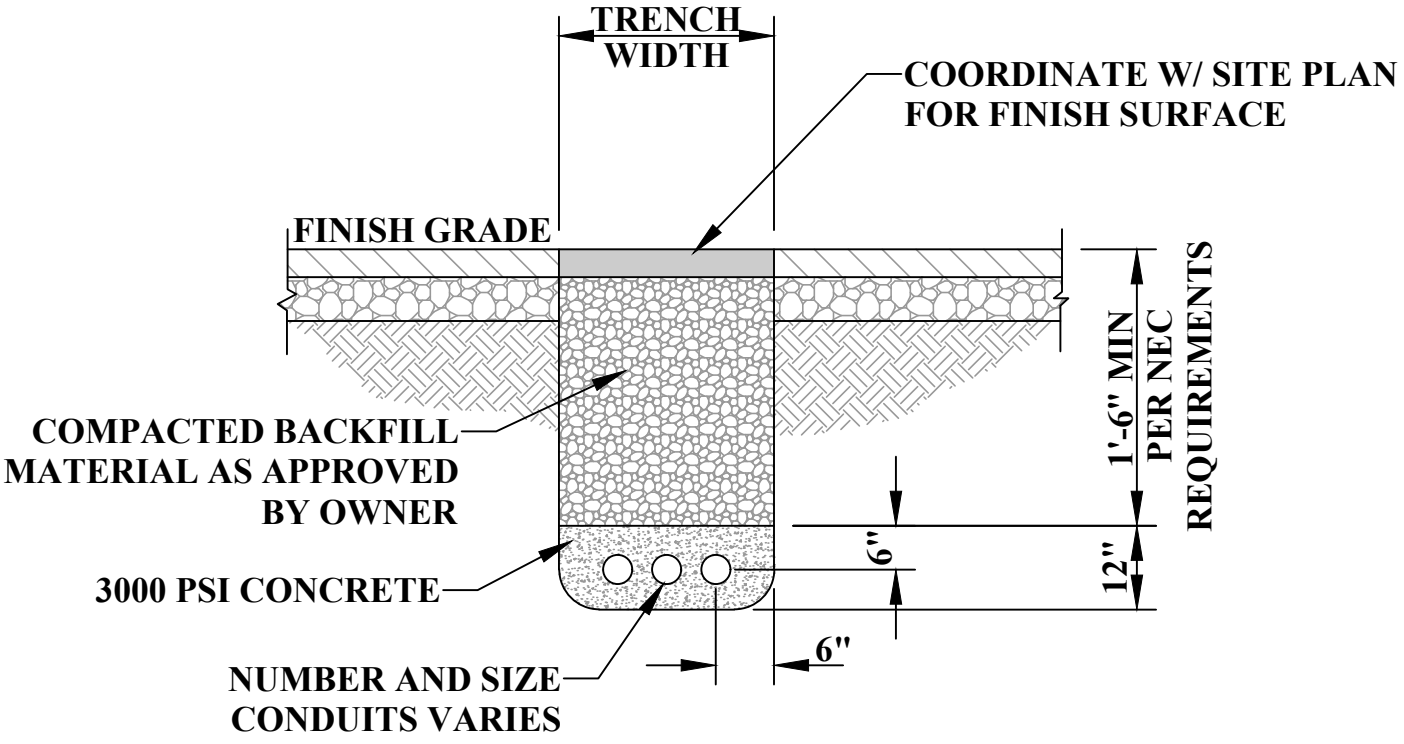
   a. Location: One each in existing GAC filter building and proposed expansion (two total).
   b. Type: Magnetic flow meter.
   c. Size: 8 inches.
   d. Flow Rate Range: 100 to 2,000 GPM.
   e. Output Signal: 4-20 mA.
   f. Process Fluid: Gravity filter effluent.

5. Clearwell Flow Meter.

   a. Location: Metering vault adjacent to new chemical building.
   b. Type: Magnetic flow meter.
   c. Size: 8 inches

d. Flow Rate Range: 100 to 2,000 GPM.
e. Output Signal: 4-20 mA.
f. Process Fluid: Finished water.

END OF SECTION 407113



TYPICAL CONDUIT TRENCH DETAIL

NOT TO SCALE

VILLAGE OF CALDWELL
CONTRACT #1
ADDENDUM #4
TYPICAL CONDUIT TRENCH DETAIL

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