Jones & Henry
ENGINEERS, LTD.

Village of Antwerp
New Water Treatment Plant

ADDENDUM 2

October 30, 2026

Planholders on the Village of Antwerp, New Water Treatment Plant are hereby notified of the following amendments to the Contract Documents. This Addendum is hereby made a part of the Contract Documents.

SPECIFICATIONS

Replace the following specifications with the attached:

C-111 - Advertisement for Bid

C-410 - Bid Form for Construction Contracts

C-800 - Exhibit 1 Wage Rates

C-800 - Exhibit 5 PAC Engineering Scope of Work

01021 - Allowances

07210 - Thermal Insulation

08315 - Roll-Up Doors

10701 - Plaques and Ornamental Signs

10702 - Signs and Tags

11026 - Vertical Pressure Filter

11223 - Chemical Pump Systems

11401 - Aerators

15150 - Sanitary Waste and Vent Piping

15250 - Valves

15410 - Plumbing Fixtures

16220 - Diesel Generator Systems

16903 - Control Panels

Planholders should update the Table of Contents to reflect the above sections.

An updated Table of Contents will be included in the Issued for Construction Project Manual.

3103 Executive Parkway, Suite 300, Toledo, Ohio 43606 - 419.473.9611

Jones & Henry
ENGINEERS, LTD.

DRAWINGS

Replace the following drawings with the attached:

R-0.1	4 of 98	A-2.5	27 of 98	P-2.3	62 of 98
R-0.4	7 of 98	A-2.6	28 of 98	P-2.4	63 of 98
C-0.4	13 of 98	A-2.7	29 of 98	P-2.5	64 of 98
C-1.1	15 of 98	S-0.1	31 of 98	E-0.1	78 of 98
A-0.3	21 of 99	S-2.1	41 of 98	E-0.2	79 of 98
A-2.0	22 of 98	S-2.3	43 of 98	E-0.4	81 of 98
A-2.1	23 of 98	S-2.6	46 of 98	E-0.5	82 of 98
A-2.2	24 of 98	PE-2.4	55 of 98	E-2.3	87 of 98
A-2.3	25 of 98	P-2.1	60 of 98	E-3.0	92 of 98
A-2.4	26 of 98	P-2.2	61 of 98		

Planholders should update the Drawing Index to reflect the above changes.

An updated Drawing Index will be included in the Issued for Construction Project Manual.

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON PAGE C-410-1 OF THE BID.

3103 Executive Parkway, Suite 300, Toledo, Ohio 43606 - 419.473.9611

VILLAGE OF ANTWERP
ANTWERP, OHIO
NEW WATER TREATMENT PLANT

ADVERTISEMENT FOR BIDS

Sealed Bids for Village of Antwerp New Water Treatment Plant, will be received by the Village of Antwerp, at the offices of Jones & Henry Engineers, 3103 Executive Parkway, Suite 300, Toledo, Ohio 43606, until 3:00 p.m. local time on November 12, 2026. Sealed Bids will be publicly opened and read at 10:00 a.m. local time on November 13, 2026, at Village Offices at 122 S. Main Street, Antwerp, Ohio 45813.

In general, the work consists of the demolition of existing water treatment plant buildings and infrastructure; construction of a new 600 gallon per minute water treatment plant consisting of aeration, detention, high service pumping, filtration, and chemical addition; upgrades to existing well houses; and connections to existing utilities.

The issuing office is Jones & Henry Engineers, Ltd., 3103 Executive Parkway, Suite 300, Toledo, Ohio 43606. Copies of the Bidding Documents may be examined at the Owner's office listed above or the issuing office, without charge.

Technical questions regarding the project should be e-mailed to the Project Manager Jake Meinerding, PE, jmeinerding@jheng.com at Jones & Henry Engineers, Ltd.

A pre-bid conference will be held October 20, 2026, at 1:00 p.m. local time at the existing water treatment plant site 9 Water Plant Drive, Antwerp, Ohio 45813. Attendance at the pre-bid conference is highly encouraged but is not mandatory.

Copies of Bidding Documents and Contract Documents may be obtained electronically from www.jhplanroom.com. There is no charge to download from the digital print-room, however, registration is required. If hard copies of the bidding documents are needed, they can be ordered from the print-room for a fee. If you have any problems using the digital print-room, you are encouraged to contact either the Engineer's Project Manager, or Eastern Engineering at 419-661-9841.

Neither Owner nor Engineer has any responsibility for the accuracy, completeness or sufficiency of any bid documents obtained from any source other than the source indicated in these documents. Obtaining these documents from any other source(s) may result in obtaining incomplete and inaccurate information. Obtaining these documents from any source other than directly from the source listed herein may also result in failure to receive any addenda, corrections, or other revisions to these documents that may be issued.

Bids must be submitted on the forms bound herein, must contain the names of every person or company interested therein, and shall be accompanied by either a Bid Guaranty and Contract Bond in the amount of 100% of the amount bid with satisfactory corporate surety, or by a certified check on a solvent bank in the amount of not less than 10% of the amount of the Bid, subject to conditions provided in the Instructions to Bidders. The successful bidder will be required to furnish satisfactory Performance Bond and Maintenance and Guarantee Bond in the amount of 100% of the Bid.

Attention of bidders is called to all the requirements contained in this bid packet. The project is funded by Ohio EPA through the Water Supply Revolving Loan Account (WSRLA). General requirements are

contained in the Additional Supplementary Conditions and include but are not limited to Equal Opportunity Requirements, Minority and Woman's Business Enterprise Utilization, Debarment, the Violating Facilities Clause, and the use of Small Businesses in Rural Areas. Davis-Bacon (Federal) Prevailing Wage Determinations must be used.

Attention of bidders is called to the Buy American Requirements pertaining to iron and steel products requirements.

This procurement is subject to the EPA policy of encouraging the participation of small businesses in rural areas (SBRAs). Any Bid may be withdrawn prior to the scheduled closing time for receipt of Bids, but no bidder shall withdraw his Bid within 90 days after the actual opening thereof.

The Owner reserves the right to reject any or all Bids, waive irregularities in any Bid, and to accept any Bid which is deemed most favorable to the Owner.

Engineer's Estimate is ~~$8,200,000~~$8,700,000 (**Addendum 2, Issued October 30, 2026**)

Brian A. Davis

Brian Davis, Village Administrator

Dated: October 5, 2026

BID FORM

Village of Antwerp, Ohio

New Water Treatment Plant

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Village of Antwerp, Ohio

122 S. Main Street,

Antwerp, Ohio 45813

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 – BIDDER'S ACKNOWLEDGEMENTS

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

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	Addendum, Date
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. 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 any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. 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.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

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

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. 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;

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

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

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

2. "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;

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

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

ARTICLE 5 – BASIS OF BID

5.01 The basis of award for the Contract will be the Base Bid Price, including Base Bid Equipment and Product Manufacturers.

A. Bid Alternate(s), Mandatory Equipment and Product Manufacturer(s), and "or equal" will be considered by the Owner, in accordance with the Contract Documents, after the award of the Contract.

5.02 Bidder shall fill in all blanks on the Bid Form.

A. The name or make of any piece of equipment or material of construction specified in the Contract Documents and identified on the following Base Bid Equipment and Product Manufacturer List shall be utilized in determining the base bid price.

B. Where two or more Equipment or Product Manufacturers are named, or the words "Or Equal" are listed in the Contract Documents and not included in the Base Bid List, Bidders may utilize any of the named or follow the "Or Equal" process outlined in the Contract Documents.

C. The Bidder shall identify their selected Equipment or Product Manufacturer on the Base Bid List as follows:

Base Bid Equipment or Product Manufacturer List	
Specification Section	**Equipment or Product Manufacturers** Select One by Circling
~~11020~~ 11026	WesTech, Tonka, Hungerford & Terry, Loprest, Artesian of Pioneer
11223	Watson Marlow; Blue-White
11401	WesTech, Tonka, ~~Loprest ,~~Delta Cooling Towers, Artesian of Pioneer
11735	Flowserve, Pentair, Paco Grundfos

(**Addendum 1, Issued October 16, 2026**)
(**Addendum 2, Issued October 30, 2026**)

D. The Owner will have the right to select the Equipment or Product Manufacturer in the Base Bid List if Bidder fails to make a selection where required.

5.03 Bidder shall provide pricing for the Mandatory Equipment or Product Manufacturer Alternates below.

A. Where required, Bidder shall make a selection for the "Add" or "Deduct" by circling one, indicating that the price is to be Added or Deducted from the Base Bid Price, if the Owner accepts that Equipment or Product Manufacturer Alternate. If the Bidder fails to make a selection the default will be a Deduction.

B. A Mandatory Alternate is required for each Equipment or Product Manufacturer listed.

Mandatory Alternate			
Specification Section	**Equipment or Product Manufacturers** Shall not be the same as Base Bid Provide pricing for Mandatory Alternate for all listed Equipment or Product manufacturers	**Circle One** Assumed to be a deduct unless one is circled	**Dollar Amount**
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	
		Add/Deduct	

UNIT PRICE BID

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 Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Item No.	Description	Estimated Quantity	Unit	Unit Price in Figures						Total Estimated Cost of Item	
				Labor		Material		Total Estimated Unit Price			
1	General WTP Work	1	LS								
2	Allowances	1	LS			~~$420,000~~ ~~$430,000~~ $480,000	00	~~$420,000~~ ~~$430,000~~ $480,000	00	~~$420,000~~ ~~$430,000~~ $480,000	00
3	Excavation of Unsuitable Material	50	CY								
4	Additional Special Backfill	50	CY								
Total Estimated Construction Cost:											

(**Addendum 1, Issued October 16, 2026**)
(**Addendum 2, Issued October 30, 2026**)

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete within ~~730~~ 690 (**Addendum 1, Issued October 16, 2026**) 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 ~~760~~ 750 (**Addendum 1, Issued October 16, 2026**) calendar days after the date when the Contract Times commence to run.

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

ARTICLE 7 – ATTACHMENTS TO THIS BID

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

A. List of Proposed Subcontractors

B. List of Proposed Suppliers

C. Required Bid security;

D. Evidence of authority to do business in the state of the Project; and

E. Required Bidder Qualification Statement with supporting data.

F. WSRLA Funding Documents

ARTICLE 8 – DEFINED TERMS

8.01 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 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

_____

_____

_____

Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

_____

Bidder's License No.: _____
(where applicable)

PERSONAL PROPERTY TAX AFFIDAVIT

STATE OF OHIO)

)ss.

COUNTY OF _____)

_____, being first duly sworn, deposes and says as follows: answering whichever is applicable by placing an "X" before items 1 or 2.

1. ( ) We are not charged with any delinquent personal property taxes on the general tax list of personal property in _____ County, Ohio.

2. ( ) We are charged with delinquent personal property taxes on the general tax list of _____County, Ohio including unpaid penalties and interest in the amount of $_____.

_____
Bidder

By: _____

Title: _____

Sworn and subscribed before me this _____ day of _____ 20 _____.

_____
Notary Public in and for

_____ State

My Commission Expires:

_____ 20_____

EXHIBIT 1

WAGE RATES

(**Addendum 2, Issued October 30, 2026**)

PAYROLL SUBMITTALS AND WAGE DETERMINATION

1. PAYROLL SUBMITTALS

Amended House Bill No. 1170 amended Section 4115.99 and enacted Section 4115.071 of the Revised Code to improve detection of violations of Ohio's Prevailing Wage Law. This Law is effective September 26, 1974.

Amended House Bill No. 1171 amended Sections 4115.04 and 411.05 of the Revised Code to require adjustments in the prevailing wage due to new collective bargaining agreements. This law is effective September 26, 1974.

Amended House Bill No. 1171 provided for an escalator in the prevailing wage rate. Each time a new prevailing wage rate is established by the Department of Industrial Relations, then the rate is required to be paid on all ongoing public improvement projects. Contractors shall include these escalators in his bid proposal. There will be no addition to a contractor's contract due to a new prevailing wage rate being provided. Refer to Revised Section 4115.05.

The following wage information shall be furnished to the Department of Administrative Services, Division of Public Works, Office of State Architect and Engineer.

a) Every contractor or subcontractor who is subject to Laws pertaining to the wages and hours on Public Works projects shall, at the beginning of performance under the contract, submit the dates during the life of his contract when payments of wages to employees are to be made.

b) Each contractor or subcontractor, within three weeks after each pay date, shall furnish a certified copy of his complete payroll for each date, exhibiting for each employee paid any wages, the employee's name, current address, social security number, number of hours worked each day during the pay period, the total for each week, his hourly rate of pay, his job classification, fringe payments, and deduction from his wages.

c) The prime contractor shall be responsible for the submission of copies of payrolls of all subcontractors.

d) The payroll submitted shall be executed by the prime contractor or subcontractor or a duly appointed agent thereof and shall recite that the payroll is correct and that the wage rates shown are not less than those required by the contract.

2. SECTION 4115.99 (A) Whoever violates Section 4115.08 or 4115.09 of the Revised Code shall be fined not less than twenty-five dollars or more than five hundred dollars. (B) Whoever violates Section 4115.071, 4115.10, or 4115.11 of the Revised Code shall be fined five hundred dollars for the first offense; for each subsequent offense such person shall be fined one thousand dollars.

3. WAGE DETERMINATION (Obtain wage rates prior to advertising)

The attached pages are Prevailing Rates of Wages as ascertained by the Department of Industrial Relations for this project as provided in Section 4115.03 through 4115.14 of the Ohio Revised Code.

"General Decision Number: OH20260066 05/18/2026

State: Ohio

Construction Types: Building

Counties: Ohio Counties of
Hardin and Paulding

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

ASBE0045-004 07/01/2024

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR	$ 37.00	28.27

BROH0022-001 07/01/2017

	Rates	Fringes
BRICK POINTER/CAULKER/CLEANER (PAULDING COUNTY)	$ 31.00	15.15

BROH0040-004 06/01/2024

	Rates	Fringes
BRICK POINTER/CAULKER/CLEANER (HARDIN COUNTY)	$ 35.67	24.75

CARP0372-005 05/01/2024

	Rates	Fringes
SOFT FLOOR LAYER	$ 30.25	25.16

ELEC0008-003 05/27/2024

	Rates	Fringes
ELECTRICIAN	$ 48.40	25.24

ENGI0018-024 05/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR: FORKLIFT	$ 42.98	16.41
POWER EQUIPMENT OPERATOR (CRANE; SCRAPER)	$ 44.14	16.41

IRON0055-013 07/01/2024

	Rates	Fringes
IRONWORKER, STRUCTURAL	$ 35.50	29.20

IRON0550-009 05/01/2025

	Rates	Fringes
IRONWORKER: ORNAMENTAL	$ 36.00	23.57

LABO0423-002 05/01/2021

	Rates	Fringes
LABORER (CHAIN LINK/CYCLONE FENCE ERECTION)	$ 28.73	11.80

LABO0500-004 05/01/2024

	Rates	Fringes
LABORER (MASON TENDER - CEMENT/CONCRETE)	$ 32.35	16.42

PAIN0948-002 07/01/2025

	Rates	Fringes
GLAZIER	$ 36.50	25.06

PLUM0050-010 06/30/2025

	Rates	Fringes
PLUMBER (HVAC PIPE INSTALLATION ONLY)	$ 51.00	32.56
PIPEFITTER (EXCLUDES HVAC PIPE INSTALLATION)	$ 51.00	32.56

ROOF0134-006 07/01/2021

	Rates	Fringes
ROOFER	$ 29.07	19.84

SHEE0033-017 07/01/2024

	Rates	Fringes
SHEET METAL WORKER (EXCLUDES HVAC DUCT AND UNIT INSTALLATION)	$ 39.58	35.15

SUOH2012-068 08/29/2014

	Rates	Fringes
TRUCK DRIVER: DUMP (ALL TYPES)	$ 17.97	4.14
SPRINKLER FITTER (FIRE SPRINKLERS)	$ 25.91	9.18
SHEET METAL WORKER (HVAC DUCT AND HVAC UNIT INSTALLATION ONLY)	$ 22.05	12.18
PLUMBER, EXCLUDES HVAC PIPE INSTALLATION	$ 29.57	17.20
PAINTER (BRUSH AND ROLLER)	$ 17.91	10.85
OPERATOR: PAVER (ASPHALT, AGGREGATE, AND CONCRETE)	$ 25.85	10.42
OPERATOR: LOADER	$ 17.43	2.72
OPERATOR: BULLDOZER	$ 23.50	7.51
OPERATOR: BOBCAT/SKID STEER/SKID LOADER	$ 20.00	3.26
OPERATOR: BACKHOE/EXCAVATOR/TRACKHOE	$ 24.59	7.76
LABORER: PIPELAYER	$ 18.37	4.79
LABORER: MASON TENDER - BRICK	$ 22.74	8.60
LABORER: LANDSCAPE & IRRIGATION	$ 10.39	0.00
LABORER: COMMON OR GENERAL	$ 21.67	8.30
DRYWALL HANGER AND METAL STUD INSTALLER	$ 17.63	5.64
DRYWALL FINISHER/TAPER	$ 18.57	3.12
CEMENT MASON/CONCRETE FINISHER	$ 23.47	10.07
CARPENTER (EXCLUDING SOFT FLOOR LAYING)	$ 21.09	9.08
BRICKLAYER	$ 27.47	12.26

UAVGOH0012 01/01/2019

	Rates	Fringes
BRICKLAYER: TILE SETTER	$ 29.90	16.52
BRICKLAYER: TILE FINISHER	$ 26.88	11.81

UAVGOH0013 01/01/2019

	Rates	Fringes

IRONWORKER: REINFORCING.....$ 33.18 23.73

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.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

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

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than ⁄SU⁄, ⁄UAVG⁄, ⁄SA⁄, or ⁄SC⁄ denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in

processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ﷿SU﷿ identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

﷿SU﷿ wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ﷿SA﷿ identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ﷿SA﷿ identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

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

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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

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

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

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

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END OF GENERAL DECISION

"

"General Decision Number: OH20260001 09/17/2026

State: Ohio

Construction Types: Heavy and Highway

Counties: Ohio Counties of
Adams, Allen, Ashland, Ashtabula,
Athens, Auglaize, Belmont, Brown,
Butler, Carroll, Champaign, Clark,
Clermont, Clinton, Columbiana,
Coshocton, Crawford, Cuyahoga, Darke,
Defiance, Delaware, Erie, Fairfield,
Fayette, Franklin, Fulton, Gallia,
Geauga, Greene, Guernsey, Hamilton,
Hancock, Hardin, Harrison, Henry,
Highland, Hocking, Holmes, Huron,
Jackson, Jefferson, Knox, Lake,
Lawrence, Licking, Logan, Lorain, Lucas,
Madison, Mahoning, Marion, Medina,
Meigs, Mercer, Miami, Monroe,
Montgomery, Morgan, Morrow, Muskingum,
Noble, Ottawa, Paulding, Perry,
Pickaway, Pike, Portage, Preble, Putnam,
Richland, Ross, Sandusky, Scioto,
Seneca, Shelby, Stark, Summit, Trumbull,
Tuscarawas, Union, Van Wert, Vinton,
Warren, Washington, Wayne, Williams,
Wood and Wyandot

Heavy Construction

Highway Construction

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026
2	05/20/2026
3	06/25/2026
4	07/30/2026
5	09/17/2026

BROH0001-001 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (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)	$ 33.39	20.06

BROH0001-004 06/01/2023

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 32.40	19.30

BROH0003-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (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)...	$ 33.39	20.06

BROH0005-003 06/01/2020

	Rates	Fringes
BRICKLAYER: BRICKLAYERS; CAULKERS; CLEANERS; POINTERS; & STONEMASONS (CUYAHOGA, LORAIN & MEDINA (HINCKLEY, GRANGER, BRUNSWICK, LIVERPOOL, MONTVILLE, YORK, HOMER, HARRISVILLE, CHATHAM, LITCHFIELD & SPENCER TOWNSHIPS AND THE CITY OF MEDINA))	$ 36.64	17.13
BRICKLAYER: SANDBLASTERS (CUYAHOGA, LORAIN & MEDINA (HINCKLEY, GRANGER, BRUNSWICK, LIVERPOOL, MONTVILLE, YORK, HOMER, HARRISVILLE, CHATHAM, LITCHFIELD & SPENCER TOWNSHIPS AND THE CITY OF MEDINA))	$ 36.39	17.13
BRICKLAYER: SEWER BRICKLAYERS & STACK BUILDERS (CUYAHOGA, LORAIN & MEDINA (HINCKLEY, GRANGER, BRUNSWICK, LIVERPOOL, MONTVILLE, YORK, HOMER, HARRISVILLE, CHATHAM, LITCHFIELD & SPENCER TOWNSHIPS AND THE CITY OF MEDINA))	$ 36.64	17.13
BRICKLAYER: SWING SCAFFOLDS (CUYAHOGA, LORAIN & MEDINA (HINCKLEY, GRANGER, BRUNSWICK, LIVERPOOL, MONTVILLE, YORK, HOMER, HARRISVILLE, CHATHAM, LITCHFIELD & SPENCER TOWNSHIPS AND THE CITY OF MEDINA))	$ 37.14	17.13

BROH0006-005 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (CARROLL, COLUMBIANA (KNOX, BUTLER, WEST & HANOVER TOWNSHIPS), STARK & TUSCARAWAS)	$ 33.39	20.06

BROH0007-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (LAWRENCE)	$ 33.39	20.06

BROH0007-005 06/01/2023

	Rates	Fringes
BRICKLAYER (PORTAGE & SUMMIT)	$ 32.40	19.30

BROH0007-010 06/01/2024

	Rates	Fringes
MASON - STONE (PORTAGE & SUMMIT)	$ 33.39	20.06

BROH0008-001 06/01/2024

	Rates	Fringes
BRICKLAYER (COLUMBIANA (SALEM, PERRY, FAIRFIELD, CENTER, ELK RUN, MIDDLETON, & UNITY TOWNSHIPS AND		

THE CITY OF NEW WATERFORD), MAHONING & TRUMBULL)....$ 33.39 20.06

BROH0009-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (BELMONT & MONROE COUNTIES AND THE TOWNSHIPS OF WARREN & MT. PLEASANT AND THE VILLAGE OF DILLONVALE IN JEFFERSON COUNTY).....	$ 33.39	20.06
REFRACTORY (BELMONT & MONROE COUNTIES AND THE TOWNSHIPS OF WARREN & MT. PLEASANT AND THE VILLAGE OF DILLONVALE IN JEFFERSON COUNTY).....	$ 31.45	19.01

BROH0010-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (COLUMBIANA (ST. CLAIR, MADISON, WAYNE, FRANKLIN, WASHINGTON, YELLOW CREEK & LIVERPOOL TOWNSHIPS) & JEFFERSON (BRUSH CREEK & SALINE TOWNSHIPS)).....	$ 33.39	20.06

BROH0014-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (HARRISON & JEFFERSON (EXCEPT MT. PLEASANT, WARREN, BRUSH CREEK, SALINE & SALINEVILLE TOWNSHIPS & THE VILLAGE OF DILLONVALE)).	$ 33.39	20.06

BROH0016-002 06/01/2023

	Rates	Fringes
BRICKLAYER, STONEMASON (ASHTABULA, GEAUGA, AND LAKE COUNTIES).....	$ 32.40	19.30

BROH0018-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (BROWN, BUTLER, CLERMONT, HAMILTON, PREBLE (GASPER, DIXON, ISRAEL, LANIER, SOMERS & GRATIS TOWNSHIPS) & WARREN COUNTIES:).....	$ 33.39	20.06

BROH0022-004 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (CHAMPAIGN, CLARK, CLINTON, DARKE, GREENE, HIGHLAND, LOGAN, MIAMI, MONTGOMERY, PREBLE (JACKSON, MONROE, HARRISON, TWIN, JEFFERSON & WASHINGTON TOWNSHIPS) AND SHELBY COUNTIES).....	$ 33.39	20.06

BROH0032-001 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (GALLIA & MEIGS).....	$ 33.39	20.06

BROH0035-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (ALLEN, AUGLAIZE, MERCER AND VAN WERT COUNTIES).....	$ 33.39	20.06

BROH0039-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (ADAMS & SCIOTO).....	$ 33.39	20.06

BROH0040-003 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (ASHLAND, CRAWFORD, HARDIN, HOLMES, MARION, MORROW, RICHLAND, WAYNE AND WYANDOT (EXCEPT CRAWFORD, RIDGE, RICHLAND & TYMOCHTEE TOWNSHIPS) COUNTIES) 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	$ 33.39	20.06

BROH0044-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (COSHOCTON, FAIRFIELD, GUERNSEY, HOCKING, KNOX, KICKING, MORGAN, MUSKINGUM, NOBLE (BEAVER, BUFFALO, SENECA & WAYNE TOWNSHIPS) & PERRY COUNTIES:)	$ 33.39	20.06

BROH0045-002 06/01/2023

	Rates	Fringes
BRICKLAYER, STONEMASON (FAYETTE, JACKSON, PIKE, ROSS AND VINTON COUNTIES)	$ 35.39	17.47

BROH0046-002 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (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) 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	$ 33.39	20.06

BROH0052-001 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (ATHENS COUNTY)	$ 33.39	20.06

BROH0052-003 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (NOBLE (BROOKFIELD, NOBLE, CENTER, SHARON, OLIVE, ENOCH, STOCK, JACKSON, JEFFERSON & ELK TOWNSHIPS) AND WASHINGTON COUNTIES)	$ 33.39	20.06

BROH0055-003 06/01/2024

	Rates	Fringes
BRICKLAYER, STONEMASON (DELAWARE, FRANKLIN, MADISON, PICKAWAY AND UNION COUNTIES)	$ 33.39	20.06

CARP0002-024 05/01/2025

	Rates	Fringes
CARPENTER & PILEDRIVERMEN (BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY & WARREN)	$ 35.94	23.59
DIVER (BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, DARKE, GREENE, HAMILTON, LOGAN, MIAMI, MONTGOMERY, PREBLE, SHELBY & WARREN)	$ 40.58	9.69

CARP0171-001 05/01/2025

	Rates	Fringes
CARPENTER (MAHONING & TRUMBULL)	$ 33.19	25.02

CARP0171-002 05/01/2025

	Rates	Fringes
CARPENTER (BELMONT, COLUMBIANA, HARRISON, JEFFERSON & MONROE)	$ 32.50	26.19

CARP0200-002 05/01/2025

	Rates	Fringes
CARPENTER (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)	$ 35.94	23.59
DIVER (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)	$ 39.41	10.40
PILEDRIVERMAN (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)	$ 35.94	23.59

CARP0285-001 05/01/2025

	Rates	Fringes
CARPENTER (CARROLL, STARK, TUSCARAWAS AND WAYNE)	$ 34.07	24.28

CARP0285-002 05/01/2025

	Rates	Fringes
CARPENTER (COSHOCTON, HOLMES, KNOX & MORROW)	$ 33.38	24.69

CARP0285-008 05/01/2025

	Rates	Fringes
CARPENTER (MEDINA, PORTAGE & SUMMIT)	$ 37.18	25.07

CARP0351-005 05/01/2025

	Rates	Fringes
CARPENTER (LUCAS & WOOD)	$ 35.44	27.56

CARP0351-006 05/01/2025

	Rates	Fringes

CARPENTER (DEFIANCE, FULTON, HANCOCK, HENRY,
PAULDING & WILLIAMS COUNTIES).....$ 32.05 26.13

CARP0372-002 05/01/2025

	Rates	Fringes
CARPENTER (ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM & VAN WERT)	$ 31.80	26.33

CARP0435-005 05/01/2025

	Rates	Fringes
CARPENTER (ASHTABULA, CUYAHOGA, GEAUGA & LAKE)	$ 38.57	24.64

CARP0735-001 05/01/2025

	Rates	Fringes
CARPENTER (ASHLAND, HURON & RICHLAND)	$ 34.67	23.57

CARP0735-002 05/01/2025

	Rates	Fringes
CARPENTER (LORAIN)	$ 38.42	24.01

CARP0735-004 05/01/2025

	Rates	Fringes
CARPENTER (ERIE)	$ 36.71	24.14

CARP0744-001 05/01/2025

	Rates	Fringes
CARPENTER (CRAWFORD, OTTAWA, SANDUSKY, SENECA & WYANDOT)	$ 33.74	27.05

CARP1090-002 05/01/2025

	Rates	Fringes
PILEDRIVERMEN & DIVER'S TENDER (ALLEN, AUGLAIZE, HARDIN, MERCER, PUTNAM, VAN WERT & WYANDOT) DIVERS - $250.00 PER DAY	$ 35.94	28.39

CARP1090-003 05/01/2025

	Rates	Fringes
DIVER, WET (BELMONT, HARRISON, & MONROE)	$ 58.52	24.91
PILEDRIVERMEN; DIVER, DRY (BELMONT, HARRISON, & MONROE)	$ 39.01	24.91

CARP1090-004 05/01/2025

	Rates	Fringes
DIVER, WET (CARROLL, STARK, TUSCARAWAS & WAYNE)	$ 49.82	25.40
PILEDRIVERMEN; DIVER, DRY (CARROLL, STARK, TUSCARAWAS & WAYNE)	$ 33.21	25.40

CARP1090-005 05/01/2025

	Rates	Fringes
DIVER, WET (ASHLAND, ASHTABULA, CUYAHOGA, ERIE, GEAUGA, HURON, LAKE, LORAIN, MEDINA, PORTAGE, RICHLAND & SUMMIT)	$ 54.51	27.50
PILEDRIVERMEN; DIVER, DRY (ASHLAND, ASHTABULA, CUYAHOGA, ERIE, GEAUGA, HURON, LAKE, LORAIN, MEDINA, PORTAGE, RICHLAND & SUMMIT)	$ 36.34	27.50

CARP1090-006 05/01/2025

	Rates	Fringes
DIVER, WET (COSHOCTON, HOLMES, KNOX & MORROW)	$ 54.36	22.54
PILEDRIVERMEN; DIVER, DRY (COSHOCTON, HOLMES, KNOX & MORROW)	$ 36.24	22.54

CARP1090-007 05/01/2025

	Rates	Fringes
DIVER, WET (MAHONING & TRUMBULL)	$ 50.85	24.82
PILEDRIVERMEN; DIVER, DRY (MAHONING & TRUMBULL)	$ 33.90	24.82

CARP1090-008 05/01/2025

	Rates	Fringes
PILEDRIVERMAN (COLUMBIANA & JEFFERSON)	$ 39.01	24.91

CARP1090-009 05/01/2025

	Rates	Fringes
PILEDRIVERMEN & DIVER'S TENDER (CRAWFORD, DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, SANDUSKY, SENECA, WILLIAMS & WOOD) DIVERS - $250.00 PER DAY	$ 37.98	28.63

ELEC0008-002 05/27/2024

	Rates	Fringes
CABLE SPLICER (DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD)	$ 38.98	18.96
ELECTRICIAN (DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD)	$ 48.40	25.24

ELEC0032-003 06/01/2025

	Rates	Fringes
ELECTRICIAN (ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY, VAN WERT & WYANDOT (CRAWFORD, JACKSON, MARSEILLES, MIFFLIN, RIDGELAND, RIDGE & SALEM TOWNSHIPS))	$ 39.17	23.60

ELEC0038-002 04/28/2025

	Rates	Fringes
ELECTRICIAN, EXCLUDING SOUND & COMMUNICATIONS WORK. 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	$ 46.63	24.92

ELEC0038-008 04/28/2025

	Rates	Fringes
SOUND & COMMUNICATION TECHNICIAN: COMMUNICATIONS TECHNICIAN (CUYAHOGA, GEAUGA (BAINBRIDGE, CHESTER & RUSSELL TOWNSHIPS) & LORAIN (COLUMBIA TOWNSHIP)) 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.....$ 34.30 14.95
SOUND & COMMUNICATION TECHNICIAN: INSTALLER
TECHNICIAN (CUYAHOGA, GEAUGA (BAINBRIDGE, CHESTER &
RUSSELL TOWNSHIPS) & LORAIN (COLUMBIA TOWNSHIP))
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.....$ 33.05 14.91

ELEC0064-003 11/30/2025

Rates Fringes
ELECTRICIAN (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))..... $ 41.49 21.81

ELEC0071-005 01/06/2025

Rates Fringes
LINE CONSTRUCTION: EQUIPMENT OPERATOR: DOT/TRAFFIC
SIGNAL & HIGHWAY LIGHTING PROJECTS (ASHTABULA,
CUYAHOGA, GEAUGA, LAKE & LORAIN)..... $ 39.97 18.79
LINE CONSTRUCTION: EQUIPMENT OPERATOR: MUNICIPAL
POWER/TRANSIT PROJECTS (ASHTABULA, CUYAHOGA,
GEAUGA, LAKE & LORAIN)..... $ 49.46 21.60
LINE CONSTRUCTION: GROUNDMAN: DOT/TRAFFIC SIGNAL &
HIGHWAY LIGHTING PROJECTS (ASHTABULA, CUYAHOGA,
GEAUGA, LAKE & LORAIN)..... $ 31.10 16.40
LINE CONSTRUCTION: GROUNDMAN: MUNICIPAL
POWER/TRANSIT PROJECTS (ASHTABULA, CUYAHOGA,
GEAUGA, LAKE & LORAIN)..... $ 38.47 18.64
LINE CONSTRUCTION: LINEMEN/CABLE SPLICER:
DOT/TRAFFIC SIGNAL & HIGHWAY LIGHTING PROJECTS
(ASHTABULA, CUYAHOGA, GEAUGA, LAKE & LORAIN)..... $ 43.89 19.85
LINE CONSTRUCTION: LINEMEN/CABLE SPLICER:
MUNICIPAL POWER/TRANSIT PROJECTS (ASHTABULA,
CUYAHOGA, GEAUGA, LAKE & LORAIN)..... $ 54.96 23.09

ELEC0071-010 01/06/2025

Rates Fringes
LINE CONSTRUCTION: EQUIPMENT OPERATOR (STATEWIDE)... $ 40.44 17.71
LINE CONSTRUCTION: GROUNDMAN (STATEWIDE)..... $ 29.07 14.97
LINE CONSTRUCTION: LINEMAN & CABLE SPLICERS
(STATEWIDE)..... $ 46.02 19.04

ELEC0082-002 12/02/2024

Rates Fringes
ELECTRICIAN (CLINTON, DARKE, GREENE, MIAMI,
MONTGOMERY, PREBLE & WARREN (WAYNE, CLEAR CREEK &
FRANKLIN TOWNSHIPS))..... $ 38.00 22.49

ELEC0082-006 11/25/2024

Rates Fringes
SOUND & COMMUNICATION TECHNICIAN: CABLE PULLER
(CLINTON, DARKE, GREENE, MIAMI, MONTGOMERY, PREBLE
& WARREN (WAYNE, CLEAR CREEK & FRANKLIN TOWNSHIPS)). $ 13.85 5.30
SOUND & COMMUNICATION TECHNICIAN:

INSTALLER/TECHNICIAN (CLINTON, DARKE, GREENE,
MIAMI, MONTGOMERY, PREBLE & WARREN (WAYNE, CLEAR
CREEK & FRANKLIN TOWNSHIPS))..... $ 27.70 15.71

ELEC0129-003 02/24/2025

	Rates	Fringes
ELECTRICIAN (LORAIN (EXCEPT COLUMBIA TOWNSHIP) & MEDINA (LITCHFIELD & LIVERPOOL TOWNSHIPS)).....	$ 42.95	18.81

ELEC0129-004 02/24/2025

	Rates	Fringes
ELECTRICIAN (ERIE & HURON (LYME, RIDGEFIELD, NORWALK, TOWNSEND, WAKEMAN, SHERMAN, PERU, BRONSON, HARTLAND, CLARKSFIELD, NORWICH, GREENFIELD, FAIRFIELD, FITCHVILLE & NEW LONDON TOWNSHIPS)).....	$ 42.95	18.81

ELEC0141-003 06/02/2025

	Rates	Fringes
CABLE SPLICER (BELMONT COUNTY).....	$ 42.94	27.74
ELECTRICIAN (BELMONT COUNTY).....	$ 39.25	31.23

ELEC0212-003 11/26/2018

	Rates	Fringes
SOUND & COMMUNICATION TECHNICIAN (BROWN, CLERMONT & HAMILTON).....	$ 24.35	10.99

ELEC0212-005 06/02/2025

	Rates	Fringes
ELECTRICIAN (BROWN, CLERMONT, AND HAMILTON COUNTIES).....	$ 38.05	22.97

ELEC0245-001 08/26/2024

	Rates	Fringes
LINE CONSTRUCTION: EQUIPMENT OPERATOR (ALLEN, HARDIN, VAN WERT & WYANDOT (CRAWFORD, JACKSON, MARSEILLES, MIFFLIN, RICHLAND, RIDGE & SALEM TOWNSHIPS)) FOOTNOTE: A. HALF DAY'S PAID HOLIDAY: THE LAST 4 HOURS OF THE WORKDAY PRIOR TO CHRISTMAS OR NEW YEAR'S DAY.....	$ 32.95	17.08
LINE CONSTRUCTION: GROUNDMAN TRUCK DRIVER (ALLEN, HARDIN, VAN WERT & WYANDOT (CRAWFORD, JACKSON, MARSEILLES, MIFFLIN, RICHLAND, RIDGE & SALEM TOWNSHIPS)): FOOTNOTE: A. HALF DAY'S PAID HOLIDAY: THE LAST 4 HOURS OF THE WORKDAY PRIOR TO CHRISTMAS OR NEW YEAR'S DAY.....	$ 20.59	13.62
LINE CONSTRUCTION: LINEMAN (ALLEN, HARDIN, VAN WERT & WYANDOT (CRAWFORD, JACKSON, MARSEILLES, MIFFLIN, RICHLAND, RIDGE & SALEM TOWNSHIPS)) FOOTNOTE: A. HALF DAY'S PAID HOLIDAY: THE LAST 4 HOURS OF THE WORKDAY PRIOR TO CHRISTMAS OR NEW YEAR'S DAY.....	$ 47.07	21.03

ELEC0245-003 01/01/2025

	Rates	Fringes
LINE CONSTRUCTION: CABLE SPLICER (DEFIANCE, FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, AND WOOD COUNTIES) : 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.....$ 53.90 23.19
LINE CONSTRUCTION: GROUNDMAN/TRUCK DRIVER
(DEFIANCE, FULTON, HANCOCK, HENRY, HURON, LUCAS,
OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA,
WILLIAMS, AND WOOD COUNTIES) 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.....$ 20.51 13.84
LINE CONSTRUCTION: HELI-ARC WELDING (DEFIANCE,
FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA,
PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, AND
WOOD COUNTIES) 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.....$ 47.17 21.31
LINE CONSTRUCTION: LINEMAN (DEFIANCE, FULTON,
HANCOCK, HENRY, HURON, LUCAS, OTTAWA, PAULDING,
PUTNAM, SANDUSKY, SENECA, WILLIAMS, AND WOOD
COUNTIES) 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.....$ 46.87 21.22
LINE CONSTRUCTION: OPERATOR - CLASS 1 (DEFIANCE,
FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA,
PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, AND
WOOD COUNTIES) 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.....$ 37.50 18.60
LINE CONSTRUCTION: OPERATOR - CLASS 2 (DEFIANCE,
FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA,
PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, AND
WOOD COUNTIES) 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.....$ 32.81 17.29
LINE CONSTRUCTION: TRAFFIC SIGNAL & LIGHTING
TECHNICIAN (DEFIANCE, FULTON, HANCOCK, HENRY,
HURON, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY,
SENECA, WILLIAMS, AND WOOD COUNTIES) 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.....$ 42.18 19.91

ELEC0245-004 01/01/2025

	Rates	Fringes
LINE CONSTRUCTION: CABLE SPLICER (ERIE COUNTY) 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	$ 53.90	23.19
LINE CONSTRUCTION: GROUNDMAN/TRUCK DRIVER (ERIE COUNTY) 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	$ 20.51	13.84
LINE CONSTRUCTION: LINEMAN (ERIE COUNTY) 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	$ 46.87	21.22
LINE CONSTRUCTION: OPERATOR - CLASS 1 (ERIE COUNTY) 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	$ 37.50	18.60
LINE CONSTRUCTION: OPERATOR - CLASS 2 (ERIE COUNTY) 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	$ 32.81	17.29

ELEC0246-001 10/28/2024

	Rates	Fringes
ELECTRICIAN (CARROLL, COLUMBIANA, HARRISON AND JEFFERSON COUNTIES IN OHIO; BROOKE AND HANCOCK COUNTIES IN WEST VIRGINIA.) FOOTNOTE: A. 1 1/2 PAID HOLIDAYS: THE LAST SCHEDULED WORKDAY PRIOR TO CHRISTMAS & 4 HOURS ON GOOD FRIDAY	$ 44.00	37.68

ELEC0306-005 05/27/2024

	Rates	Fringes
CABLE SPLICER (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))	$ 46.81	20.95
ELECTRICIAN (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))..................$ 42.55 20.95

ELEC0317-002 06/02/2025

	Rates	Fringes
CABLE SPLICER (GALLIA & LAWRENCE).....	$ 32.68	18.13
ELECTRICIAN (GALLIA & LAWRENCE).....	$ 41.15	29.35

ELEC0540-005 06/30/2025

	Rates	Fringes
ELECTRICIAN (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).....	$ 39.86	29.19

ELEC0573-003 06/01/2025

	Rates	Fringes
ELECTRICIAN (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)).....	$ 42.20	23.37

ELEC0575-001 05/29/2023

	Rates	Fringes
ELECTRICIAN (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)).....	$ 37.00	22.26

ELEC0648-001 09/01/2025

	Rates	Fringes
CABLE SPLICER (BUTLER AND WARREN COUNTIES (DEERFIELD, HAMILTON, HARLAN, MASSIE, SALEM, TURTLE CREEK, UNION & WASHINGTON TOWNSHIPS)).....	$ 30.50	18.23
ELECTRICIAN (BUTLER AND WARREN COUNTIES (DEERFIELD, HAMILTON, HARLAN, MASSIE, SALEM, TURTLE CREEK, UNION & WASHINGTON TOWNSHIPS)).....	$ 38.00	24.16

ELEC0673-004 05/26/2025

	Rates	Fringes
CABLE SPLICER (ASHTABULA (EXCLUDING ORWELL, COLEBROOK, WILLIAMSFIELD, WAYNE & WINDSOR TOWNSHIPS), GEAUGA (BURTON, CHARDON, CLARIDON, HAMBDEN, HUNTSBURG, MONTVILLE, MUNSON, NEWBURY & THOMPSON TOWNSHIPS) AND LAKE COUNTIES).....	$ 33.81	21.47

ELECTRICIAN (ASHTABULA (EXCLUDING ORWELL, COLEBROOK, WILLIAMSFIELD, WAYNE & WINDSOR TOWNSHIPS), GEAUGA (BURTON, CHARDON, CLARIDON, HAMBDEN, HUNTSBURG, MONTVILLE, MUNSON, NEWBURY & THOMPSON TOWNSHIPS) AND LAKE COUNTIES).....$ 41.17 24.58

ELEC0683-002 06/02/2025

	Rates	Fringes
CABLE SPLICER (CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON, PICKAWAY (CIRCLEVILLE, DARBY, HARRISON, JACKSON, MADISON, MONROE, MUHLENBERG, SCIOTO, WALNUT & WASHINGTON TOWNSHIPS), AND UNION COUNTIES).....	$ 44.00	26.40
ELECTRICIAN (CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FRANKLIN, MADISON, PICKAWAY (CIRCLEVILLE, DARBY, HARRISON, JACKSON, MADISON, MONROE, MUHLENBERG, SCIOTO, WALNUT & WASHINGTON TOWNSHIPS), AND UNION COUNTIES).....	$ 43.00	26.37

ELEC0688-003 05/30/2022

	Rates	Fringes
ELECTRICIAN (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).....	$ 32.30	21.83

ELEC0972-002 06/01/2024

	Rates	Fringes
CABLE SPLICER (ATHENS, MEIGS, MONROE, MORGAN, NOBLE, VINTON (BROWN, KNOX, MADISON, VINTON & WILKESVILLE TOWNSHIPS), AND WASHINGTON COUNITES)...	$ 40.25	33.33
ELECTRICIAN (ATHENS, MEIGS, MONROE, MORGAN, NOBLE, VINTON (BROWN, KNOX, MADISON, VINTON & WILKESVILLE TOWNSHIPS), AND WASHINGTON COUNITES).....	$ 40.00	33.32

ELEC1105-001 05/27/2024

	Rates	Fringes
ELECTRICIAN (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).....	$ 39.60	24.41

ENGI0018-003 05/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR: 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). (ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, AND SUMMIT COUNTIES).....$ 45.63 16.41

POWER EQUIPMENT OPERATOR: 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). (ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, AND SUMMIT COUNTIES).....$ 45.53 16.41

POWER EQUIPMENT OPERATOR: 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 $4.00 PER HOUR. (ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, AND SUMMIT COUNTIES).....$ 44.49 16.41

POWER EQUIPMENT OPERATOR: 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. (ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, AND SUMMIT COUNTIES).....$ 43.27 16.41

POWER EQUIPMENT OPERATOR: 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. (ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, AND SUMMIT COUNTIES).$ 37.98 16.41

POWER EQUIPMENT OPERATOR: GROUP 6- MASTER MECHANIC & BOOM FROM 150 TO 180. (ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, AND SUMMIT COUNTIES).....$ 46.63 16.41

POWER EQUIPMENT OPERATOR: GROUP 7- BOOM FROM 180 AND OVER. (ASHTABULA, CUYAHOGA, ERIE, GEAUGA, LAKE, LORAIN, MEDINA, PORTAGE, AND SUMMIT COUNTIES).$ 46.63 16.41

ENGI0018-004 05/01/2024

	Rates	Fringes

POWER EQUIPMENT OPERATOR: 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 9SINGLE 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 OPERATORON); 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. (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,
PTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA,
SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON,
WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, AND
YANDOT COUNTIES).....$ 44.14 16.41

POWER EQUIPMENT OPERATOR: 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 MRE THAN 48""; BULLDOZER; ENDLOADER; HYDRO
MILLING MACHINE; HORIZONTAL DIRECTIONAL DRILL (OVER
50,000 FT. LBS. THURUST); KOLMAN-TYPE LOADER
(PRODUCTION TYPE-DIRT); LEAD GREASEMAN; LIGHTING &
TRAFFIC SIGNAL INSTALLATION EQUIPMENT (INCLUDES ALL
GROUPS OR CLASSIFICATIONS); MATERIAL TRANSFER
EQUIPMENT (SHUTTLE BUGGY); ASHPHALT; 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. (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,
PTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA,
SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON,
WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, AND
YANDOT COUNTIES).....$ 44.02 16.41

POWER EQUIPMENT OPERATOR: 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: ARTICULATING/STRAIGHT BED END DUMPS IF
ASSIGNED (MINUS $4.00 PER HOUR). (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, PTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO,
SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD,
AND YANDOT COUNTIES).....$ 42.98 16.41
POWER EQUIPMENT OPERATOR: 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 EXCEPT 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. (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, PTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO,
SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT,
VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD,
AND YANDOT COUNTIES).....$ 41.80 16.41
POWER EQUIPMENT OPERATOR: 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. (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, PTNAM, RICHLAND, ROSS,
SANDUSKY, SCIOTO, SENECA, SHELBY, STARK,
TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE, WILLIAMS, WOOD, AND YANDOT
COUNTIES).....$ 36.34 16.41
POWER EQUIPMENT OPERATOR: GROUP 6- MASTER MECHANIC
& BOOM FROM 150 TO 180. (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,
PTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA,
SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON,
WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, AND
YANDOT COUNTIES).....$ 45.14 16.41
POWER EQUIPMENT OPERATOR: GROUP 7- BOOM FROM 180
AND OVER. (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, PTNAM, RICHLAND, ROSS,
SANDUSKY, SCIOTO, SENECA, SHELBY, STARK,
TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN,
WASHINGTON, WAYNE, WILLIAMS, WOOD, AND YANDOT
COUNTIES).....$ 45.14 16.41

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	Rates	Fringes
POWER EQUIPMENT OPERATOR: ALL OTHER WORK GROUP 1- RIG, PILE DRIVER OR CAISSON TYPE; & RIG, PILE HYDRAULIC UNIT ATTACHED. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES)	$ 37.19	24.30
POWER EQUIPMENT OPERATOR: ALL OTHER WORK 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; VULLDOZER; C.M.I. ROAD BUILDER & SIMILAR TYPE; CABLE PLACER &LATYER; CARRIER-STRADDLE; CARRYALL-SCRAPER OR SCOPP; CHICAGO BOOM; COMPACTOR WITH BLAD 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 BOO; 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; HYRAULIC 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) (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 36.92 24.30

POWER EQUIPMENT OPERATOR: ALL OTHER WORK GROUP 3 - ASPHALT PLANT; BENDING MACHINE (PIPELINE OR 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. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 32.06 24.30

POWER EQUIPMENT OPERATOR: ALL OTHER WORK 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 MANIUPLATOR CRANE; JACK-HYDRAULIC POWER DRIVEN; JACK-HYARAULIC (RAILROAD); LADAVATOR; MINOR MACHINE OPERATOR; MIXER-CONCRETE; MULCHING MACHINE; PIN PULLER; POWER BROOM; PULVERIZER; PUMP; ROAD FINISHING MAHINC (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. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 28.77 24.30

POWER EQUIPMENT OPERATOR: ALL OTHER WORK GROUP 5 - BRAKEPERSON; FIREPERSON; & OILER. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 25.94 24.30

POWER EQUIPMENT OPERATOR: ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS GROUP 1 - A & B - RIG, PILE DRIVER OR CAISSON TYPE; & RIG, PILE HYDRAULIC UNIT ATTACHED. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 44.63 24.30

POWER EQUIPMENT OPERATOR: ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS GROUP 2 - A & B - 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; VULLDOZER; C.M.I. ROAD BUILDER & SIMILAR TYPE; CABLE PLACER &LATYER; CARRIER-STRADDLE; CARRYALL-SCRAPER OR SCOPP; CHICAGO BOOM; COMPACTOR WITH BLAD 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 BOO; 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; HYRAULIC 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) (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 44.30 24.30

POWER EQUIPMENT OPERATOR: ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS GROUP 3 - A & B - ASPHALT PLANT; BENDING MACHINE (PIPELINE OR 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(COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 38.47 24.30

POWER EQUIPMENT OPERATOR: ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS GROUP 4 - A & B - 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 MANIUPLATOR CRANE; JACK-HYDRAULIC POWER DRIVEN; JACK-HYARAULIC (RAILROAD); LADAVATOR; MINOR MACHINE OPERATOR; MIXER-CONCRETE; MULCHING MACHINE; PIN PULLER; POWER BROOM; PULVERIZER; PUMP; ROAD FINISHING MAHINC (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. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).$ 34.52 24.30

POWER EQUIPMENT OPERATOR: ASBESTOS; HAZARDOUS/TOXIC WASTE PROJECTS GROUP 5 - A & B - BRAKEPERSON; FIREPERSON; & OILER. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 31.13 24.30

POWER EQUIPMENT OPERATOR: HAZARDOUS/TOXIC WASTE PROJECTS GROUP 1 - C & D - RIG, PILE DRIVER OR CAISSON TYPE; & RIG, PILE HYDRAULIC UNIT ATTACHED. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 40.91 24.30

POWER EQUIPMENT OPERATOR: HAZARDOUS/TOXIC WASTE PROJECTS GROUP 2 - C & D - 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; VULLDOZER; C.M.I. ROAD BUILDER & SIMILAR TYPE; CABLE PLACER &LATYER; CARRIER-STRADDLE; CARRYALL-SCRAPER OR SCOPP; CHICAGO BOOM; COMPACTOR WITH BLAD 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 BOO; 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; HYRAULIC 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) (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 40.61 24.30

POWER EQUIPMENT OPERATOR: HAZARDOUS/TOXIC WASTE PROJECTS GROUP 3 - C & D - ASPHALT PLANT; BENDING MACHINE (PIPELINE OR 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(COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 35.27 24.30

POWER EQUIPMENT OPERATOR: HAZARDOUS/TOXIC WASTE PROJECTS GROUP 4 - C & D - 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 MANIUPLATOR CRANE; JACK-HYDRAULIC POWER DRIVEN; JACK-HYARAULIC (RAILROAD); LADAVATOR; MINOR MACHINE OPERATOR; MIXER-CONCRETE; MULCHING MACHINE; PIN PULLER; POWER BROOM; PULVERIZER; PUMP; ROAD FINISHING MAHINC (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. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).$ 31.65 24.30

POWER EQUIPMENT OPERATOR: HAZARDOUS/TOXIC WASTE PROJECTS GROUP 5 - C & D - BRAKEPERSON; FIREPERSON; & OILER. (COLUMBIANA, MAHONING & TRUMBULL COUNTIES).....$ 28.53 24.30

IRON0017-002 05/01/2024

	Rates	Fringes
IRONWORKER: ORNAMENTAL, REINFORCING, & STRUCTURAL (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).....	$ 36.83	29.01

IRON0017-010 05/01/2024

	Rates	Fringes
IRONWORKER: STRUCTURAL, INCLUDING METAL BUILDING ERECTION & REINFORCING (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)).....	$ 36.83	29.01

IRON0044-001 06/01/2025

	Rates	Fringes
IRONWORKER, REINFORCING (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).....	$ 38.27	23.90

IRON0044-002 06/01/2025

	Rates	Fringes
IRONWORKER: FENCE ERECTOR (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)).....	$ 35.88	23.90
IRONWORKER: ORNAMENTAL; STRUCTURAL (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)).....	$ 37.77	23.90

IRON0055-003 07/01/2024

	Rates	Fringes
IRONWORKER: ALL OTHER WORK (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 MAYSVILLE TO A POINT 4 MILES SOUTH OF THE NORTHEN LINE OF 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 SOURTHERN BORDER), SANDUSKY, SENECA, WILLIAMS (EAST OF A LINE DRAWN FROM PIONEER THROUGH STRYKER TO THE SOUTHERN BORDER), WOOD & WYANDOT (NORTH OF RTE. #30)).....	$ 29.77	21.30
IRONWORKER: FENCE ERECTOR (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 MAYSVILLE TO A POINT 4 MILES SOUTH
OF THE NORTHEN LINE OF 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 SOURTHERN BORDER), SANDUSKY, SENECA,
WILLIAMS (EAST OF A LINE DRAWN FROM PIONEER THROUGH
STRYKER TO THE SOUTHERN BORDER), WOOD & WYANDOT
(NORTH OF RTE. #30))..............................$ 29.77 21.30
IRONWORKER: FLAT ROAD MESH (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 MAYSVILLE TO A POINT 4 MILES SOUTH
OF THE NORTHEN LINE OF 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 SOURTHERN BORDER), SANDUSKY, SENECA,
WILLIAMS (EAST OF A LINE DRAWN FROM PIONEER THROUGH
STRYKER TO THE SOUTHERN BORDER), WOOD & WYANDOT
(NORTH OF RTE. #30))..............................$ 26.40 24.62
IRONWORKER: TUNNES & CAISSONS UNDER PRESSURE
(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 MAYSVILLE TO A
POINT 4 MILES SOUTH OF THE NORTHEN LINE OF 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 SOURTHERN BORDER),
SANDUSKY, SENECA, WILLIAMS (EAST OF A LINE DRAWN
FROM PIONEER THROUGH STRYKER TO THE SOUTHERN
BORDER), WOOD & WYANDOT (NORTH OF RTE. #30))........$ 35.50 29.20

IRON0147-002 06/01/2025

Rates Fringes

IRONWORKER (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).....$ 38.00 26.39

IRON0172-002 06/01/2025

	Rates	Fringes
IRONWORKER (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	$ 40.87	23.15

IRON0207-004 06/01/2025

	Rates	Fringes
IRONWORKER: LAYOUT; SHEETER (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)	$ 37.26	28.16
IRONWORKER: ORNAMENTAL; REINFORCING; STRUCTURAL (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)	$ 36.26	28.16

IRON0290-002 06/01/2025

	Rates	Fringes
IRONWORKER (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)	$ 37.39	25.35

IRON0549-003 12/01/2022

	Rates	Fringes
IRONWORKER (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))	$ 35.19	25.66

IRON0550-004 05/01/2024

	Rates	Fringes

IRONWORKERS: STRUCTURAL, ORNAMENTAL AND REINFORCING
(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).....$ 34.70 22.88

IRON0769-004 06/01/2025

	Rates	Fringes
IRONWORKER (ADAMS (EASTERN HALF), GALLIA, JACKSON (SOUTHERN HALF), LAWRENCE & SCIOTO).....	$ 39.70	29.59

IRON0787-003 06/01/2025

	Rates	Fringes
IRONWORKER (ATHENS, MEIGS, MORGAN, NOBLE, AND WASHINGTON COUNTIES).....	$ 36.10	24.65

LABO0265-008 05/01/2024

	Rates	Fringes
LABORER 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. 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. (REMAINING COUNTIES OF OHIO).....	$ 35.52	14.45
LABORER 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. 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. (CUYAHOGA, GEAUGA & LAKE COUNTIES).....	$ 37.18	14.45
LABORER 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. TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (ASHTABULA, ERIE, HURON, LORAIN, LUCAS, MAHONING, MEDINA, OTTAWA, PORTAGE, SANDUSKY, STARK, SUMMIT, TRUMBULL & WOOD COUNTIES).....$ 35.95 14.45

LABORER 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). TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (REMAINING COUNTIES OF OHIO)..$ 35.69 14.45

LABORER 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). TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (CUYAHOGA, GEAUGA & LAKE COUNTIES).....$ 37.35 14.45

LABORER 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). TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (ASHTABULA, ERIE, HURON, LORAIN, LUCAS, MAHONING, MEDINA, OTTAWA, PORTAGE, SANDUSKY, STARK, SUMMIT, TRUMBULL & WOOD COUNTIES)..$ 36.12 14.45

LABORER 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. TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (REMAINING COUNTIES OF OHIO) .....$ 36.02 14.45

LABORER 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. TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (CUYAHOGA, GEAUGA & LAKE COUNTIES) ....$ 37.68 14.45

LABORER 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. TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (ASHTABULA, ERIE, HURON, LORAIN, LUCAS, MAHONING, MEDINA, OTTAWA, PORTAGE, SANDUSKY, STARK, SUMMIT, TRUMBULL & WOOD COUNTIES).....$ 36.45 14.45

LABORER GROUP 4- MINER (WITH AIR-PRESSURIZED - $1.00 PREMIUM); & GUNITE NOZZLE PERSON. TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (ASHTABULA, ERIE, HURON, LORAIN, LUCAS, MAHONING, MEDINA, OTTAWA, PORTAGE, SANDUSKY, STARK, SUMMIT, TRUMBULL & WOOD COUNTIES)..$ 36.90 14.45

LABORER GROUP 4- MINER (WITH AIR-PRESSURIZED - $1.00 PREMIUM); & GUNITE NOZZLE PERSON. TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING. (REMAINING COUNTIES OF OHIO) ..$ 36.47 14.45

LABORER 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. (CUYAHOGA, GEAUGA & LAKE
COUNTIES).....$ 38.13 14.45
LABORER: SEWAGE PLANTS, WASTE PLANTS, WATER
TREATMENT FACILITIES, PUMPING STATIONS, & ETHANOL
PLANTS CONSTRUCTION. (CUYAHOGA AND GEAUGA COUNTIES
ONLY).....$ 38.56 14.45

PAIN0006-002 05/01/2023

	Rates	Fringes
PAINTER- COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS: GROUP 1- BRUSH; & ROLLER (ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. OF THE EAST-WEST TURNPIKE) & SUMMIT (N. OF THE EAST-WEST TURNPIKE))	$ 30.75	18.95
PAINTER- COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS: GROUP 2- SANDBLASTING & BUFFING (ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. OF THE EAST-WEST TURNPIKE) & SUMMIT (N. OF THE EAST-WEST TURNPIKE))	$ 31.15	18.95
PAINTER- COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS: GROUP 3- SPRAY PAINTING; CLOSED STEEL ABOVE 55 FEET; BRIDGES & OPEN STRUCTURAL STEEL; TANKS - WATER TOWERS; BRIDGE PAINTERS; BRIDGE RIGGERS; CONTAINMENT BUILDERS (ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. OF THE EAST-WEST TURNPIKE) & SUMMIT (N. OF THE EAST-WEST TURNPIKE))	$ 31.45	18.95
PAINTER- COMMERCIAL NEW WORK; REMODELING; & RENOVATIONS: GROUP 4- BRIDGE BLASTER (ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. OF THE EAST-WEST TURNPIKE) & SUMMIT (N. OF THE EAST-WEST TURNPIKE))	$ 37.01	18.95
PAINTER- COMMERCIAL REPAINT GROUP 1- BRUSH; & ROLLER (ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. OF THE EAST-WEST TURNPIKE) & SUMMIT (N. OF THE EAST-WEST TURNPIKE))	$ 29.25	18.95
PAINTER- COMMERCIAL REPAINT GROUP 2- SANDBLASTING & BUFFING (ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN, PORTAGE (N. OF THE EAST-WEST TURNPIKE) & SUMMIT (N. OF THE EAST-WEST TURNPIKE))	$ 29.65	18.95
PAINTER- COMMERCIAL REPAINT GROUP 3- SPRAY PAINTING.	$ 29.95	18.95

PAIN0007-002 07/01/2025

	Rates	Fringes
PAINTER: NEW COMMERCIAL WORK: GROUP 1- BRUSH; SPRAY & SANDBLASTING POT TENDER. (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES)	$ 33.66	23.88
PAINTER: NEW COMMERCIAL WORK: 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) (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES)	$ 34.66	23.88
PAINTER: NEW COMMERCIAL WORK: GROUP 3- SWING STAGE & CHAIR (REPAINT IS 90% OF GROUP RATE) (FULTON,		

HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES).....$ 34.66 23.88

PAINTER: NEW COMMERCIAL WORK: GROUP 4- LEAD ABATEMENT (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES).....$ 34.66 23.88

PAINTER: NEW COMMERCIAL WORK: GROUP 5- ALL METHODS OF SPRAY (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES).....$ 34.66 23.88

PAINTER: NEW COMMERCIAL WORK: GROUP 6- SOLVENT-BASED CATALIZED EPOXY MATERIALS OF 2 OR MORE COMPONENT MATERIALS, TO INCLUDE SOLVENT-BASED CONVERSION VARNISH (EXCLUDING WATER BASED) (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES).....$ 34.66 23.88

PAINTER: NEW COMMERCIAL WORK: GROUP 7- SPRAY SOLVENT BASED MATERIAL; SAND & ABRASIVE BLASTING (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES).....$ 34.66 23.88

PAINTER: NEW COMMERCIAL WORK: GROUP 8- TOWERS; TANKS; BRIDGES; STACKS OVER 30 FEET (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES).....$ 34.66 23.88

PAINTER: NEW COMMERCIAL WORK: GROUP 9- EPOXY SPRAY (EXCLUDING WATER BASED) (REPAINT IS 90% OF GROUP RATE) (FULTON, HENRY, LUCAS, OTTAWA (EXCLUDING ALLEN, BAY, BONO, CATAWBA ISLAND, CLAY CENTER, CURTICE, DANBURY, EAGLE BEACH, ELLISTON, ELMORE, ERIE, FISHBACK, GEM BEACH, & GENOVA) & WOOD COUNTIES).....$ 34.66 23.88

PAIN0012-008 05/01/2019

	Rates	Fringes
PAINTER: GROUP 1- BRIDGE EQUIPMENT TENDER; BRIDGE/CONTAINMENT BUILDER (BUTLER COUNTY).....	$ 21.95	10.20
PAINTER: GROUP 2- BRUSH & ROLLER (BUTLER COUNTY)....	$ 25.30	10.20
PAINTER: GROUP 3- SPRAY (BUTLER COUNTY).....	$ 25.80	10.20
PAINTER: GROUP 4- SANDBLASTING; & WATERBLASTING (BUTLER COUNTY).....	$ 26.05	10.20
PAINTER: GROUP 5- ELEVATED TANKS; STEEPLEJACK WORK; BRIDGE; & LEAD ABATEMENT (BUTLER COUNTY).....	$ 26.30	10.20

PAIN0012-010 05/01/2019

	Rates	Fringes
PAINTER HEAVY & HIGHWAY BRIDGES- GUARDRAILS-LIGHTPOLES- STRIPING BRIDGE EQUIPMENT TENDER AND CONTAINMENT BUILDER (BROWN, CLERMONT,		

HAMILTON & WARREN).....$ 21.95 10.20
PAINTER HEAVY & HIGHWAY BRIDGES-
GUARDRAILS-LIGHTPOLES- STRIPING BRIDGES WHEN
HIGHEST POINT OF CLEARANCE IS 60 FEET OR MORE; &
LEAD ABATEMENT PROJECTS (BROWN, CLERMONT, HAMILTON
& WARREN).....$ 26.30 10.20
PAINTER HEAVY & HIGHWAY BRIDGES-
GUARDRAILS-LIGHTPOLES- STRIPING BRUSH & ROLLER
(BROWN, CLERMONT, HAMILTON & WARREN).....$ 25.30 10.20
PAINTER HEAVY & HIGHWAY BRIDGES-
GUARDRAILS-LIGHTPOLES- STRIPING SANDBLASTING &
HOPPER TENDER; WATER BLASTING (BROWN, CLERMONT,
HAMILTON & WARREN).....$ 26.05 10.20
PAINTER HEAVY & HIGHWAY BRIDGES-
GUARDRAILS-LIGHTPOLES- STRIPING SPRAY (BROWN,
CLERMONT, HAMILTON & WARREN).....$ 25.80 10.20

PAIN0093-001 12/01/2024

Rates Fringes
PAINTER: BRIDGES; LOCKS; DAMS; TENSION TOWERS; &
ENERGIZED SUBSTATIONS (ATHENS, GUERNSEY, HOCKING,
MONROE, MORGAN, NOBLE AND WASHINGTON COUNTIES).....$ 36.44 24.46
PAINTER: POWER GENERATING FACILITIES (ATHENS,
GUERNSEY, HOCKING, MONROE, MORGAN, NOBLE AND
WASHINGTON COUNTIES).....$ 33.29 24.46

PAIN0249-002 05/01/2025

Rates Fringes
PAINTER: GROUP 1: BRUSH & ROLLER (CLARK,
DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE).....$ 29.15 13.97
PAINTER: GROUP 2: SWING, SCAFFOLD BRIDGES;
STRUCTURAL STEEL; OPEN ACID TANK; HIGH TENSION
ELECTRICAL EQUIPMENT; & HOT PIPES (CLARK,
DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE).....$ 33.09 13.97
PAINTER: GROUP 3: SPRAY; SANDBLAST; STEAMCLEAN;
LEAD ABATEMENT (CLARK, DARKE, GREENE, MIAMI,
MONTGOMERY & PREBLE).....$ 29.90 13.97
PAINTER: GROUP 4: STEEPLEJACK WORK (CLARK,
DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE).....$ 30.10 13.97
PAINTER: GROUP 5: COAL TAR (CLARK, DARKE,
GREENE, MIAMI, MONTGOMERY & PREBLE).....$ 30.65 13.97
PAINTER: GROUP 6: BRIDGE EQUIPMENT TENDER & OR
CONTAINMENT BUILDER (CLARK, DARKE, GREENE,
MIAMI, MONTGOMERY & PREBLE).....$ 37.86 13.97
PAINTER: GROUP 7: TANKS, STACKS & TOWERS
(CLARK, DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE)..$ 33.86 13.97
PAINTER: GROUP 8: BRIDGE BLASTER, RIGGER
(CLARK, DARKE, GREENE, MIAMI, MONTGOMERY & PREBLE)..$ 40.86 13.97

PAIN0356-002 09/01/2009

Rates Fringes
PAINTER: BRIDGE EQUIPMENT TENDERS AND CONTAINMENT
BUILDERS (KNOX, LICKING, MUSKINGUM, AND PERRY).....$ 27.93 7.25
PAINTER: BRIDGES; BLASTERS; AND RIGGERS (KNOX,
LICKING, MUSKINGUM, AND PERRY).....$ 34.60 7.25
PAINTER: BRUSH AND ROLLER (KNOX, LICKING,
MUSKINGUM, AND PERRY).....$ 20.93 7.25
PAINTER: SANDBLASTING; STEAM CLEANING;
WATERBLASTING; AND HAZARDOUS WORK (KNOX, LICKING,
MUSKINGUM, AND PERRY).....$ 25.82 7.25
PAINTER: SPRAY (KNOX, LICKING, MUSKINGUM, AND
PERRY).....$ 21.40 7.25

PAINTER: STRUCTURAL STEEL AND SWING STAGE (KNOX, LICKING, MUSKINGUM, AND PERRY).....$ 25.42 7.25
PAINTER: TANKS; STACKS; AND TOWERS (KNOX, LICKING, MUSKINGUM, AND PERRY).....$ 28.63 7.25

PAIN0438-002 12/01/2023

	Rates	Fringes
PAINTER: BRIDGES, LOCKS, DAMS, TENSION TOWERS & ENERGIZED SUBSTATIONS (BELMONT, HARRISON AND JEFFERSON COUNTIES)	$ 36.09	19.49
PAINTER: POWER GENERATING FACILITIES (BELMONT, HARRISON AND JEFFERSON COUNTIES)	$ 32.94	19.49

PAIN0476-001 06/01/2025

	Rates	Fringes
PAINTER: GROUP 1- PAINTERS, BRUSH & ROLLER (COLUMBIANA, MAHONING, AND TRUMBULL COUNITES)	$ 30.64	18.36
PAINTER: GROUP 2- BRIDGES (COLUMBIANA, MAHONING, AND TRUMBULL COUNITES)	$ 40.27	18.36
PAINTER: GROUP 3- STRUCTURAL STEEL (COLUMBIANA, MAHONING, AND TRUMBULL COUNITES)	$ 40.27	18.36
PAINTER: GROUP 4- SPRAY, EXCEPT BAR JOIST/DECK (COLUMBIANA, MAHONING, AND TRUMBULL COUNITES)	$ 31.14	18.36
PAINTER: GROUP 5- EPOXY/MASTIC; SPRAY- BAR JOIST/DECK; WORKING ABOVE 50 FEET; AND SWINGSTAGES (COLUMBIANA, MAHONING, AND TRUMBULL COUNITES)	$ 31.29	18.36
PAINTER: GROUP 6- TANKS; SANDBLASTING (COLUMBIANA, MAHONING, AND TRUMBULL COUNITES)	$ 35.27	18.36
PAINTER: GROUP 7- TOWERS; STACKS (COLUMBIANA, MAHONING, AND TRUMBULL COUNITES)	$ 32.64	18.36

PAIN0555-002 01/01/2025

	Rates	Fringes
PAINTER: GROUP 1- CONTAINMENT BUILDER (ADAMS, HIGHLAND, JACKSON, PIKE & SCIOTO)	$ 33.32	21.54
PAINTER: GROUP 2- BRUSH; ROLLER; POWER TOOLS, UNDER 40 FEET (ADAMS, HIGHLAND, JACKSON, PIKE & SCIOTO)	$ 35.02	21.54
PAINTER: 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 (ADAMS, HIGHLAND, JACKSON, PIKE & SCIOTO)	$ 36.72	21.54
PAINTER: GROUP 4- STACKS; BRIDGES (ADAMS, HIGHLAND, JACKSON, PIKE & SCIOTO)	$ 40.03	21.54

PAIN0639-001 05/01/2011

	Rates	Fringes
SIGN PAINTER & ERECTOR 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	$ 20.61	3.50

PAIN0788-002 06/01/2024

	Rates	Fringes
PAINTER: BRUSH & ROLLER (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) 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	$ 29.13	17.52
PAINTER: STRUCTURAL STEEL (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) 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	$ 30.73	17.52

PAIN0813-005 12/01/2008

	Rates	Fringes
PAINTER: BASE RATE (GALLIA, LAWRENCE, MEIGS & VINTON)	$ 24.83	10.00
PAINTER: BRIDGES, LOCKS, DAMS & TENSION TOWERS (GALLIA, LAWRENCE, MEIGS & VINTON)	$ 27.83	10.00

PAIN0841-001 07/01/2025

	Rates	Fringes
PAINTERS: GROUP 1- BRUSH, ROLLER & PAPERHANGER (MEDINA, PORTAGE (SOUTH OF AND INCLUDING OHIO TURNPIKE), AND SUMMIT (SOUTH OF AND INCLUDING OHIO TURNPIKE) COUNTIES)	$ 31.93	18.15
PAINTERS: GROUP 2- EPOXY APPLICATION (MEDINA, PORTAGE (SOUTH OF AND INCLUDING OHIO TURNPIKE), AND SUMMIT (SOUTH OF AND INCLUDING OHIO TURNPIKE) COUNTIES)	$ 32.58	18.15
PAINTERS: GROUP 3- SWING SCAFFOLD, BOSUM CHAIR, &		

WINDOW JACK (MEDINA, PORTAGE (SOUTH OF AND INCLUDING OHIO TURNPIKE), AND SUMMIT (SOUTH OF AND INCLUDING OHIO TURNPIKE) COUNTIES).....$ 32.68 18.15

PAINTERS: GROUP 4- SPRAY GUN OPERATOR OF ANY & ALL COATINGS (MEDINA, PORTAGE (SOUTH OF AND INCLUDING OHIO TURNPIKE), AND SUMMIT (SOUTH OF AND INCLUDING OHIO TURNPIKE) COUNTIES).....$ 32.78 18.15

PAINTERS: GROUP 5- SANDBLAST, PAINTING OF STANDPIPES, ETC. FROM SCAFFOLDS, BRIDGE WORK AND/OR OPEN STRUCTURAL STEEL, STANDPIPES AND/OR WATER TOWERS (MEDINA, PORTAGE (SOUTH OF AND INCLUDING OHIO TURNPIKE), AND SUMMIT (SOUTH OF AND INCLUDING OHIO TURNPIKE) COUNTIES).....$ 33.18 18.15

PAINTERS: GROUP 6- PUBLIC & COMMERCE TRANSPORTATION, STEEL OR GALVANIZED, BRIDGES, TUNNELS & RELATED SUPPORT ITEMS (CONCRETE) (MEDINA, PORTAGE (SOUTH OF AND INCLUDING OHIO TURNPIKE), AND SUMMIT (SOUTH OF AND INCLUDING OHIO TURNPIKE) COUNTIES).....$ 38.60 18.15

PAINTERS: GROUP 7- SYNTHETIC EXTERIOR, DRYWALL FINISHER AND/OR TAPER, DRYWALL FINISHER AND FOLLOW-UP MAN USING AUTOMATIC TOOLS   (MEDINA, PORTAGE (SOUTH OF AND INCLUDING OHIO TURNPIKE), AND SUMMIT (SOUTH OF AND INCLUDING OHIO TURNPIKE) COUNTIES).....$ 33.18 18.15

PAIN0841-002 07/01/2025

	Rates	Fringes
PAINTER: BRIDGES; TOWERS, POLES & STACKS; SANDBLASTING STEEL; STRUCTURAL STEEL & METALIZING (CARROLL, COSHOCTON, HOLMES, STARK, TUSCARAWAS & WAYNE)	$ 33.18	18.15
PAINTER: BRUSH & ROLLER (CARROLL, COSHOCTON, HOLMES, STARK, TUSCARAWAS & WAYNE)	$ 31.93	18.15
PAINTER: SPRAY; TANK INTERIOR & EXTERIOR (CARROLL, COSHOCTON, HOLMES, STARK, TUSCARAWAS & WAYNE)	$ 32.78	18.15

PAIN1020-002 07/01/2025

	Rates	Fringes
PAINTER: BRUSH & ROLLER (ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY, VAN WERT, AND WILLIAMS COUNTIES) 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	$ 27.59	18.54
PAINTER: DRYWALL FINISHING & TAPING (ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY, VAN WERT, AND WILLIAMS COUNTIES): LL 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	$ 28.34	18.54
PAINTER: LEAD ABATEMENT (ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY, VAN WERT, AND WILLIAMS COUNTIES) 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	$ 29.34	18.54

PAINTER: SPRAY, SANDBLASTING PRESSURE CLEANING, &
REFINERY (ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE,
HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY,
VAN WERT, AND WILLIAMS COUNTIES)   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 - $1.00 PREMIUM.....$ 28.34 18.54
PAINTER: SWING STAGE, CHAIR, SPIDERS, & CHERRY
PICKERS (ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE,
HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY,
VAN WERT, AND WILLIAMS COUNTIES)   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 - $1.00 PREMIUM.....$ 27.84 18.54
PAINTER: WALLCOVERINGS (ALLEN, AUGLAIZE, CHAMPAIGN,
DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM,
SHELBY, VAN WERT, AND WILLIAMS COUNTIES)   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 - $1.00 PREMIUM.....$ 28.34 18.54

PAIN1275-002 05/01/2025

	Rates	Fringes
PAINTER: BRIDGES (DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS & UNION)	$ 37.26	15.16
PAINTER: BRUSH; ROLLER (DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS & UNION)	$ 30.20	15.16
PAINTER: SANDBLASTING; STEAMCLEANING; WATERBLASTING (3500 PSI OR OVER)& HAZARDOUS WORK (DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS & UNION)	$ 32.35	15.16
PAINTER: SPRAY (DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS & UNION)	$ 32.15	15.16
PAINTER: STACKS; TANKS; & TOWERS (DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS & UNION)	$ 34.46	15.16
PAINTER: STRUCTURAL STEEL & SWING STAGE (DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, MADISON, PICKAWAY, ROSS & UNION)	$ 30.50	15.16

PLAS0109-001 06/01/2025

	Rates	Fringes
PLASTERER (MEDINA, PORTAGE, STARK, AND SUMMIT COUNTIES)	$ 33.00	23.83

PLAS0109-003 06/01/2025

	Rates	Fringes
PLASTERER (CARROLL, HOLMES, TUSCARAWAS, AND WAYNE COUNTIES)	$ 33.00	23.83

PLAS0132-002 07/01/2025

	Rates	Fringes
PLASTERER (BROWN, BUTLER, CLERMONT, HAMILTON, HIGHLAND, WARREN COUNTIES)	$ 31.35	17.65

PLAS0404-002 05/01/2018

	Rates	Fringes
PLASTERER (ASHTABULA, CUYAHOGA, GEAUGA, AND LAKE COUNTIES)	$ 29.63	17.11

PLAS0404-003 05/01/2018

	Rates	Fringes
PLASTERER (LORAIN COUNTY)	$ 28.86	17.11

PLAS0526-022 05/01/2018

	Rates	Fringes
PLASTERER (COLUMBIANA, MAHONING, AND TRUMBULL COUNTIES)	$ 28.86	17.11

PLAS0526-023 05/01/2018

	Rates	Fringes
PLASTERER (BELMONT, HARRISON, AND JEFFERSON COUNTIES)	$ 28.21	17.11

PLAS0886-001 07/01/2025

	Rates	Fringes
PLASTERER (FULTON, HANCOCK, HENRY, LUCAS, PUTNAM, AND WOOD COUNTIES)	$ 36.65	25.60

PLAS0886-003 07/01/2025

	Rates	Fringes
PLASTERER (DEFIANCE, ERIE, HURON, OTTAWA, PAULDING, SANDUSKY, AND SENECA)	$ 36.65	25.60

PLAS0886-004 07/01/2025

	Rates	Fringes
PLASTERER (ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, AND VAN WERT)	$ 35.29	23.07

PLUM0042-002 07/01/2025

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER (ASHLAND, CRAWFORD, ERIE, HURON, KNOX, LORAIN, MORROW, RICHLAND & WYANDOT)	$ 43.02	26.45

PLUM0050-002 06/30/2025

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER (DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS & WOOD)	$ 51.00	32.56

PLUM0055-003 05/05/2025

	Rates	Fringes
PLUMBER (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))	$ 44.86	30.03

PLUM0083-001 07/01/2023

	Rates	Fringes
PLUMBER AND STEAMFITTER (BELMONT & MONROE (NORTH OF		

RTE. #78))....$ 35.94 37.35

PLUM0094-002 05/01/2025

	Rates	Fringes
PLUMBER/PIPEFITTER (CARROLL (NORTHEN HALF), STARK, AND WAYNE COUNTIES)....$	47.48	27.14

PLUM0120-002 05/01/2025

	Rates	Fringes
PIPEFITTER (ASHTABULA, CUYAHOGA, GEAUGA, LAKE, LORAIN (THE C.E.I. POWER HOUSE IN AVON LAKE), MEDINA (N. OF RTE. #18) & SUMMIT (N. OF #303))....$	49.17	28.55

PLUM0162-002 06/01/2024

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER (CHAMPAIGN, CLARK, CLINTON, DARKE, FAYETTE, GREENE, MIAMI, MONTGOMERY & PREBLE)....$	43.05	27.18

PLUM0168-002 06/01/2025

	Rates	Fringes
PLUMBER/PIPEFITTER (MEIGS, MONROE (SOUTH OF RTE. #78), MORGAN (SOUTH OF RTE. #78) & WASHINGTON).....$	40.92	37.20

PLUM0189-002 06/01/2025

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER (DELAWARE, FAIRFIELD, FRANKLIN, HOCKING, LICKING, MADISON, MARION, PERRY, PICKAWAY, ROSS & UNION).....$	53.00	27.59

PLUM0219-002 06/01/2025

	Rates	Fringes
PLUMBER AND STEAMFITTER (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).....$	46.87	28.39

PLUM0392-002 06/01/2025

	Rates	Fringes
PLUMBER/PIPEFITTER (BROWN, BUTLER, CLERMONT, HAMILTON & WARREN)....$	43.30	27.40

PLUM0396-001 06/01/2025

	Rates	Fringes
PLUMBER/PIPEFITTER (COLUMBIANA (EXCLUDING WASHINGTON & YELLOW CREEK TOWNSHIPS & LIVERPOOL TWP. - SECS. 35 & 36 - WEST OF COUNTY ROAD #427), MAHONING AND TRUMBULL COUNTIES).....$	40.55	29.25

PLUM0495-002 06/01/2025

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER (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).....$ 39.32 37.60

PLUM0577-002 06/01/2025

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER (ADAMS, ATHENS, GALLIA, HIGHLAND, JACKSON, LAWRENCE, PIKE, SCIOTO & VINTON)	$ 42.65	28.56

PLUM0776-002 07/01/2025

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER (ALLEN, AUGLAIZE, HARDIN, LOGAN, MERCER, SHELBY AND VAN WERT COUNTIES)	$ 42.76	30.81

TEAM0377-003 05/01/2025

	Rates	Fringes
TRUCK DRIVER: GROUP 1- ASPHALT DISTRIBUTOR; BATCH; 4- WHEEL SERVICE; 4-WHEEL DUMP; OIL DISTRIBUTOR & TANDEM (STATEWIDE, EXCEPT CUYAHOGA, GEAUGA & LAKE)	$ 34.26	18.85
TRUCK DRIVER: 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 (STATEWIDE, EXCEPT CUYAHOGA, GEAUGA & LAKE)	$ 35.26	18.85

TEAM0436-002 05/01/2025

	Rates	Fringes
TRUCK DRIVER: GROUP 1- STRAIGHT & DUMP, STRAIGHT FUEL (CUYAHOGA, GEAUGA & LAKE)	$ 34.92	19.30
TRUCK DRIVER: 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 (CUYAHOGA, GEAUGA & LAKE)	$ 35.73	19.30

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.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

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

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

Union Rate Identifiers

A four-letter identifier beginning with characters other than SU, UAVG, SA, or SC denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The SU identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

SU wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The SA identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the SA identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

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

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter

d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

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

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

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

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

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

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

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END OF GENERAL DECISION"

EXHIBIT 5

PAC ENGINEERING SCOPE OF WORK
(**Addendum 2, Issued October 30, 2026**)

October 27, 2026

Jakob D. Meinerding, P.E.
Jones & Henry Engineers, Ltd.
4357 Ferguson Dr.
Suite 220
Cincinnati, OH 45245

References: **PAC Proposal: AntwerpWTP2601F – Controls and SCADA Upgrade**
PAC Meeting Minutes Dated 11/28/23

Dear Jake:

In response to your request for the Allowance cost for Engineering, equipment/instrumentation, and startup services for the new Antwerp WTP, we are pleased to submit this revised proposal for your review. The attached proposal identifies the project scope of work and the fixed fee cost required to complete this effort.

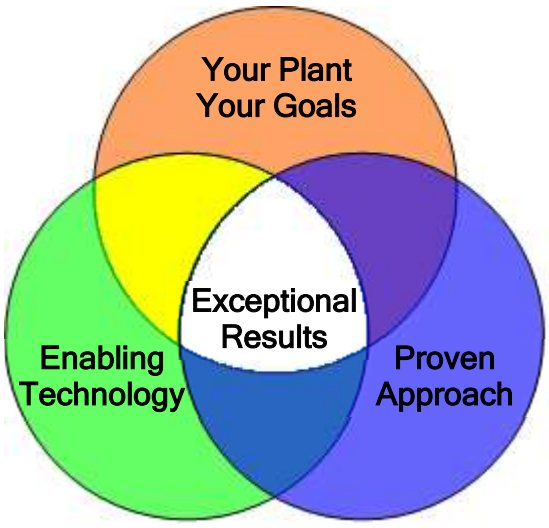
PAC Engineering's team members have been involved in many industrial control projects, providing automation, visualization, data collection, and reporting solutions for Companies and Municipalities in Michigan, Ohio, and Indiana.

We appreciate this opportunity to propose our services and look forward to building a relationship with US Ecology, Michigan. If you have any further questions or comments, please contact me by phone at (419) 704-8626 or email me at: jshortridge@pac-llc.com

Sincerely,

Jim Shortridge
Senior Project Manager

cc: Accounting



PROPOSAL
FOR



Village of Antwerp, OH

New Water Treatment Facility
Controls, SCADA, and Instrumentation
Proposal

PAC Proposal AntwerpWTP2601F
Revision 1

October 27, 2026

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1.0 PROJECT OVERVIEW

1.1. The existing WTP is very old and dilapidated. It will be replaced with a new building, MCC, filters, aeration, chemical pumps, PLC, SCADA, related instrumentation, and other subsystems.

1.2. While the existing plant lacks mature PLC controls and a SCADA system, the new plant will utilize both and will include fiber communications to three wells and a radio telemetry link to one water tower.

1.3. A general overview of the new WTP is provided in the PAC Meeting Minutes dated 11/28/23 referenced above.

2.0 SCOPE OF WORK

2.1. WTP Control Panel

2.1.1. A new centrally located CompactLogix PLC-based control panel has been designed. It will be fabricated, delivered to the site, and commissioned.

2.1.2. The panel will host a 4RF MTU telemetry radio with a lightning arrester and antenna hardware for communicating with the tower control panel and a fiber network switch for controls network communications.

2.1.3. Control of the VFDs and related equipment and data access to the Power Monitor housed in the new MCC will be over Ethernet.

2.1.4. PLC logic will control the High Service pumps, backwash to the filters, provide plant alarming, and central data access for SCADA integration.

2.2. Well and Tower control panels

2.2.1. Three new well and one water tower PLC-based control panels have been designed. Each will be fabricated, delivered to the site, and commissioned.

2.2.2. Each panel will feature an Allen Bradley Micro820 PLC. The well panels will house a fiber network switch and the tower will feature a 4RF or existing Radio Telemetry system.

2.2.3. PLC logic will control the well pumps and report general status back to both the Main PLC panel and SCADA system.

2.2.4. The water tower will utilize a new pressure transmitter for level monitoring.

2.2.5. The three wells and water tower will include low temperature and intrusion alarming back to the SCADA system.

2.3. Truck Unloading Panel

2.3.1. A new truck unloading panel will be fabricated, delivered, and commissioned.

2.4. SCADA System

2.4.1. A new VTSCADA system will be provided that will allow for visualization, historical data collection, trending, alarming, remote alarm callouts, and secure operations.

2.4.2. A single desktop PC with a large monitor will be provided for the SCADA system.

2.4.3. The SCADA system will provide for remote alarm annunciation using the native VTSCADA applications.

2.5. Drawings

2.5.1. Drawings for the three new wells, single water tower, truck unloading panel, and main WTP control panels will be updated for construction. Each drawing set includes the following:

2.5.1.1. Title page

2.5.1.2. Control Panel Layout and Notes

2.5.1.3. Sub Panel Layout

2.5.1.4. Bill of Materials and Nameplate Legend

2.5.1.5. Control Panel Wiring Diagram

2.5.1.6. PLC I/O Wiring Diagrams

2.5.1.7. Terminal Block Wiring Diagrams

2.5.1.8. System Architecture drawing.

2.6. Secure Remote Access

2.6.1. A Watchguard T125 Secure VPN will be installed and configured to enable remote access by operators and approved System Integrator Personnel.

2.7. Instrumentation

The following instrumentation will be provided.

2.7.1. Qty 1: Water Tower Level Pressure Transmitter

2.7.2. Qty 1: High Service Pump Pressure Transmitter

2.7.3. Qty 6: Intrusion Alarms for the three well houses, the water tower, and two WTP buildings.

2.7.4. Qty 6: Low Temperature Switches for alarm notification at the three wells, the water tower, and two WTP buildings.

2.8. Remote Access

2.8.1. Qty 1: Watchguard T125 Secure VPN

2.9. Generator

2.9.1. Generator status will be provided using a Modbus RTU module at the main PLC.

3.0 PROJECT PLAN

3.1. Setup kickoff meeting with representatives from the Village of Antwerp, Jones and Henry Engineers, and PAC to:

- Review the project scope of work
- Review project constraints
- Review project deliverables
- Review Initial Schedule

3.2. Develop a Quality and Project Plan for the project to communicate to all Company and PAC team members:

- Project organization and all responsibilities
- Project Deliverables
- Change control
- Schedule
- Constraints
- Security issues
- Quality procedures and standards to be followed
- Define quality measurements to be made
- Safety requirements

3.3. Upon the successful completion of the Installation Qualification/ Operational Qualification protocols, the project will be complete. The following tasks will be performed.

- Capture lessons learned
- Review quality measurements
- Project closeout

4.0 PROJECT DELIVERABLES

4.1. PAC will provide the Village of Antwerp, OH, the hardware and instrumentation as listed in the project scope above.

4.2. As-built panel and system architecture drawings as DWGs and PDFs.

4.3. PAC will provide The Village of Antwerp the following software and custom programming as part of the project scope. All will be delivered on a USB drive, and the software will be owned by the Village of Antwerp.

4.3.1. PLC logic for the WTP, three well buildings, and One Water Tower.

4.3.2. SCADA System modifications for alarming.

4.3.3. Watchguard T25 Secure VPN for secure remote access by Operators and approved System Integrators.

4.4. SCADA and related training.

4.5. O&M Manuals for the various instruments, systems, and remote access procedures.

5.0 PROJECT COSTS

5.1. The fixed fee cost for the scope of work and deliverables is as identified in the table below. Hardware costs include 15% PAC Markup and 15% hardware contingency. Project Total is **$192,100**.

Item	Cost
Labor - PLC, SCADA configurations, Drawings, Manuals, VPN, Training	$58,200
SCADA Related Equipment - SCADA Software, Desktop PC, Monitor, and secure VPN	$18,100
Control Panel Hardware	$97,200
Qty 1, Main PLC Panel	
Qty 3, Well Control Panels	
Qty 1, Tower Panel	
Qty 1, Truck Unloading Control Panel	
Hardware – Instrumentation	$6,300
Startup/Commissioning Services	$13,100

5.2. The project will be performed on a fixed fee basis and therefore, invoices will be submitted as defined milestones for work completed are met. The milestones and invoice percentages are summarized in the table below. Invoices are net 30 days.

Milestone	Invoice %
Project awarded (hardware purchase)	60%
PLC, HMI Programming Simulation Complete	30%
Commissioning and Validation Complete	10%
Total Invoice %:	**100%**

6.0 SCOPE CHANGE PROCEDURE

6.1. If during the project a change in scope or services should occur, PAC will advise the Owner of the cost and schedule impact for engineering services prior to proceeding with that portion of the work. After approval by the Owner, the increase or decrease will be reflected in the total project cost. Delay in Owner's approval may result in delays in schedule.

7.0 PROPOSAL VALIDITY

7.1. Our proposal is firm and valid for your acceptance until December 31st, 2026, and is thereafter subject to reconfirmation. If an award cannot be made by this date, we would be pleased to review our proposal to extend the pricing and schedule offered. The proposal is subject to prior sale or allocation of our resources.

8.0 EXCEPTIONS / CLARIFICATIONS /ASSUMPTIONS

8.1. PAC will deliver the hardware as listed above for installation by Others.

8.2. Equipment purchased by PAC Engineering will not be subject to project retainage.

8.3. The plant will have internet access provided by others.

8.4. A VoIP service will be required for alarm callouts. This will be provided by others.

8.5. The wells will utilize their existing non-electrical flow meters. Provisions for accessing new well mag meters can easily be provided as an option.

8.6. Each well control panel and the main control panel will feature fiber ready network switches.

8.7. Communications between the main control panel and the water tower will be by radio with hardware provided by PAC. Antenna installation is by others.

8.8. All fiber, and fiber terminations/testing to each Well Pump Control Panel is by others. Fiber terminations must be LC style connectors.

8.9. Generator comms will be Modbus RTU.

8.10. The new Filter Control Panel features an Ethernet IP capable controller.

8.11. I/O to the new MCC and related devices will be via Ethernet. No provisions have been included for physical wiring to each device.

8.12. The MCC and related equipment are provided by others.

9.0 OPTIONS

9.1. An alternative to the 4RF radio systems is wireless connectivity using Ubiquity hardware. The cost difference will be a reduction and will be provided if this option is selected.

10.0 TERMS AND CONDITIONS

1.1. **Changes in the Work –** Except as may be otherwise provided in the proposal, Owner may from time to time increase or decrease the scope of services by written instruction to PAC, subject to acceptance by PAC and the provisions of this contract shall apply to all such increases or decreases. In such event, both schedule and compensation shall be equitably adjusted.

1.2. **Responsibility of Parties –** PAC shall perform its Professional Services as an independent contractor in accordance with its own methods, this contract, and applicable laws and regulations. To the extent that PAC's Professional Service may be performed based on information furnished by Client's agents or employees from time to time, PAC shall be entitled to rely upon such information.

1.3. **Inspection** – Upon reasonable prior notice, Client shall have free access to and the right to inspect during normal business hours any part of the Professional Services, including drawings, sketches, plans, specifications, cost estimates, schedules, and other documents prepared by PAC under this contract.

1.4. **Insurance** – PAC will obtain and retain in force until completion of Professional Services, at its cost the following insurance:

10.1.1. Worker's Compensation insurance in such amounts and in such form as may be required by the state in which the Professional Services are to be performed

10.1.2. General Liability insurance in an amount not less than $1,000,000 combined bodily injury and property damage single limit, $2,000,000 aggregate

10.1.3. Professional Liability insurance in the amount of $1,000,000 per occurrence for errors and omissions, $1,000,000 aggregate

1.5. **Warranty -** In providing its Professional Services, PAC represents and warrants to the Client that all such Services shall be performed by qualified personnel in a manner consistent with professional skill and care appropriate for the type of services performed at that time and place. In the event that any Professional Services provided by PAC fail to comply with such applicable standards, the Client shall give written notice thereof to PAC, no later than one (1) year after the date of the delivery of the product of such Professional Services. Promptly upon receipt of such written notice, PAC will review the work with the Client and if mutually agreed, PAC shall revise, correct and/or re-perform services found to be deficient, at no cost

to the Client. The performance of such correct services by PAC shall be the limit of PAC's liability.

1.6. **Force Majeure –** Neither party shall be considered in default of any of its obligations, representations or warranties if and to the extent that the performance of any of its services or the carrying out of its obligations is prevented, delayed or affected by any cause or condition beyond its control.

1.7. **Indemnification –** To the extent permitted by law, PAC agrees to hold harmless and indemnify Client from and against all claims, costs, and liability, including reasonable attorney's fees, to the extent caused by PAC's negligent acts, errors, or omissions.

1.8. **Limitation of Liability –** In no event shall PAC be liable to the Client or to any person(s) claiming under the Client for consequential, indirect or incidental damages nor for exemplary, special or punitive damages, unless caused by intentional or willful and wanton actions of PAC or its employees, whether in contract, tort (including negligence) or otherwise. The remedies set forth herein shall be exclusive. Furthermore, PAC's liability under this contract for direct damages shall in no event exceed amounts recoverable under the insurance policies maintained in accordance with the foregoing.

1.9. **Precedence of Documents –** In the event of conflict among documents relating to this contract, the following order of precedence of documents shall govern unless otherwise provided in the Professional Services Contract:

10.1.4. Amendment to the Professional Services Contract (if any)

10.1.5. Professional Services Contract

10.1.6. PAC's Proposal

10.1.7. Any other documents specifically referenced or provided for in the Professional Services Contract

1.10. **Governing Law –** The terms of this contract shall be construed and interpreted under, and all respective rights and duties of the parties shall be governed by the laws of the State of Michigan.

1.11. **Termination –** Should either party breach this contract, and fail to remedy such breach promptly upon notice of same from the other party, then the other party may terminate this contract and pursue any other remedies available by law.

SECTION 01021
ALLOWANCES

PART 1 GENERAL

1.01 SCOPE

A. This Section includes the allowances which are to be furnished by the Contractor per Paragraph GC-13.02 of the General Conditions.

B. The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. These allowances shall cover the net cost of the materials and equipment delivered and unloaded at the Site, and all applicable taxes.

C. The Contractor's handling costs on the Site, labor installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Price and not in the allowance.

D. The Contractor shall cause the Work covered by these allowances to be performed for such amounts and by such persons as the Engineer may direct, but he will not be required to employ persons against whom he makes a reasonable objection.

E. If the cost, when determined, is more than or less than the allowance, the Contract Price shall be adjusted accordingly by Change Order.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

    a. Contractor shall prepare and submit proposals for the Owner to select the items included in allowance.

2. Information for the Record:

    a. Operation and maintenance manuals as may be required for items included in allowance.

    b. Invoices and delivery slips, for items provided under the allowance, shall be submitted to the resident project representative or Engineer.

1.03 PRODUCT HANDLING

A. The Contractor shall provide all labor, material and equipment to insure the safe delivery, handling and storage of goods until acceptance by Owner and Engineer.

1.04 GUARANTEE

A. Contractor shall provide manufacturer's warranties to the Owner for all goods provided.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.01 COORDINATION

A. Contractor shall advise Owner and Engineer of, and include in the schedule, the timing of the selection, Shop Drawing review and procurement of the goods or services required in the allowance.

B. Contractor shall be responsible for the coordination, of all allowance item(s) provided, with the remainder of the contract work.

3.02 ERECTION, INSTALLATION AND APPLICATION

A. Contractor shall assemble, install or apply all goods as may be required to complete the requirements of the allowance.

3.03 PROTECTION

A. Contractor shall examine all goods on delivery. All damaged or defective goods shall be returned to the manufacturer for replacement.

PART 4 SPECIAL PROVISIONS

4.01 LIST OF ALLOWANCES

		Allowance
A.	Asbestos Remediation	$10,000.00
B.	Utility Installation:	
	1. Electrical service installation and connection	$20,000.00
C.	Office furniture, Tools, Maintenance Equipment	~~$10,000.00~~ 60,000.00
(**Addendum 2, Issued October 30, 2026**)		
D.	Laboratory Glassware and Equipment	$5,000.00
E.	Control Panels, Computers, Internet Devices, Programming, Software	~~$200,000.00~~ $210,000.00
F.	General Contingency	$150,000.00
G.	Security Cameras	$25,000.00
(**Addendum 1, Issued October 16, 2026**)		

4.02 DEFINITION OF ALLOWANCE

A. This allowance includes an Asbestos Study of any existing buildings and equipment to be removed. It is unknown if asbestos is present in the existing buildings. The asbestos study and remediation of any asbestos shall be included as part of this allowance.

B. Utility installation shall be in accordance with the specification, as shown on the Drawings and as directed.

C. The Office Furniture, tools and maintenance equipment shall be selected by the Owner and a list provided to the Contractor. (**Addendum 2, Issued October 30, 2026**)

D. The Laboratory Glassware and equipment shall be selected by the Owner and a list provided to the Contractor.

E. The control panels, computers, internet devices, programming, system integration and software will be provided by PAC Engineering and invoices provided to the Contractor.

F. This allowance shall be used as directed by the Owner to provide material and labor to enhance the work.

G. The Security Cameras will be supplied and installed by others. Invoices for this work will be provided to the Contractor.

END OF SECTION

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SECTION 07210
THERMAL INSULATION

PART 1 GENERAL

1.01 SCOPE

A. This Section includes thermal insulation for buildings.

1.02 REFERENCES

A. ASTM C518 – Steady-State Thermal Transmission Properties

B. ASTM C1289 – Polyisocyanurate Insulation

C. ASTM E84 – Surface Burning Characteristics

D. ASTM D1621 – Compressive Strength of Rigid Cellular Plastics

E. NAIMA 202-96 – Metal Building Insulation Application Guide

F. ASHRAE 90.1-2021 – Energy Standard for Buildings Except Low-Rise Residential Buildings (**Addendum 2, Issued October 30, 2026**)

1.03 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. Product literature.

b. Two samples of each type and thickness of insulation. Samples shall be minimum 8-inch by 8-inch.

2. Information for the Record:

a. Manufacturer's certification.

b. Manufacturer's installation instructions.

c. R-value certification per FTC labeling requirements

d. Fire-rating compliance per ASTM E84 (**Addendum 2, Issued October 30, 2026**)

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Minimum 3 years experience installing insulation in PEMB assemblies.

B. Regulatory Requirements: Assemblies shall comply with ASHRAE 90.1-2021, Climate Zone 5.

C. Manufacturer Qualifications: ISO-certified quality control program.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened packaging.

B. Store insulation dry, elevated, and protected from moisture.

C. Protect foil facers and liner system facing from puncture and UV exposure.

1.06 WARRANTY

A. Manufacturer's standard 1-year material warranty. B. Installer's 1-year workmanship warranty. (**Addendum 2, Issued October 30, 2026**)

PART 2 PRODUCTS

2.01 MATERIALS

A. Insulation shall be of type and thickness shown or specified.

B. Insulation shall not rot, disintegrate, slump, or leave uninsulated voids and shall not provide sustenance to vermin, rodents, insects, bacteria, or fungi. Insulation shall not react with or accelerate corrosion of steel, aluminum, or copper. Insulation shall be odorless.

C. Combustible insulation shall be treated with fire retardant.

D. Insulation shall retain thermal capacity for minimum of 20 years.

E. Production of insulation shall not utilize chemicals banned by the Montreal Accord.

2.02 TYPES

A. Type A - Fiberglass Insulation:

1. Manufacturers: Owens Corning, Johns Manville, Knauf Insulation, or equal.

2. Manufacturers of PKS Faced Liner System: Silvercote; Therm-All; Thermal Design, or equal. (**Addendum 2, Issued October 30, 2026**)

3. Kraft Paper Faced Description: Pre-formed fiberglass or mineral fiber thermal and acoustical insulation, batt or roll form, kraft paper faced vapor barrier, complying with ASTM C665, Type II, Class C, Category 1.

   a. Construction: Fiberglass insulation batts or rolls are bonded with thermosetting resin and adhered to a kraft paper vapor barrier.

4. PKS-Faced Liner System - Polypropylene-scrim-kraft Faced Description: Pre-formed fiberglass or mineral fiber thermal and acoustical insulation, batt or roll form, reinforced polypropylene-scrim-kraft paper faced vapor barrier, complying with ASTM C665, Type II, Class C, Category 1.

a. Construction: Fiberglass insulation batts or rolls are bonded with thermosetting resin and adhered to a reinforced polypropylene-scrim-kraft paper vapor barrier.

b. Liner System Support Straps: Galvanized steel banding, 1" wide, 26–20 gauge.

1) Accessories: Clips, fasteners, and hangers compatible with PEMB framing. (**Addendum 2, Issued October 30, 2026**)

5. Unfaced Description: Pre-formed fiberglass or mineral fiber thermal and acoustical insulation, batt or roll form, unfaced, complying with ASTM C665, Type I, ASTM E136.

a. Construction: Fiberglass insulation batts or rolls are bonded with thermosetting resin.(**Addendum 2, Issued October 30, 2026**)

6. Physical Properties:

Physical Property	Test Method	Specification
Thermal Resistance (Thickness: R-Value) Min., degrees F-Sqft-Hr/BTU	ASTM C518	3”: R-11 3-1/2”: R-13 6-1/4”: R-19 9-1/2”: R-30
Critical Radiant Flux, W/Sqcm	ASTM E970	0.12 or greater
Water Vapor Sorption, Min., Percent by Weight	ASTM C1104	Less than 5
Water Vapor Permeance Kraft Faced, Min., Perms	ASTM E96	1.0
Surface Burning Characteristics, Flame Spread/Smoke Developed, Index Unfaced Kraft Faced PKS Faced	ASTM E94	 25/50 NR/NR NR/NR

(**Addendum 2, Issued October 30, 2026**)

B. Type B Rigid Polyisoncyanurate Foam Board:

1. Manufacturers: Johns Manville, AP Foil-Faced Rigid Foam Sheathing, RMax, or equal.

2. Manufacturers of Therma Spacer Blocks: Thermal Design; Silvercote; Therm-All, or equal. (**Addendum 2, Issued October 30, 2026**)

3. Description: Foil-faced, rigid foam insulating sheathing product for exterior applications and concealment in cavity wall construction, complying with ASTM C1289, Type 1, Class 1.

4. Construction: Foam bonded on both sides in the manufacturing process to foil facers. Both sides printed with one side reflective foil facer and the other non-reflective foil facer.

5. Foam: Closed cell polyisocyanurate, CFC and HCFC free.

6. Physical Properties:

Physical Property	Test Method	Specification
Thermal Resistance per Nominal 1 inch Thickness Min., degrees F-Sqft-Hr/BTU	ASTM C518	6.0
Compressive Strength, Min. psi	ASTM D1621	16 or greater 20 or greater for thermal spacer blocks
Flexural Strength, Min. psi	ASTM C203	40 or greater
Water Absorption, Min., Percent by Volume	ASTM C209	0.1
Water Vapor Permeance, Min., Perms	ASTM E96	0.05
Surface Burning Characteristics, Flame Spread, Index	ASTM E84	25 or less
Surface Burning Characteristics, Smoke Developed, Index	ASTM E84	450 or less
Service Temperature, degrees F		-100 to 250

(**Addendum 2, Issued October 30, 2026**)

7. Board Size: 48 inches wide by 96, 108, or 120 inches in length. Refer to the Drawings for required thickness.

8. Thermal Spacer Block Size: width to match purlin flange depth, thermal spacer block should be continuous between roof panel & purlin for full length of purlin. (**Addendum 2, Issued October 30, 2026**)

9. Accessories:

   a. Insulation Flashing Tape: JM Ultrafast Flashing Tape, 3M All Weather Flashing Tape 8067, or equal.

   b. Wall Penetration Sealant: Tremco Spectrem 1, or equal.

   c. Insulation Fasteners: JM Ultrafast CI Plates and JM Ultrafast CI Philips screws, or equal. For masonry cavity walls refer to the masonry specification for insulation retainers.

C. Type C Extruded Polystyrene Rigid Foam Insulation:

1. Manufacturers: Owens Corning Foamular, Dupont Styrofoam Brand SM, Dow, or equal.

2. Description: Rigid foam insulated sheathing for exterior applications complying with ASTM C578, Type IV.

3. Construction: Extruded polystyrene, closed-cell, moisture-resistant rigid foam boards.

4. Physical Properties:

Physical Property	Test Method	Specification
Thermal Resistance Min., R-Value, degrees F-Sqft-Hr/BTU @75 degrees F Mean Temperature	ASTM C518	5.0
Compressive Strength, Min. psi	ASTM D1621	25
Flexural Strength, Min. psi	ASTM C203	50
Water Absorption, Max., Percent by Volume	ASTM C272	0.3
Water Vapor Permeance, Max., Perms	ASTM E96	1.5
Dimensional Stability, Max % by Volume	ASTM D2126	2.0
Surface Burning Characteristics, Flame Spread, Index	ASTM E84	10
Surface Burning Characteristics, Smoke Developed, Index	ASTM E84	175
Service Temperature, Max. degrees F		165

2.03 INSULATION MATERIALS

A. Insulation shall follow the requirements of 2019 ASHRAE 90.1. Insulation shall comply with NAIMA standard 202.

1. Minimum R-Values:

a. Above Grade Mass Walls: R-11.4 c.i.

b. Metal Walls: R-19 c.i.

c. Metal Roofs: R-19 + R-11 Ls.

2. Maximum Assembly U-Values:

a. Above Grade Mass Walls: U-0.090.

b. Metal Walls: U-0.050.

c. Metal Roofs: U-0.037.

3. Insulation shall be non-combustible with a flame-spread rating of 25 or less.

4. Retainer strips shall be 0.019-inch thick, formed, galvanized steel or PVC retainer clips colored to match insulation facing.

PART 3 EXECUTION

3.01 PREPARATION

A. Contractor shall examine surfaces to receive insulation prior to installation. Surfaces shall be dry, free of dirt, dust, and debris.

B. Unacceptable conditions shall be reported to Engineer.

3.02 INSTALLATION

A. Insulation shall be installed and secured in locations shown. Installation shall be in accordance with manufacturer's instructions.

B. For ceilings provide Type A insulation between the joist/rafter/truss ceiling construction. Provide Kraft paper vapor barrier faced insulation where covered by drywall or other interior building wall system. Kraft paper is installed towards the interior of the building just behind the wall or ceiling board. Where second layer of insulation is required provide unfaced insulation perpendicular and on top of the faced insulation that is installed between the ceiling members to give the proper thickness and R-Value required by the energy code.

C. For PEMB Roofs

1. install Type B thermal spacer blocks continuous along top of roof purlin flanges, maintain full contact with roof panels, avoid gaps or crushing.
2. Infill roof purlin space with R-19 MIN Type A unfaced insulation.
3. Install R-11 MIN Type A PKS faced liner system insulation to interior girt flange with PKS facing toward interior.
4. Install liner system support straps perpendicular to roof purlins @ 48" O>C>, unless otherwise required by the liner system MFR. Secure straps tightly to prevent sagging. (**Addendum 2, Issued October 30, 2026**)

D. For masonry cavity walls provide Type B insulation between the veneer masonry and the structural backup masonry and shall be secured with insulation retainers. The insulation shall be placed against the interior face of the structural backup masonry. Provide or cut the board height to match the vertical spacing between veneer ties.

E. For PEMB Walls

1. Infill girt space with R-13 MIN Type A unfaced insulation.
2. Install continuous R-14 MIN Type B insulation to exterior girt flange, tape all seams of Type B insulation with manufacturer-approved foil tape. (**Addendum 2, Issued October 30, 2026**)

F. For foundations provide Min. R-15 Type C insulation around the inside face of foundation walls and 24" horizontal under slab perimeter. Adhere the insulation to the foundation. (**Addendum 2, Issued October 30, 2026**)

3.03 PROTECTION

A. Insulation shall be protected from moisture and inclement weather. Exposed insulation shall be covered at the end of each work day or at onset of inclement weather.

B. Damaged or wet insulation shall be removed and replaced with new material.

PART 4 SPECIAL PROVISIONS

Not used.

END OF SECTION

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SECTION 08315
ROLL-UP DOORS

PART 1 GENERAL

1.01 SCOPE

A. This Section includes the furnishing and installing of roll-up doors complete and ready for service as shown on the Drawings and described in this Section.

B. Each roll-up door shall be furnished complete with a curtain, hood, guides, gears, motor operator, weather-stripping, safety strip, and all other accessories required for satisfactory operation.

C. The erector of the doors shall be approved by the manufacturer.

D. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. The Contractor shall indicate all variances from the requirements of the Contract Documents.

b. Door Schedule.

c. Dimensional Drawing.

d. Manufacturer's literature.

e. Color charts showing the full range of colors available. (**Addendum 2, Issued October 30, 2026**)

2. Operation and maintenance manual.

PART 2 PRODUCTS

2.01 EQUIPMENT

A. General - The dimensions of the roll-up doors shall be as shown on the Drawings and as called for in the door schedule. The doors, frames, and operators shall be products of Overhead Door Corp., or equal.

B. Doors:

1. The door curtain shall be of interlocking slats formed in easy curves without sharp bends. The slats shall be flat profile and shall be insulated. The front of

the slat shall be 0.040-inch-thick aluminum while the back of the slat shall be 0.024-inch-thick aluminum.

2. Slats shall be of sufficient section to provide curtain strength adequate to safely resist a wind load of 20 pounds per square feet.
3. Insulation shall be CFC-free polyurethane providing an R value of 7.7.
4. Ends of slats shall be provided with end locks with integral slat lugs as wind locks which engage bars and lock the curtain in the guides. Bottom bar shall be two aluminum angles.
5. The curtain shall be coiled on a pipe or barrel of size sufficient to carry the door load, with a deflection not to exceed 0.03 inch per feet of opening width. The door shall be evenly counterbalanced by helical springs contained in pipe. All springs shall be anchored to the same tension rod and held in position by the same adjusting wheel accessible from the outside.
6. The coil brackets shall be of high grade iron or precision formed steel plate designed to house the ends of the coils and support the counterbalance assembly.
7. The coil shall be housed in a minimum 24-gauge aluminum hood.
8. The gears shall be high grade gray iron, cast teeth machine molded from machine-cut patterns.
9. The guides shall be built of structural aluminum angles to form a slot of sufficient depth to retain curtain in guides against heavy wind pressure. Guides shall be provided with wind lock bars.
10. Guides and hood shall be weather-stripped to prevent air passage.
11. Doors shall be equipped with vinyl or neoprene seals to close the void between the door and head.
12. Doors shall be powder coated. Colors shall be selected by Owner from manufacturer's full range of colors available. (**Addendum 2, October 30, 2026**)

PART 3 EXECUTION

3.01 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle roll-up doors in accordance with the requirements of Section 01350.

3.02 INSTALLATION OF FRAMES

A. Set frames to maintain scheduled dimensions, hold head level, and set jambs plumb and square.

B. Secure anchorages and provide connections to adjacent construction.

3.03 INSTALLATION OF DOORS

A. Comply with manufacturer's instructions for installation of door hardware, operator, and other components. The installation shall include conduit and wire per Division 16, required to connect the pushbutton station, disconnect switch, and safety strip to the control panel.

B. Adjust so doors operate smoothly and fit properly when closed.

C. Adjust and lubricate locks and operators.

D. Clean surfaces and remove protective tape and excess caulking sealants.

PART 4 SPECIAL PROVISIONS

Not used.

END OF SECTION

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SECTION 10701
PLAQUES AND ORNAMENTAL SIGNS

PART 1 GENERAL

1.01 SCOPE

A. This Section includes furnishing and installing a bronze plaque in the ~~Administration Building and a plant sign on the retaining wall in front of the Administration Building~~ Water Treatment Plant. (**Addendum 2, Issued October 30, 2026**)

B. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. The Contractor shall indicate all variances from the requirements of the Contract Documents.

b. Scaled dimensional drawings.

c. Materials of construction.

d. Manufacturer's catalog data.

e. Full sized rubbing for plaque.

PART 2 PRODUCTS

2.01 BRONZE PLAQUE

A. The plaque shall be cast bronze with a velvet finish background and polished border and lettering. The plaque shall be of sufficient size to contain the names and years of service for approximately 12 ~~38~~ City Officials. The name of ~~four~~ the contractor~~s~~ and ~~the~~ engineering firm shall also appear on the plaque. ~~The size of all lettering, border style, and background texture shall match that on the existing plaques.~~ (**Addendum 2, Issued October 30, 2026**)

B. The plaque shall be made near the end of the project. The Engineer will provide a sketch showing the required layout and a listing of information to appear on the plaque.

PART 3 EXECUTION

3.01 INSTALLATION OF THE PLAQUE

A. The plaque shall be mounted to an existing concrete block wall in the ~~lobby~~ hallway of the ~~Administration Building~~ water treatment plant. Rosette covers and toggle bolts shall be used to mount the plaque. (**Addendum 2, Issued October 30, 2026**)

B. ~~Three existing plaques shall be removed from the lobby of the Maintenance Building and from the Sludge Conditioning Building and installed in the lobby of the Administration Building.~~ (**Addendum 2, Issued October 30, 2026**)

3.02 EXACT LOCATION

A. The exact location of the plaque will be selected by the Engineer.

PART 4 SPECIAL PROVISIONS

Not used.

END OF SECTION

SECTION 10702
SIGNS AND TAGS

PART 1 GENERAL

1.01 SCOPE

A. Under this Section the Contractor shall furnish all labor, materials, equipment, and incidentals required to provide and install identification devices as shown and specified.

B. The extent of identification devices is shown on the Drawings and described herein.

C. The types of identification devices include the following:

1. Door Signs.
2. Floor Loading Signs.
3. Safety Signs.
4. Fire Extinguisher Location Signs.
5. Hazardous Material Signs.
6. Equipment Identification Nameplates.
7. Valve Tags.
8. Exit Signs.

D. The type and number of each sign required are scheduled in Part 4 unless otherwise noted.

E. Additional product requirements are specified in Section 01350.

1.02 QUALITY ASSURANCE

A. Contractor is responsible for all field measurements to ensure the proper fitting of the Work and use of the correct anchoring device.

1.03 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:
    a. The Contractor shall indicate all variances from the requirements of the Contract Documents.
    b. Materials of construction.
    c. Manufacturer’s catalog data.

d. Anchorage and accessory items.

e. Samples - When requested by the Engineer:

1) Full size sample of proposed product.

PART 2 PRODUCTS

2.01 DOOR SIGNS

A. Material - Laminated thermoset plastic, minimum 1/16-inch thick and 2-inch by 12-inch in size, engraved condensed 1-inch high block lettering on contrasting background and beveled front edges. Signs shall be provided with a pressure sensitive adhesive backing. Colors shall be selected by the Owner from the manufacturer's standard colors.

B. ~~Door Sign Schedule - Signs as scheduled in Part 4~~ (**Addendum 2, Issued October 30, 2026**) Provide interior door signs at the following location:

1. Garage
2. Office
3. Chemical Room
4. Laboratory
5. Restroom
6. Electrical room
7. Blower Room
8. Process Room (**Addendum 2, Issued October 30, 2026**)

2.02 FLOOR LOADING SIGNS, SAFETY SIGNS, AND FIRE EXTINGUISHER LOCATION SIGNS

A. Material - As a minimum, 20-gauge steel with a baked enamel finish, 10-inch by 14-inch in size, colors and contrasting colors and letter sizes per OSHA regulations.

B. Appropriate mounting holes or anchoring device as required, single faced sign and appropriate for indoor or outdoor use.

C. Signs to conform to OSHA Safety and Health Standards - General Industry (29 CFR 1910), Subpart J - General Environmental Controls, Section 1910.145 Specifications for accident prevention signs and tags.

D. Danger Signs - White background on bottom half with red oval on black background top half; black letters on bottom half and top half to have the word "DANGER" in white letters all in the red oval; letter sizes as appropriate.

E. Caution Signs - Yellow background with black panel on top one-third with yellow letters of word "CAUTION" on panel; black letters for words and of appropriate size.

F. Informational Signs - White background with blue panel on top one-third with white letters of word “NOTICE” on panel; blue letters for words and of appropriate size.

G. Fire Extinguisher Sign - Red background with white letters of appropriate size.

2.03 HAZARDOUS MATERIAL SIGNS

A. Material - As a minimum, 20-gauge steel with a baked enamel finish, 10-3/4-inch by 10-3/4-inch in size, colors and contrasting colors and letters per DOT Specifications of the DOT Hazardous Material Regulations 40 CFR Part 172.500 as amended.

B. Chlorine Gas - White background with black lettering and symbols as required.

C. Signs shall be as detailed on the Drawings and specified herein.

2.04 EQUIPMENT NAMEPLATES

A. Material – Brass or 304 Stainless Steel, 19 gauge thick, 2-inch diameter in size, engraved condensed black lettering on contrasting background. Provide hole(s) in tag for attachment.

B. All equipment, not included in Section 16030 and 09900 to be stenciled, shall have an identification nameplate attached. Notation shall be as shown on the Drawings, described in the appropriate sections of the Specifications, or as directed by the Engineer.

2.05 VALVE AND ACCESSORY TAGS

A. Material – Brass or 304 Stainless Steel, 19 gauge thick, 2-inch diameter in size, engraved condensed black lettering on contrasting background. Provide hole(s) in tag for attachment.

B. All buried and exposed valves and accessories shall be tagged.

2.06 PIPE LABELS

A. Pipe labels and flow directional arrows shall be self-adhesive Vinyl color coded to match the service of the pipe. Pipe flow arrows shall be 1 inch wide bands for pipe sizes up to 3 inch, 2 inch wide bands for pipe sizes greater than 3 inches up to 12 inch, 4 inch wide bands for pipe sizes greater than 12 inches.

1. Tape shall meet ASME/ANSI A13.1-2015 requirements when used in conjunction with a pipe marker which meets the ASME/ANSI A13.1-2015 requirements.

   Adhesion to steel (PSTC-1) 15 min. dwell (Avg)—75 oz/in.(82N/100mm) Ultimate(72hrs.dwell)(Avg)—116oz/in.(127N/100mm) Tack(ASTM-2979)(Avg)—800g(8N) Drop Shear(PSTC-7) (Avg)—4Hrs

   Temperature requirements: Minimum application 0°F(-17°C). Service Application temperature -40°F to 180°F (-40°C to 82°C).

Chemical Resistance:	**Reagent**	**7 day Immersion**	**Dip Test**	**Rub Test**
	Bleach	NE	NE	NE
	Water	NE	NE	NE
	NE: No effect **F**: Failed			
7 Day Immersion:	Immersed in reagent for 7 days.			
Dip Test:	Five minute dips in reagent for 30 minute recovery.			
Rub Test:	Rubbed sample for one minute with swab soaked in reagent.			
Shelf Life:	1 year when stored at 70°F (21°C) and 40% to 50% R.H.			

2.07 MANUFACTURER

A. Seton Name Plate Corp. - New Haven, CT; Industrial Safety & Security Co. - Lima, OH; or equal.

PART 3 EXECUTION

3.01 INSPECTION

A. Examine the substrates and conditions under which the devices are to be installed and notify the Engineer in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION OF SIGNS

A. Install identification devices and components at the locations shown or as directed by the Engineer, securely mounted with concealed theft-resistant fasteners, unless otherwise indicated.

B. Attach signs to substrates using appropriate methods so that signs are secure and free from movement, not easily removed or damaged. Such methods shall include:

1. Exterior, wet/damp/corrosive areas shall use stainless steel fasteners in substrate.

2. On handrail provide stainless steel strapping material which is wrapped around the handrail top and bottom rail and bolted to the sign. There shall be a minimum of two anchors at top and tow at the bottom.

3. Pole mount shall have a stainless steel backer plate same a 1/2 inch lager than the sign attached to the pole and the sign attached to the backer plate.

C. Install level, plumb, and at the proper height. Cooperate with other trades for installation of sign units to finish surfaces. Repair or replace damaged units as directed by the Engineer.

3.03 INSTALLATION OF EQUIPMENT NAME PLATE AND VALVE AND ACCESSORY TAGS

A. Equipment nameplates shall be attached to the electrical motor, if there is one, or at the location designated by the Owner.

B. All buried and exposed valves and accessories shall be tagged.

C. Valve tags shall be attached to the valve in a location designated by the Owner.

D. Attach tags with one of the following:

1. Stainless steel chain.

2. Aluminum or stainless steel key-hole shape snap rings.

3. ~~Plastic zip tie (remove excess strapping).~~ (**Addendum 2, Issued October 30, 2026**)

4. By placing tag under an existing screw on equipment in location acceptable to Owner.

5. Tapping or self-tapping screw into the casting of equipment (as approved by Manufacturer).

E. For buried valves with valve boxes and valves with operating nut and floor box, attach plastic tags with stainless steel screws to underside of valve box covers. For exposed valves, the tags shall be secured with self-locking nylon straps.

F. Fire hydrants and lawn hydrants do not require tagging.

PART 4 SPECIAL PROVISIONS

4.01 SCHEDULE

A. ~~Signs and tags are scheduled on the Drawings.~~ See Drawings for additional schedules. (**Addendum 2, Issued October 30, 2026**)

END OF SECTION

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SECTION 11026
VERTICAL PRESSURE FILTER

PART 1 GENERAL

1.01 SCOPE

A. This Section includes installing four vertical pressure filters and related accessories as specified and as shown on the Drawings and as described in this Section.

B. Under this Section, the Contractor shall furnish labor, materials, equipment and incidentals as specified to install and test the filtration equipment complete with piping, internals, and appurtenances.

C. All work performed under this Section shall comply with all approved trade practices and manufacturer's recommendations.

D. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirement of Section 01300 and shall include:

1. Shop Drawings for Review:

   a. The Contractor shall indicate all variances from the requirement of the Contract Documents.

   b. Dimensions.

   c. Manufacturer's literature.

   d. Manufacturer's installation instructions.

   e. Manufacturer's certificates.

   f. Filter media sieve analysis reports.

2. Information for the Record:

   a. Equipment supplier's written report that equipment:

      1) Has been properly installed.

      2) Has been operated and that satisfactory operation has been obtained.

   b. Complete list of all component parts including:

      1) Manufacturer's name and model number.

      2) Materials of construction.

3) Accessories.

4) Performance data.

c. Catalog data.

d. Design data.

B. Operation and Maintenance Manuals.

1.03 MANUFACTURER

A. It is the specific intent of this Section to limit the equipment furnished to a product of a major process equipment manufacturer that has substantial experience and expertise in similar size pressure filters and that will assume responsibility with respect to the overall functional capability of the equipment provided.

B. All major filter components shall be furnished by a single manufacturer who has adequate experience and experimental data, in the judgment of the Engineer, concerning filters of the type to be furnished for this Section.

C. The manufacturer shall have at least 10 years experience with similar capacity installations and shall provide documented proof of installations that successfully removed iron and manganese to less than 0.1 and 0.015 mg/L respectively using dual media with similar water characteristics as given in this Section.

D. To establish a minimum quality required, the products furnished under this Section shall be by WesTech Engineering, LLC; Tonka Water; Hungerford & Terry, Inc.; Artesian of Pioneer, Inc. or Loprest. Filter and piping arrangement shown on Drawings is based on standard Tonka Water details. (**Addendum 2, Issued October 30, 2026**)

E. All equipment in this section shall be supplied by a single manufacturer.

PART 2 PRODUCTS

2.01 FILTER

A. Each vertical pressure filter unit shall be capable of filtering at water flow of 150 gpm to 200 gpm at a filtration rate of 3.0 gpm/sf to 4.0 gpm/sf when filtering a water with the following analysis:

Total Alkalinity (as CaCO3 mg/L)	230-240
pH	7.2-7.5
Temperature (°C)	4-10
Total Hardness (as CaCO3 mg/L)	350-540
TOC (mg/L)	1.2
Fluoride (mg/L)	1.5-2.3
Iron (ug/L)	35-1,300

Manganese (ug/L)	0-20
Sulfur (ug/L)	50,000-213,000
Nitrogen, Ammonia (mg/L) (**Addendum 2, October 30, 2026**)	0.3-0.4

Prior to application to the filters the water will be aerated, and a 12.5 percent solution of sodium hypochlorite applied.

2.02 FILTERS

A. Four vertical pressure filters shall be supplied and sized as follows:

1. Total Flow Rate: 600 gpm
2. Filtration rate: 3 gpm/sf (4 gpm/sf with one filter offline)
3. Tank diameter: 8’-0”
4. Tank side shell height: 6’-0”
5. Tank design pressure: 100 psig
6. Tank hydrostatic test pressure: 130 psig

B. The vessels shall be constructed in accordance with ASME code Section VIII Division 1 requirements with ASME code stamp required.

C. Each tank shall be equipped with the necessary flanges and connections for the main piping system. The top tank head shall be equipped with one 24 inch manhole. Each unit is to be supported on four structural legs welded to the side shell. A 2-inch drain valve shall be included on each filter effluent. (**Addendum 2, October 30, 2026**) Each leg is to be provided with a suitable base plate and manufacturer supplied anchor bolts.

2.03 FILTER UNDERDRAIN SYSTEM

A. Each filter bottom shall be equipped with an underdrain system consisting of a rigidly supported flat plate extending over the entire bottom of the filter area. It shall be perforated with openings to receive non-clogging plastic distributors.

B. A header-lateral cast in concrete alternative is also acceptable.

1. Underdrain pipes: Structurally supported PVC pipe construction.
2. Header pipe with laterals on 12” centers.
3. Header-lateral underdrain piping factory installed by the manufacturer. Field installed systems are not acceptable.
4. Concrete fill: Installed by Contractor to bottom of the underdrain diffuser nozzles per manufacturer’s instructions.

a. Take care so as not to introduce foreign material into the underdrain laterals during the installation process.

b. Plug laterals until the installation process has been completed, after which the plugs will be removed and the underdrain diffuser nozzles are installed by the contractor. (**Addendum 2, Issued October 30, 2026**)

C. The design of the underdrain distributor shall consist of a single horizontal slot with a minimum opening of 0.125 inch. Slot area of the distributor shall be greater than the final orifice area to assure uniform distribution. The quantity of distributors shall be such that the ratio of final orifices to filter area is approximately 0.003.

D. The underdrain shall be so designed to reduce the water velocity, discharging the water horizontally without impeding its flow, thereby preventing channeling in the filter bed.

E. Underdrain nozzles shall be NSF Standard 61 approved for use in drinking water. Plastic underdrain components without this approval shall not be allowed.

F. Supporting Beds

1. Each filter shall be provided with a 15-inch supporting bed consisting of the following graded layers of gravel:

Layer & Depth	Passing Screen	Retained on Screen
Bottom 4-inch	3/4-inch	1/2-inch
Next 4-inches	1/2-inch	3/16-inch
Next 4-inches	3/16-inch	3/32-inch
Top 3-inches (Torpedo Sand)	2.0 mm	0.8 mm

2. The gravel shall conform to AWWA standards B-100 and be free from clay, loam, dirt, calcareous, or other foreign material and shall consist of round or angular particles being relatively free of flat or elongated particles.

3. The gravel shall be shipped bagged.

2.04 FILTER MEDIA

A. Torpedo sand shall have an effective size of 0.8-2.0 millimeters and uniformity coefficient not greater than 1.7.

B. Each filter shall be provided with an 18 inch deep bed of best quality GreensandPlus. The GreensandPlus shall have an effective size of 0.30-0.35 millimeters, a uniformity coefficient not greater than ~~1.55~~ 1.60 (**Addendum 2, October 30, 2026**) and shall be specifically processed and stabilized for continuous regeneration with sodium hypochlorite.

C. A 12 inch deep bed of 0.8-1.2 millimeters effective size anthracite with a uniformity coefficient no more than 1.7 shall be furnished on top of the GreensandPlus layer.

D. Sieve analysis reports of filter media including torpedo sand, greensand plus and anthracite shall be submitted for review in accordance with AWWA B100-16.

2.05 BACKWASH COLLECTION

A. A backwash collection and influent distribution (**Addendum 2, October 30, 2026**) system shall be provided consisting of a washwater collector and media-backwash water separator. The backwash collection system shall separate the air and media from the backwash water without interfering with removal of accumulated suspended solids. The backwash collection system shall be located immediately above the top of the filter media and provide for simultaneous air-water backwashing in a manner, which results in clean media and minimal mud ball formation and surface cracking essential for maintaining high quality filter effluent at all time. Additionally, the simultaneous air and water backwash system must be designed so that filter media is not lost during the backwash cycle to the extent continued media replacement will be required. Continual media loss during backwash is not acceptable.

1. Troughs:
   a. Material: 304 stainless steel.
   b. Hardware 316 stainless steel.
2. Simultaneous air and water:
   a. Minimum of 2 cfm/sf air and 3-5 gpm/sf water.
   b. Minimum of 12 gpm/sf of water without air.

B. H-Pattern Inlet distributor/backwash collector alternative. An alternative collection systems shall be furnished with an H-pattern inlet distributor/backwash collector system designed with schedule 80 PVC pipe and fittings. The hub will extend down from the tank top head and include two (2) lateral arms, each ending with two (2) upturned elbows. The distributing system shall be designed for uniform distribution of inlet water over the entire filter bed and for the uniform collection of the backwash water during the backwash operation. (**Addendum 2, October 30, 2026**)

2.06 PIPING AND VALVES

A. The piping shall be arranged to carry out all the operations of filtering, backwashing, air washing and filtering to waste. Piping shall be as shown on the drawings. All piping 3 inches in diameter and larger shall be ~~standard~~ ductile iron pipe as specified in Section 15210 or epoxy lined carbon steel piping ~~weight flanged steel construction.~~ (**Addendum 2, October 30, 2026**)Flanges are to be standard weld on flanges. No threads are to be cut on pipe 3 inches and larger.

B. The filter equipment supplier shall supply butterfly type filter function valves. All valve bodies shall be monoflange for mounting between ANSI 125/150 flanges. Valves shall be designed for watertight control at the maximum actual working pressure. Disc

material shall be corrosion resistant. Shafts shall be one piece solid stainless steel with corrosion resistant bearings. Seat material and shaft seals shall be EPDM.

C. The following electrically operated filter function valves shall be furnished by the filtration equipment manufacturer:

1. 4 - size 4" influent modulating valves.
2. 4 - size 6" backwash waste valves.
3. 4 - size 6" backwash supply valves.
4. 4 - size 6" effluent valves.
5. ~~4 - size 2" drain valves.~~ (**Addendum 2, October 30, 2026**)
6. 1 - size 4" backwash low rate set valve.
7. 1 - size 6" backwash high rate set valve.
8. 4 - size ~~3~~ 4" air wash valves. (**Addendum 2, October 30, 2026**)

D. Each filter function valve shall be furnished with an electric actuator. Each electrically actuated butterfly valve shall be controlled by a 120-volt, single-phase electric actuator. Each actuator shall be weatherproof and furnished with a corrosion resistant cover complete with sealing gaskets. Power for these actuators is to be supplied from the control panel.

E. All necessary air vents and relief valves shall be furnished. Air release piping shall be supplied by the Contractor.

2.07 LOSS OF HEAD GAUGES

A. The filter system shall be equipped with (2) loss of head assemblies including pressure gauges for indicating loss of head. Each ~~set of filters~~ filter to include an assembly. A differential pressure switch shall be included as part of the assembly to automatically initiate backwash when terminal headloss is reached. (**Addendum 2, October 30, 2026**)

2.08 RATE OF FLOW INDICATOR

A. Filters shall be equipped with a magnetic flow meter for backwash supply metering and (4) magnetic flow meters for filter influent metering.

1. Acceptable manufacturers: Siemens Sitran, Rosemount, Endress+Hauser or equal.
2. Capable of bi-directional flow measurement.
3. Fabricated from carbon steel and internally lined with polyurethane or Ebonite hard rubber.
4. Meter housing: rated for 200 psi minimum.

5. Include two (2) stainless steel grounding rings, shipped loose for installation on per manufacturer's instructions.
6. Install full face gaskets between grounding ring and flanged ends of meter.
7. Meter converter:
    a. Local or remote mount.
    b. Housed in TYPE 4 enclosure with readout display.
    c. Meter transmitter: capable of producing pulse and analog output signals.

2.09 SAMPLING COCKS

A. Sampling cocks shall be provided in the pipe nozzles so that representative water samples may be secured at the following ports.
    1. Filter influent.
    2. Filter effluent.

2.10 PAINTING

A. The interior and exterior of the filter tanks shall be thoroughly cleaned of loose mill scale and grease and sandblasted to SSPC-SP10/NACE 2 near white blast in preparation for the coating systems.

B. The interior filter coating shall be an NSF-600 coating system applied above the underdrain plate prior to shipment.
    a. One coat of Tnemec Series 21-1255 (beige) primer to 5 – 7 mils dry film thickness.
    b. One stripe coat of Tnemec Series 21-WH16 (off-white) primer applied with brush to all weld and hard to reach areas.
    c. One finish coat of Tnemec Series 21-WH16 (Off-White) to 5 – 7 mils dry film thickness.

C. The exterior of the filter tank shall receive the following coating system prior to shipment:
    a. One factory coat of Tnemec Series 21-1255 (beige) primer to 5 – 7 mils dry film thickness.
    b. One stripe coat of Tnemec Series 21-WH16 primer applied with brush to all weld and hard to reach areas.
    c. Additional coatings shall be furnished and field applied by the installing contractor.

D. The contractor shall be responsible for touching up the coating system as needed.

2.11 BACKWASH CONTROL

A. A control system shall be furnished to provide fully automatic sustained simultaneous air and water backwash of four filters in sequence.

B. Automatic Backwash Control:

1. The automatic MULTIWASH backwash cycle shall be initiated by elapsed time, by loss of head with a differential pressure switch, or by manual pushbutton.

C. Orifice Plates

1. Orifice plates shall be installed as shown on the Plans and made of 304 stainless steel.

D. Control Features

1. Automatic (Filter selector to "AUTO"): Each of the Four (4) filters shall automatically proceed in sequence through simultaneous air and water backwash, air purge water wash and return to service. Only one filter cell is to be backwashed at a time.

   a. One set of filters (two total) shall be backwashed sequentially.

2. Semi-Automatic (Filter selector to "AUTO"): To initiate backwashing manually, the control system shall be provided with a "BACKWASH START" push button, which can initiate the filter backwash cycle. The filter shall then proceed through the backwash cycle and return to service.

3. Manual or Off (Filter selector to "OFF"): The filter function valve solenoids shall be provided with manual overrides to allow the valves to be positioned manually.

4. Removing a filter from service: It shall be possible to remove a filter from service by changing the filter selector to "OFF" and placing the filter valve in the required position by use of the manual overrides on the solenoid pilots, providing the control air reserve is adequate.

E. Control Components

1. Backwash: Contacts shall be provided to operate the backwash sequence with the control system. The duration of the backwash shall be adjustable from 0 - 30 minutes. One panel shall service all units. The backwash rate shall be controlled by a manual rate set valve in the backwash water waste line in conjunction with a backwash rate of flow indicator. A HAND-OFF-AUTO selector switch shall be included on the front of the panel to operate the backwash pump when using the "MANUAL" control mode.

2. Backwash water supply shall be supplied by high service pumping. When a filter is in backwash mode, the remaining three filters shall remain online to ensure adequate backwash water is supplied to the system.

3. Air wash: Contacts shall be provided to operate the air wash blower in the proper sequence with the control system. The duration of the air wash shall be

adjustable from 0-10 minutes. One timer shall service all units. The air wash rate shall be 3 cfm/sf. A HAND-OFF-AUTO selector switch shall be included on the front of the panel to operate the air wash blower when using the "MANUAL" control mode.

4. Indicator lights: OIT lights shall indicate both the service and backwash position of each unit. There shall also be included on the panel "ON - OFF" lights for the backwash pump. There shall also be included on the panel "ON-OFF" lights for the air wash blower.

F. Interlocks and safeties:

1. In the event of a power failure, the units shall remain in the service position if the control air reserve is adequate. If the failure occurs during the backwash cycle, the valves shall return to the service position. On restoration of power, the unit shall return to the beginning of the cycle and continue to completion.

2. Each unit shall be interlocked to ensure that only one unit can backwash at a time.

2.12 BACKWASH CONTROL PANEL

A. The control panel shall be a single door NEMA 4X steel ~~wall~~ floor (**Addendum 2, October 30, 2026**) mounted control cabinet containing a programmable logic controller. An operator interface terminal (OIT) shall be mounted on the face of the panel for adjustment of the backwash duration and other timers/setpoints. The OIT shall include a connection for remote programming and troubleshooting.

B. A 120 volt, 60 Hz, 1 phase electrical power source, sized for 20 amps, is to be supplied to the control panel. All electrical wiring within the panel shall be factory installed and tested before shipment. All panel wiring shall terminate at a numbered terminal strip. All wiring external to the panel shall be furnished and installed by others under the electrical contract.

2.13 AIR SCOUR BLOWER

A. Air for the air scour shall be provided by a regenerative blower designed to deliver 3 cubic feet per minute per square foot of filter area at a pressure of 5 psig. The blower shall be furnished as part of the filter equipment.

B. Blower accessories shall consist of intake air filter, intake silencer, discharge silencer, pressure relief valve, check valve, isolation valve, intake and outlet flexible connections, and pressure gauge.

C. Blower should be FPZ Inc K10- MS-10-3 or equal.

2.14 AIR WASH GRIDS

A. Provide an in bed air wash distributor system for each filter to be placed at the interface between the supporting gravel bed and the filter media. The air wash grids shall be

properly sized to provide even distribution of air throughout the entire filter bed when air is applied at a rate of 3 cfm/sq. ft. of bed area.

B. Each in bed air wash grid system shall consist of minimum Sch. 80 PVC pipe headers and 3/4 inch diameter Sch. 80 PVC laterals on 8" centers. Laterals shall be provided with air distribution points on 7 inch centers. Air distribution points shall be designed to prevent media intrusion. Laterals shall be cut to proper length and have the distributors factory installed. The pipe headers shall be rigidly supported at points not exceeding 5 feet – 0 inch centers.

PART 3 EXECUTION

3.01 INSTALLATION

A. The filter and accessories shall be installed in accordance with the Contract Documents, manufacturer's recommendations, and Engineer's instructions.

B. Filter support gravel and filter media shall be installed per manufacturer's recommendations and in accordance with AWWA B100.

C. After all work related to placement of the media has been completed, and before the filter is placed in service, the entire filter shall be cleaned and disinfected by chlorination in accordance with AWWA C653.

3.02 APPLICATION

A. The method of introduction of raw water to the filter units, or the collection of wash water from the units, shall be such that water is distributed to, or collected from, the entire filter bed in a uniform manner.

3.03 INSPECTION, STARTUP, AND TRAINING

A. The Contractor shall furnish the services of a manufacturer's factory service person for final inspection and startup of all equipment furnished by the manufacturer and to instruct Owner and Contractor personnel in proper operation and maintenance procedures. A minimum of two trip~~s~~ for a total of six, eight-hour workdays shall be required.

B. Inspection, startup, and training services shall consist of an equipment check, startup, and training of operating personnel. The Contractor shall ensure that all equipment is in operating condition and ready for service.

C. Contractor to coordinate Startup plan in accordance with Section 01650.

PART 4 SPECIAL PROVISIONS

Not used.

END OF SECTION

SECTION 11223
CHEMICAL PUMP SYSTEMS

PART 1 GENERAL

1.01 SCOPE

A. This Section includes furnishing and installing all materials, labor and supervision required for the chemical pump systems complete and ready for service as specified and as shown on the Drawings.

B. The pump systems shall include all drives, drive shafts, couplings, belts, drive shaft and belt guards, spray guards, motor slide bases, base plates, anchor bolts, and other appurtenances as specified or required for a complete installation.

C. All Work performed under this Section shall be in accordance with all approved trade practices and manufactures' recommendations.

D. If not specified, materials of construction shall be selected by the pump manufacturer. All materials used shall be entirely suitable for the chemical service and intended operating conditions. Materials that are not highly rated and recommended for the service shall not be used. The Engineer shall have final say as to what materials are acceptable.

E. Chemical pump system accessories such as backpressure valves, calibration chambers, etc. are covered under Section 11224.

F. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. The Contractor shall indicate all variances from the requirements of the Contract Documents.

b. Scaled dimensional drawings.

c. Wiring schematics with termination point identification.

d. Piping schematics.

e. Materials of construction.

f. Manufacturer's catalog data.

g. General Arrangement Drawings.

h. Motor information per Section 11050.

2. Information for the Record.

3. Operation and maintenance manual.

PART 2 PRODUCTS

2.01 SEAL LESS MAGNETIC DRIVE AND CHEMICAL TRANSFER PUMPS

A. Chemical transfer pumps shall be centrifugal, seal-less, magnetic drive pumps of the capabilities specified.

B. The pump shall have a drive magnet assembly which, when rotated, will rotate a magnet attached to the pump impeller.

C. The impeller and its magnet shall be housed in an enclosed pump/impeller magnet housing with no opening except for suction and discharge connections.

D. If not specified, the materials of construction shall be selected by the manufacturer of the pump. All materials used shall be entirely suitable for the chemical service and intended operating conditions. Materials that are not highly rated and recommended for the service will not be accepted. The Engineer shall have the final say as to what materials are acceptable.

E. Drive motors shall be 3,450 rpm, 115 VAC, 60 Hz, single phase unless otherwise noted, blast cooled.

2.02 PERISTALTIC PUMP

A. Peristaltic pump shall be a positive displacement, hose type pump as specified meeting the operating conditions specified in Part 4.

B. Each pumping unit shall be complete with an electric motor, speed reducer, coupling, coupling guard, base plate and other appurtenances specified in Part 4.

C. The pump shall have one rotating member with two sliding shoes mounted 180 degrees opposite each other inside of a pump housing. Between the pump housing and the shoes shall be a rubber hose. The pump housing shall contain a CP grade glycerin for lubricating the hose and shoe.

D. The pump shall operate by the shoes on the rotating member compressing a rubber hose between the shoe and the inner pump housing. The fluid being pumped shall be only in contact with the inside of the hose.

E. Pump components shall be constructed of the materials specified below:

1. Pump housing – Powder Coated Aluminum.

2. Housing cover – Clear Acrylic.

3. Motor Shaft – Chrome Plated Steel.

4. Rotor shoes – Nylon.

5. Hose - Norprene or other material compatible with chemical being pumped. Hose life under specified service shall be a minimum 2,000 hours.

F. Pump housing inlet and discharge nozzle 1-inch in diameter and larger shall have 150 - feet ANSI flanges. Nozzles smaller than 1-inch in diameter shall have male pipe threads.

G. Shaft bearings shall be antifriction grease lubricated with AFBMA L10 life of 40,000 hours.

H. Drive motors shall be 1,800 rpm, TEFC induction type and shall comply with the applicable NEMA standards. Motors shall be Design B, Class F insulation, with a service factor of 1.15. Motors shall have thermal overload protection and be suitable for the power supply specified in Part 4. Motor sizing shall be adequate to meet with the running and starting torque requirements of the pump.

I. Speed reducers on pumps with discharges 1-inch and larger shall be of the helical/inline type with a NEMA C flange input for mating with the pump motor. Gear rating shall be a minimum of an AGMA Class II rating with a minimum efficiency of 97%.

J. Speed reducers on pumps with discharges less than 1-inch shall be of the helical/inline type specified in Paragraph I. or worm gear type. Worm gear type reducers shall have a cast iron housing and motor flanges; tapered rollerbearing on all output shaft; and steel shafting having a minimum tensile strength of 100,000 psi. Worms shall be integral with steel shafting having a minimum tensile strength of 125,000 psi and a minimum hardness of RC 52. Gears shall be 603 Dynally forged bronze. Oil seals shall be nitrile and the housing shall incorporate a gravity oil feed system. All reducers shall be warranted for two years from the time they are placed in service.

K. If required in Part 4, the pump manufacturer shall provide an inlet pulse damper suitable for eliminating negative pressure spikes in the pump's suction piping. The damper shall be constructed of materials compatible with the solution being pumped. Damper shall be sized by the pump manufacturer for the pump being furnished. Damper shall be suitable for horizontal or vertical mounting and not require initial charging or subsequent recharging.

L. All peristaltic pumps shall be furnished by one manufacturer.

PART 3 EXECUTION

3.01 INSTALLATION

A. Installation shall be complete and in accordance with the pump manufacturer's recommendations, Engineer's instructions, and Contract Drawings.

B. The pump drive belt, where applicable, shall be placed in the proper pulley position for the specified pumping rate.

C. Proper oil level shall be confirmed prior to starting.

D. Related piping and electrical items are covered under Section 15211 and Division 16 respectively.

3.02 INSPECTION, STARTUP, AND TRAINING

A. The Contractor shall furnish a qualified representative of the manufacturer to perform inspection, start-up, and training services. The manufacturer's representative shall be experienced in the installation, start-up, operation, and maintenance of the equipment.

B. The representative shall check the installation and supervise final adjustments and initial start-up of the equipment. The representative shall certify that the installation is correct and that the equipment is operating satisfactorily. This service shall be for a minimum period of one trip and one day.

C. Within two weeks of start-up, the manufacturer shall submit to the Engineer a written report (minimum four copies) covering the representative's inspection and start-up of the equipment. This report shall include the manufacturer's certification that the installation is correct and that the equipment is operating satisfactorily.

D. After the installation and operation of the equipment has been certified, the manufacturer's representative shall train the Owner's personnel for one, eight-hour day in the proper operation and maintenance of the equipment. The Owner may videotape the training.

E. In addition to the initial training, the manufacturer shall provide one, eight-hour day of training at the time requested by the Owner within the one-year maintenance and guarantee period. This service would be in addition to any warranty work.

PART 4 SPECIAL PROVISIONS

4.01 ENGINEERED SKID SYSTEMS

A. Each set of metering (peristaltic) pumps specified in the schedule as part of a manufacturer-supplied engineered skid system.

B. Single skid systems shall be provided when one or two pumps, respectively, are scheduled for each metering pump system. Each engineered skid system mounted on an FRP platform, as shown on the Drawings.

C. Engineered skid systems shall include a drip tray.

D. All mounting hardware, mounting brackets, and mounting foot/wall pads shall be constructed of stainless steel or FRP.

E. Provide accessories for the metering pump systems as specified and include: vented type true union ball valves; pressure relief valves; pulsation dampener; pressure gauge; check valve; and wye strainer.

F. Metering pumps shall require 115 VAC, receive control inputs of 4-20 mA for external speed control and output for tube failure detection.

4.02 SODIUM HYPOCHLORITE METERING PUMP

Number Required:	Two-Pump System , Two Outlets; One Spare
Type:	Peristaltic
Operation:	Continuous
Solution:	12% Liquid Sodium Hypochlorite
Solution Temperature:	Ambient
Suction Conditions:	Flooded to 5-feet suction lift
Discharge Conditions:	15 psi max
Design Flow:	6.0gph (**Addendum 2, Issued October 30, 2026**)
Expected Feedrate:	6.0 gph (**Addendum 2, Issued October 30, 2026**)
Metering Pump Flow Range	1.0-10.0 gph (**Addendum 2, Issued October 30, 2026**)
Motor:	115V, 60 Hz
Accessories:	Isolation ball valves Y-strainers Calibration column Flushing connections Pressure Relief Valves Pressure gauges NEMA 4x Control Junction Box, Inputs/Outputs Prewired Power Supply (2) ½" outlet connection Skid legs
Spare parts	5 spare tube assemblies
Manufacturer and Model:	Watson Marlow Qdos 60 Uni+ Duplex Skid, dual discharge; Blue-White M2 with CFPS Dual Outlet skid.

4.03 SODIUM HYPOCHLORITE TRANSFER PUMP

Number Required:	Two
Type:	Seal-less magnetic drive
Operation:	Intermittent
Solution:	12% Liquid Sodium Hypochlorite
Solution Temperature:	Ambient
Suction Conditions:	Flooded
Design Head Capacity:	10 gpm @ 5' TDH
Manufacturer	Finish Thompson DB6 or equal

END OF SECTION

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SECTION 11401
AERATORS

PART 1 GENERAL

1.01 SCOPE

A. Under this Section, the Contractor shall furnish all materials, equipment, labor and supervision required to install two induced draft aerators as shown on the Drawings and as described in this Section.

B. All work under this Section shall comply and be in accordance with all approved trade practices and manufacturer's recommendations.

1.02 MANUFACTURER

A. It is the specific intent of this Section to limit the equipment furnished to a product of a major process equipment manufacturer that has substantial experience and expertise in similar size aerators and that will assume responsibility with respect to the overall functional capability of the equipment provided.

B. All major aerator components shall be furnished by a single manufacturer who has adequate experience and experimental data, in the judgment of the Engineer, concerning aerators of the type to be furnished for this Section. The manufacturer shall assume the responsibility for integrating the various components, regardless of manufacturer, to produce a complete aerator.

C. To establish a minimum quality required, the products furnished under this Section shall be by WesTech Engineering, LLC; Tonka Water; Artesian of Pioneer, Inc., or Delta Cooling Towers, Inc. ~~Loprest~~. (**Addendum 2, October 30, 2026**)

1.03 ALL EQUIPMENT IN THIS SECTION SHALL BE SUPPLIED BY A SINGLE MANUFACTURER.SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

   a. The Contractor shall indicate all variances from the requirements of the Contract Documents.

   b. Design calculations demonstrating the aerator conformance to the specified performance criteria.

2. Information for the Record:

   a. Performance data.

b. Equipment supplier's written report that equipment:

1) Has been properly installed.

2) Has been operated satisfactorily.

c. Operation and Maintenance information.

1.04 ELECTRICAL AND CONTROL COORDINATION

A. If the current requirement of any motor or piece of equipment is increased to such an extent that the wiring, conduit, or starter for that motor or equipment must be increased from that shown on the Electrical Drawings, the Contractor shall furnish and install the larger items under the Section the equipment is specified. The increased wiring, conduit, and starter costs shall be included in the motor or equipment cost under the Section the equipment is specified and no additional compensation will be allowed.

B. Equipment and panels shall be NEMA 4X unless designated otherwise on the Drawings, or in the electrical or equipment specifications.

C. Certain equipment furnished under this Section shall be connected to the plant control system as shown on the P&ID Drawings. Mechanical and electrical components for these connections shall be furnished, under this Section, as required to provide control functions compatible with the plant control system. These connections and any remote-control connections shall be furnished and wired to clearly labeled terminal strips within the equipment control panel.

D. If the electrical control requirements change from that specified or shown on the Electrical or P&ID Drawings due to the requirements of the actual equipment furnished, the Contractor shall perform all necessary modifications under this Section and no additional compensation will be allowed. The final installation shall meet the operational intent of that specified and shown on the Drawings.

PART 2 PRODUCTS

2.01 GENERAL

A. The aerators shall be designed to oxidize iron from well water. Average well water characteristics are as follows:

Total Hardness	419 mg/L as $CaCO_3$
Total Alkalinity	237 mg/L as $CaCO_3$
Iron	1.3 mg/L
Manganese	0.019 mg/L
pH	7.43

B. Each aerator shall be designed to oxidize soluble iron and hydrogen sulfide at a design water flow of 300 gpm (0.43 mgd) and ambient air temperatures between -5 degrees F to 98 degrees F.

2.02 AERATOR SHELL

A. The aerator shall consist of a closed chamber for affecting a countercurrent flow water and air. The aerator shall be constructed of Type 3000 or 5000 series aluminum plate suitability reinforced with type 6061 structural aluminum members. The aerator shall be welded inside and outside with fillet welds equal in size to the thickness of the plates. All water retaining welds shall be dye penetrant checked at the manufacturer's factory before shipment to insure they are watertight. Four structural support legs shall be welded to the base of the aerator chamber. The support legs shall include mounting holes for anchorage to the support structure. The anchor bolt pattern shall be provided by the aerator manufacturer. The anchor bolt's configuration shall be compatible with the metal frame that will anchor the aerator.

2.03 AERATOR INTERNALS

A. Liquid Distributor:

1. A non-corrosive liquid distributor and air collector shall be provided for uniform distribution on the inlet water over the horizontal cross section of the aerator and for the uniform collection of exhaust air. The distributor box shall be constructed of aluminum with air exhaust stacks, inlet velocity breaker, and water distribution target nozzles.

B. Slats (Pipes) and Support Grid:

1. Aerator internals shall be made up of NSF approved round PVC slats supported on type 304 stainless steel grids with 6-inch vertical spacing.

C. Moisture Eliminator:

1. A moisture separator shall be provided in the aerator at the blower mounting location.

2.04 BLOWER ASSEMBLY

A. Each aerator shall have one motor driven propeller type blower to supply the air required by the design. The TEFC aluminum frame motor shall be mounted vertically and directly connected to the cast aluminum propeller.

B. The motor shaft and through bolts shall be stainless steel. The blower motor starters, disconnect switches, wiring and conduit to blower are furnished and installed by the installing contractor.

2.05 AIR INTAKE

A. The open area of the screen shall pass the design air volume without excessive head loss. The assemblies shall be properly baffled to prevent water loss from the aerator chamber as well as prevent wind borne water and falling debris from entering the

chamber. The assemblies shall be constructed of aluminum with stainless steel screen. The screen shall be easily removed to aid cleaning.

2.06 AERATOR ACCESSORIES

A. Manways:

1. Provide two 13-inch by 15-inch manway in the aerator side shell below the trays for inspection of the lower collection area.

B. Side Door:

1. Provide hinged doors on the side of the aerator for access to the PVC slats. The doors shall open providing an unobstructed access to the entire width of the aerator. Door height shall be from the lowest tray to the aerator top. The doors shall be constructed of 1/4-inch aluminum and furnished with aluminum hinges with stainless steel pins. The doors shall bolt on to the aerator with stainless steel bolts on 6-inch centers. A neoprene gasket shall be provided to seal the doors against the aerator.

PART 3 EXECUTION

3.01 INSTALLATION

A. Installation shall be complete and in accordance with the manufacturer's recommendations, engineers' instructions, and Contract Documents.

B. The Contractor shall furnish the services of a manufacturer's factory serviced person for final inspection, startup and training of all equipment furnished by the manufacturer and to instruct Owner and Contractor personnel in proper operation and maintenance procedures. A minimum of one trip and one day for final inspection and one trip and one day for training shall be required.

PART 4 SPECIAL PROVISIONS

4.01 AERATOR

A. Two induced draft aerators shall be provided with sufficient number of slats to oxidize iron in the raw water at a maximum concentration of 3.5 mg/L.

B. In the Drawings, assumptions have been made as to the size and design of the aerator so that the supporting structure, access grating, and piping could be designed. These assumptions are:

1. The aerator is estimated to be 3-feet-6-inches by 3-feet-6-inches and will vary depending on the manufacturer.

2. The aerator unit has a total height of approximate 10-feet.

3. The aerator water inlet is one 6-inch diameter 125-pound flanged pipe. The inlet connection is not designed to support the weight of the inlet pipe. The

centerline of the inlet pipe is 10-feet-0-inches above the finished floor of the Detention Basin.

4. The aerator water outlet is one 6-inch Sch. 40 plain end pipe.

5. A blowers shall be provided for each aerator. Each aerator blower motor will be 460 volt, 3 phase, and have a maximum of 1/2 horsepower.

C. Each blower shall provide approximately 920 scfm at 3/8-inch static pressure.

END OF SECTION

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SECTION 15150
SANITARY WASTE AND VENT PIPING

PART 1 GENERAL

1.01 SCOPE

A. Section Includes:

1. Sanitary drain, waste, and vent (DWV) piping buried within 5 feet of building.
2. Chemical resistant DWV piping.
3. Unions and flanges.
4. Valves.
5. Pipe hangers and supports.
6. Floor drains.
7. Trench drains. (**Addendum 2, October 30, 2026**)
8. Barrier-type trap seal. (**Addendum 2, October 30, 2026**)
9. Cleanouts.
10. Interceptors.
11. Sleeves.
12. Bedding and cover materials.

B. This Section includes furnishing all materials, equipment, labor, and supervision related to air sanitary waste and vent piping necessary for the completion of the Work in accordance with the Contract Documents. Sleeves for penetrations for new Work shall be provided by this Section and installed by others.

C. This Section shall include but not limited to all appurtenances required for complete installation.

D. All Work performed under this Section shall comply and be in accordance with all approved trade practices and manufacturer's recommendations.

E. Additional equipment and installation requirements in Division 15 as included shall be provided by this Contract.

F. Additional product requirements are specified in Section 01350.

1.02 REFERENCES

A. American Standard of Mechanical Engineers:

1. ASME A112.21.1 – Floor Drains.
2. ASME B16.1 – Cast Iron Pipe Flanges and Flanged Fittings.
3. ASME B16.3 – Malleable Iron Threaded Fittings.
4. ASME B16.4 – Gray Iron Threaded Fittings.
5. ASME B31.9 – Building Services Piping.

B. ASTM International:

1. ASTM A47 – Standard Specification for Ferritic Malleable Iron Castings.
2. ASTM A53 – Standard Specification for Pipe, Steel, Black, and Hot-Dipped, Zinc-Coated, Welded and Seamless.
3. ASTM A74 – Standard Specification for Cast iron Soil Pipe and Fittings.
4. ASTM A234 – Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service.
5. ASTM A395 – Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures.
6. ASTM A536 – Standard Specification for Ductile Iron Castings.
7. ASTM B32 – Standard Specification for Solder Material.
8. ASTM C14 – Standard Specification for Concrete Sewer, Storm Drain, and Culvert Pipe.
9. ASTM C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
10. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
11. ASTM C478 – Standard Specification for Precast Reinforced Concrete Manhole Sections.
12. ASTM C564 – Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
13. ASTM D1785 – Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedule 40, 80, and 120.
14. ASTM D2464 – Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
15. ASTM D2467 – Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.

16. ASTM D2564 – Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
17. ASTM D2665 – Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
18. ASTM D2729 – Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
19. ASTM D2855 – Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
20. ASTM D3034 – Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
21. ASTM F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
22. ASTM F708 – Standard Practice for Design and Installation of Rigid Pipe Hangers.
23. ASTM F891 – Standard Specification for Coextruded Poly (Vinyl Chloride) (PVC) Plastic Pipe with a Cellular Core.
24. ASTM F1476 – Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications.

C. Cast Iron Soil Pipe Institute:

1. CISPI 301 – Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waster, and Vent Piping Applications.
2. CISPI 310 – Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.

D. Manufacturers Standardization Society of the Valve and Fittings Industry:

1. MSS SP 58 – Pipe Hangers and Supports – Materials, Design and Manufacturer.
2. MSS SP 69 – Pipe Hangers and Supports – Selection and Application.
3. MSS SP 70 – Cast Iron Gate Valves, Flanged and Threaded Ends.
4. MSS SP 71 – Cast Iron Swing Check Valves, Flanged and Threaded Ends.
5. MSS SP 80 – Bronze Gate, Globe, Angle and Check Valves.
6. MSS SP 89 – Pipe Hangers and Supports – Fabrication and Installation Practices.
7. MSS SP 110 – Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

E. Plumbing and Drainage Institute:

1. PDI G101 – Standard – Testing and Rating Procedure for Grease Interceptors.

1.03 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

B. Shop Drawings: Indicate dimensions, weights, and placement of openings and holes for sewage-ejectors, and manholes.

1. Product Data:

a. Piping: Submit data on pipe materials, fittings, and accessories. Submit manufacturers catalog information.

b. Valves: Submit manufacturers catalog information with valve data and ratings for each service.

c. Hangers and Supports: Submit manufacturers catalog information including load capacity.

d. Sanitary Drainage Specialties: Submit manufacturers catalog information, component sizes, rough-in requirements, service sizes, and finishes.

e. Pumps: Submit pump type, capacity, certified pump curves showing pump performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable. Include electrical characteristics and connection requirements.

2. Manufacturer's Installation Instructions: Submit installation instructions for material and equipment.

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

C. Information for the Record:

1. Operation and Maintenance Data: Submit frequency of treatment required for interceptors. Include spare parts list, exploded assembly views for pumps and equipment.

1.04 DRAWINGS

A. All Drawings are diagrammatic and are intended to show the approximate location of equipment and piping. Dimensions given on the Drawings shall take precedence over scaled dimensions and all dimensions whether in figures or scaled, shall be verified in the field.

1.05 PROTECTION FROM DAMAGE

A. Delivery, Handling, and Storage:

1. Material delivery, handling, and storage shall meet the requirements of Section 01350.

2. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.

1.06 ENVIRONMENTAL REQUIREMENTS

A. Do not install underground piping when bedding is wet or frozen.

1.07 FIELD MEASUREMANTS

A. Verify field measurements prior to fabrication.

PART 2 PRODUCTS

2.01 SANITARY DRAIN, WASTE, AND VENT (DWV) PIPING

A. Cast Iron Pipe: ASTM A74, service weight, bell and spigot ends.

1. Fittings: Cast iron, ASTM A74.

2. Joints: ASTM C564, rubber gasket joint devices or lead and oakum.

B. Cast Iron Pipe: CISPI 301, hub-less, service weight.

1. Fittings: Cast iron, CISPI 301.

2. Joints: CISPI 310, neoprene gaskets and stainless-steel clamp-and-shield assemblies.

C. PVC Pipe: ASTM D2665, polyvinyl chloride (PVC) material.

1. Fittings: ASTM D2665, PVC.

2. Joints: ASTM D2855, solvent weld with ASTM D2564 solvent cement.

D. PVC Pipe: ASTM D1785 Schedule 80, polyvinyl chloride (PVC) material.

1. Fittings: Schedule 80, PVC, ASTM D2464 PVC, threaded.

2. Joints: ASTM D2855, solvent weld with ASTM D2564 Solvent cement.

2.02 CHEMICAL RESISTANT SEWER PIPING

A. Cast Iron Pipe: CISPI 301, hubless, service weight.

1. Fittings: Cast iron, CISPI 301.

2. Joints: CISPI 310, neoprene gaskets and stainless-steel clamp-and-shield assemblies.

B. PVC Pipe: ASTM D2729 or ASTM D2665, polyvinyl chloride (PVC) material.

1. Fittings: PVC, ASTM D2729 or ASTM D2665.

2. Joints: ASTM D2855, solvent weld with ASTM D2564 solvent cement.

2.03 UNIONS AND FLANGES

A. Unions for Pipe 2 inches and Smaller:

1. PVC Piping: PVC.

B. Flanges for Pipe 2-1/2 inches and Larger:

1. PVC Piping: PVC flanges.

2. Gaskets: 1/16-inch-thick preformed neoprene gaskets.

C. PVC Pipe Materials: For connections to equipment and valves with threaded connections, furnish solvent-weld socket to screwed joint adapters and unions, or ASTM D2464, Schedule 80, threaded, PVC pipe.

2.04 UNIONS

A. Plastic Unions for PVC Schedule 80 Pressure Pipe:

1. Manufacturers: Hayward, Spears Manufacturing Union 2000, or equal.

2. Unions: All thermoplastic unions shall be schedule 80, manufactured to ASTM F1970 and constructed from PVC Type I, ASTM D1784 Cell Classification 12454 or CPVC Type IV, ASTM D1784 Cell Classification 23447. All O-rings shall be EPDM or FKM construction. All union nuts shall have Buttress threads. All EPDM valves shall be certified by NSF International for use with potable water.

2.05 PIPE HANGERS AND SUPPORTS

A. Drain, Waste, and Vent: Conform to ASME B31.9, ASTM F708, MSS SP 58, MSS SP 69, and MSS SP 89.

B. Hangers for Pipe Sizes ½ to 1-1/2 inch: Malleable iron or carbon steel, adjustable swivel, split ring.

C. Hangers for Pipe Sizes 2 inches and Larger: Carbon steel, adjustable, clevis.

D. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.

E. Wall Support for Pipe Sizes 3 inches and Smaller: Cast iron hooks.

F. Wall Support for Pipe Sizes 3 inches and Larger: Welded steel bracket and wrought steel clamp.

G. Vertical Support: Steel riser clamp.

H. Floor Support: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

2.06 FLOOR AND AREA DRAINS

A. Medium Duty:

1. Manufacturers: Zurn Industries, Inc., Model ZN550, J.R. Smith Mfg. Co., Model 2120-NB, Josam Manufacturing Co., or equal.

2. Construction: ASME A112.21.1; 9-inch diameter top drain, medium duty, latex coated, cast-iron two-piece body with double drainage flange and bottom outlet, seepage pan, weep holes, combination membrane flashing clamp and frame with integrated trap primer and plug, and round, adjustable slotted nickel-bronze medium-duty grate.

3. Deep Seal Trap with Floor Cleanout:

a. Manufacturer: Zurn Industries, Inc., Model Z1012/ZN1406, J.R. Smith Mfg. Co., Josam Manufacturing Co., or equal.

b. Construction: Deep seal trap, latex coated, cast-iron body for use with bottom outlet drain, with adjustable cast iron floor cleanout with spigot for caulking into Hub. Latex coated cast iron body with gas and watertight ABS plug and cast-iron housing with round, scoriated, secured cast iron heavy-duty cover adjustable to finished floor.

B. Type “T” floor trench shall be Neenah R-4995-A2 Type M Trench Frame with Grated cover or equal. Provide drain slopes, grating, end caps, catch basins, trash buckets drain sizes, and traps as required on the drawings.

1. Length: 16 ft.

2.07 TRENCH DRAINS

A. Manufacturers: Zurn Z886-HD, or equal.

B. Channels: ASME A112.6.3; constructed of High-Density Polyethylene (HDPE) with a 4-inch throat size. Positive mechanical connection between channel sections, non-separating during installation, mechanically locked into the surrounding concrete every 10-inches, with a built-in slope of 0.75 percent. Channels include rebar clips for securing trench location before concrete installation.

C. End Caps: Closed end for 6-inch wide trench, constructed of 1/4-inch thick HDPE.

D. Bottom Outlets: Constructed of 3/16-inch thick HDPE for 6-inch wide, with no-hub bottom outlet. See drawings for outlet pipe diameter sizes.

E. Frame: ASTM A36; heavy-duty carbon steel powder coated frame assembly, with 10 4-inch in length concrete anchors per 80-inches of channel length. Welds per ASTM AWS D1.1.

F. Grating: DIN EN1433, Class C; H-20 traffic loading rated, constructed of ductile iron, 20-inch nominal lengths, 1/2-inch wide slots, with 3-inch bearing depth. (**Addendum 2, Issued October 30, 2026**)

2.08 BARRIER-TYPE TRAP SEAL

A. Manufacturers: Everflow Supplies Green Drain, Sure Seal, or equal.

B. Construction: ASSE 1072 tested and certified, inline floor drain, barrier type trap seal with UV ABS plastic frame, silicone rubber sealing flapper, and four flexible sealing ribs. Trap seal shall open to allow drainage and close when there is no flow. Trap seals shall be in compliance with the Ohio Plumbing Code.

2.09 CLEANOUTS

A. Interior Finished Floor Areas:

1. Manufacturers: Zurn Model ZN1400, J.R. Smith Mfg. Co., Josam, or equal.

2. Construction: Adjustable floor cleanout, latex coated cast iron body, anchor flange, threaded top assembly, and round scored polished nickel bronze cover with gasket in service areas and round depressed cover with gasket to accept floor finish in finished floor areas.

2.10 OIL INTERCEPTORS

A. Precast Concrete Type:

1. Manufacturers: Norwalk Concrete Industries, 7200 sq. ft. traffic-bearing oil/water separator, Coate Concrete Products, or equal.

2. Construction:

a. Material: Precast reinforced concrete, lifting anchors, compressive strength psi rating for depth of installation, and knockouts for inlet, outlet, and vent piping.

b. Rough In: Below grade installation with covers flush with grade.

c. Inlet Connection: 4-inch diameter.

d. Outlet Connection: 4-inch diameter.

e. Vent Connection: 3-inch diameter.

3. Accessories: Integral deep seal trap, with concrete manway risers.

4. Covers: Steel, epoxy coated, non-skid with heavy duty leak-proof gasket, securing handle, with risers for flush with grade installation, and covers H-20 rated for heavy traffic loading.

5. Unit Rating: 538-gallon oil capacity.

2.11 SLEEVES

A. Type B Sleeve:

1. Type B sleeves are for use in exterior walls.

2. Type B sleeves consist of casting in place a black wrought iron sleeve two sizes larger than the service pipe with couplings on both ends of the sleeve.

3. Service pipe shall be caulked in place with oakum. The oakum shall be covered with a minimum of 1-inch of lead wool on both ends.

B. Type C Sleeve:

1. Type C sleeves are used in exterior walls and other walls as designated on the Drawings.

2. Type C shall be a modular mechanical type seal of interlocking synthetic rubber links.

3. Unless otherwise indicated, the seal shall be suitable for corrosive service in a temperature range of 40-degree F to 250-degree F. The pressure plates shall be of Delrin plastic for good resistance to organic compounds. The bolts and nuts shall be of 18-8 stainless steel. The sealing elements shall be of EPDM rubber which has high resistance to most organic and inorganic materials.

C. Type D Floor Sleeve - Type D sleeves consist of casting in place a Schedule 40 steel sleeve with four anchors in the floor slab. The sleeve shall be one size larger than the service pipe or 1-inch larger than the flange on the service pipe. The sleeve shall extend 1-inch above the finish floor surface.

D. Type E Sleeve:

1. Type E wall sleeves shall be used where noted on the Drawings.

2. Type E sleeves consist of casting in place mechanical joint, cast iron wall sleeves meeting the requirements of AWWA C110 and C111.

3. Each Type E sleeve shall be sealed using plain rubber gaskets, follower glands, and mechanical joint studs meeting all requirements of AWWA C111 on both ends.

E. Type F Sleeve:

1. Type F sleeves shall be used for passing through masonry walls.

2. Type F sleeves shall be constructed as detailed on the Drawings using 15-pound felt paper and sealant.

2.12 BEDDING AND COVER MATERIALS

A. Bedding, Cover, and Backfill: In accordance and as specified in Section 02200.

PART 3 EXECUTION

3.01 EXAMINATION

A. Section 01300 - Administrative Requirements: Coordination and project conditions.

B. Verify excavations are to required grade, dry, and not over-excavated.

3.02 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

B. Remove scale and dirt, on inside and outside, before assembly.

C. Prepare piping connections to equipment with flanges or unions.

D. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

3.03 INSTALLATION - HANGERS AND SUPPORTS

A. Inserts:

1. Provide inserts for placement in concrete forms.
2. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe 4 inches and larger.
4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
5. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut flush with top of slab.

B. Pipe Hangers and Supports:

1. Install in accordance with ASME B31.9, ASTM F708, and MSS SP 89.
2. Support horizontal piping as scheduled.
3. Install hangers to provide minimum 1/2-inch space between finished covering and adjacent work.
4. Place hangers within 12 inches of each horizontal elbow.
5. Use hangers with 1-1/2-inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
6. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.

7. Where installing several pipes in parallel and at same elevation, provide multiple pipe hangers or trapeze hangers.

8. Prime coat exposed steel hangers and supports. Refer to Section 09900. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.

9. Install hangers adjacent to motor driven equipment with vibration isolation.

3.04 INSTALLATION - BURIED PIPING SYSTEMS

A. Verify connection to existing piping system size, location, and invert are as indicated on Drawings.

B. Establish elevations of buried piping with not less than one ft of cover.

C. Establish minimum separation of from other services piping in accordance with applicable code.

D. Remove scale and dirt on inside of piping before assembly.

E. Excavate pipe trench in accordance with Section 02200.

F. Install pipe to elevation as indicated on Drawings.

G. Place bedding material at trench bottom to provide uniform bedding for piping, level bedding materials in one continuous layer not exceeding 4 inches compacted depth; compact to 95 percent maximum density.

H. Install pipe on prepared bedding.

I. Route pipe in straight line.

1. Backfill trench in accordance with Section 02200.

2. Maintain optimum moisture content of fill material to attain required compaction density.

3. After hydrostatic test, evenly backfill entire trench width by hand placing backfill material and hand tamping in 6 inches compacted layers to 12 inches minimum cover over top of jacket. Compact to 95 percent maximum density.

4. Evenly and continuously backfill remaining trench depth in uniform layers with backfill material.

5. Do not use wheeled or tracked vehicles for tamping.

J. Install Work in accordance with applicable standards.

3.05 INSTALLATION - ABOVE GROUND PIPING

A. Establish invert elevations and maintain gradients.

B. Slopes for Horizontal Drainage Pipe:

1. 2-1/2 Inches or Less: 1/4 inch per foot.
2. 3 to 6 Inches: 1/8 per foot.
3. 8 Inches or Larger: 1/16 inch per foot.

C. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Provide clearances at cleanout for snaking drainage system.

D. Encase exterior cleanouts in concrete flush with grade.

E. Install floor cleanouts at elevation to accommodate finished floor.

F. Provide non-conducting dielectric connections wherever jointing dissimilar metals.

G. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.

H. Install piping to maintain headroom. Do not spread piping, conserve space.

I. Group piping whenever practical at common elevations.

J. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment

K. Provide clearance in hangers and from structure and other equipment for installation of insulation.

L. Provide access where valves and fittings are not accessible.

M. Install piping penetrating roofed areas to maintain integrity of roof assembly.

N. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.

O. Prepare exposed, unfinished pipe, fittings, supports, and accessories ready for finish painting. Refer to Section 09900.

P. Install bell and spigot pipe with bell end upstream.

Q. Sleeve pipes passing through partitions, walls, and floors.

R. Install firestopping at fire rated construction perimeters and openings containing penetrating sleeves and piping. Follow Section 07270.

S. Support cast iron drainage piping at every joint.

T. Install Work in accordance with applicable standards.

3.06 FIELD QUALITY CONTROL

A. Test sanitary waste and vent piping system in accordance with applicable code or local authority having jurisdiction.

PART 4 SPECIAL PROVISIONS

Not used.

END OF SECTION

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SECTION 15250
VALVES

PART 1 GENERAL

1.01 SCOPE

A. This Section includes the furnishing and installing valves, flap gates, and shear gates 4-inch and larger.

B. Floor stands, floor boxes; valve boxes; gears, manual, hydraulic, and electric operators; extension stems; stem guides and supports; brackets; gaskets; bolts and nuts; and other accessories shall be provided as necessary to complete the Work.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. The Contractor shall indicate all variances from the requirements of the Contract Documents.

b. Scaled dimensional drawings.

c. Wiring schematics with termination point identification.

d. Piping schematics.

e. Materials of construction.

f. Manufacturer’s catalog data.

g. General Arrangement Drawings.

h. Motor information per Section 11050.

2. Information for the Record:

a. Operation and maintenance manual.

PART 2 PRODUCTS

2.01 GENERAL

A. All valves and appurtenances shall be of standard make approved by the Engineer and shall have the name, monogram, or initials of the manufacturer cast thereon. They shall be built and equipped for the type of operation shown on the Drawings, specified herein, or as directed by the Engineer.

B. Opening Direction - Unless otherwise specified in Part 4, valves with screw stems shall open by turning counterclockwise, the direction being indicated by an arrow cast where easily visible to operator.

C. Connections - Valves shall be provided with hubs, spigots, flanges, mechanical groove-type, screw, or other connections compatible with the pipe in which they are installed or scheduled in Part 4.

D. Unless otherwise specified, a stuffing box packed with O-ring seals shall be used to seal the stem of the valve. The seal system used shall be replaceable without removing bonnet or rotating element. Gaskets shall be of either Buna or a rubber composition.

E. Bolts and nuts on buried valves shall be a low alloy steel cathodic to the valve body and having a minimum yield strength of 45,000 psi. All other nuts and bolts shall be low carbon steel conforming with the mechanical and chemical requirements of ASTM A307, Grade B.

2.02 GATE VALVES

A. Except as modified herein, gate valves and appurtenances shall conform to the requirements of AWWA Standard C509 covering iron-body, bronze mounted, non-rising stem gate valves 4-inch through 12-inch diameter and AWWA standard C500 covering iron body, bronze mounted, non-rising-stem gate valves 14-inch through 48-inch diameter.

B. Rising stem gate valves - shall also conform to the above Standard.

C. Valve types shall be as follows for the intended use and service:

1. Throttling Service - Gate valves used for throttling service shall be square bottom type.

2. Hydraulic Operation - Double disc valves shall be provided when hydraulic operation is specified.

3. Water Service - Valves used for water service shall be resilient seat gate valves unless specified otherwise.

2.03 CHECK VALVES

A. Check valves, unless otherwise noted, shall be standard swing type, quiet closing, and constructed for 150-pounds working pressure. They shall be iron body, bronze mounted, with outside lever and adjustable weights, flanged or grooved connections, and have hinge pins of hardened corrosion-resistant alloy. Discs on sizes smaller than 6-inch shall be solid bronze, and on larger sizes shall be cast iron with bronze facing.

B. Applicable specifications under gate valves, as to materials and character of construction, shall apply to check valves.

C. Check valves on high service pumps shall be Globe Style Check Valves. Globe style check valves shall be of the silent operating type and the same size as the entering pipe. Globe style check valves shall be rate 250-pound, have a ductile iron body (ASTM A-536 65-45-12), 125-pound ANSI flanges. Springs shall be ASTM type 316 stainless steel. Valve seat shall be ASTM 304 stainless steel with integral EPDM seat seal. Stem and disc shall be ASTM type 304 stainless steel with ASTM B584 bronze guide bushing. Valve is operate silently in either the vertical or horizontal position, flow up or down.

2.04 BUTTERFLY VALVES

A. All butterfly valves shall conform to AWWA C504, except as herein modified. The valves shall be suitable for throttling service through the entire operating head range and for the service listed in the Valve Schedule.

B. The butterfly valves shall be equipped with ANSI B16.1 Class 125 cast iron flanges, grooved ends or mechanical joints as indicated on the Drawings. Valve bodies shall be cast iron conforming to ASTM A48, Class 40, or ductile iron ASTM A536, Grade 65-45-12.

C. Valves shall be AWWA Class 150B short body, unless otherwise specified in Part 4.

D. Rubber seats shall be retained to the body of the valve. Method of retention shall conform to AWWA C504.

E. Valve shafts shall be a continuous, one-piece shaft type extending through the valve disc hubs for valves up through the 12-inch size. Valve shafts for valves larger than 12-inch shall be the stub shaft type into the disc hub. Shafts shall be of 18-8 stainless steel.

F. Valve disc shall be cast ductile iron with an 18-8 stainless steel seating edge.

G. The valve shall be equipped with a thrust bearing, other than the seat, to hold the disc in the center of the valve seat.

H. Unless otherwise indicated, operators shall be sized in accordance with AWWA C504 for Class 150B valves. Traveling nut type operators are not acceptable for throttling service.

I. Butterfly valves for process air service shall be either cast or ductile iron body, aluminum-bronze disc, EPDM seats, stainless steel stem, with manufacturer's standard stem seal for dry air at 150 degrees F. Unless otherwise specified or shown on the Drawings, lever operators with positioning/locking handles with position pointer shall be supplied. Valves shall be rated for 150 psi service and 250 degrees F maximum.

2.05 PLUG VALVES

A. Unless otherwise shown on the Drawings or called for in the Valve Schedule, plug valves shall be the nonlubricated eccentric type valve providing dead tight shut-off.

B. Port area of valves 20-inch and smaller shall be not less than 80% of the nominal pipe area. Valves 24-inch and larger shall have port area of not less than 70% of the nominal pipe area.

C. The valve body bonnet and rotating element shall be semi-steel (ASTM A126, Class B). The bonnet shall be held in position with bolts and designed with a recessed tongue and groove or dowel pinned connection to the valve body to insure proper alignment of the body and bonnet bushings.

D. Corrosion-resistant bushings of the permanently lubricated type shall be provided in the body and the bonnet to support the rotating element trunnions. Bushings shall be stainless steel, bronze, or metal-jacketed fusion-bonded Nylon 11 suitable for sewage service. Valves 24-inch and larger shall have bronze bearings and stainless-steel sleeves. Tape, sprayed, or roll-on type bushings or sleeves are not acceptable.

E. The valve body seat contacting the rotating element shall be welded in overlay of not less than 90% pure nickel or fusion-bonded Nylon 11 coating. The seating surface of the rotating element shall be Hycar, Buna-N, neoprene or other material recommended by the manufacturer for the application specified.

F. 2331 Valves and actuators shall have seals on all shafts and gaskets on covers to prevent leakage of liquid out of or the entry of dirt or liquid into the valve.

G. For buried or submerged service, actuator and mounting bracket shall be completely enclosed to prevent entry of dirt or liquid.

H. Manual gear actuators shall be rated for bi-directional shutoff at the valves design pressure rating.

I. Grit seals are required on both the upper and lower plug shafts.

2.06 RESERVED

2.07 RELIEF VALVES

A. The high service pump surge relief valve shall be sized for a maximum flow of 700 gpm at a discharge pressure of 180 feet water column and backpressure of 20 feet water column.

B. The valve shall be ductile iron body with bronze trim; pilot system rated 20 psi to 200 psi; Cla-Val Model 52-01, Bermad 735-M or OCV 108SA-3.

2.08 RESERVED

2.09 RESERVED

2.10 RESERVED

2.11 INSERTING VALVE AND VALVE BOX

A. Inserting valves shall be full-body ductile iron castings. Inserting valves shall be RW Gates as manufactured by TEAM. All nuts, bolts and other metal hardware used on

inserting valves shall be 316 stainless steel. Valves shall open in the counterclockwise direction.

B. Inserting valves shall operate to fully shut off the flow in existing water mains.

2.12 TAPPING SLEEVE, VALVE AND VALVE BOX

A. Tapping valves shall be Mueller T-2360 Resilient Wedge Gate Valves. Tapping gate valves shall be designed for mechanical joint connections. All nuts, bolts and other metal hardware used on tapping sleeves and valves shall be 316 stainless steel.

B. Tapping sleeves shall be Mueller H-304SS stainless steel tapping sleeves with a 3/4-inch NPT test plug.

2.13 RESERVED

2.14 RESERVED

2.15 FLOOR BOXES AND STANDS

A. Wherever a valve is located directly below a concrete slab or where shown on the Drawings, the valve shall be equipped with a floor box or floor stand with an extension stem.

B. Floor boxes for access to operating nuts of valves and gates shall be cast iron cover and body with bronze bushing, and shall be of length equal to the thickness of the concrete slab in which they are installed.

C. Floor stands shall be made of cast iron and shall extend to a level where hand wheel or other operator is easily operated. Floor stands shall be shop primed and field painted according to Section 09900. Stands shall be anchored to the concrete slab with stainless steel bolts. Floor stands shall have bronze bushings for maintaining proper extension stem alignment.

D. Extension stems meeting the requirements of this Section shall be furnished and installed for use with all floor boxes and floor stands. The extension stems shall be of sufficient length to extend from the valve to the floor box or floor stand.

2.16 EXTENSION STEMS AND STEM GUIDES

A. Each valve shall be provided with extension stem, when required for ease of operation. Unless otherwise specified, each extension stem shall be made of cold-rolled steel material and the same size as the valve stem of the valve it operates. If the extension is more than 8-feet long, intermediate stem guides shall be installed and supported from the wall by suitable brackets at a maximum spacing of 8-feet. Brackets and stem guides shall be made of cast iron and fully adjustable. The guide block shall be bronze bushed where it contacts the extension stem. Stem guides shall be as manufactured by the Eddy

Valve Co., Rodney Hunt, or equal. Secure stem guides to walls with stainless steel 5/8-inch expansion bolts.

B. All valves which are to be operated by tee wrench shall have 2-inch square operating nut at the top of the extension stem.

C. Stems for operation of plug valves shall not be less than 1-1/4-inch diameter Schedule 80 galvanized steel pipe with intermediate steady guides. Weld socket for 2-inch valve nuts to bottom of extension stems and pin sockets to nuts with stainless steel 3/8-inch bolts. Provide a permanent lever or a 2-inch square operating nut at top of stems, in accordance with requirements of Drawings.

2.17 TEE WRENCHES

A. Tee wrenches shall be supplied in the number and length specified in Part 4 of this Section. The minimum length shall be 3 feet.

2.18 MANUAL OPERATION

A. Valves shall be equipped with nut, hand wheel crank, chain, gears, floor stand, and other appurtenances as required for manual operation as specified or scheduled. Operators shall be in accordance with AWWA specifications except as modified herein.

B. Each valve with a manual operator within a building which is more than 5-feet-6-inch above the floor to the rim of the manual operator shall have a chain wheel with galvanized chain looping 3-feet-6-inch from the floor. The valve shall be oriented to permit chain wheel operation or intermediate pulleys shall be installed to facilitate chain operation.

C. Operation shall be designed so that the effort required to operate the hand wheel, lever, or chain shall not exceed 25 pounds applied at the extremity of the wheel or lever. The hand wheels on valves 4-inch and larger shall not be less than 12-inch in diameter.

D. Gears for valve operation shall be installed in such a manner that the stuffing box will be accessible for packing.

2.19 HYDRAULIC OPERATION

A. Valves for hydraulic operation shall be equipped with cylinders in accordance with AWWA C504. The size of the cylinder shall be determined by the valve manufacturer to be adequate for specified pressure and operating conditions in each instance where a hydraulically operated valve is specified in the definitive specifications under Part 4 of this Section. Unless otherwise specified, cylinders above 12 inches in size, or where the cylinder pressure exceeds 100 pounds, shall be cast iron bronze-lined type.

2.20 ELECTRIC VALVE OPERATOR

A. Electrical actuated valves not specified under Sections ~~11020~~ 11026 shall be match those specified in ~~11020~~ 11026 and be Bray Series 70 or equal. Each electrically actuated butterfly valve shall be controlled by a 120-volt, single-phase electric actuator. Each actuator shall be weatherproof and furnished with a corrosion resistant cover complete with sealing gaskets. (**Addendum 2, October 30, 2026**)

2.21 SHOP PAINTING

A. All iron parts shall be painted before leaving the shop.

B. Unless otherwise specified, all internal ferrous surfaces of each valve except finished or bearing surfaces shall be shop painted with two coats of an asphalt varnish.

C. Unless otherwise specified, all exterior ferrous surfaces of each valve except finished or bearing surfaces shall be shop painted with two coats of a universally compatible primer or in the case of valves buried or submerged, with two coats of an asphalt varnish.

2.22 SOURCE QUALITY CONTROL

A. Each check, gate, butterfly, and ball valve shall be submitted to operation and hydrostatic tests at the manufacturer's plant as specified in applicable AWWA Standards.

B. Other valves shall be tested in conformance with applicable specifications in Part 4 of this Section.

PART 3 EXECUTION

3.01 INSTALLATION

A. All valves shall be carefully installed in their respective positions free from distortion and stress. Connecting joints shall conform to applicable requirements of Section 15210.

B. Stem guides shall be accurately aligned.

C. Double disc gate valves shall not be installed with the bonnet more than 90 degrees from an upright position.

D. Accessories:

1. Valve Boxes shall be installed in a plumb position and in alignment with the operating nut.

2. Extensions stems and stem guides shall be in alignment with operating nut and prevent binding and stresses on connecting pins.

3. When there is a change to the grade elevation, valve boxes new and existing shall be adjusted to the new grade elevation.

3.02 TAPPING SLEEVE VALVE AND VALVE BOX

A. The Contractor shall locate the existing water main to be tapped prior to installing pipe directly connecting to the tapping valve to verify the outside diameter of the existing water main pipe.

B. The Contractor shall perform a hydrostatic test of the tapping sleeve and valve prior to installing the tap connection to the existing water main. The sleeve shall be hydrostatically tested for 15 minutes using test pressures in accordance with tapping sleeve manufacturer's recommendations. Compressed air testing shall not be permitted.

3.03 TESTING

A. All valves shall be tested in place by the Contractor as far as practicable under the conditions for the pipelines in which they are placed, and defects revealed in valves or connections under test shall be corrected at the expense of the Contractor to the satisfaction of the Project Field Representative.

PART 4 SPECIAL PROVISIONS

4.01 VALVE SCHEDULE

A. See Drawings.

4.02 TEE WRENCHES

A. Contractor shall furnish one tee wrench 4 feet in length and one tee wrench 6 feet in length.

END OF SECTION

SECTION 15410
PLUMBING FIXTURES

PART 1 GENERAL

1.01 SCOPE

A. Section Includes:

1. Water closets.
2. Lavatories.
3. ~~Sinks.~~
4. ~~Service sinks.~~
5. Utility sinks. (**Addendum 2, Issued October 30, 2026**)
6. Electric water coolers.
7. Emergency Combination Shower with Eye and Face Wash.

B. This Section includes representative examples of plumbing fixtures and trim. Select, repeat, and edit for Project conditions.

C. This Section shall include but not limited to all appurtenances required for complete installation.

D. All Work performed under this Section shall comply and be in accordance with all approved trade practices and manufacturer's recommendations.

E. Additional equipment and installation requirements in Division 15 as included shall be provided by this Contract.

F. Additional product requirements are specified in Section 01350.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. Shop Drawings: Indicate dimensions, weights, and placement of openings and holes for sewage-ejectors, and manholes.

b. Product Data: Submit catalog illustrations of fixtures, sizes, rough-in dimensions, utility sizes, trim, and finishes.

c. Submit manufacturer's installation instructions including mounting and support requirements.

2. Information for the Record:

a. Material certificates.

b. Operation and maintenance manual.

c. Operation and Maintenance Data: Submit fixture, trim, exploded view and replacement parts list.

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

1.03 QUALITY ASSURANCE

A. Perform Work in accordance with applicable codes.

B. Provide products requiring electrical connections listed and classified by Underwriters Laboratories Inc., as suitable for purpose specified and indicated.

C. Provide plumbing fixture fittings in accordance with ASME A112.18.1 that prevent backflow from fixture into water distribution system.

D. Maintain one copy of each document on site.

1.04 DRAWINGS

A. All Drawings are diagrammatic and are intended to show the approximate location of equipment and piping. Dimensions given on the Drawings shall take precedence over scaled dimensions and all dimensions whether in figures or scaled, shall be verified in the field.

1.05 PROTECTION FROM DAMAGE

A. Delivery, Handling, and Storage:

1. Material delivery, handling, and storage shall meet the requirements of Section 01350.

2. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.

B. Accept fixtures on site in factory packaging. Inspect for damage.

C. Protect installed fixtures from damage by securing areas and by leaving factory packaging in place to protect fixtures and prevent use.

1.06 EXTRA MATERIALS

A. Furnish two sets of faucet washers, flush valve service kits, lavatory supply fittings, shower heads, and toilet seats.

PART 2 PRODUCTS

2.01 TANK TYPE WATER CLOSETS

A. Floor Mounted:

1. Manufacturers: American Standard Model Cadet 2467.016, Kohler, Crane, or equal.

2. Bowl: ASME A112.19.2M; floor mounted, pressure assisted siphon jet, vitreous china, 16.5 -inches high for ADA close-coupled closet combination with elongated rim, insulated vitreous china closet tank with fittings and chrome metal lever flushing valve, bolt caps.

B. Seat:

1. Manufacturers: Bemis Model 1955CT 000, Church, or equal.

2. Solid white plastic, open front, extended back, self-sustaining hinge, brass bolts, without cover.

2.02 LAVATORIES

A. Wall Hung:

1. Manufacturers: American Standard Model 9141.011, Kohler, Crane, or equal.

2. Vitreous China Wall Hung Basin: ASME A112.19.2M; vitreous china wall hung lavatory 14x14-3/4-inch minimum, drillings on 4-inch centers, rectangular basin with splash lip, front overflow, and faucet ledge.

B. Faucet:

1. Manufacturer: American Standard Model 7502.175, Kohler, Crane, or equal.

2. Supply Fitting: ASME A112.18.1; chrome plated supply fitting with open grid strainer, rigid swivel gooseneck spout, water economy aerator with maximum 0.5 gpm flow, vandal resistant wrist blade handles.

C. Waste Fittings: ASME A112.18.2 or ASTM F 409.

D. For public hand washing facilities, provide tempered water through regulating device conforming to ASSE 1070.

E. Accessories:

1. Chrome plated 17 gage brass P-trap with clean-out plug and arm with escutcheon.

2. Offset waste with perforated open strainer.

3. Wheel handle stops.

4. Rigid supplies.

5. Trap and waste insulated and offset to meet ADA compliance.

F. Wall Mounted Carrier: ASME A112.6.1; cast iron and steel frame with tubular legs, lugs for floor and wall attachment, concealed arm supports, bearing plate and studs.

2.03 LAVATORY INSULATION KIT

A. Manufacturers: Truebro Lav Guard 2, McMaster-Carr, or equal.

B. Product Description: Where Lavatories are noted to be insulated for ADA compliance, furnish the following: Safety Covers conforming to ANSI A177.1 and consisting of insulation kit of molded closed cell vinyl construction, 3/16-inch thick, white color, for insulating tailpiece, P-trap, valves, and supply piping. Furnish with weep hole and angle valve access covers.

2.04 ~~SINKS~~

A. ~~Double Compartment Bowl:~~

1. ~~Manufacturers: Elkay Model DLR432210, Moen, or equal.~~

2. ~~Construction: ASME A112.19.3; 43x22x10-1/8 inch outside dimensions 18 gage thick, Type 304 stainless steel. Self-rimming and undercoated, with 1-1/2-inch chromed brass drains, 3-1/2 inch crumb cups and tailpieces, ledge back drilled for trim.~~ (**Addendum 2, Issued October 30, 2026**)

B. ~~Trim:~~

1. ~~Manufacturers: Elkay Model LK1000CR, Moen, or equal.~~

2. ~~Construction: ASME A112.18.1; chrome plated brass supply with swing spout, water economy aerator with maximum 2.2 gpm flow, single lever handle.~~

C. ~~Accessories: Chrome plated 17 gage brass P-trap with clean-out plug and arm with escutcheon, wheel handle stop, rigid supplies.~~ (**Addendum 2, Issued October 30, 2026**)

2.05 ELECTRIC WATER COOLERS

A. Manufacturers: Oasis Model PG8FEBFSL-FVF, Haws, Halsey Taylor, or equal.

B. ANSI 117.1 and ADA/ARI 1010; surface mounted, bi-level electric water cooler with stainless steel tops, heavy duty galvanized steel frames, Greystone powder coat on galvanized steel bodies, elevated anti-squirt bubbler with stream guard, automatic stream regulator, four push pads for manual operation, mounting bracket, bottle filler alcove with stainless steel cabinet finish and LED lighted, built-in 100 micron strainer stops particles before they enter the waterway, refrigerated with integral air-cooled condenser with integral grilles. Contactless sensor control on bottle filler and four push pads for manual activation on each fountain.

C. Capacity: 8.0 gph of 50 degrees F water with inlet at 90 degrees F and room temperature of 90 degrees F.

D. Electrical:

1. V/PH/Hz: 115/1/60.

2. Rated watts: 500.

3. Accessories: Power cord and plug for connection to electric wiring system including grounding connector.

2.06 ~~SERVICE SINKS~~

A. ~~Manufacturers: American Standard Model 7695.00, Kohler, or equal.~~

B. ~~Bowl: ASME A112.19.1M; 24 x 20 x 12 inch deep, porcelain enameled (inside only) cast iron roll-rim sink, with 9-inch-high back, concealed hanger, chrome plated strainer, stainless steel rim guard, cast iron P-trap with adjustable floor flange.~~

C. ~~Faucet:~~

1. ~~Manufacturers: American Standard Model 8341.076, Kohler, or equal.~~

2. ~~Faucet: ASME A112.18.1 exposed wall type supply with lever handles, spout wall brace, vacuum breaker, hose end spout, strainers, eccentric adjustable inlets, integral screwdriver stops with covering caps and adjustable threaded wall flanges.~~

D. ~~Accessories:~~

1. ~~5 feet of 1/2 inch diameter plain end reinforced plastic or rubber hose.~~ (**Addendum 2, Issued October 30, 2026**)

2.07 UTILITY SINKS

A. Manufacturer: McMaster-Carr, E.L. Mustee & Sons, Inc., or equal.

1. Construction: Floor-standing utility sink made of structural thermoplastic construction, molded in one piece by a cellular thermoplastic process. Sink shall have four heavy-gauge tapered steel legs with levelers and can be bolted to the floor with stainless steel expansion bolts.

2. Faucet: Chrome plated, 4-inch center set with brass body.

3. Provide with drain and P-trap assembly. (**Addendum 2, Issued October 30, 2026**)

2.08 COMBINATION EMERGENCY SHOWER AND EYEWASH UNITS

A. Traditional Type:

1. Manufacturers: Speakman Model SE-693, Haws Corporation, Bradley Corporation, or equal.

2. Shower: ANSI Z358.1; free standing, self- cleaning, non-clogging 8-inch diameter plastic drench shower head, instant action stay open valve actuated by rigid stainless steel pull rod.

3. Eyewash: ANSI Z358.1; stainless steel bowl with elbow, 1-1/4-inch galvanized steel pipe pedestal with floor flange, instant action stay open valve actuated by push flag or foot pedal, twin spray heads, dust cover assembly, and tailpiece and chrome plated brass P-trap.

4. Supply and Waste Piping: 1-1/4-inch galvanized steel pipe pedestal with floor flange.

5. Furnish universal emergency sign.

6. Furnish corrosion resistant powder-coated coating on stanchion.

7. Flow Switch: Manufacturer to provide a 115/1/60 flow switch for activation of an alarm condition to the PLC whenever the shower or eye/face wash is activated. Switch must be able to activate at low flows when only the eye/face wash is in use.

B. Thermostatic Mixing Valve and Surface Mounted Cabinet:

1. Manufacturers: Guardian Model G6042-1R1, Speakman Model STW-362, Haws Corporation, Bradley Corporation, or equal.

   a. Function: Valve shall have a precision thermal actuator accurately blend hot and cold water. Control and maintain the temperature of the tepid water of 70 degrees F delivered to the emergency shower and eye/face wash. Valve shall include a high temperature limit stop at 90 degrees F. Temperature shall be adjustable in field up and locked.

   b. Capacity: Valve shall have a flow capacity of 50 GPM at 30 PSI pressure drop.

   c. Construction: ANSI/ASSE 1071 certified, factory assembled and tested, self-contained for wall mounting, of all brass construction, with a maximum working pressure of 125 psi. Valve shall be furnished with lockable shutoff valves on the hot and cold-water supplies, internal check valves to prevent cross-mixing of hot and cold water and stainless steel basket filters to remove debris from the water flow. 1-inch NPT female inlets and 1-1/4-inch NPT outlet. Dial thermometer on outlet. Valve shall include cold water bypass in case of hot water failure and hold positive shut-off when cold water supply is lost.

2. Wall Mounting Bracket: Stainless steel construction for corrosion resistance, thermostatic mixing valve mounting bracket for mounting bracket to wall cabinet.

3. Surface Mounted Cabinet: Surface mountable, 16-gauge steel door with piano hinge and #4 satin finish, stainless steel for corrosion resistance, with pre-drilled mounting holes, with a keyed cam lock.

PART 3 EXECUTION

3.01 EXAMINATION

A. Section 01300 - Administrative Requirements: Coordination and project conditions.

B. Verify walls and floor finishes are prepared and ready for installation of fixtures.

C. Verify electric power is available and of correct characteristics.

D. Confirm millwork is constructed with adequate provision for installation of counter top lavatories and sinks.

3.02 PREPARATION

A. Rough-in fixture piping connections in accordance with minimum sizes indicated in fixture rough-in schedule for particular fixtures.

3.03 INSTALLATION

A. Install Work in accordance with applicable standards.

B. Install each fixture with trap, easily removable for servicing and cleaning.

C. Provide chrome plated rigid or flexible supplies to fixtures with loose key screwdriver stops, reducers, and escutcheons.

D. Install components level and plumb.

E. Install and secure fixtures in place with wall supports or wall carriers and bolts.

F. Seal fixtures to wall and floor surfaces with sealant as specified in Section 07900, color to match fixture.

G. Solidly attach water closets to floor with lag screws. Lead flashing is not intended hold fixture in place.

H. For ADA accessible water closets, install flush valve with handle to wide side of stall.

3.04 INTERFACE WITH OTHER PRODUCTS

A. Review millwork shop-drawings. Confirm location and size of fixtures and openings before rough in and installation.

3.05 ADJUSTING

A. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.

3.06 CLEANING

A. Clean plumbing fixtures and equipment.

3.07 PROTECTION OF INSTALLED CONSTRUCTION

A. Do not permit use of fixtures before final acceptance.

3.08 SCHEDULES

A. Fixture Mounting Heights:

1. Water Closet:
   a. Standard: 15 inches to top of bowl rim.
   b. Accessible: 18 inches to top of seat.
2. Lavatory:
   a. Standard: 31 inches to top of basin rim.
   b. Accessible: 34 inches to top of basin rim.
3. Electric Water Cooler or Drinking Fountain:
   a. Child: 30 inches to top of basin rim.
   b. Standard Adult: 40 inches to top of basin rim.
   c. Accessible: 36 inches to top of spout.
4. Emergency Eye and Face Wash: Standard: 38 inches to receptor rim.
5. Emergency Shower: Standard: 84 inches to bottom of head.

B. Fixture Rough-In:

Fixture	Hot (Inches)	Cold (Inches)	Waste (Inches)	Vent (Inches)
Water Closet (Tank Type):	NA	1/2	4	2
Lavatory:	1/2	1/2	1-1/2	1-1/4
Sink:	1/2	1/2	1-1/2	1-1/4
Utility Sink	1/2	1/2	2	1-1/2
~~Service Sink:~~	~~1/2~~	~~1/2~~	~~3~~	~~1-1/2~~
Electric Water Cooler or Drinking Fountain:	NA	1/2	1-1/2	1-1/4

(**Addendum 2, October 30, 2026**)

PART 4 SPECIAL PROVISIONS

Not used.

END OF SECTION

SECTION 16220
DIESEL GENERATOR SYSTEMS

PART 1 GENERAL

1.01 SCOPE

A. This Section includes furnishing and installing a stationary, engine powered, standby power rated, diesel fueled, generating system(s), complete and in place, ready for service.

B. System shall include, but not be limited to, the engine-generator set, battery system, exhaust system, fuel system, enclosure, ducting, and all other appurtenances needed to make a complete operating system.

C. Engine-generator system shall be delivered to the Site completely equipped, tested, and ready for installation.

D. Engine-generator system(s) shall be comprised of all new materials. The design kW rating is based on the loads and load steps and the model listed in Part 4 of this Section.

E. Power and control wiring to the generator(s), transfer switch(s), and accessories, except wiring described herein, shall be furnished and installed under other sections of Division 16.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. Submit a list of materials giving manufacturer's name and catalog numbers.

b. Submit manufacturer's technical product sheets on each component to be furnished.

c. Submit drawings which show dimensional layouts of the engine-generator system(s) and its spatial relationship to associated equipment.

d. Submit wiring diagrams for the engine-generator system(s) showing connections to feeders, load, and accessory equipment. Clearly differentiate between portions of the wiring that are manufacturer installed and the portions to be field wired.

e. Provide warranty for review; executed copies shall be submitted when completed with copies included in the operation and maintenance manuals.

2. Information for the Record:

a. Manufacturer's recommended method of installation for the products to be furnished.

b. Certified copies of the factory and field test procedures and results.

c. Operation and maintenance manuals.

d. Manufacturer's qualifications, including a list of similar installations.

1.03 QUALITY ASSURANCE

A. Engine-generator system(s) and accessories described herein shall be furnished by a single supplier who shall be responsible for the performance of the equipment in its entirety. The responsibility shall not be split among suppliers of individual components.

B. The supplier of the engine-generator shall maintain a rental fleet of portable engine generators within 100 highway miles of the project location, maintain 24-hour parts and service capability, and provide qualified, factory trained, service personnel that can respond to an emergency call within 4 hours of notification.

1.04 ELECTRICAL AND CONTROL COORDINATION

A. All electrical, instrumentation, control equipment, and panels furnished under this Contract shall conform to appropriate Sections of Division 16 of these Specifications. Equipment and panels shall be NEMA rated as shown on the Drawings or specified in Part 4.

B. Certain equipment items shall be connected to the plant control system as shown on the Control (P&ID) Drawings. Those connections and any remote-control connections shall be wired to clearly labeled terminal strips within the equipment control panel.

1.05 GUARANTEE

A. The manufacturer's standard warranty shall be for a period of five years from the date of substantial completion and shall not be limited by hours of operation. Warranty shall include repair parts, labor, reasonable travel expense necessary for repairs at the job site, and expendables including, but not limited to lubricating oil, filters, antifreeze, and other service items used during the course of repair.

B. Optional warranties, supplier/manufacturer maintenance packages, and associated cost shall be available for the Owner's consideration.

C. Engine starting batteries shall have a twelve-month full replacement warranty. The warranty shall be prorated from twelve to sixty months.

PART 2 PRODUCTS

2.01 EQUIPMENT

A. Engine:

1. Provide a liquid cooled, four cycle, full compression, ULSD (ultra-low sulfur diesel) fueled engine for each engine-generator system.

2. Each engine shall have the number of cylinders and displacement needed to develop the brake horsepower and torque necessary to drive the alternator at 1800 revolutions per minute to meet the specified performance requirements listed in Part 4.

3. Provide a fully enclosed electronic speed sensing isochronous governor, capable of providing accurate speed control. Frequency regulation shall be plus 0.5% of rated frequency during steady state conditions.

4. Engine shall be provided with an electric starting motor with starter pinion and solenoid to turn the engine at firing speed under the temperature range of 110 degrees F maximum and 0 degrees F minimum. Each starting motor shall be rated to operate on the voltage as determined by the engine manufacturer.

5. An engine mounted, replaceable element, dry type air cleaner of sufficient capacity and filtration rating to protect working parts of the engine from dust and grit.

B. Cooling System:

1. Each engine shall be furnished with a radiator, mounted on vibration isolators, and fan with fan guard.

2. Radiator shall keep the engine within normal operating temperature when running at full load.

3. Each engine coolant system shall be filled with the engine manufacturer’s recommended antifreeze/antiboil solution. The Contractor shall provide the engine manufacturer’s recommended antifreeze/antiboil solution.

4. Engine shall be furnished with a coolant heating system. The heating element(s) shall be single-phase and rated for operation at 60 Hz and the AC voltage listed in Part 4 of this Section.

5. Engine coolant heater system shall maintain the manufacturer’s specified coolant temperature. A thermostat shall control the temperature of the coolant to the manufacturer’s recommended temperature for start-up.

6. WARNING: Do not energize block heater until engine block is filled with coolant and the generator set is run to remove trapped air. Otherwise, block heater failure will result.

C. Alternator:

1. Alternator shall be 4-pole, engine driven, drip proof, self-aligning, continuous duty, synchronous unit with full amortisseur windings. The insulation shall be NEMA Class H.
2. Alternator shall be rated for the voltage listed in Part 4 of this Section and for 60 Hz operation at rated 1800 rpm.
3. The alternator neutral wire shall not be connected to ground at the alternator. Each alternator shall be directly connected to the engine through a flexible coupling.
4. Operating temperature of the rotor and stator shall not exceed 105 degrees C at rated load.
5. Alternator shall have a brushless, rotating, solid-state, full wave, rectifier or a permanent magnet exciter. Surge suppressors shall be included on the brushless, solid-state exciter to protect the diodes from voltage spikes.
6. Alternator shall have a voltage regulator to provide no load to full load regulation of plus or minus 0.5% at rated voltage during steady state conditions. Regulator shall be a totally solid state design, and shall include electronic voltage buildup, volts per Hz regulation, three phase sensing, over-excitation protection, loss of sensing protection, temperature compensation, and shall limit voltage overshoot on startup, and be environmentally sealed.

D. Engine Fuel System:

1. The engine shall have fuel filters with replaceable elements and an engine driven or electric fuel pump.
2. Fuel shall be injected into each cylinder by individual, adjustment- free injectors.
3. A radiator mounted fuel cooler shall be provided.
4. Fuel filter and serviceable fuel system components shall be located to prevent fuel from spilling onto engine-generator set batteries.

E. Lubrication System:

1. Lubricating oil shall be supplied by a lube oil system.
2. Full flow, replaceable element, oil filters, with a liquid cooled oil cooler, dip stick oil level indicator, and oil pan drain valve shall also be provided.
3. The filter system shall be equipped with a bypass valve to prevent stoppage of lubricating oil in the event the filters become clogged
4. The contractor shall provide the engine manufacturer’s recommended lubricant and fill the crankcase to the proper level.

F. Strip Heater:

1. Engine-generator system(s) located outdoors or in an unheated area shall have a UL listed, 120 VAC, 60 Hz, single-phase strip heater(s) mounted in the alternator housing to prevent condensation, and shall be provided with an automatic control to turn off the heater(s) when the alternator is running.

G. Batteries/Charger/Tray:

1. Provide sealed storage batteries.
2. Batteries shall be sized to crank and start the engine in the ambient temperatures of 0 degrees F for outdoor installations and 40 degrees F for indoor installations.
3. Battery system shall have the capacity to start the engine a minimum of three times between charges.
4. Provide battery cables sized to prevent voltage drop problems during cranking cycle.
5. Provide a UL listed, fully automatic, solid-state, battery charger with both float and equalize charge rates, automatic AC line voltage compensation, DC voltage regulation, and automatic equalizing timer.
6. The input voltage to the charger shall be 120 VAC, single phase, 60 Hz.
7. Charger shall be capable of fully recharging batteries within 24 hours.
8. Charger shall have the following protective features: fused AC input, fused DC output, automatic surge suppression, and current limit overload protection.
9. Charger shall have a DC ammeter, DC voltmeter, AC pilot light, and an equalize charge light.
10. Provide the following alarm contacts for connection to the alternator local annunciator: low DC voltage, high DC voltage, current/charger failure, and AC power failure. Provide high DC voltage shutdown. Charger shall be mounted for easy visual and maintenance access.
11. Provide a battery tray or rack for each battery set.
12. Battery tray or rack shall conform to NEC. It shall be treated to be resistant to deterioration by battery electrolyte.
13. Battery tray or rack shall contain any spillage or boil-over of electrolyte.

2.02 ENGINE-GENERATOR CONTROL PANEL

A. Engine-generator control panel shall be mounted on the alternator end of the assembly.

B. Control panel shall be housed in a rigid metal, NEMA 4x rated enclosure, and shall include a section for cable terminations. Enclosure doors shall be lockable.

C. Control panel shall be furnished with the necessary fuses, transformers, and other accessories required to perform the following functions:

1. Alternator output power thermal magnetic circuit breaker, as listed in Part 4 of this Section. Breaker shall be sized and rated to carry 100% of the output current of the alternator, be UL listed, and have an adjustable shunt trip unit.
2. Automatic start/stop operation.
3. Adjustable cycle cranking.
4. Output voltage adjustment potentiometer.
5. Digital AC metering with manual phase selection and 0.5% true RMS accuracy.
6. Digital engine monitoring.
7. Shutdown sensors and alarms with horn and reset.
8. Adjustable cool-down timer, and a maintained-action, red mushroom head, emergency stop push-button.
9. Self-diagnostics and fault logging.

D. Control panel components shall be environmentally sealed to protect against moisture and dirt. Engraved nameplates (black letters on white background) shall be provided to identify each device or function located on each control panel.

E. Control panel located in unheated locations shall be provided with a strip heater, with thermostat, to eliminate condensation. Voltage shall be as specified in Part 4 of this Section.

F. Provide visual display of the following variables, either with gauges or digital displays:

1. Engine oil pressure.
2. Engine oil temperature.
3. Coolant temperature.
4. Engine RPM.
5. System DC Volts.
6. Engine accumulated running hours.
7. Alternator AC volts, selectable line-to-line and line-to-neutral.
8. Alternator AC amps, selectable each phase.
9. Alternator frequency.
10. Alternator output kW.
11. Alternator output kWHR.
12. Alternator output kVA.

13. Alternator output kVAR.
14. Percentage of rated power.
15. Alternator power factor.

G. Control panel shall include a local annunciator with the following alarms:

1. Low engine oil pressure alarm light.
2. Low engine oil pressure shutdown light.
3. High coolant temperature alarm light.
4. High coolant temperature shutdown light.
5. Low coolant temperature alarm light.
6. Overcrank lockout light.
7. Audible alarm and reset button.
8. System not in Auto indicator light.
9. Overspeed shutdown alarm light.
10. Diagnostic shutdown light.
11. Low coolant level.
12. Low battery/DC voltage.
13. Battery charger ac failure.
14. High battery voltage.
15. Emergency stop depressed.
16. Spare.

Note: All alarm lights to be flashing LED type.

H. Remote Alarms and Monitoring:

1. Provide a remote annunciator to meet the requirements of NFPA 110, Level 1. The annunciator shall provide remote annunciation of the following alarms:
    a. Low engine oil pressure alarm light.
    b. Low engine oil pressure shutdown light.
    c. High coolant temperature alarm light.
    d. High coolant temperature shutdown light.
    e. Low coolant temperature alarm light.
    f. Overcrank lockout light.
    g. Audible alarm and reset button.

h. System not in Auto indicator light.

i. Overspeed shutdown alarm light.

j. Diagnostic shutdown light.

k. Low coolant level.

l. Low battery/DC voltage.

m. Battery charger AC failure.

n. High battery voltage.

o. Emergency stop depressed.

p. Spare.

q. Generator running.

2. Remote annunciator shall incorporate ring-back capability so that after silencing the initial alarm, any subsequent alarms will sound the horn.

3. Provide alarm indication for “generator ground fault” on solidly grounded wye systems of more than 150 volts to ground and circuit breakers rated 1000 amp or more, to meet NEC.

2.03 PERFORMANCE REQUIREMENTS

A. The engine-generator system shall be capable of producing the amount of electrical power listed in Part 4 of this Section at 0.8 power factor for continuous operation.

B. The engine-generator system shall be ready to have loads applied within 10 seconds after start-up.

C. The engine-generator system shall have a minimum motor starting capability of the kilovolt amperes (kVA) listed in Part 4 of this Section. The engine-generator system shall meet NFPA 110 single step load pickup. These ratings shall be met after all applicable demand factors for operation at 1,000 feet above sea level and in an ambient temperature of 110 degrees F maximum and 0 degrees F minimum.

2.04 ACCESSORIES

A. Silencer:

1. Engine-generator system shall provide a critical grade silencer to reduce noise attenuation.

B. Enclosure:

1. Provide a weather-protected, sound attenuated, enclosure for each engine-generator system located outdoors. Maximum sound level shall be 70 decibels at 50 feet, while the engine-generator system is operating at full load.

2. Enclosure shall be constructed from galvanized steel and shall be designed and constructed so that the engine-generator system and accessories are totally enclosed.

3. Enclosure shall be zinc phosphate treated prior to painting, then painted with the manufacturer's standard color polyester powder baked paint.

4. Enclosure door(s) shall be hinged and key lockable with stainless locks and hinges. Other enclosure hardware shall be stainless steel. A control panel viewing window with safety glass and lockable access door to the control panel and circuit breaker shall be provided. Each enclosure shall be provided with an externally mounted, shielded emergency stop button; drain lines to the outside for lube oil, coolant, and crankcase fumes disposal.

C. Engine Generator Fuel Storage System - Subbase Fuel Tanks:

1. Furnish and install engine generator fuel storage system, sized as shown on the schedule, in accordance with Federal, State and Local authorities.

2. The exterior fuel storage tank shall be a UL 142 approved, double wall design for above ground use, consisting of a Fuel Holding Cell (Inner Tank) and The Secondary Containment Tank (outer tank).

3. Tanks shall provide at least one 24-hour day fuel supply for engine-generators operating at full capacity.

4. The subbase fuel storage tank shall include but not be limited to: lockable fill cap, overfill protection, spill containment, normal vent with riser and cap, emergency pressure relief vent, outer tank emergency pressure relief vent, mechanical fuel gauge, low fuel level alarm, 2-inch opening for fuel gauge/switch assembly, and leak alarm.

5. The Fuel Holding Cell (inner tank) and Secondary Containment Tank (outer tank) shall be mated together into one assembly.

6. Subbase fuel tanks shall be suitable for applications requiring sound enclosures.

7. The sub-base fuel tank and related equipment including vents and fill pipes shall not block access to serviceable items on the engine or generator.

8. Access ports, such as vents, fill opening and instrumentation, on the sub-base fuel tank shall not be located inside the area defined by the plan view of the radiator shroud.

9. Means shall be provided to prevent adding additional fuel to the tank if oil is detected in the interstitial space between the inner and outer tanks.

D. Tank Filling System:

1. Provide a factory packaged system for control of filling operations of above ground tanks that are filled from pumper trucks. This system shall provide a means of connection of a 3-inch fill hose and capture spills that may occur at the

fill point of up to 7 gallons. The container for the capture of spilled fuel shall employ a weathertight hinged cover and a gravity drain to convey spilled fuel to the base mounted tank.

2. The system shall have a continuous display of tank level graduated from 0% to 100% of capacity with an accuracy of plus or minus 2%.

3. When the tank reaches the 90% level, an audible and visual alarm shall activate to alert the tank truck operator.

4. When the tank reaches the 95% level, an audible and visual alarm shall activate and the fuel port valve shall close and not be capable of reopening.

5. The fuel port shall have a quick-disconnect 3-inch hose coupling with dust plug.

6. Other features shall include a check valve, low fuel level alarm, primary tank leak detection switch in the interstitial space between the inner and outer tanks and ground stud for connection of the delivery truck's ground cable.

7. The fuel port shall operate on a power supply of 115 volts, 1 phase, 60 Hz.

8. The fuel port shall include a level transmitter and level switch assembly to be mounted in a 2-inch diameter tank fitting.

E. Emergency Stop Pushbutton:

1. All generators shall have a remote manual stop station If the generator is located outdoors the stop station shall be located elsewhere on the premises.

2. The pushbutton station shall have a red pushbutton labeled "Stop". The switch shall have one Normally Closed set of contacts for each generator. The enclosure shall be rated for the area in which it is installed.

3. A permanent nameplate shall be provided to indicate that the purpose of the switch is to stop the generator in an emergency. The nameplate shall be mounted on or in close proximity to the pushbutton station.

4. The pushbutton station shall be Allen-Bradley Catalog Number 800T-NX114.

2.05 FABRICATION

A. Base:

1. Engine-generator system shall be mounted on a structural steel base capable of maintaining proper alignment between components during shipment, installation, and operation.

2. The engine-generator system shall be free from torsional stress when running at 10% of rated speed.

3. Provide spring type vibration isolators with rubber backing between the structural steel base and its foundation.

2.06 FACTORY TESTS AND FIELD TESTS

A. Prior to shipment, the unit shall be factory performance tested under load with all accessories. The tests shall be performed in accordance with the manufacturer's standards.

B. Full block load test shall demonstrate no more than a 15% RMS voltage dip and 15% frequency deviation measured during the fourth complete cycle following application of the load.

C. Both voltage and frequency shall return to within 3% of rated voltage and frequency in less than 5 seconds following the application of the block load. The following block load tests shall be performed:

1. Stepped load test at 1/2, 3/4, and full load for 5 minutes each step.
2. Three-quarter block load.
3. Full single step block load.

D. The Contractor shall furnish a qualified representative of the manufacturer to perform inspection, start-up, testing, and training services. The manufacturer's representative shall be experienced in the installation, start-up, operation, maintenance of the equipment, and fuel shelf life.

E. The representative shall check the installation and supervise final adjustments and initial start-up of the equipment. The representative shall certify that each installation is correct and that the equipment is operating satisfactorily. This service shall be for a minimum period of one trip and three days.

F. The complete installation including each automatic transfer switch, if applicable, shall be field-tested for compliance with the plans and specifications following completion of all site work. Testing shall be conducted by representatives of the transfer switch supplier, if applicable, and the engine- generator supplier, and the switchgear supplier, if applicable. The Contractor shall supply the load bank and other equipment required for each test. The Owner and inspector shall be notified in advance and shall have the option to witness the tests. The tests shall be repeated until each system performs as specified. The tests to be conducted on site shall be as follows:

1. Perform a cold start test on each engine-generator using the generator's actual load as a test load. A power failure shall be simulated by opening the normal power source disconnect and the following information shall be recorded for each engine-generator set.
    a. Time delay on start.
    b. Cranking on time.
    c. Time required coming up to speed.
    d. Voltage and frequency overshoot.
    e. Time to achieve steady state.

f. Voltage, frequency, and amps at standby state.

g. Oil pressure, water temperature, and battery charge rate at 5 minute intervals for the first 15 minutes and at 15 minute intervals thereafter for 2 hours.

h. Time delay on retransfer after return of normal power.

i. Cool down time delay.

2. Immediately after cooling time from cold start test, perform a one-step, four-hour, full load test using a load bank. Record the same data as in the cold start test except for time delays on transfer and retransfer.

3. Disable each engine-generator from starting by a method approved by the manufacturer and test the crank cycle by switching the engine-generator controls to “Run.”

4. Test each engine-generator safety shutdown mechanism.

G. After the field-testing, has been successfully completed, the manufacturer’s representative shall train the Owner’s personnel for one eight-hour day in the proper operation and maintenance of the equipment. The Owner may make a video record of the training.

PART 3 EXECUTION

3.01 COORDINATION

A. Examine area for compliance to written installation requirements.

3.02 INSTALLATION

A. Engine-Generator:

1. Provide a concrete housekeeping pad in accordance with Section 03300.

2. Each engine-generator set shall be installed with galvanized steel anchor bolts as recommended by the manufacturer. Bolts shall be embedded in the concrete pad. Expansion-type anchors are not acceptable.

3. Each engine-generator shall be installed with vibration isolators provided with the set.

4. Provide equipment grounding connection(s) for each engine-generator unit as indicated by the manufacturer. Tighten each connection to comply with the tightening torques specified in UL standards to assure permanent and effective grounding.

5. All connections to the engine, generator and mounting base such as conduits, fuel lines, exhaust piping, etc., must have flexible sections to prevent breakage and isolate vibration to the generator set.

PART 4 SPECIAL PROVISIONS

4.01 ENGINE GENERATOR LOADING SCHEDULE

Step Number	Load Type (1)	Load Rating (2)	Full Load Amps	Motor Controller (3)	Equipment ID Tag
	Load via 480V – 120/240V Trf				
1	Mtr	Hp	46	FV	WH 3 Pump
1	Mtr	Hp	46	FV	WH4 Pump
1	Mtr	Hp	46	FV	WH 5 Pump
1	Misc	Kva	35		WH 3 Panelboard
1	Misc	Kva	35		WH 4 Panelboard
1	Misc	Kva	35		WH 5 Panelboard
	Load via 480 – 120/208V Trf				
1	Misc	Trf	Kva		LP-1
	480V Load				
1	Mtr	Hp	2.1		EF-1
1	Mtr	Hp	2.1		EF-3
1	Mtr	Hp	2.1		EF-4
1	Mtr	Hp	2.1		Overhead Door 1
1	Mtr	Hp	2.1		Overhead Door 2
1	Res	kW	12		FC-3 Heater
1	Mtr	Hp	2.1	FV	FC-3 Fan
1	Mtr	HP	8	FV	Hp-1 Condenser
1	Mtr	HP	7.6	FV	Compressor
2	Mtr	Hp	52	VFD	HSP-1
3	Mtr	Hp	52	VFD	HSP-2
4	Mtr	Hp	14	FV	Scour Blower
5	Mtr	Hp	4.8	FV	WW Pump 1
5	Mtr	HP	4.8	FV	WW Pump 2
6	Mtr	Hp	1.1	FV	Aerator 1
6	Mtr	Hp	1.1	FV	Aerator 2

(1) Load Type: Mtr = Motor
Trf = Transformer
Res = Resistance Heating
HVAC = Heating, Ventilating, Air Conditioning
Misc = Miscellaneous

(2) Load Rating: hp = Horsepower
kW = kilowatts
kVA = kilovolt-amperes

(3) Moto Controller FV = Full-Voltage, across-the-line
RVSS = Reduced-Voltage Solid-state
VFD = Variable Frequency Drive
2S = Two-Step, single or double winding
RVA = Reduced Voltage Auto-transofmer
2Spd = Two Speed (**Addendum 2, Issued October 30, 2026**)

Description	Voltage	HP	AMPS FLA	Motor Control	Notes
MCC-1					
Loads Via 150 kVA Transformer/MDP-1					
Well House #3 Pump	240	15	46	ATL Starter	Duty. On Generator Backup
Well House #3 Lighting Panel	240/120		35		Duty. On Generator Backup
Well House #4 Pump	240	15	46	ATL Starter	Duty. On Generator Backup
Well House #4 Lighting Panel	240/120		35		Duty. On Generator Backup
Well House #5 Pump	240	15	46	ATL Starter	Duty. On Generator Backup
Well House #5 Lighting Panel	240/120		35		Duty. On Generator Backup
Loads Via PP-1					
75 kVA Transformer/LP-1	480		90		Feeds LP-1. Duty. On Generator Backup.
Overhead Lift Door (D-2-5)	480	0.5	1.1	ATL Starter	Duty. On Generator Backup
Overhead Lift Door (D-2-6)	480	0.5	1.1	ATL Starter	Duty. On Generator Backup
Overhead Lift Door (D-2-7)	480	0.5	1.1	ATL Starter	Duty. On Generator Backup
EF-1	480	0.75	2.1	ATL Starter	Duty. On Generator Backup
EF-3	480	0.75	2.1	ATL Starter	Duty. On Generator Backup
EF-4	480	0.75	2.1	ATL Starter	Duty. On Generator Backup
High Service Pump #1	480	40	52	VFD	Duty. On Generator Backup
High Service Pump #2	480	40	52	VFD	Standby. (This may change in the future)
Aerator #1	480	0.5	1.1	ATL Starter	Duty. On Generator Backup
Aerator #2	480	0.5	1.1	ATL Starter	Duty. On Generator Backup
Waste Washwater Pump #1	480	3	4.8	ATL Starter	Duty. On Generator Backup
Waste Washwater Pump #2	480	3	4.8	ATL Starter	Standby.
Air Scour Blower	480	10	14	ATL Starter	Duty. On Generator Backup
FC-3 Heater/Fan	480	0	18.18	ATL Starter	Duty. On Generator Backup
Air Compressor	480	5	7.6	ATL Starter	Duty. On Generator Backup
CU-2	480	5	8	ATL Starter	Duty. On Generator Backup
HP-1	480	5	8	ATL Starter	Duty. On Generator Backup

(**Addendum 2, Issued October 30, 2026**)

4.02 POWER GENERATING SYSTEM SCHEDULE

A. The following schedule is intended to aid the Contractor in identifying generator location and size. It is intended to supplement the Drawings and Specifications and is not guaranteed to be complete. All generators shown on the drawings shall be furnished and installed by the Contractor whether or not listed in the schedule.

Location	ID Tag	Size kW/kVA	Model Number	Alternator Voltage(s)	Engine Coolant Heater Voltage	Control Panel Strip Heater Voltage	Minimum Starting Capability (kVA)	Circuit Breaker Rating (amps)	Tank Capacity	Day Tank Capacity
South of Water Treatment Bldg.		350/437.5	~~D350GC~~	480/277V	208V	120V	863	800	2553 Gal	

4.03 FUEL

A. The Contractor shall provide a full tank of fuel for testing the system. Fuel shall be ULSD (ultra-low sulfur diesel) fuel (not subject to highway fuel taxes). The fuel tank shall be

topped off at the Contractor's expense after testing is complete and before the system is turned over to the Owner.

4.04 SPARE PARTS

A. Provide one spare 120 VAC, single phase, 60 Hz, 1/2 hp over full fuel return pump for each engine generator system.

B. Provide one spare positive displacement transfer pump as specified above.

END OF SECTION

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SECTION 16903
CONTROL PANELS

PART 1 GENERAL

1.01 SCOPE

A. Work under this Section includes the fabrication and installation of all control panels and other enclosures required to provide a complete instrumentation and control package. Panel wiring is also included herein.

B. All control panels furnished or installed under this contract shall meet the requirements of this Section. Panels include, but are not limited to, those designated control panels, interim panels, enclosures, remote I/O panels, or other required enclosures necessary to complete the Work.

1.02 SUBMITTALS

A. Submittals shall be in accordance with the requirements of Section 01300 and shall include:

1. Shop Drawings for Review:

a. Submittals shall show door arrangement and device layout, wireways, subpanel layout, padlock and vault type locking handle, dimensions, legends, terminal blocks and terminations, etc.

b. Panel schematic wiring diagrams shall be provided to show all panel wiring systematically numbered. All devices shall be identified by device symbol designation; all lines and points shall be numbered. Each line shall be identified by function.

c. Furnish manufacturer's name, catalog numbers, and product specifications for each component and panel to be furnished.

2. Information for the Record:

a. Operation and maintenance manuals.

b. Upon completion of the installation and acceptance by the Owner and Engineer, all electrical (schematic) diagrams, interconnection diagrams, panel layouts, and related support materials shall be corrected and amended to reflect the installed system.

1.03 QUALITY ASSURANCE

A. All control panel enclosures shall be UL listed and designed in accordance with applicable NEMA, ANSI, and UL 508 Standards.

B. All wiring and terminations shall be designed, manufactured, and tested in accordance with the latest applicable standards of the NEC as well as state and local codes.

C. Control panels shall conform to third party safety certification. The assembled control panel shall bear a serialized UL label listed for “Industrial Control Panels” UL 508A. The enclosure, and all components mounted thereto shall conform to UL descriptions and procedures.

PART 2 PRODUCTS

2.01 ENCLOSURES

A. All enclosures shall be Hoffman Enclosures, Inc., Bulletin A4, A12, A19, or A30 as specified or equal.

B. All equipment and controls shall be mounted in metal enclosures designed and manufactured in accordance with the applicable standards of NEMA, ANSI, and UL 508A Standards. Panels shall be floor-mounted, free standing or wall mounted (as determined by manufacturer’s mounting provisions for the size and type of panel).

C. Enclosures in a Control Room shall be NEMA 12 rated. Enclosures not located in a Control Room shall be NEMA 4X rated, nonventilated stainless steel unless noted otherwise.

D. Enclosures shall have a rolled lip around all sides of the opening so that a drip hood is not required.

E. Single door enclosures shall be hinged left with removable hinge pins. All NEMA 12 rated panel doors shall incorporate a vault type handle with 3-point latching mechanism for securing the door in closed position and door locks shall be keyed alike. NEMA 4X rated panel doors shall be furnished with padlock hasp and padlocks, all keyed alike. NEMA 4X rated panel doors shall be held closed with hardware certified compatible with the epoxy resin coating or stainless steel. Only smooth rubber gasket material shall be used for providing the door seal.

F. Double door enclosures shall have a removable center mullion and overlapping doors with three-point latching mechanisms with oil tight keyed locking handles, all keyed alike.

G. Removable “eye” bolts shall be provided to facilitate slinging and handling of enclosures. “Eye” bolts shall be mounted directly to and be part of the enclosure structural members so as to distribute the stresses and weight while slinging.

H. Panels shall have print pockets attached inside the door, as space permits.

I. Cover boxes, enclosures; etc. regardless of size with front mounted devices shall have a hinged door unless noted otherwise.

J. Panel layout and equipment spacing shall be sufficient to allow for device removal and maintenance without disassembly of adjacent devices. Additionally, ample panel gutter space (sides, top, and bottom) shall be provided for training wires and cables.

K. The Contractor shall properly size each enclosure, allowing 20% back panel spare space. Each enclosure shall be sized as specified herein or shown on the Drawings, or to suit the physical dimensions required for components and heat requirements of the components mounted within, whichever is the largest.

L. Control panel doors shall not exceed 36 inches in width.

M. Control panel depth shall not be less than 8 inches.

N. Floor mounted type enclosures shall be provided with floor stands. The legs of floor-mounted enclosures shall be at least 12 inches high.

2.02 PLC AND REMOTE I/O ENCLOSURES

A. Programmable controller system enclosures shall include, in addition to those general requirements previously listed:

1. Power supply and distribution equipment.
2. All I/O wiring from the modules, including spares, wired to terminal strips.
3. The main processor chassis, I/O chassis as required, power supplies and power strips.
4. A constant-voltage, filtered power supply shall be provided for all AC loads or an uninterruptible power supply.
5. Circuitry and devices for a POWER ON indicating light.
6. A 15 amp, specification grade, duplex receptacle, and interior fluorescent lighting switched by a door operated switch, both powered from a circuit separate from the control voltage circuit.

B. All panel enclosures housing a PLC shall be of sufficient size to house any required analog output power supplies, properly sized wiring channel and wiring terminals sufficient in number to terminate all incoming and outgoing wiring of the enclosures, plus enough spares to wire all spare points in the I/O chassis assuming worst case conditions (all 120VAC inputs).

2.03 POWER, INSTRUMENTATION AND CONTROL WIRING

A. Panel interior control wiring shall be a minimum of No. 16 AWG-MTW, 2/64 PVC insulation, and 90 degrees C rated for AC connections. Nylon jacketed and/or TFFN wire will not be accepted. Thermoplastic wire cover shall be colored:

RED	for AC wires
DARK BLUE	for DC wires
CANARY YELLOW	all foreign wiring inside the panel not being de-energized by the panel feed circuit breaker
GREEN	all ground wire connections
BLACK	for power source

WHITE	for power neutral
LIGHT BLUE	intrinsically safe system

B. Signal conductors shall be as specified in Section 16121.

C. Power wiring shall be 600 volts and as specified in Section 16120. Conductors shall be stranded copper. No wire smaller than No. 12 AWG shall be used for power wiring.

D. All wire in control enclosures shall be identified at each terminal with wire identification tags as specified in Section 16030.

2.04 ENCLOSURE ACCESSORIES

A. Terminal blocks shall be Allen Bradley 1492 - W4 or equal. The Contractor shall allow 20% extra terminal connections in addition to those terminals required for the termination of spare control conductors and instrument cables.

B. Outdoor NEMA 4X rated enclosures shall have condensation protection and temperature control to maintain equipment manufacturer's specified operating temperatures. Condensation protection and temperature control shall be typical for all such enclosures and shall be sized accordingly and thermostatically controlled. Condensation protection and temperature control shall be Hoffman Enclosures Inc. - Bulletin D85, or equal.

C. Plastic wireway shall be used to train wires in all control panels and enclosures. Wireway fill shall not exceed 20% and shall be run in continuous lengths with snap-on type covers.

D. Each panel shall have a panel grounding bus bonded to the panel enclosure and a braided grounding strap connecting the panel door(s) to the panel enclosure frame.

E. Nameplates and legends shall be per Section 16030.

2.05 FABRICATION

A. Equipment, controls, and devices specified elsewhere and shown on the Drawings shall be mounted in enclosures manufactured in accordance with applicable NEMA, ANSI, and UL 508A Standards. All devices shall be mounted in accordance with the component manufacturer's recommendation. Devices shall be adequately supported and organized so that operation and maintenance access is unrestricted.

B. All necessary inner panels and supporting members shall be provided by the Contractor.

C. To minimize future maintenance problems, all panel enclosures shall be provided by one manufacturer to the extent that it is possible.

D. All panel wiring shall terminate at terminal blocks unless noted otherwise. Wire numbers shall be marked on an integral marker strip in numerical sequence for each individual block.

E. Instrumentation designs shall be such that analog signals that do not leave the enclosure shall be wired direct, without splices or terminals, from instrument to instrument unless accomplished in accordance with other provisions of these specifications.

F. Signal wiring shall be segregated and shielded from control and power wiring, grouped functionally, and arranged neatly to facilitate tracing of circuits.

G. No combination of analog, digital input, or control output wiring should be intermixed within the same bundle or duct. All analog wires shall be justified right while discrete 120 VAC wires shall be justified left.

H. Plastic wiring wraps shall be used to bundle wires, except within wiring ducts. The bundles shall be securely fastened to the steel structure at suitable intervals, not exceeding 12 inches.

I. Required device holes shall be provided by the panel manufacturer and punched prior to coating. No extra holes or field cut holes shall be permitted unless approved by Owner or Engineer.

J. Door or cover mounted panel devices shall not be located less than 30 inches above the finished floor. Door and cover mounted devices (i.e., pushbuttons, pilot lights, selector switches, meters, etc.) mounted in NEMA 12 and 4X enclosures shall, in addition to standard gaskets, be sealed with silicone grease compound as manufactured by Dow-Corning (No. 732) or equal.

K. Panels containing 480 volt power wiring contained within shall have a defeatable (disconnect switch) mounted on the panel front exterior to prevent opening the panel while the switch is in the ON position.

L. Panels containing 120 volt power (except canary yellow foreign wiring powered elsewhere) shall have provided inside the enclosure a properly sized fused isolation switch or circuit breaker.

M. Floor mounted and free standing enclosures shall be equipped with an interior, 15 amp, specification grade duplex receptacle and interior fluorescent lighting. A switch shall be provided to control the lighting unless noted otherwise in these specifications. The receptacle and light shall be powered from a circuit separate from the control voltage circuit.

N. Panel shall have sufficient structural reinforcement to ensure a flat plane surface, to limit vibration, and to provide rigidity during shipment, installation, and operation, without distortion or damage to the panel or damage to any instrument mounted thereon. Minimum thickness of panels shall be:

1. Single door wall mounted up to 48-inch high by 36-inch wide by 16-inch deep shall be a minimum of 14-gauge steel.

2. Floor-mounted, wall-mounted and free standing panels larger than the above shall be a minimum of 12-gauge steel with angle reinforcement.

O. Joined edges, corners, and seams shall be of a continuous bead weld (filler or dubbing shall not be permitted), and ground to a finish so as not to be detectable after painting. Spot welds shall be used only to connect flat metal surfaces to structural support bracing to provide rigidity. Panels with any warping due to welding procedures or any other cause shall be rejected.

P. Panels shall be bonderized or cold phosphated before painting. NEMA 12 rated panel shall be primed and factory finished with two coats of ANSI color baked enamel. The color is to be selected by the Owner. NEMA 4X rated panels shall be primed and coated with a powdered resin, heat-cured, 100% solid thermosetting epoxy, unless the enclosure is stainless steel. Interior surfaces shall be high-gloss white, and the exterior surfaces shall be a high-gloss color to be selected by the Owner.

Q. The inner-mounting panel shall be a minimum of 12 gauge for single door enclosures and 10 gauge for double door enclosures. The panel shall be mounted with stainless steel fasteners and coated the same as panel interior.

R. Equipment mounted within free standing and floor-mounted control enclosures shall not be located such that it will be less than 18 inches above the mounting surface (floor, housekeeping pad, platform, etc.) after installation in the field.

S. Outdoor enclosures shall have their operator controls, (such as, but not limited to: pushbuttons and selector switches), mounted on a steel inner swing-out panel unless noted otherwise on the drawings. The swing-out panel mounted controls shall be accessible only after opening the lockable outer door.

T. Indicators and control operators mounted through the exterior of control enclosures shall be at least 30 inches above the walking surface (floor, housekeeping pad, platform, etc.) after installation in the field. The only exception to this rule will be alarm horns, speakers and similar audible devices.

PART 3 EXECUTION

3.01 COORDINATION

A. Panel location and clearances shall be in compliance with the NEC.

3.02 INSTALLATION

A. Each conduit penetration of the panel shall be made in accordance with the manufacturer’s recommendations. Each panel penetration shall comply with requirements to maintain NEMA ratings specified. No remaining holes or knockouts will be permitted except for power wiring entrances, signal wiring entrances, and mounting hole for any future panel mounted device(s). Holes shall be covered with a plastic plate. Conduit entrances shall be from the bottom of the enclosure first; then if bottom is not practical, the sides of the enclosure will be used. All panel mounted equipment will be protected from metal shavings, moisture, and debris while working in enclosures.

B. Install wiring between panel mounted devices and field devices as specified in Section 16120.

C. Check connectors, terminals, bus joints, and mountings for tightness. Tighten field-connected connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Standards 486A and UL 486B.

D. Provide equipment grounding connections for individually mounted units as indicated and as required by the NEC. Tighten connectors to comply with tightening torques specified in UL Standard 486A to assure permanent and effective grounding.

E. Upon completion of installation, inspect devices, and remove paint splatters, other spots, dirt, and debris. Touch up scratches and mars of finish to match original finish.

F. The bottom of wall-mounted control enclosures shall be at least 18 inches above the floor or platform. Use galvanized or aluminum unistrut when attaching control enclosures to vertical surfaces. Consideration shall be given to compatibility of unistrut and control panel metal surfaces in contact with one another.

G. The mounting of each panel shall allow for a minimum of 30-inch wide by 42-inch deep work area and door opening clearance of 90 degrees in front of panel to accommodate suitable room to open panel door and to provide the necessary work area.

H. Each floor mounted or freestanding panel shall be installed on a 4-inch thick housekeeping pad, continuous under the panel and extending 1-inch out from all sides. Pads shall have a 1/2-inch chamfer on all sides, except against walls.

3.03 IDENTIFICATION

A. Identify panel and components in accordance with Section 16030.

B. Individual nameplates shall be labeled to match the single line and schematic drawings.

PART 4 SPECIAL PROVISIONS

4.01 GENERAL ENCLOSURE SCHEDULE

A. The following schedule is intended to aid the Contractor in identifying panels, location, and approximate size. It is intended to supplement the Drawings and Specifications and is not guaranteed to be complete. All enclosures shown on the drawings, specified or as necessary to complete the Work shall be furnished and installed by the Contractor whether or not listed in the schedule.

Panel Name	Specification Section	Location	NEMA Rating	Approx. Size (H x W x D)
Filter Control Panel	Section 11026	Process Room	4X	???

Truck Unloading Panel	Furnished under Allowance E; installed by Contractor	Outside Wall of Sodium Hypochlorite Room	4X	???
Fiber Enclosure for Security Cameras	Furnished and installed under Allowance G	Sodium Hypochlorite Room	4X	???

(**Addendum 2, Issued October 30, 2026**)

4.02 PLC AND REMOTE I/O ENCLOSURE SCHEDULE

A. The following schedule is intended to aid the Contractor in identifying panels, location, and approximate size. It is intended to supplement the Drawings and Specifications and is not guaranteed to be complete. All enclosures shown on the drawings, specified or as necessary to complete the Work shall be furnished and installed by the Contractor whether or not listed in the schedule.

Panel Name	Specification Section	Location	NEMA Rating	Approx. Size (H x W x D)
MTU (Main PLC)	Furnished under Allowance E; installed by Contractor.	Electrical Room	12	???

(**Addendum 2, Issued October 30, 2026**)

END OF SECTION

BENCHMARKS				
POINT #	RAW DESCRIPTION	NORTHING	EASTING	ELEVATION
300	SET SQUARE CUT ON SOUTHWEST CORNER OF CONCRETE VAULT	557,617.24	1,353,937.15	733.76
301	SET SQUARE CUT ON SOUTH SIDE OF LIGHT POLE BASE	558,185.82	1,353,798.60	735.95
302	SET BENCHMARK TIE IN POWER POLE	557,555.81	1,353,476.62	735.25

CONTROL POINTS			
POINT #	RAW DESCRIPTION	NORTHING	EASTING
50	SET CAPPED IRON REBAR	558,180.18	1,353,909.77
51	SET CAPPED IRON REBAR	557,566.81	1,353,914.94
52	SET MAG NAIL	557,718.76	1,353,697.12
53	SET CAPPED IRON REBAR	557,525.51	1,353,529.12

EXISTING STRUCTURE DATA		
NAME	TYPE	DATA
5587	CATCH BASIN	CASTING EL. 732.60 4" W INV. EL. 731.00
5754	SANITARY MANHOLE	CASTING EL. 733.96 4" E INV. EL. 726.26 10" W INV. EL. 725.66
5873	CATCH BASIN	CASTING EL. 733.57 4" E INV. EL. 732.72 4" W INV. EL. 732.72
6041	STORM MANHOLE	CASTING EL. 734.44 2" S INV. EL. 730.84 6" S INV. EL. 730.44 6" E INV. EL. 730.64 6" N INV. EL. 730.44

PIPING LEGEND

- EXISTING PIPE
- EXISTING PIPE TO BE REMOVED
- EXISTING PIPE TO BE ABANDONED

NOTES

1. CONTRACTOR MAY REMOVE FENCE, OR PART THEREOF, AS NEEDED TO PERFORM THE WORK. SITE SHALL REMAIN SECURED WITH PERMANENT OR TEMPORARY FENCE EQUAL TO THE SITE SECURITY PRIOR TO CONSTRUCTION. FENCE WHICH IS REMOVED SHALL BE REPLACED IN ACCORDANCE WITH SECTION 02710. DAMAGED SECTIONS OF FENCE SHALL BE REPLACED IN ACCORDANCE WITH SECTION 02710.
2. EXISTING PIPE IN THE VICINITY OF THE EXISTING WATER TREATMENT PLANT SHALL BE REMOVED PER SECTION 02110 AND REMAIN IN OPERATION UNTIL THE NEW WATER TREATMENT PLANT IS OPERATIONAL.
3. OWNER HAS CLEARED TREES OVER 4" IN DIAMETER AND CUT FLUSH WITH GROUND. CONTRACTOR SHALL CLEAR AND GRUB REMAINING GROWTH AS NEEDED.
4. ~~REMOVE EXISTING WELL HOUSES 1 AND 2 AT COMMENCEMENT OF CONSTRUCTION.~~
5. CONTRACTOR SHALL CONTACT UTILITY TO REMOVE EXISTING UTILITY METER AND POWER SUPPLY TO WELL HOUSES 3,4 AND 5. EXISTING POWER SUPPLY SHALL REMAIN UNTIL THE NEW CONDUIT AND WIRE HAVE BEEN INSTALLED IN THE DUCT BANK TO MINIMIZE THE SHUTDOWN PERIOD. REFER TO SEQUENCE OF CONSTRUCTION FOR DETAILS.

SEE NOTE 5

CONTRACTOR STAGING AND SPOILS AREA

WELL 3
300' ISOLATION RADIUS

ABANDONED FIELD TILE. REMOVE AS REQUIRED FOR CONSTRUCTION EXTENTS OF FIELD TILE ARE UNKNOWN.

REMOVE SECTION OF 8" FINISHED WATER FOR INSTALLATION OF 8" TEE ℄ EL. 729.00+/-

REMOVE SECTION OF 6" RAW WATER FOR INSTALLATION OF 6" TEE ℄ EL. 729.30+/-

EXISTING SPOILS AREA. CONSISTS OF CONCRETE, CINDERS AND SOIL. CONTRACTOR TO REMOVE ALL AND HAUL OFFSITE TO WWTP AT 13744 ROAD 43. LEVEL AREA TO 734.00 PRIOR TO CONSTRUCTION.

REMOVE ABANDONED RAW WATER MAIN IN THIS AREA AS NEEDED FOR NEW SANITARY PIPING

REMOVE PREVIOUSLY ABANDONED RAW WATER MAIN IN THESE AREAS

OWNER HAS PREVIOUSLY ABANDONED EXISTING WELLS AND WELL STRUCTURES

REMOVE CHAIN LINK FENCE

REMOVE EXISTING GAS METER AND PRESSURE REGULATOR SET. CAP NATURAL GAS PIPE BELOW GRADE

REMOVE MAINTENANCE BUILDING SANITARY. CAP AT 4" SANITARY FROM FILTER BUILDING

REMOVE AND CAP HIGH SERVICE DISCHARGE PIPING IMMEDIATELY OUTSIDE OF BUILDING.

REMOVE EXISTING FILTERS AND FILTER PIPING. SEE FILTER BUILDING REMOVAL SHEETS

REMOVALS SITE PLAN

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/30/26	ADDENDA# 2	JDM

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JOB NO. 564-8141.001

SCALE 1"=40'

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDM	BJD	JDM

STATUS: ISSUED FOR BID

DATE: 9/28/26

SHEET NO.
R-0.1
4 OF 98

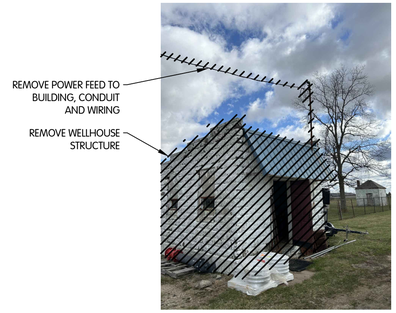
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10/29/2026 4:30 PM



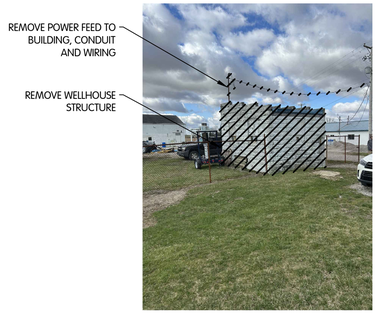
EXISTING WELLHOUSE 1 - INTERIOR
NTS



EXISTING WELLHOUSE 1 - NORTH ELEVATION
NTS



EXISTING WELLHOUSE 1 - SOUTHWEST CORNER
NTS



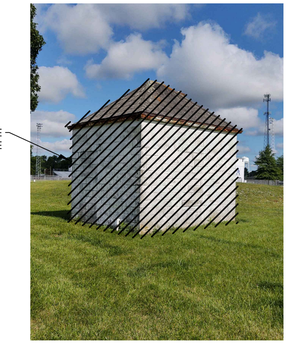
EXISTING WELLHOUSE 1 - NORTHEAST CORNER
NTS



EXISTING WELLHOUSE 2 - INTERIOR
NTS



EXISTING WELLHOUSE 2 - WEST ELEVATION
NTS



EXISTING WELLHOUSE 2 - SOUTHEAST ELEVATION
NTS



EXISTING WELLHOUSE 2 - SOUTHWEST ELEVATION
NTS

1. NOTES:
   1. REMOVE WELLHOUSE 1 AND WELLHOUSE 2, INCLUDING ASSOCIATED STRUCTURES AND FOUNDATIONS, TO A MINIMUM DEPTH OF 5' BELOW GRADE.
   2. THE WELLS LOCATED WITHIN BOTH WELLHOUSES HAVE BEEN PREVIOUSLY ABANDONED. WELL CASINGS PREVIOUSLY ABANDONED SHALL BE CUT TO 5' BELOW GRADE AND PERMANENTLY CAPPED OR PLUGGED.
   3. FILL VOIDS FROM WELLHOUSE 1 WITH SELECT BACKFILL.
   4. FILL VOIDS FROM WELLHOUSE 2 WITH SPECIAL BACKFILL.

EXISTING WELLHOUSE 1 AND 2
REMOVALS
PHOTOS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	11/21/26	ADDENDUM 2	JDM

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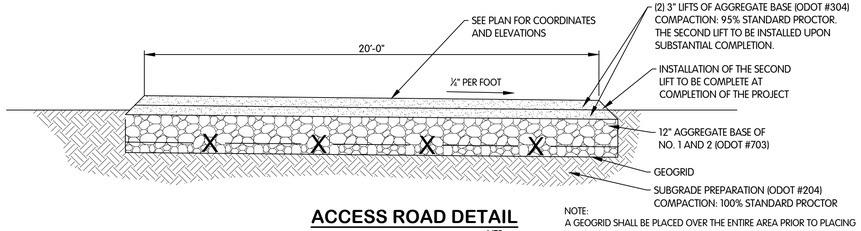
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THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDM	RLR	JDM

STATUS: ISSUED FOR BID
DATE: 9/28/26

SHEET NO.
R-0.4
7 OF 98

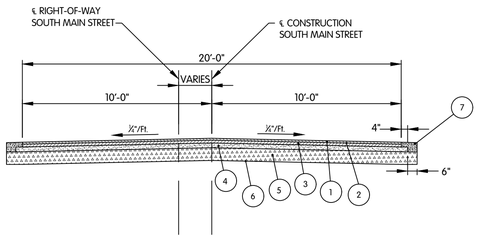
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ACCESS ROAD DETAIL

NTS

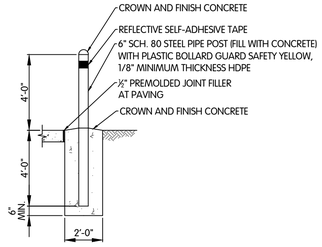
NOTE:
A GEOGRID SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF 200 LB. AND A MULLEN BURST STRENGTH OF AT LEAST 190 LB.



1. 1¼" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE I (448)
2. TACK COAT ODOT ITEM 407 0.05 GAL/SQ.YD.
3. 1½" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE TYPE II (448)
4. 3" ODOT ITEM 301 ASPHALT CONCRETE BASE
5. 8" AGGREGATE BASE ODOT ITEM 304
6. COMPACT SUBGRADE ODOT ITEM 204
7. 6" ODOT ITEM 411 STABILIZED CRUSHED AGGREGATE

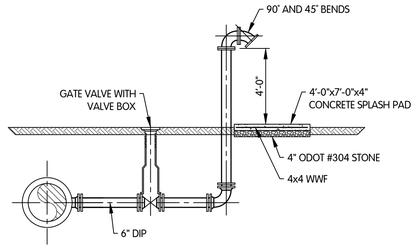
TYPICAL UNCURBED PAVEMENT SECTION

¼"=1'-0"



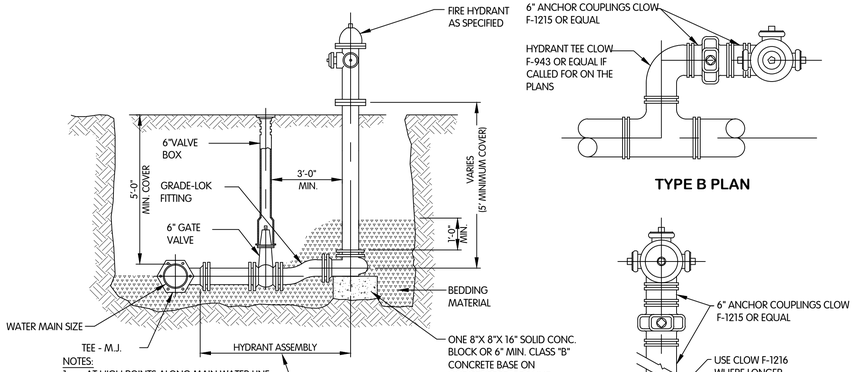
BOLLARD DETAIL

½" = 1'-0"



RAW WATER FLUSHING HYDRANT

NTS



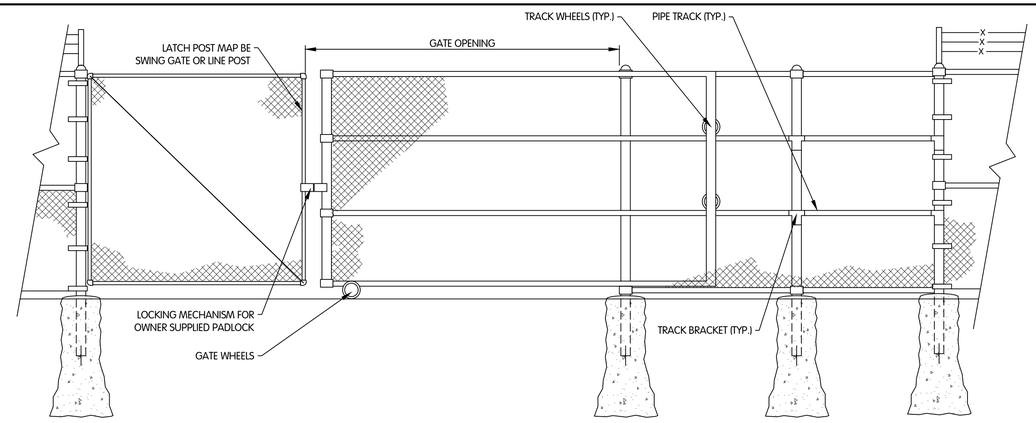
NOTES:
1. AT HIGH POINTS ALONG MAIN WATER LINE WHERE INDICATED ON DRAWINGS, ANCHORING TEE SHALL BE SET AT 45° ANGLE UPWARDS AND CONNECTED TO 6" 45° BEND. MAIN WATER LINE SHALL BE LOWERED TO PROVIDE SUFFICIENT COVER AS SPECIFIED.
2. ALL JOINTS SHALL BE RESTRAINED EXCEPT IN RUN OF TEE.

TYPE B PLAN

TYPE A PLAN

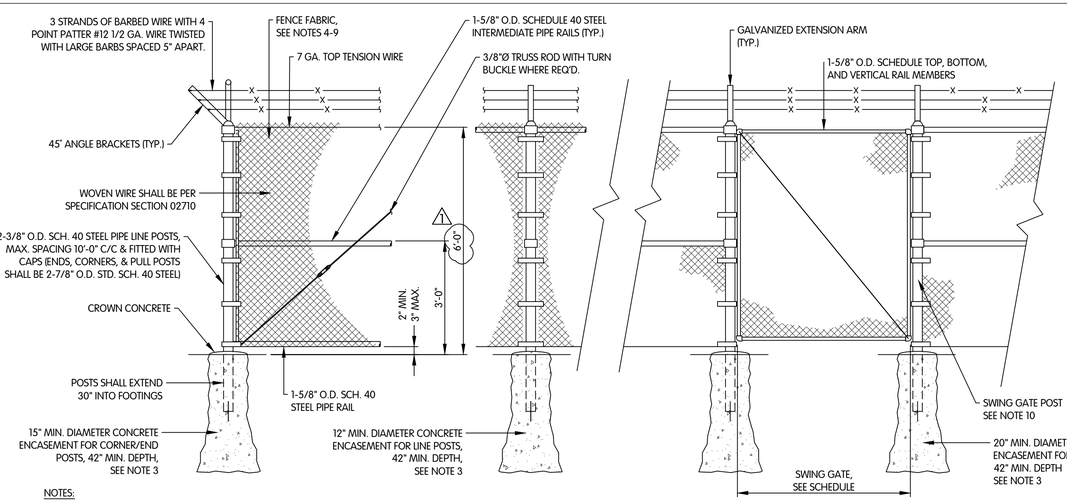
FIRE HYDRANT ASSEMBLY

NTS



ROLLING GATE DETAIL

NTS



NOTES:
1. ALL END & GATE POSTS BRACED HORIZONTAL WITH 1⅝" O.D. STEEL PIPE SECURELY TRUSSED.
2. PROVIDE MANUFACTURER'S STANDARD FOR VERTICAL & HORIZONTAL BRACING, AND LATCH & OR VISIONS FOR OWNERS LOCK.
3. CONCRETE FOUNDATIONS SHALL BE BELLED AS SHOWN. 42" MINIMUM FOR FENCE HEIGHT 7' OR LESS. OVER 7' SHALL BE DESIGNED.
4. FENCE FABRIC SHALL BE 2-INCH MESH OF CARBON STEEL WIRE AND SHALL BE GALVANIZED AFTER WEAVING IN ACCORDANCE WITH ASTM A392 CLASS II OR ALUMINUM-CLAD IN ACCORDANCE WITH ASTM A491 CLASS II.
5. WIRE SHALL BE 6 GAUGE ON 6-FEET FABRIC AND 7 GAUGE ON 4-FEET FABRIC.
6. PVC-COATED FENCES SHALL BE GALVANIZED MATERIALS AND CHEMICALLY CLEANED. A PHOSPHATE CONVERSION TREATMENT SHALL BE APPLIED TO PREPARE THE ZINC COATING TO RECEIVE THE POLYVINYL CHLORIDE COATING.
   A. A MINIMUM OF 7 MILS OF CLACK COMPOUND SHALL BE APPLIED TO THE MATERIALS. COATING APPLICATION SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
   B. FENCE FABRIC SHALL BE ATTACHED TO ALL POST RAILS AND TENSION WIRES WITH 12 GAUGE TIE WIRE AT A MAXIMUM OF 15-INCH CENTERS. TIRE WIRE SHALL BE ALUMINUM OR GALVANIZED STEEL.
7. FENCE FABRIC SHALL BE STRETCHED TAUT, SECURELY FASTENED TO THE POSTS, TENSION WIRE, AND TOP RAIL. FENCE FABRIC SHALL BE INSTALLED APPROXIMATELY 1 INCH ABOVE THE TOP RAIL.
8. FENCE FABRIC SHALL BE INSTALLED APPROXIMATELY 2 INCHES ABOVE FINISHED GRADE. FENCE FABRIC WHEN LIFTED SHALL NOT ALLOW AN OPENING GREATER THAN 5 INCHES.
9. FENCE FABRIC SHALL BE STRETCHED AT A MAXIMUM OF 30 FEET AND ALL TERMINAL POSTS.
10. POSTS FOR SWING GATES TO BE SIZED BY FENCE MANUFACTURER.
11. ALL PADLOCKS TO BE KEYED TO OWNER'S REQUIREMENTS.
12. FENCE SHALL BE GROUNDED WHEN ENCLOSING ELECTRICAL EQUIPMENT.

FENCE SYSTEM					
DESIGNATION	HEIGHT	FENCE FABRIC	GATE TYPE	GATE SIZE	ACCESSORIES
GA-1	6'	GALV	SWING	4'	1, 2 AND 4

ABBREVIATIONS:

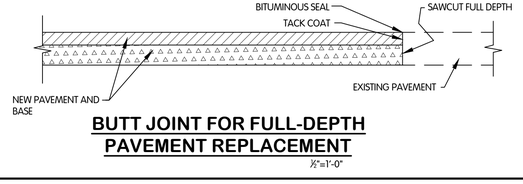
FENCE FABRIC
- PVC PVC COATED
- GALV GALVANIZED
- AL ALUMINUM CLAD

GATE TYPE
- SWING
- SLIDING

ACCESSORIES
1. BARB WIRE
2. TOP RAIL
3. TOP TENSION WIRE
4. LATCH/LOCK
5. BOTTOM RAIL

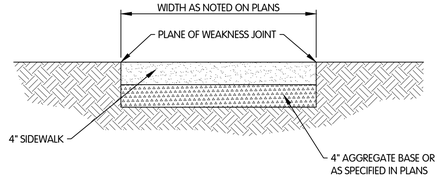
CHAIN LINK FENCE DETAIL

NTS



BUTT JOINT FOR FULL-DEPTH PAVEMENT REPLACEMENT

½"=1'-0"



4" CONCRETE SIDEWALK

NTS

CIVIL DETAILS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
5			
4			
3			
2	10/23/26	ADDENDUM 2	JDM
1			

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JOB NO. 564-8141.001

SCALE AS INDICATED

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDM	BJD	JDM

STATUS: ISSUED FOR BID

DATE: 9/28/26

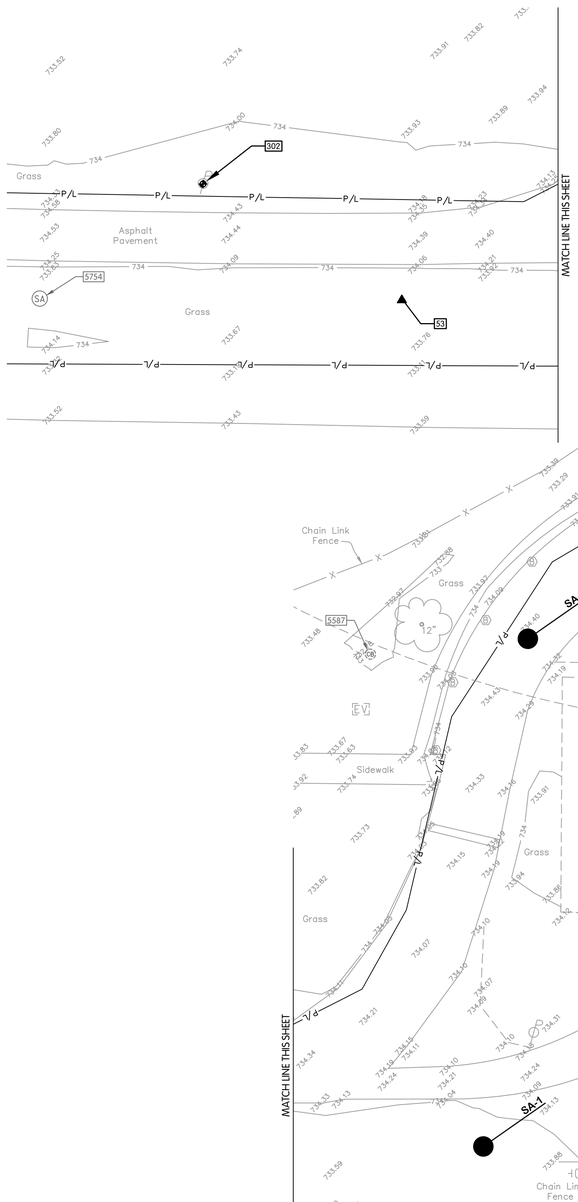
SHEET NO.
C-0.4
13 OF 98

TOL-8141.001\C02-C-0.4 DETAILS
10/29/2026 3:59 PM - AELLINGHAM
10/29/2026 3:59 PM

BENCHMARKS				
POINT #	RAW DESCRIPTION	NORTHING	EASTING	ELEVATION
300	SET SQUARE CUT ON SOUTHWEST CORNER OF CONCRETE VAULT	557,617.24	1,353,937.15	733.76
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5873	CATCH BASIN	CASTING EL. 733.57 4" E INV. EL. 732.72 4" W INV. EL. 732.72
6041	STORM MANHOLE	CASTING EL. 734.44 2" S INV. EL. 730.84 6" S INV. EL. 730.44 6" E INV. EL. 730.64 6" N INV. EL. 730.44



1 NOTES:
1. PROVIDE GEOGRID AND 6-INCH LAYER OF ODOT #57 STONE FOR STONE PAVEMENT AROUND GENERATOR.

CIVIL
SITE, GRADING AND PAVING PLAN

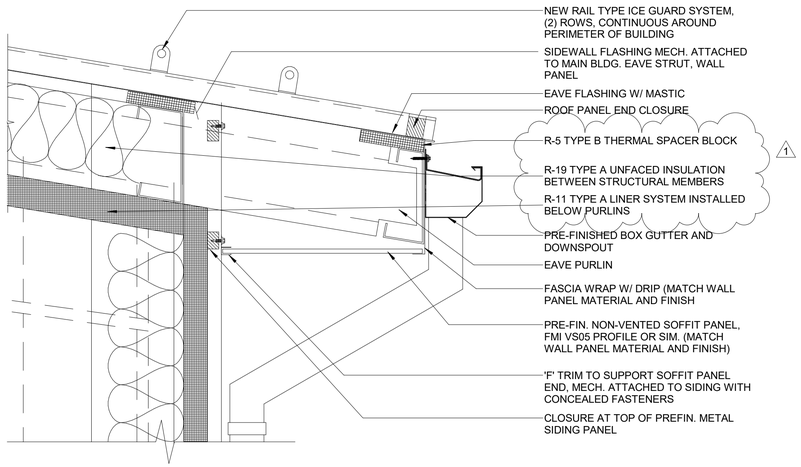
VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/30/26	ADDENDUM 2	JDM

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JOB NO. 564-8141.001
SCALE 1"=20'
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED JDM | DRAWN BJD | CHECKED
STATUS: ISSUED FOR BID
DATE: 9/28/26
SHEET NO.
C-1.1
15 OF 98

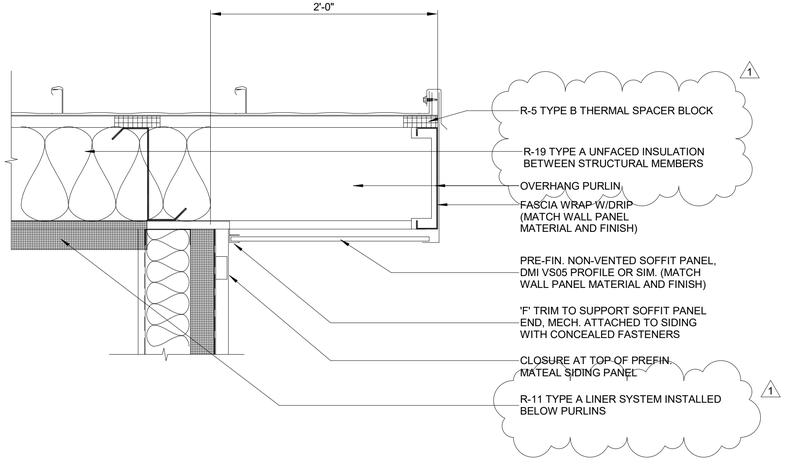
TOL-8141001C2-C-1.1 SITE GRADING PAVING PLAN
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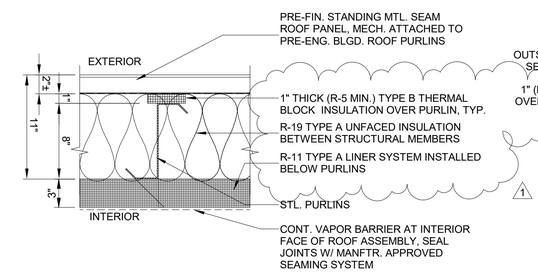
1 ROOF OVERHANG DETAIL
1 1/2" = 1'-0"

GENERAL ROOF NOTES:

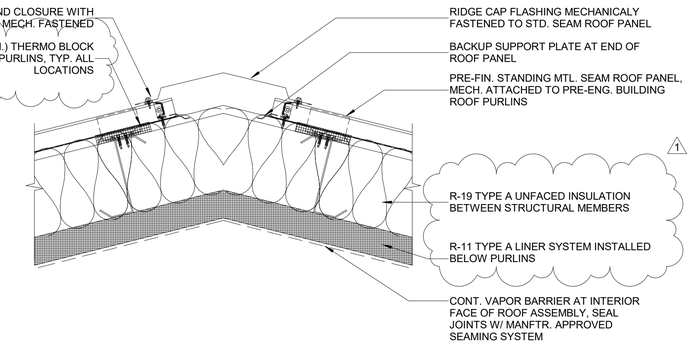
1. TYPICAL ROOF SLOPE IS 2:12 UNLESS NOTED OTHERWISE
2. ALL ROOF DETAILS SHALL FOLLOW BUILDING MANUFACTURER MOST CURRENT PRACTICES FRO WEATHERABILITY, EXPANSION/CONTRACTION, MATERIALS, AND SEPARATION OF DIS-SIMILAR METALS.
3. TYPICAL METAL ROOF PANEL SHALL BE MECHANICALLY SEAMED ON SITE.
4. 1X TYPE B THERMAL BLOCK INSULATION SHALL BE INSTALLED AT ALL LOCATIONS BETWEEN ROOF PANEL AND STRUCTURAL SUPPORTS, TYPICAL UNLESS NOTED OTHERWISE.
5. MECHANICAL FASTENERS SHALL BE CONCEALED WHERE POSSIBLE.
6. DETAILS SHALL MINIMIZE PENETRATIONS OF ROOF PANELS.
7. TRIM, SOFFIT, FASCIA, RIDGE CAP AND EXPOSED FLASHING SHALL MATCH WALL PANEL MATERIAL AND PAINT FINISH.



2 RAKE EDGE DETAIL
1 1/2" = 1'-0"



3 TYPICAL BUILDING ROOF ASSEMBLY
1 1/2" = 1'-0"



4 ROOF RIDGE DETAIL
1 1/2" = 1'-0"

STATE OF OHIO
ANDREW
ARK KNOPP
17352
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THOMAS PORTER ARCHITECTS

ARCHITECTURAL
ROOF DETAILS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

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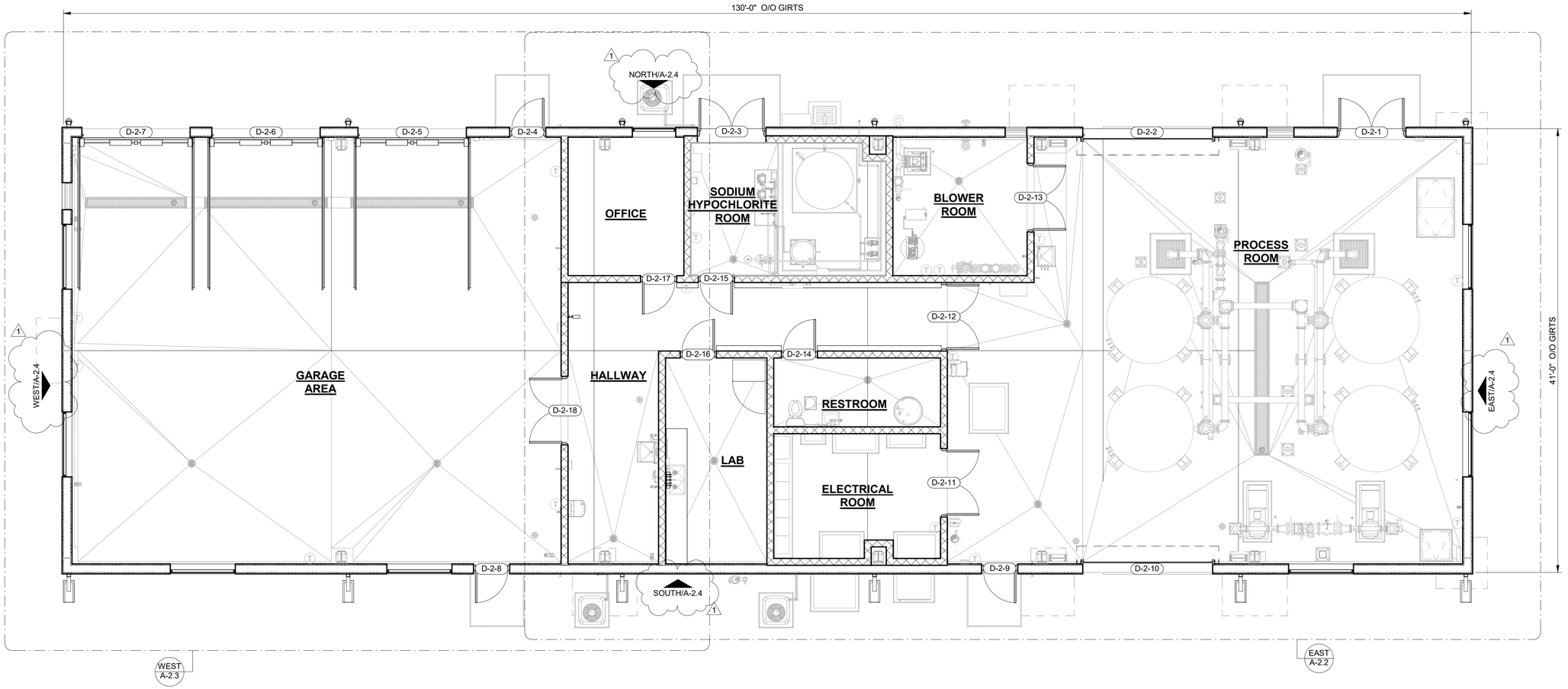
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OVERALL PLAN
3/16" = 1'-0"

KEY PLAN

STATE OF OHIO
ANDREW KNOPH
17352
REGISTERED ARCHITECT

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING
ARCHITECTURAL
OVERALL PLAN

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

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CODE REVIEW

BUILDING OFFICIAL JURISDICTION: 2024 OHIO BUILDING CODE
2024 OHIO MECHANICAL CODE
2024 OHIO PLUMBING CODE
2023 NATIONAL ELECTRICAL CODE
ACCESSIBILITY CODE: ICC/ANSI A117.1-09

PROJECT DESCRIPTION: PROJECT SCOPE OF WORK INVOLVES:
NEW WATER TREATMENT PLANT FOR
THE VILLAGE OF ANTWERP.

PROJECT ADDRESS: THE VILLAGE OF ANTWERP

OBC-CHAPTER 3 USE AND OCCUPANCY

NEW STRUCTURE:

SECTION 306.2 MODERATE-HAZARD FACTORY INDUSTRIAL, GROUP F-1. FACTORY INDUSTRIAL USES THAT ARE NOT CLASSIFIED AS FACTORY INDUSTRIAL F-2 LOW HAZARD SHALL BE CLASSIFIED AS F-1 MODERAT HAZARD AND SHALL INCLUDE, BUT NOT LIMITED TO: WATER/SEWER TREATMENT FACILITIES.

SECTION 307.6 HIGH HAZARD GROUP H-4. BUILDINGS AND STRUCTURES CONTAINING MATERIALS THAT ARE HEALTH HAZARDS SHALL BE CLASSIFIED AS GROUP H-4. SUCH MATERIALS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: CORROSIVES, HIGHLY TOXIC MATERIALS, TOXIC MATERIALS.

SECTION 311.3 LOW-HAZARD STORAGE, GROUP S-2. STORAGE GROUP S-2 OCCUPANCIES INCLUDE AMONG OTHERS, BUILDINGS USED FOR THE STORAGE OF NONCOMBUSTIBLE MATERIALS SUCH AS PRODUCTS ON WOOD PALLETS OR IN PAPER CARTONS WITH OR WITHOUT SINGLE THICKNESS DIVISIONS; OR IN PAPER WRAPPINGS. SUCH PRODUCTS ARE PERMITTED TO HAVE NEGLIGIBLE AMOUTN OF PLASTIC TRIM, SUCH AS KNOBS, HANDLES, OR FILM WRAPPING. GROUP S-2 STORAGE USES SHALL INCLUDE, BUT NOT LIMITED TO: PUBLIC PARKING GARAGES, OPEN OR ENCLOSED.

OBC CHAPTER 4 SPECIAL DETAIL REQUIREMENTS BASED ON OCCUPANCY AND USE

SECTION 414.1.3 INFORMATION REQUIRED. A REPORT SHALL BE SUBMITTED TO THE BUILDING OFFICIAL IDENTIFYING THE MAXIMUM EXPECTED QUANTITIES OF HAZARDOUS MATERIALS TO BE STORED, USED IN A CLOSED SYSTEM AND USED IN AN OPEN SYSTEM, AND SUBDIVIDED TO SEPARATELY ADDRESS HAZARDOUS MATERIAL CLASSIFICATION CATEGORIES BASED ON TABLES 301.1 (1) AND 301.1(2). THE METHODS OF PROTECTION FROM SUCH HAZARDS, INCLUDING BUT NOT LIMITED TO CONTROL AREAS, FIRE PROTECTION SYSTEM AND GROUP H OCCUPANCIES SHALL BE INDICATED IN THE REPORT AND ON THE CONSTRUCTION DOCUMENTS. THE OPINION AND REPORT SHALL BE PREPARED BY A QUALIFIED PERSON, FIRM OR CORPORATION APPROVED BY THE BUILDING OFFICIAL AND PROVIDED WITHOUT CHARGE TO THE ENFORCING AGENCY.

FOR BUILDINGS AND STRUCTURES WITH AN OCCUPANCY IN GROUP H, SEPARATE FLOOR PLANS SHALL BE SUBMITTED IDENTIFYING THE LOCATINOS OF ANTICIPATED CONTENTS AND PROCESSES SO AS TO REFLECT THE NATURE OF EACH OCCUPIED PORTION OF EVERY BUILDING AND STRUCTURE.

SECTION 414.3 VENTILATION. ROOMS, AREAS OR SPACES IN WHICH EXPLOSIVE, CORROSIVE, COMBUSTIBLE FLAMMABLE OR HIGHLY TOXIC DUST, MISTS, FUMES, VAPORS OR GASES ARE OR HAVE THE POTENTIAL TO BE EMITTED DUE TO THE PROCESSING, USE, HANDLING OR STORAGE OF MATERIALS SHALL BE MECHANICALLY VENTILATED WHERE REQUIRED BY THIS CODE, THE INTERNATIONAL FIRE CODE OR THE MECHANICAL CODE.

EMISSIONS GENERATED AT WORKSTATIONS SHALL BE CONFINED TO THE AREA IN WHICH THEY ARE GENERATED AS SPECIFIED IN THE INTERNATIONAL FIRE CODE AND THE MECHANICAL CODE.

SECTION 414.5.1 EXPLOSION CONTROL. EXPLOSION CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE AS REQUIRED BY TABLE 414.5.1 WHERE QUANTITIES OF HAZARDOUS MATERIALS SPECIFIED IN THAT TABLE EXCEED THE MAXIMUM ALLOWABLE QUANTITIES IN TABLE 307.1(1) OR WHERE A STRUCTURE, ROOM OR SPACE IS OCCUPIED FOR PURPOSES INVOLVING EXPLOSION HAZARDS AS REQUIRED BY SECTION 415 OR THE INTERNATIONAL FIRE CODE.

SECTION 414.5.2 EMERGENCY OR STANDBY POWER. WHERE REQUIRED BY THE INTERNATIONAL FIRE CODE OR THIS CODE, MECHANICAL VENTILATION, TREATMENT SYSTEMS, TEMPERATURE CONTROL ALARM, DETECTION OR OTHER ELECTRICALLY OPERATED SYSTEMS SHALL BE PROVIDED WITH EMERGENCY OR STANDBY POWER IN ACCORDANCE WITH SECTION 2702. FOR STORAGE AND USE AREAS FOR HIGHLY TOXIC OR TOXIC MATERIALS, SEE SECTIONS 6004.2.2.8 AND 6004.3.4.2 OF THE INTERNATIONAL FIRE CODE.

SECTION 414.5.3 SPILL CONTROL, DRAINAGE AND CONTAINMENT. ROOMS, BUILDINGS OR AREAS OCCUPIED FOR THE STORAGE OF SOLID AND LIQUID HAZARDOUS MATERIALS SHALL BE PROVIDED WITH A MEANS TO CONTROL SPILLAGE AND TO CONTAIN OR DRAIN OFF SPILLAGE AND FIRE PROTECTION WATER DISCHARGED IN THE STORAGE AREA WHERE REQUIRED IN THE INTERNATIONAL FIRE CODE. THE METHODS OF SPILL CONTROL SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE.

SECTION 415.3 AUTOMATIC FIRE DETECTION SYSTEMS. GROUP H OCCUPANCIES SHALL BE PROVIDED WITH AN AUTOMATICE FIRE DECTECTION SYSTEM IN ACCORDANCE WITH SECTION 907.2.

SECTION 415.4 AUTOMATIC SPRINKLER SYSTEMS. GROUP H OCCUPANCIES SHALL BE EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.2.5.

SECTION 415.5 EMERGENCY ALARMS. EMERGENCY ALARMS FOR THE DETECTION AND NOTIFICATION OF AN EMERGENCY CONDITION IN GROUP H OCCUPANCIES SHALL BE PROVIDED AS SET FORTH HEREIN.

SECTION 415.5.1 STORAGE. AN APPROVED MANUAL EMERGENCY ALARM SYSTEM SHALL BE PROVIDED IN BUILDINGS, ROOMS OR AREAS USED FOR STORAGE OF HAZARDOUS MATERIALS. EMERGENCY ALARM-INITIATING DEVICES SHALL BE INSTALLED OUTSIDE OF EACH INTERIOR EXIT OR EXIT ACCESS DOOR OF STORAGE BUILDINGS, ROOMS OR AREAS. ACTIVATION OF AN EMERGENCY ALARM-INITIATING DEVICE SHALL SOUND A LOCAL ALARM TO ALERT OCCUPANTS OF AN

EMERGENCY

SITUATION INVOLVING HAZARDOUS MATERIALS.

SECTION 415.5.3 SUPERVISION. EMERGENCY ALARM SYSTEMS REQUIRED BY SECTION 415.5.1 OR 415.5.2 SHALL BE ELECTRICALLY SUPERVISED AND MONITORED BY AN APPROVED CENTRAL, PROPRIETARY OR REMOTE STATION SERVICE OR SHALL INITIATE AN AUDIBLE AND VISUAL SIGNAL AT A CONSTANTLY ATTENDED ON-SITE LOCATION.

SECTION 415.10 GROUPS H-3 AND H-4. GROUPS H-3 AND H-4 SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THIS CODE AND THE INTERNATIONAL FIRE CODE.

OBC CHAPTER 5 GENERAL BUILDING HEIGHTS & AREAS

TABLES 504.3, 504.4 & 506.2: ALLOWABLE BUILDING HEIGHT/NUMBER OF STORIES/AREA FACTOR
OCCUPANCY CLASSIFICATION F-1/ S-2 (NONSEPARATED),
CONSTRUCTION TYPE 2B, NON-SPRINKLERED (NS):

ALLOWABLE BUILDING DATA 55'-0"/ 3 STORY/ 23,000 SQUARE FEET

ACTUAL BUILDING DATA 21'-0" / 1 STORY/ 5,062 GSF
F-1 WATER TREATMENT PLANT AREAS = 2,970 GSF
H-4 ACCESSORY HAZARDOUS STORAGE AREAS = 243 GSF
S-2 GARAGE / STORAGE AREA = 1,849 GSF

SECTION 508.3.2 ALLOWABLE BUILDING AREA, HEIGHT AND NUMBER OF STORIES. THE ALLOWABLE BUILDING AREA, HEIGHT AND NUMBER OF STORIES OF THE BUILDING OR PORTION THEREOF SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR THE OCCUPANCY GROUPS UNDER CONSIDERATION FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN ACCORDANCE WITH SECTION 503.1.

SECTION 508.3.3 SEPARATION. NO SEPARATION IS REQUIRED BETWEEN NONSEPARATED OCCUPANCIES.

EXCEPTIONS: 1. GROUP H-2, H-3, H-4 AND H-5 OCCUPANCIES SHALL BE SEPARATED FROM ALL OTHER OCCUPANCIES IN ACCORDANCE WITH SECTION 508.4.

SECTION 508.4 SEPARATED OCCUPANCIES. BUILDINGS OR PORTIONS OF BUILDINGS THAT COMPLY WITH THE PROVISIONS OF THIS SECTION SHALL BE CONSIDERED AS SEPARATED OCCUPANCIES.

TABLE 508.4: F-1 & H-4 = 1 HR (S) / 2 HR (NS)

OBC- CHAPTER 6, TABLE 601: TYPE OF CONSTRUCTION

CONSTRUCTION TYPE	2B
STRUCTURAL FRAME:	0 HR
BEARING WALLS:	0 HR
NON-BEARING WALLS:	0 HR
FLOOR CONSTRUCTION:	0 HR
ROOF CONSTRUCTION:	0 HR

602.2 TYPES I AND II: TYPES I AND II CONSTRUCTION ARE THOSE TYPES OF CONSTRUCTION IN WHICH THE BUILDING ELMENTS LISTED IN TABLE 601 ARE OF NON-COMBUSTIBLE MATERIALS, EXCEPT AS PERMITTED IN SECTION 603 AND ELSEWHERE IN THIS CODE.

OBC-CHAPTER 7
FIRE & SMOKE PROTECTION FEATURES

TABLE 705.5
FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRES EPARATION DISTANCE

FIRE SEPARATION DISTANCE = "X" (FT.)	TYP OF CONSTR.	OCCUPANCY GROUP H	OCCUPANCY GROUP F-1, M, S-1	OCCUPANCY GROUP A, B, E, F-2, I, R, S-2, U
10 ≤ X ≤ 30	2B	1	0	0
X ≥ 30	2B	0	0	0

707.3.9 SEPARATED OCCUPANCIES.

WHERE THE PROVISIONS OF SECTION 508.4 ARE APPLICABLE, THE FIRE BARRIER SEPARATING MIXED OCCUPANCIES SHALL HAVE A FIRE-RESISTANCE RATING OF NOTE LESS THAN THAT INDICATED IN TABLE 508.4 BASED ON THE OCCUPANCIES BEING SEPARATED.

TABLE 716.5 OPENINGS 2-HOUR RATED FIRE BARRIER REQUIRES 1-1/2 HOUR RATING / 100 SI

OBC-CHAPTER 8, TABLE 803.13:
INTERIOR FINISHES

GROUP	EXIT ENCLOSURES AND EXIT PASSAGEWAYS	CORRIDORS	ENCLOSED SPACES
F	B	C	C
H	A	A	B
S	B	B	C

OBC-CHAPTER 8, SECTION 804.4:
INTERIOR FLOOR FINISH

INTERIOR FLOOR FINISH REQUIREMENTS
ALL USE GROUPS - NON-SPRINKLERED FACILITY:
EXIT ENCLOSURES, PASSAGEWAYS, CORRIDORS & ROOMS
CLASS II 0.22 WATTS/CM2 OR CREATER, DOCFF-1 PILL TEST

OBC-CHAPTER 9: FIRE PROTECTION SYSTEMS

SECTION 903.2.4 NOT REQUIRED. NOT PROVIDED.
SECTION 903.2.5 REQUIRED, PROVIDED.
SECTION 903.2.10 NOT REQUIRED, NOT PROVIDED.
SECTION 906.1 PORTABLE FIRE EXTINGUISHERS: WHERE REQUIRED, PORTABLE FIRE EXTINGUISHERS
SHALL BE INSTALLED:

- IN GROUP F / H / S / OCCUPANCIES

SECTION 907.2.4 NOT REQUIRED, NOT PROVIDED
SECTION 907.2.5 REQUIRED, PROVIDED
SECTION 907.2.10 NOT REQUIRED, NOT PROVIDED

OBC-CHAPTER 10: MEANS OF EGRESS

TABLE 1004.5 - MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	OCCUPANT LOAD
INDUSTRIAL AREAS	100 GROSS
ACCESSORY STORAGE AREAS	300 GROSS
MECHANICAL & EQUIPMENT ROOMS	300 GROSS
PARKING GARAGES	200 GROSS

S-2	1,781	SF / 200 = 8.905 = 9 OCCUPANTS
F-1	2,998	SF / 100 = 29.98 = 30 OCCUPANTS
H-4	222	SF / 300 = 0.74 = 01 OCCUPANT
TOTAL		= 40 OCCUPANTS

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE

OCCUPANCY	WITHOUT SPRINKLER SYSTEM	WITH SPRINKLER SYSTEM
F-1	200'	250'
S-2	300'	400'
H-4	NOT PERMITTED	175'

OBC-CHAPTER 29: PLUMBING FIXTURES

TABLE 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES

OCCUPANCY	WATER CLOSETS	LAVATORIES	DRINKING FOUNTAINS	OTHER
FACTORY & INDUSTRIAL	1 PER 100	1 PER 100	1 PER 400	1 SERVICE SINK
PROVIDED	1	1	2	1

LIFE SAFETY PLAN LEGEND

PATH OF EGRESS TRAVEL

INDICATES UL U906 2 HR RATED FIRE BARRIER

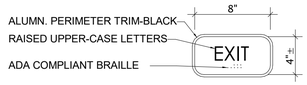
0 / 0 — ACTUAL OCCUPANT LOAD FOR THIS EXIT / ALLOWABLE OCCUPANT LOAD FOR THIS EXIT

FE — FIRE EXTINGUISHER

COMBINATION EGRESS LIGHTING/ILLUMINATED EXIT SIGN - SEE LIGHT FIXTURE SCHEDULE

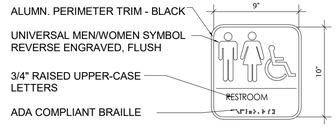
TES — TACTILE EXIT SIGN

TRS — TACTILE RESTROOM SIGN



TACTILE EXIT SIGNAGE (TES)
SEE LIFE SAFETY SHEETS FOR LOCATIONS

TACTILE EXIT SIGN
1 1/2" = 1'-0"



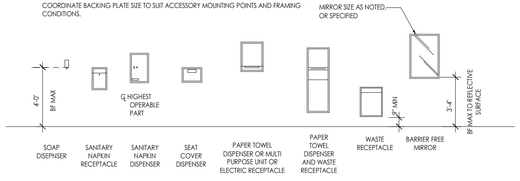
TACTILE RESTROOOM SIGNAGE (TRS)
SEE LIFE SAFETY SHEETS FOR LOCATIONS

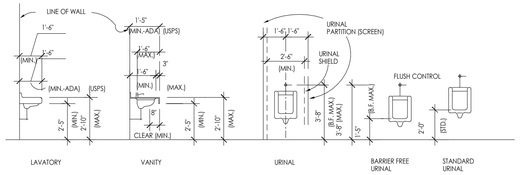
TACTILE RESTROOM SIGN
1 1/2" = 1'-0"

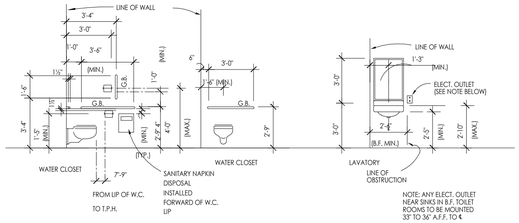
ACCESSIBLE TOILET ACCESSORIES, FIXTURES & MISCELLANEOUS

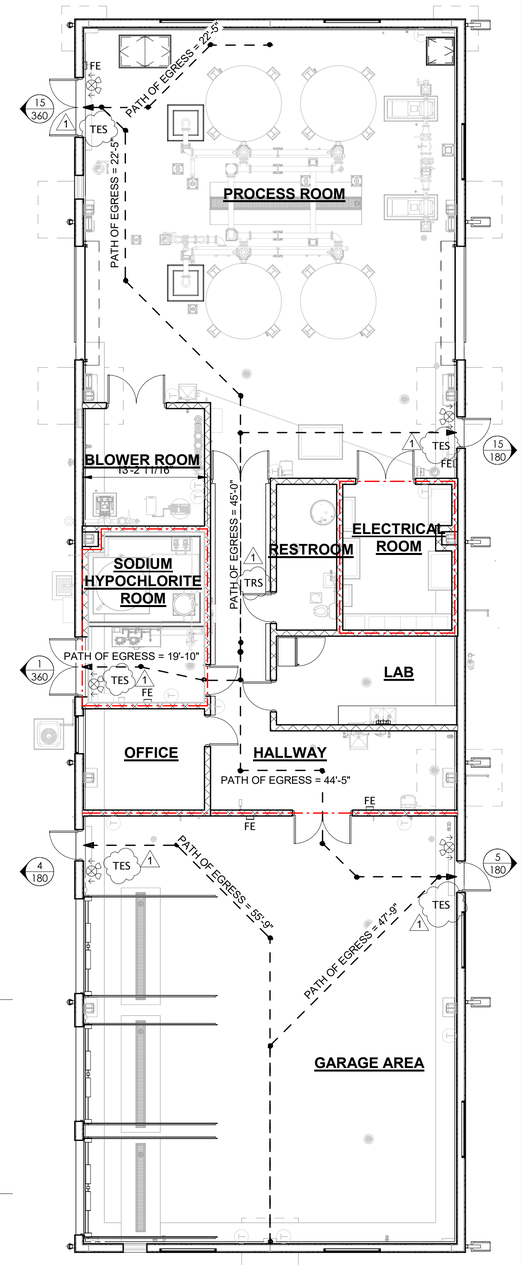
NOTES:

1. MOUNTING HEIGHTS SHOWN ARE TYPICAL. ANY VARIATIONS FOR SPECIFIC CONDITIONS ARE SHOWN ON DRAWINGS. ALL FIXTURES AND ACCESSORIES SHOWN HERE DO NOT NECESSARILY OCCUR ON THE PROJECT.
2. PROVIDE 12 GA METAL BACKING PLATE BEHIND ALL SURFACE MOUNTING TOILET ACCESSORIES. COORDINATE BACKING PLATE SIZE TO SUIT ACCESSORY MOUNTING POINTS AND FRAMING CONDITIONS.

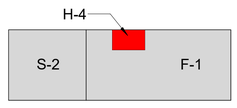








LIFE SAFETY PLAN
1/8" = 1'-0"



KEY PLAN

ANDREW KNOPP 17352 REGISTERED ARCHITECT STATE OF OHIO

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING
ARCHITECTURAL
LIFE SAFETY PLAN

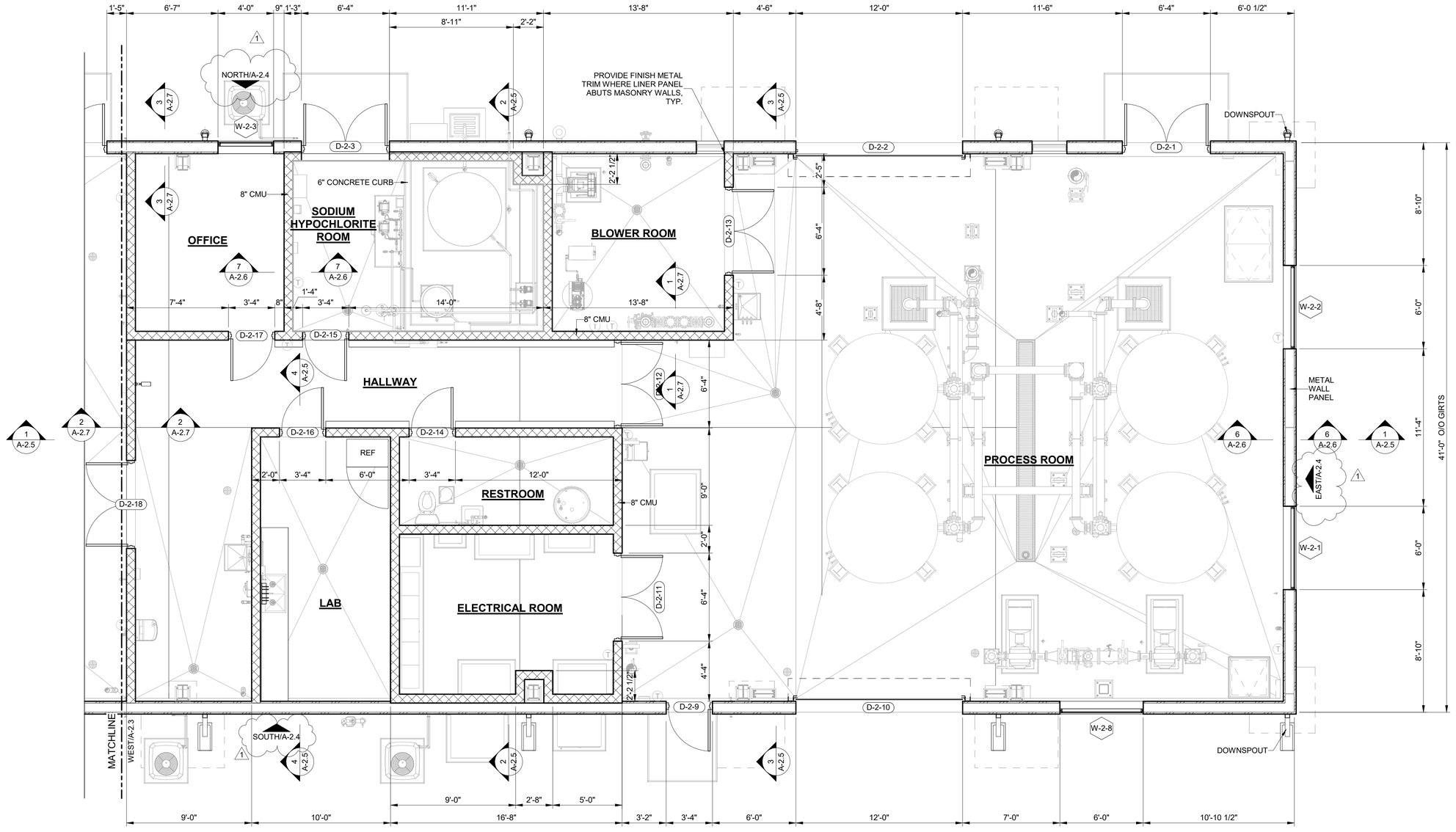
VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

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PLAN AT EL. 735.00 - EAST

1/4" = 1'-0"

KEY PLAN

STATE OF OHIO
ANDREW R. KNOPP
17352
REGISTERED ARCHITECT

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING
ARCHITECTURAL
ENLARGED FLOORPLAN - EAST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

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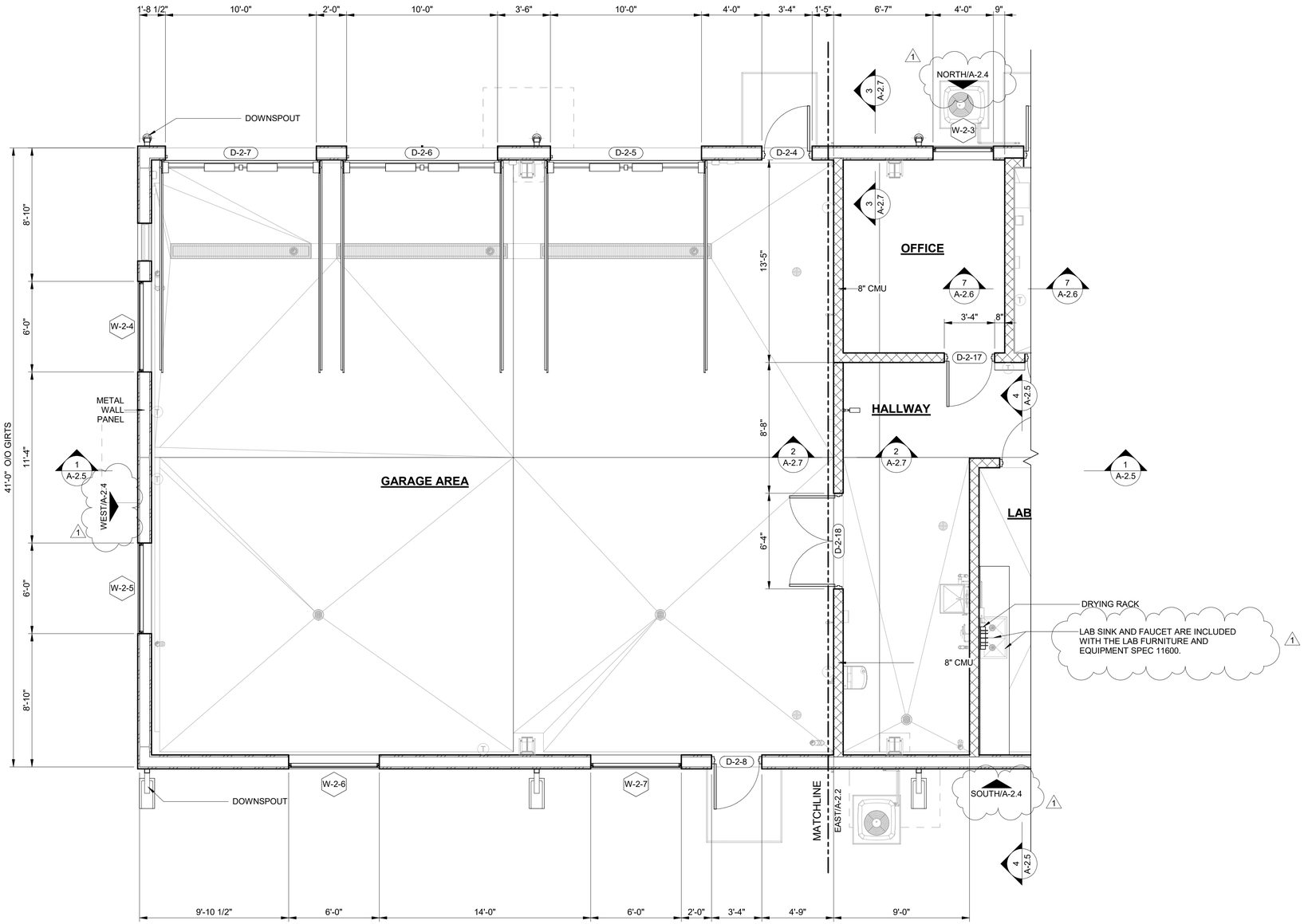
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PLAN AT EL. 735.00 - WEST

1/4" = 1'-0"

KEY PLAN

STATE OF OHIO
ANDREW R. KNOPP
17352
REGISTERED ARCHITECT

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING
ARCHITECTURAL
ENLARGED FLOORPLAN - WEST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

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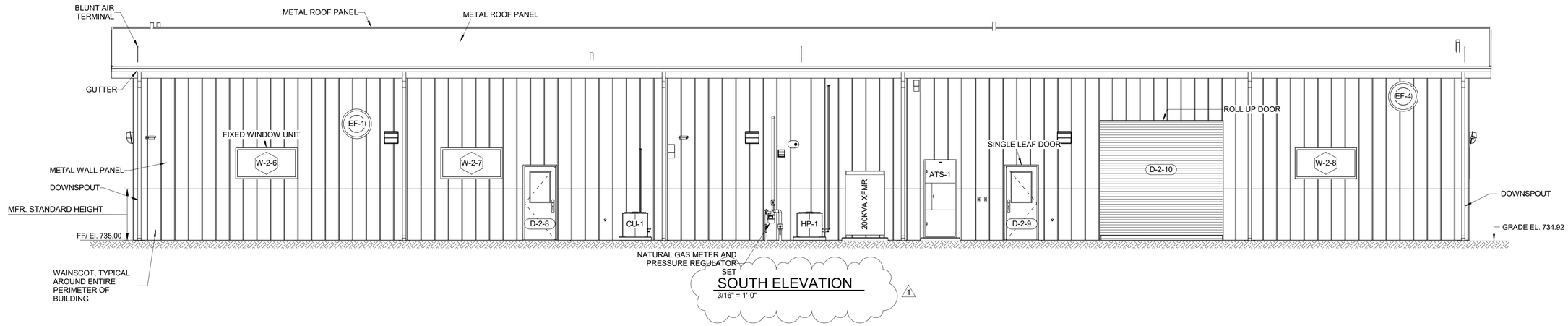
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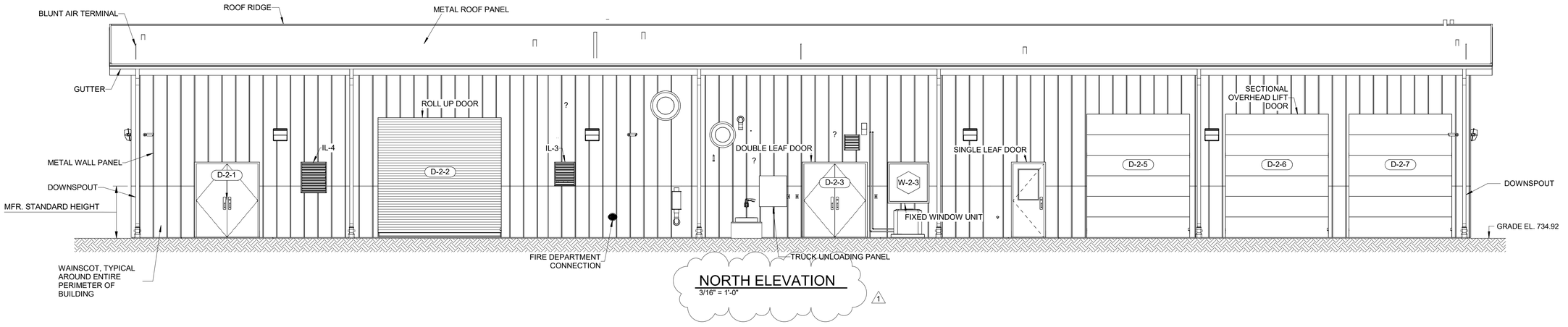
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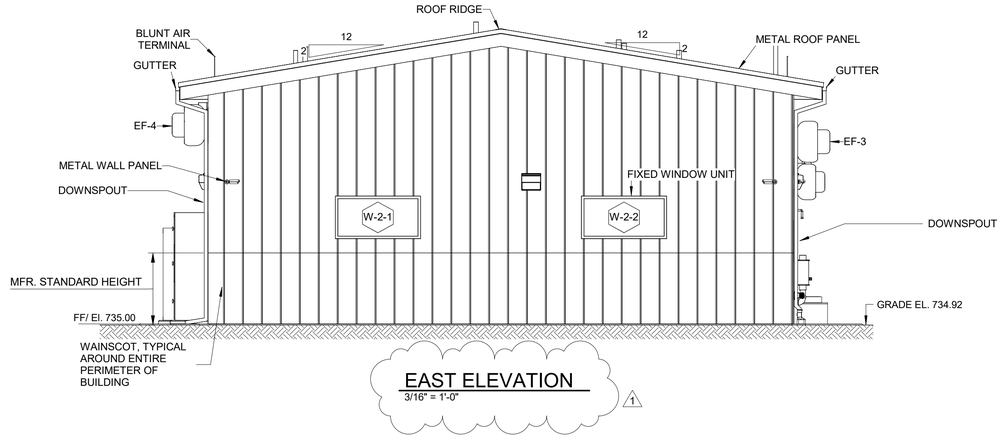
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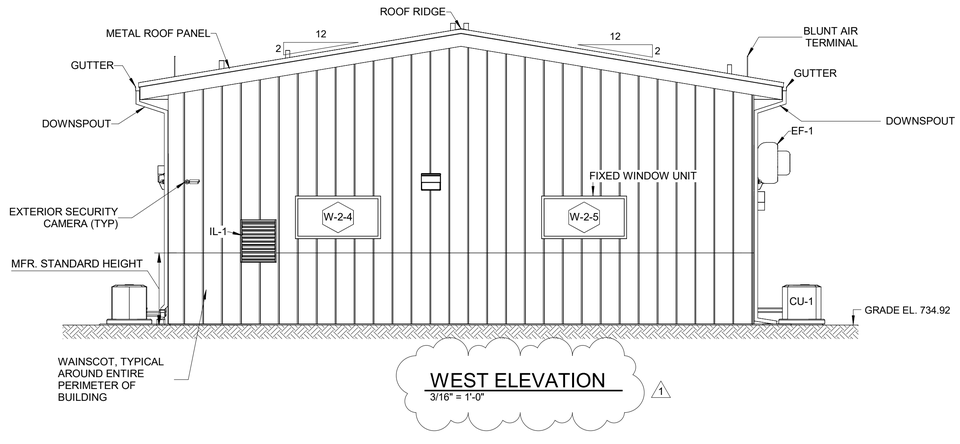
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3/16" = 1'-0"



NORTH ELEVATION
3/16" = 1'-0"



EAST ELEVATION
3/16" = 1'-0"



WEST ELEVATION
3/16" = 1'-0"

ANDREW KNOPH 17352 REGISTERED ARCHITECT STATE OF OHIO

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING
ARCHITECTURAL
EXTERIOR ELEVATIONS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	12/4/25	ADDENDUM 2	

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JOB NO.:	564-8141.001
SCALE:	3/16" = 1'-0"

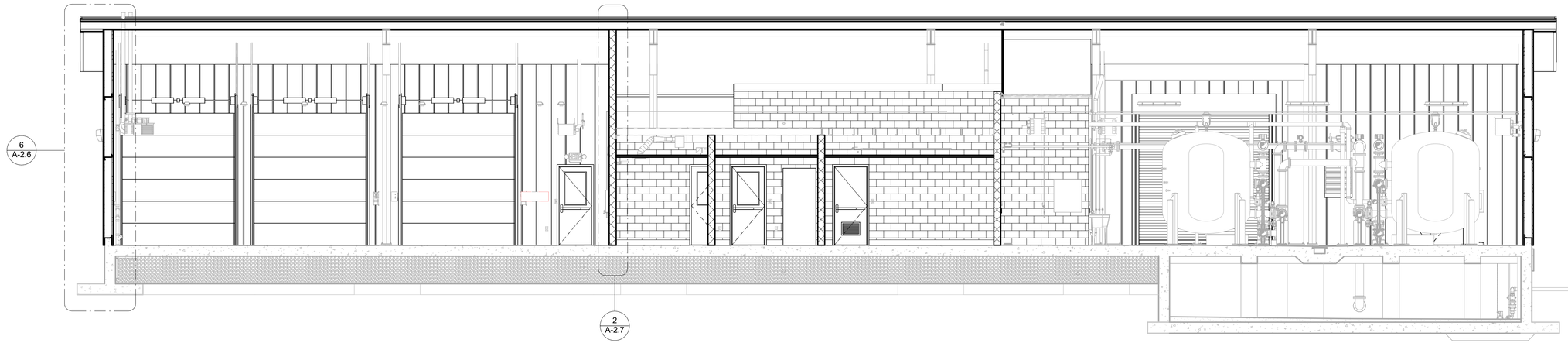
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ARK	YS	XXX

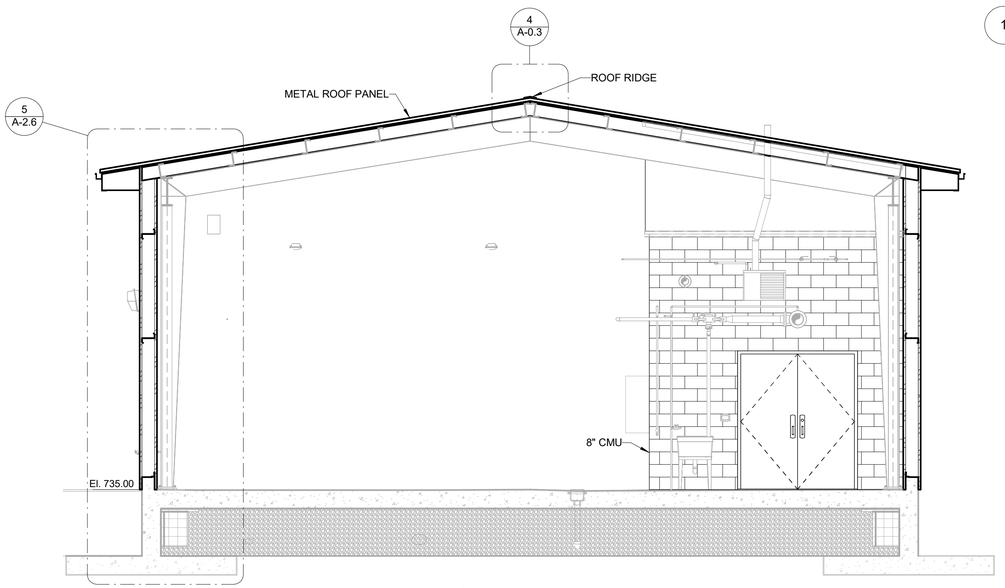
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26 OF 98

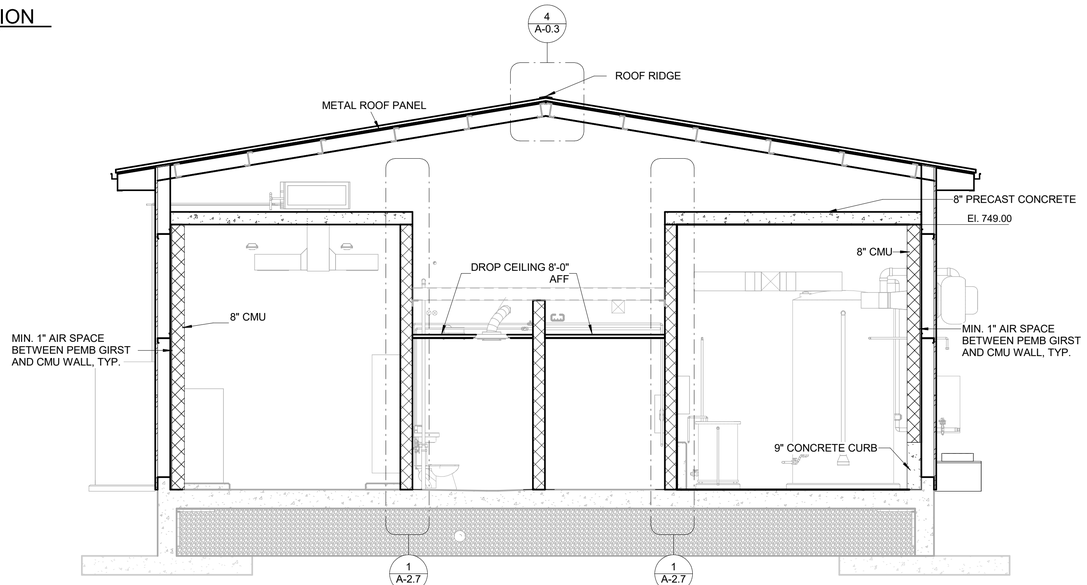
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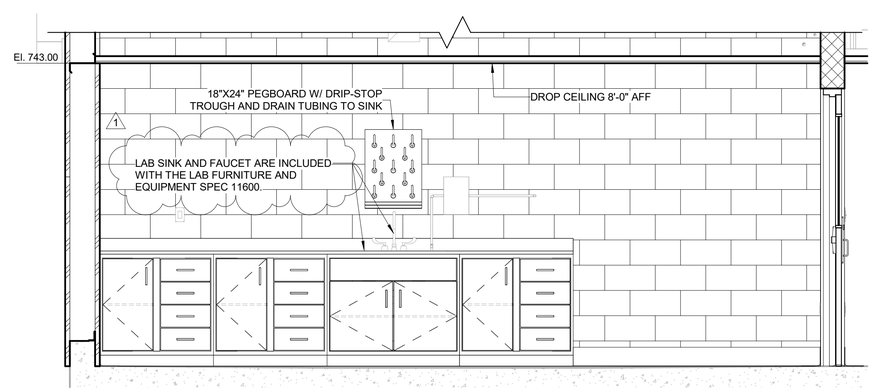
1 SECTION
3/16" = 1'-0"



3 SECTION
1/4" = 1'-0"



2 SECTION
1/4" = 1'-0"



4 SECTION
1/2" = 1'-0"

STATE OF OHIO
ANDREW R. KNOPP
17352
REGISTERED ARCHITECT

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING ARCHITECTURAL SECTIONS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	12/4/25	ADDENDUM 2	

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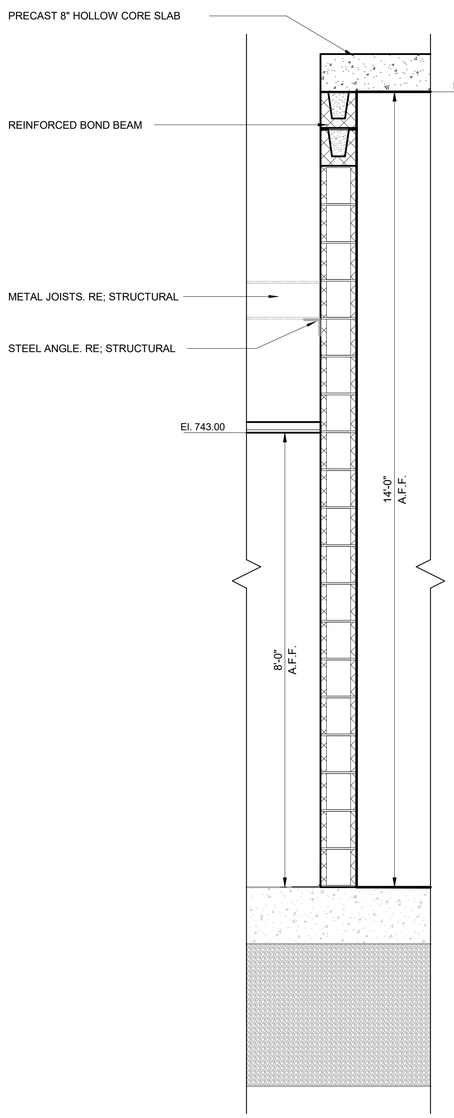
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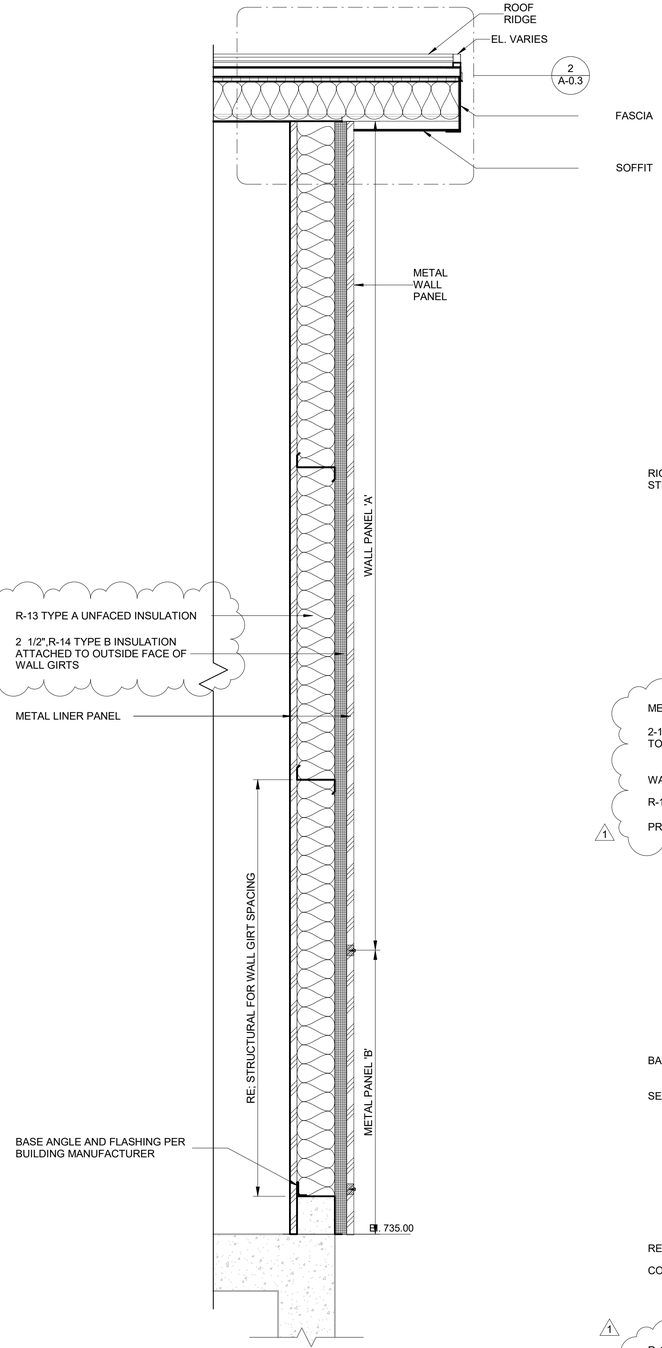
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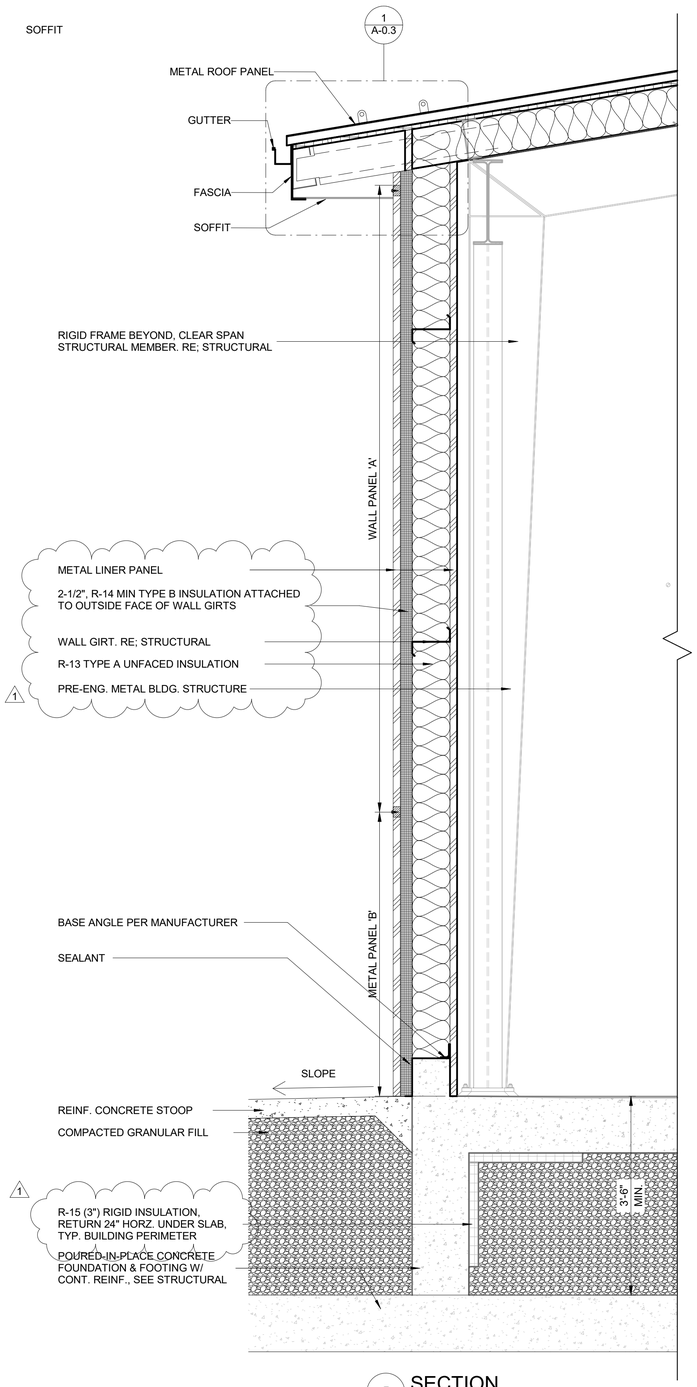


7 SECTION
3/4" = 1'-0"



NOTE: PANEL "A" AND "B" SHALL BE DIFFERENT COLORS AS SELECTED BY OWNER FROM MANUFACTURER'S STANDARD COLORS.

6 SECTION
3/4" = 1'-0"



5 SECTION
3/4" = 1'-0"

NOTE: REFER TO STRUCTURAL DRAWINGS FOR ALL CONCRETE AND MASONRY REINFORCING

STATE OF OHIO
ANDREW R. KNOPP
17352
REGISTERED ARCHITECT

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING ARCHITECTURAL SECTIONS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
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JOB NO.:	564-8141.001
SCALE:	3/4" = 1'-0"

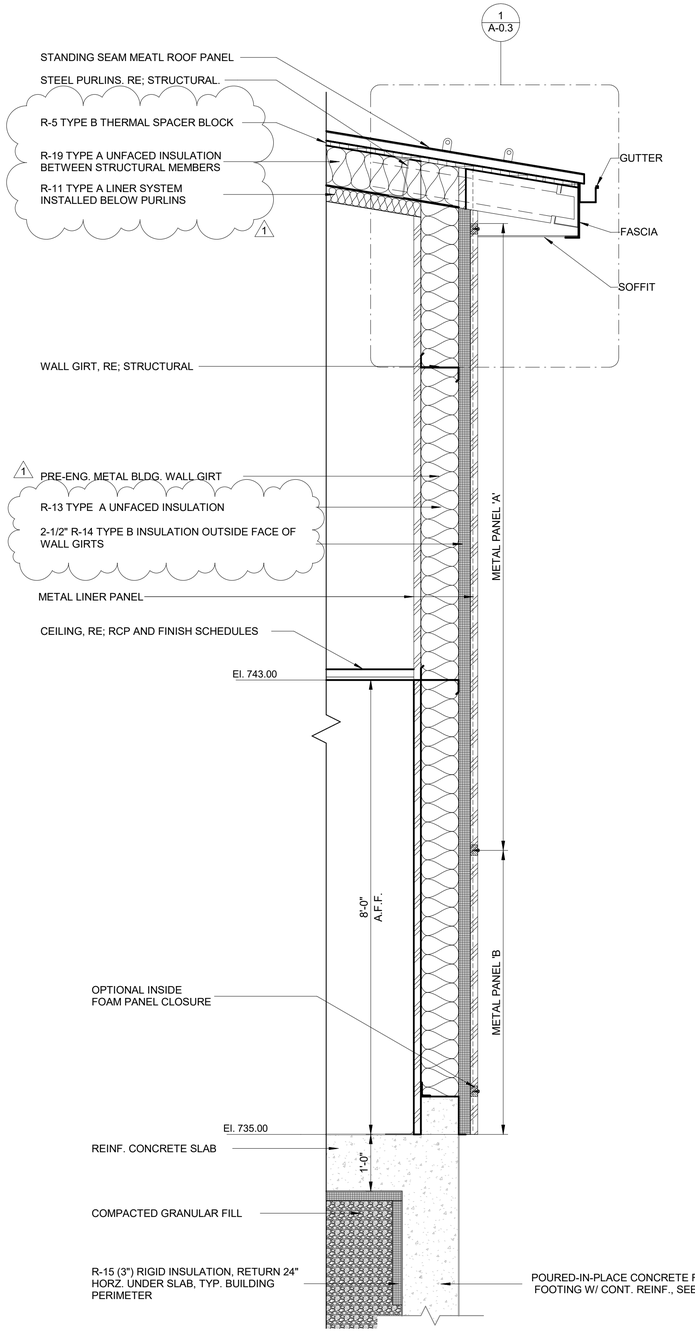
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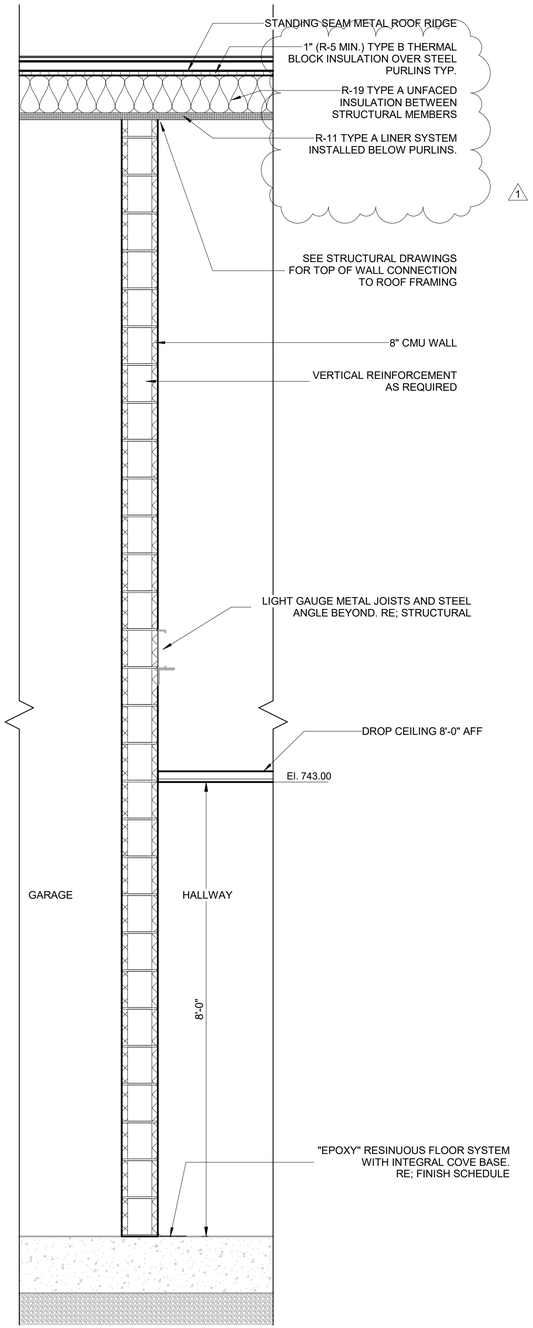
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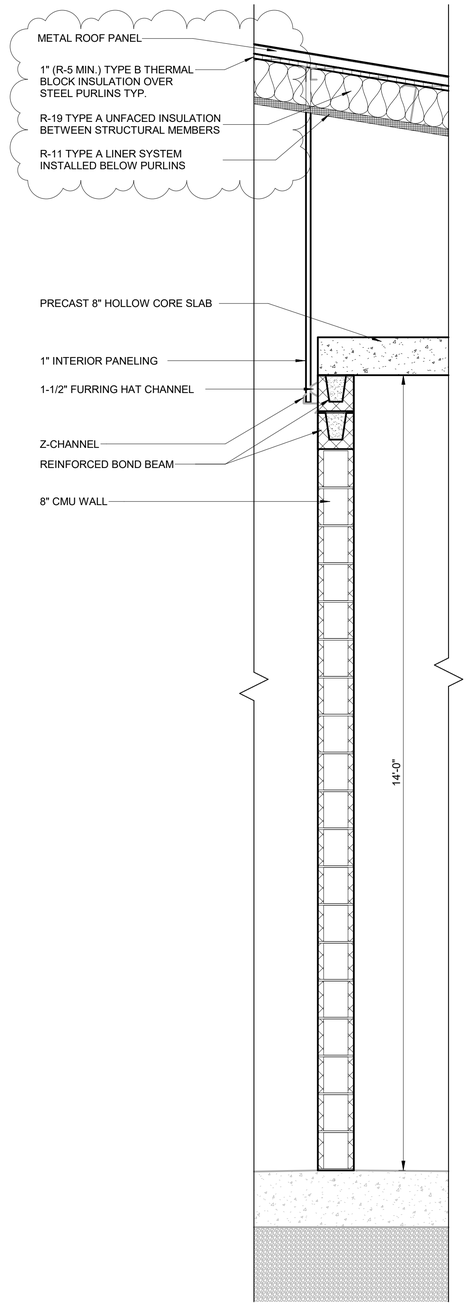
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3 SECTION
3/4" = 1'-0"



2 SECTION
3/4" = 1'-0"



1 SECTION
3/4" = 1'-0"

NOTE: REFER TO STRUCTURAL DRAWINGS FOR ALL CONCRETE AND MASONRY REINFORCING

STATE OF OHIO
ANDREW R. KNOPP
17352
REGISTERED ARCHITECT

THOMAS PORTER ARCHITECTS

WATER TREATMENT BUILDING
ARCHITECTURAL SECTIONS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
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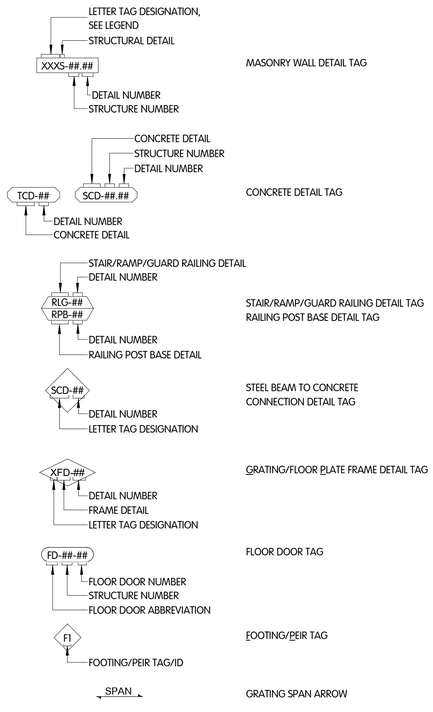
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29 OF 98

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STRUCTURAL SHEET SYMBOLS



STRUCTURAL TAG LEGEND

TCD	-TYPICAL CONCRETE DETAILS
SCD	-STANDARD CONCRETE DETAILS
GFD	-GRATING FRAME DETAILS
PFD	-FLOOR PLATE FRAMES DETAILS
GSD	-GRATING SUPPORT DETAILS
STR	-STAIR RAILING DETAILS
RLG	-GUARD RAILING DETAILS
RPB	-RAILING POSE BASE DETAILS
PWTS	-PARAPET WALL TOP DETAILS, STRUCTURAL
WBS	-WALL BASE DETAILS, STRUCTURAL
WPCS	-WALL/PLANK CONNECTION DETAILS, STRUCTURAL
WTCS	-WALL/TRUSS CONNECTION DETAILS, STRUCTURAL

STRUCTURAL ABBREVIATIONS

ALUM	ALUMINUM
B	BOTTOM
BLDG	BUILDING
C/C	CENTER TO CENTER
CJ	CONTROL JOINT
CSJ	CONSTRUCTION JOINT
DBR	DOWEL BAR REPLACMENT
DIA	DIAMTER
DEG	DEGREES
DIAG	DIAGONAL
DL	DEAD LOAD
EL	ELEVATION
EMB	EMBEDMENT
EXP.JT	EXPANSION JOINT
EXT	EXTERIOR
EXIST	EXISTING
FRB	FIBERGLASS
FTG	FOOTING
GALV	GALVANIZED
HORIZ	HORIZONTAL
INT	INTERIOR
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
NTS	NOT TO SCALE
O/O	OUT TO OUT
REINF	REINFORCING
SL	SNOW LOAD
SS	STAINLESS STEEL
STD	STANDARD
T	TOP
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
WL	WIND LOAD

TYPICAL STRUCTURAL NOTES

1. THE CONSTRUCTION SHALL CONFORM TO THE TYPICAL STRUCTURAL NOTES, DETAILS AND SCHEDULES, UNLESS NOTED OTHERWISE. TYPICAL NOTES, DETAILS AND SCHEDULES ARE PREFIXED WITH THE WORD "TYPICAL".
2. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SUPERVISION AND CONTROL OF DEWATERING OPERATIONS TO ENSURE THAT STABILITY OF EXCAVATED AND CONSTRUCTED SLOPES ARE NOT ADVERSELY AFFECTED BY INFLOW OF GROUNDWATER AND TO PERMIT PLACEMENT AND CURING OF CONCRETE UNDER CONTROLLED ENVIRONMENTS.
3. BACKFILL UNDERNEATH BASE SLABS AND FOOTINGS SHALL BE SPECIAL BACKFILL, UNLESS OTHERWISE APPROVED. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATION 02200 AND SHALL BE WELL COMPACTED TO NOT LESS THAN 100% MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE STANDARD PROCTOR TEST ASTM D-698.
4. VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS AT THE INTERFACE BETWEEN EXISTING & NEW CONSTRUCTION PRIOR TO DETAILING STRUCTURAL STEEL OR REINFORCEMENT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOR RESOLUTION.
5. THE CONTRACTOR SHALL ENSURE THAT FOUNDATIONS REST ON FIRM SOIL MATERIAL. THE TESTING LAB SHALL VERIFY THAT THE SOIL BEARING CAPACITY LISTED BY THE "STRUCTURAL DESIGN DATA" TABLE IS OBTAINED PRIOR TO FOUNDATION PLACEMENT. THE BEARING CAPACITY VERIFICATION IS REQUIRED AT REGULAR INTERVALS IN EACH DIRECTION. NOTIFY THE ENGINEER OF ANY UNSUITABLE SOIL ENCOUNTERED. SUCH SOIL SHALL BE REMOVED AND REPLACED PER SPECIFICATION 02200.
6. DURING EXCAVATION OPERATIONS THE CONTRACTOR SHALL PREVENT THE UNDERMINING OF, AND DAMAGE TO, NEARBY NEW AND EXISTING STRUCTURES, AND UTILITIES, WITH SOIL SUPPORT METHOD SUCH AS SHEET PILING, SHAFT CONSTRUCTION, SOIL NAILING, UNDERPINNING, SOLIDER PILE & LAGGING, OR OTHER SOIL SUPPORT METHODS. THE NEARBY STRUCTURES SHALL BE MONITORED FOR SETTLEMENT WHILE THE EXCAVATION REMAINS OPEN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SOIL SUPPORT AND UNDERPINNING METHODS. WHEN SHEET PILING OR OTHER SOIL SUPPORT STRUCTURES RETAIN MORE THAN 20 FEET OF SOIL, THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL ENGINEER TO DESIGN THE SUPPORT. THE CONTRACTOR'S EMPLOYED ENGINEER SHALL SUBMIT SEALED CALCULATIONS AND DRAWINGS TO THE ENGINEER OF RECORD.

STRUCTURAL DESIGN DATA

BUILDING CODE	2024 OHIO BUILDING CODE	
RISK CATEGORY		= IV
FLOOR	LIVE LOAD, UNLESS OTHERWISE NOTED	= 150 PSF
FLAT ROOF	LIVE LOAD MECHANICAL & ELECTRICAL	= 20 PSF (MIN.) = 10 PSF
SNOW	GROUND SNOW LOAD FLAT ROOF SNOW EXPOSURE FACTOR SNOW LOAD IMPORTANCE FACTOR THERMAL FACTOR	= P_G = 20 PSF = P_f = 24 PSF = C_E = 1.0 = I_S = 1.2 = C_T = 1.0
WIND	BASIC WIND SPEED WIND EXPOSURE	= 120 MPH = C
SEISMIC	SEISMIC IMPORTANCE FACTOR SITE CLASS SEISMIC DESIGN CATEGORY DESIGN SPECTRAL RESPONCE ACCELERATIONS ANALYSIS PROCEDURE	= IE = 1.5 = D = C = S_{DS} = 0.148 = S_{D1} = 0.099 = EQUIVALENT LATERAL FORCE
GRATING	LIVE LOAD, UNLESS OTHERWISE NOTED	= 100 PSF
SOILS	NET DESIGN BEARING CAPACITY	= 2500 PSF
CONCRETE	DESIGN STRENGTH AT 28 DAY	= 4500 PSI
FLOOD	100 YEAR ELEVATION	= 713.00
DATUM		NAVD 1988

PIPE PENETRATION SCHEDULE

TAG/ID	SIZE	TYPE	CL PIPE EL (UNO)	CONNECTION	USE
1-DETENTION BASIN					
PP-1-1	8"	TYPE A	736.00	FL X PE	RW
PP-1-2	6"	TYPE A	743.34	FL X FL	RW
PP-1-3	6"	TYPE A	743.34	FL X FL	RW
PP-1-4	8"	TYPE A	743.11	FL X FL	RW
1 PP-1-5	6"	TYPE A	743.11	FL X FL	RW
PP-1-6	8"	TYPE A	---	MJ X MJ	AW
PP-1-7	8"	TYPE A	---	MJ X MJ	AW
PP-1-8	6"	TYPE D	---	N/A	V
PP-1-9	6"	TYPE D	---	N/A	V
PP-1-10	4"	TYPE D	---	N/A	V
PP-1-11	4"	TYPE D	---	N/A	V
PP-1-12	6"	TYPE D	---	N/A	AW
PP-1-13	6"	TYPE D	---	N/A	AW
2-WATER TREATMENT BUILDING					
PP-2-1	8"	TYPE D	---	N/A	AW
PP-2-2	8"	TYPE D	---	N/A	FW
PP-2-3	8"	TYPE D	---	N/A	CAR
PP-2-4	8"	TYPE A	729.50	MJ X MJ	FW
PP-2-5	8"	TYPE A	729.50	MJ X MJ	AW
PP-2-6	6"	TYPE C	732.21	N/A	SA
PP-2-7	4"	TYPE C	732.58	N/A	SA
PP-2-8	4"	TYPE C	746.50	N/A	AWS
PP-2-9	4"	TYPE C	746.50	N/A	PW
PP-2-10	4"	TYPE C	736.50	N/A	AWS
PP-2-11	4"	TYPE F	746.50	N/A	V
PP-2-12	8"	TYPE C	732.66	N/A	CAR

NOTES: PENETRATION SCHEDULE

1. 4" AND LARGER PENETRATIONS SCHEDULED ONLY. PENETRATIONS SMALLER THAN 4" NOT SCHEDULED.

CONCRETE BEAM SCHEDULE

TAG/ID	SIZE WIDTH	SIZE DEPTH	REINFORCEMENT TOP CONT.	TOP ADDITIONAL	BOTTOM CONT.	BOTTOM ADDITIONAL	REMARKS	STIRRUPS SIZE	STIRRUPS SPACING EACH END
2-WATER TREATMENT BUILDING									
CB-2-1	18"	20"	(3) #6		(3) #6			#3 TIES	@8" ACROSS BEAM
CB-2-2	18"	20"	(3) #6		(3) #6			#3 TIES	@8" ACROSS BEAM
CB-2-3	18"	20"	(4) #6		(4) #6			#3 TIES	@8" ACROSS BEAM
CB-2-4	18"	20"	(4) #6		(4) #6			#3 TIES	@8" ACROSS BEAM

FLOOR DOOR SCHEDULE

TAG / ID	SIZE (LXW)	NOTES
1-DETENTION BASIN		
FD-1-1	30" X 30"	
FD-1-2	36" X 42"	
FD-1-3	30" X 30"	
FD-1-4	36" X 42"	
2-WATER TREATMENT BUILDING		
FD-2-1	36" X 60"	
FD-2-2	30" X 30"	

FOOTING AND PIER SCHEDULE

TAG/ID	FOOTING SIZE (DxWxL)	FOOTING T/FOOTING	FOOTING REINFORCING	PIER SIZE (AxB)	PIER T/ PIER ELEVATION	PIER REINFORCING	PIER TIES	NOTES
2-WATER TREATMENT BUILDING								
F1	1'-0" x 6'-0" x 9'-0"	731.50	#5@12 EWTB	2'-3" x 2'-0"	735.00	(14)#5	#4@10, (3)#4@3 AT TOP	SEE FOOTING DETAILS FOR MORE INFORMATION
F2	1'-0" x 6'-0" x 9'-0"	731.50	#5@12 EWTB	2'-3" x 3'-3"	735.00	(20)#5	#4@10, (3)#4@3 AT TOP	SEE FOOTING DETAILS FOR MORE INFORMATION
F3	1'-0" x 4'-9" x 4'-9"	731.50	#5@12 EWTB	2'-4" x 1'-4"	735.00	(18)#5	#4@10, (3)#4@3 AT TOP	
F4	1'-0" x 6'-0" x 6'-0"	731.50	#5@12 EWTB	1'-4" x 1'-4"	735.00	(10)#5	#4@10, (3)#4@3 AT TOP	
F5	1'-0" x 4'-9" x 4'-9"	728.00	#5@12 EWTB	2'-4" x 1'-4"	734.00	(18)#5	#4@10, (3)#4@3 IN SLAB ABOVE	EXTEND VERTICAL BARS INTO SLAB
F6	1'-0" x 6'-0" x 6'-0"	728.00	#5@12 EWTB	1'-4" x 1'-4"	734.00	(10)#5	#4@10, (3)#4@3 IN SLAB ABOVE	EXTEND VERTICAL BARS INTO SLAB
F7	1'-0" x 6'-0" x 9'-0"	728.00	#5@12 EWTB	1'-11" x 3'-3"	734.00	(18)#5	#4@10, (3)#4@3 IN SLAB ABOVE	EXTEND VERTICAL BARS INTO SLAB

NOTE:
SCHEDULES ARE NOT GUARANTEED TO BE COMPLETE. ALL ITEMS SHOWN ON THE DRAWINGS OR SPECIFIED SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR WHETHER OR NOT LISTED IN THE FOLLOWING SCHEDULE.

STRUCTURAL LEGENDS, ABBREVIATIONS, SCHEDULES, AND NOTES

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	BY
1	10/10/26 ADDENDUM 2	JDM

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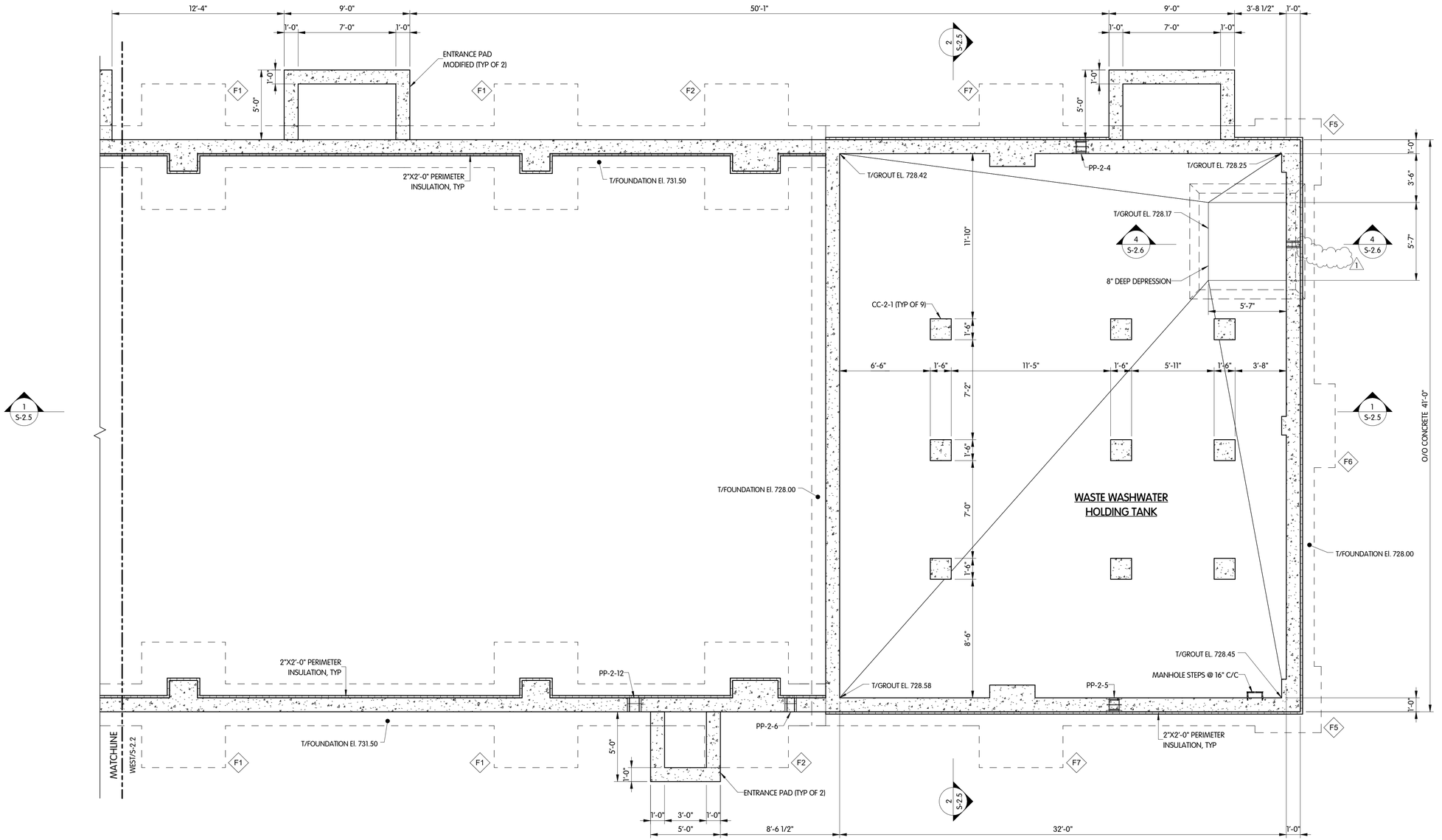
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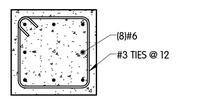
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PLAN AT EL. 731.50 - EAST

1/4" = 1'-0"



CONCRETE COLUMN CC-2-1 DETAIL

3/4" = 1'-0"

KEY PLAN

WATER TREATMENT BUILDING
STRUCTURAL
PLAN AT EL. 731.50 - EAST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

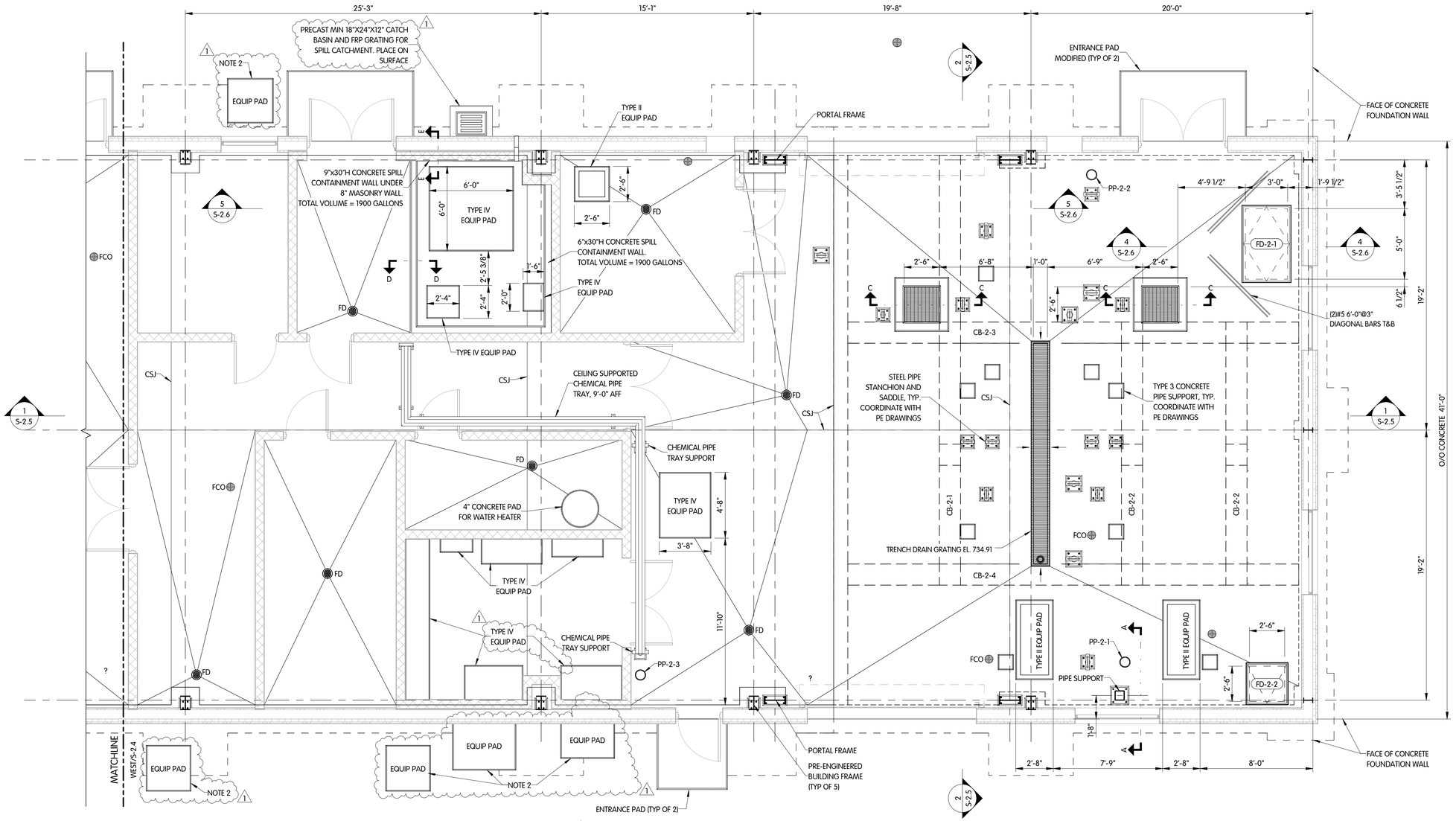
NO.	DATE:	REVISIONS AFTER ISSUED FOR BID	BY
1	10/30/26	ADDENDUM 2	JDM

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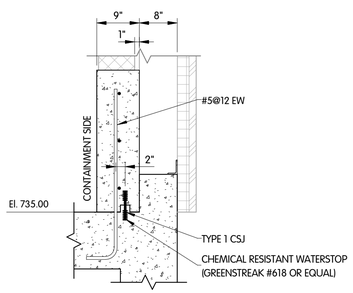
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DRAWN	AAE
CHECKED	JDN
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DATE:	9/28/26
SHEET NO.	S-2.1
	41 OF 98

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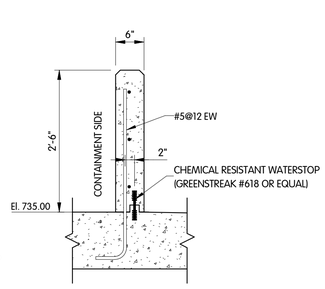


NOTES:
1. APPROXIMATE FLOOR DRAIN EL. 734.94 UNO. SLOPE FLOOR TO FLOOR DRAINS.
2. 6" SLAB WITH #4@12 EW, CENTER, ON 6" COMPACTED BACKFILL. SLAB SHALL BE MIN. 4" LARGER THAN EQUIPMENT ON ALL SIDES. BACKFILL NOT REQUIRED WHERE EQUIPMENT IS LOCATED ON DRIVEWAY.

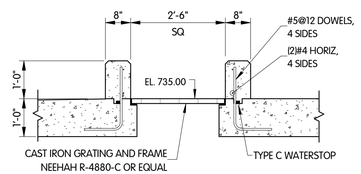
PLAN AT EL. 735.00 - EAST
1/4" = 1'-0"



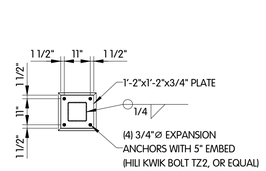
E DETAIL 3/4" = 1'-0"



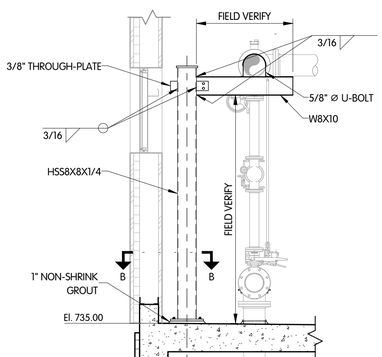
D DETAIL 3/4" = 1'-0"



C DETAIL 1/2" = 1'-0"



B DETAIL 3/8" = 1'-0"



A DETAIL 3/8" = 1'-0"

KEY PLAN

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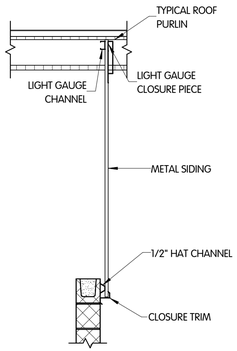
WATER TREATMENT BUILDING STRUCTURAL
PLAN AT EL. 735.00 - EAST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

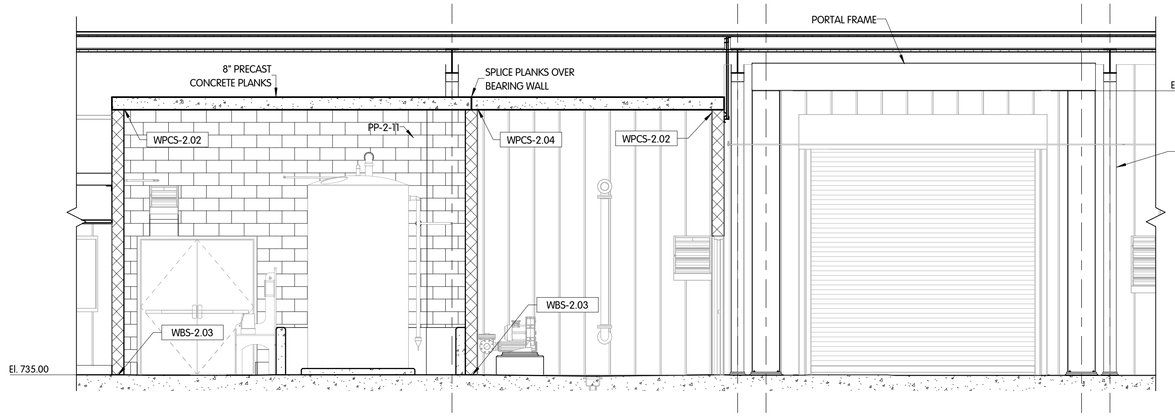
NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	01/30/26	ADDENDUM 2	JDM

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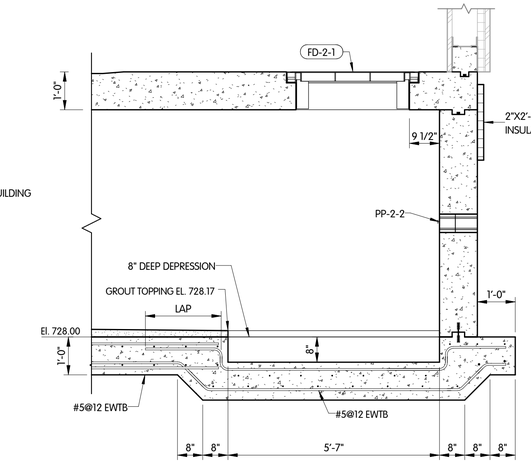
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	THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED	DRC
DRAWN	AAE
CHECKED	JDN
STATUS:	ISSUED FOR BID
DATE:	9/28/26
SHEET NO.	S-2.3
	43 OF 98



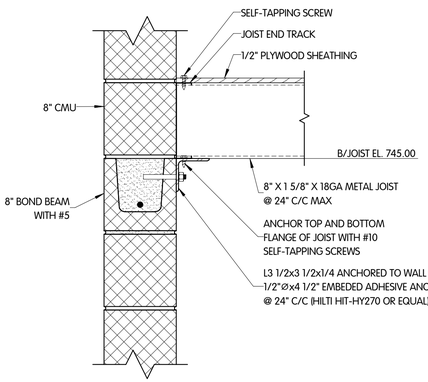
A DETAIL
1/2" = 1'-0"



5 SECTION
1/4" = 1'-0"

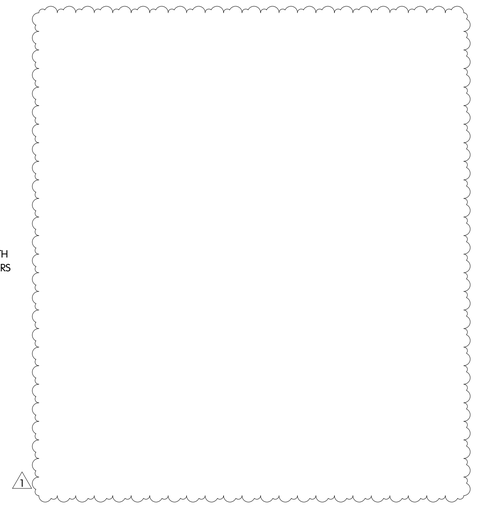


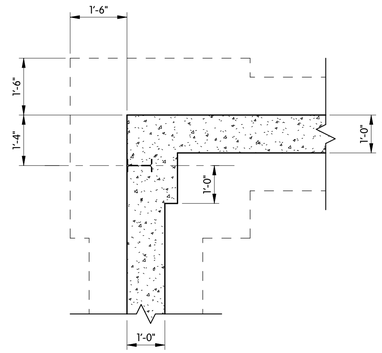
4 SECTION
1/2" = 1'-0"



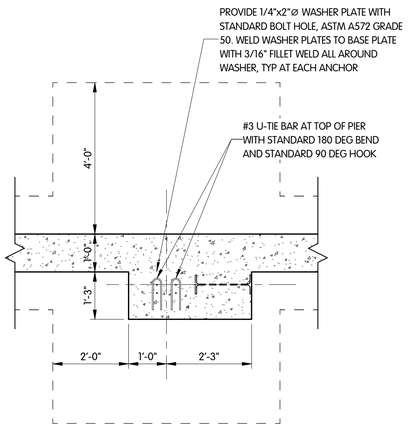
NOTE:
RESTROOM AND EAST-WEST HALLWAY JOIST SPAN NORTH-SOUTH DIRECTION.
ALL OTHER JOISTS SPAN EAST-WEST DIRECTION.

SUSPENDED CEILING SUPPORT FRAMING CONNECTION TO SIDE OF CMU WALL
C 1 1/2" = 1'-0"

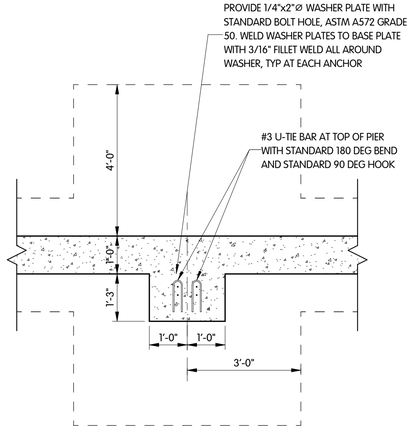




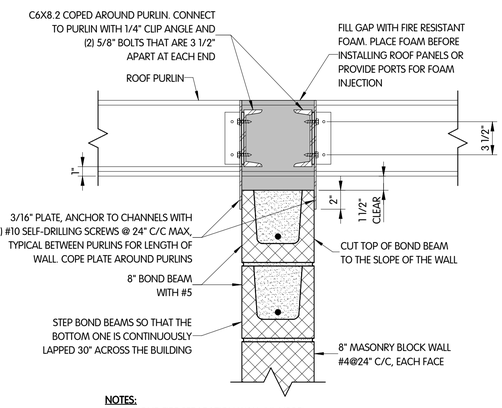
FOOTING DETAIL- F3
1/2" = 1'-0"



FOOTING DETAIL- F2
1/2" = 1'-0"

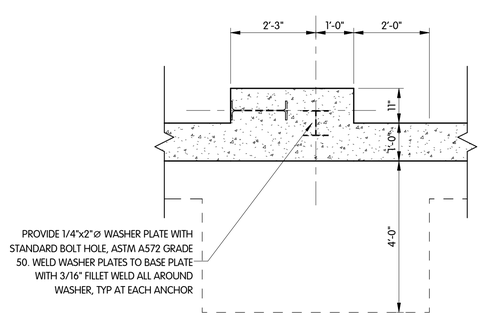


FOOTING DETAIL- F1
1/2" = 1'-0"

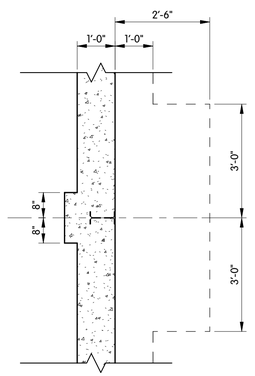


NOTES:
1. 2-HOUR FIRE SEPARATION WALL (UL U905).
2. THE CONTRACTOR MAY USE STEEL WOOL TO COMPLETELY FILL THE VOID ABOVE THE WALL IN LIEU OF THE FIRE RATED FOAM.

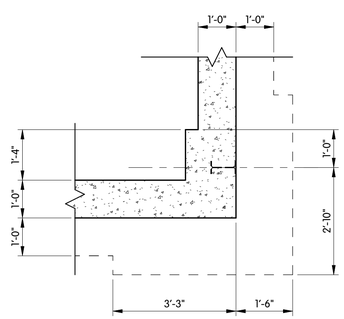
D TOP OF MASONRY SEPERATION WALL DETAIL
1 1/2" = 1'-0"



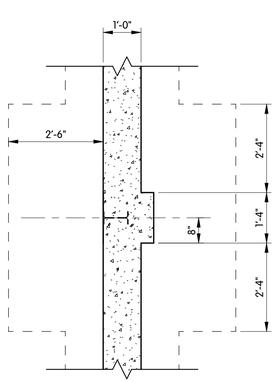
FOOTING DETAIL- F7
1/2" = 1'-0"



FOOTING DETAIL- F6
1/2" = 1'-0"



FOOTING DETAIL- F5
1/2" = 1'-0"



FOOTING DETAIL- F4
1/2" = 1'-0"

WATER TREATMENT BUILDING
STRUCTURAL
SECTIONS AND DETAILS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/30/26	ADDENDUM 2	JDH

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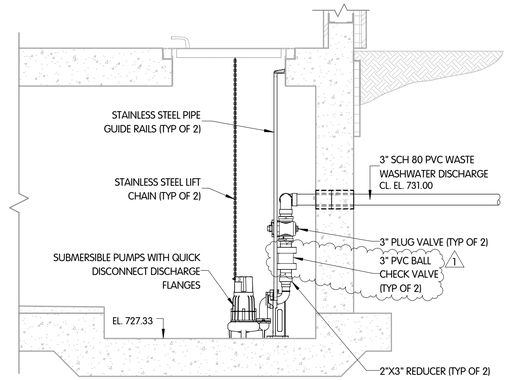
JOB NO.: 564-8141.001
SCALE: AS INDICATED
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
DRC	AAE	JDN

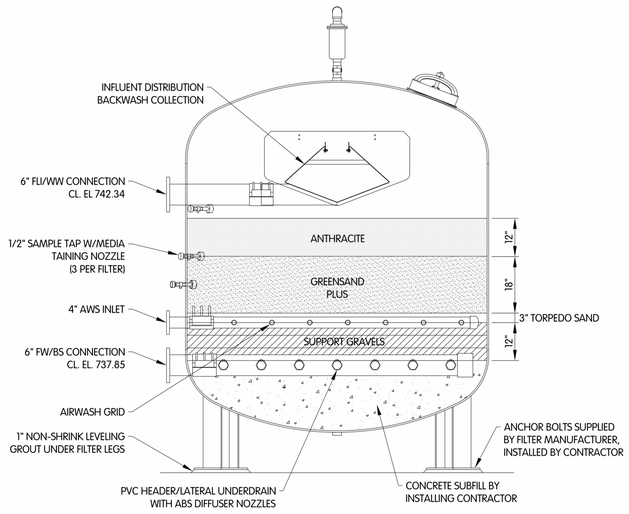
STATUS: ISSUED FOR BID
DATE: 9/28/26

SHEET NO.
S-2.6
46 OF 98

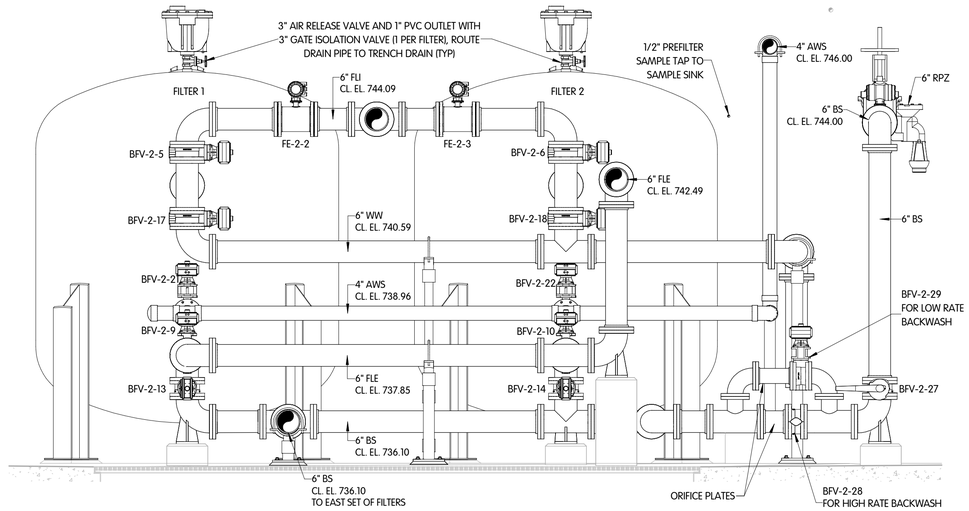
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6 SECTION
1/2" = 1'-0"

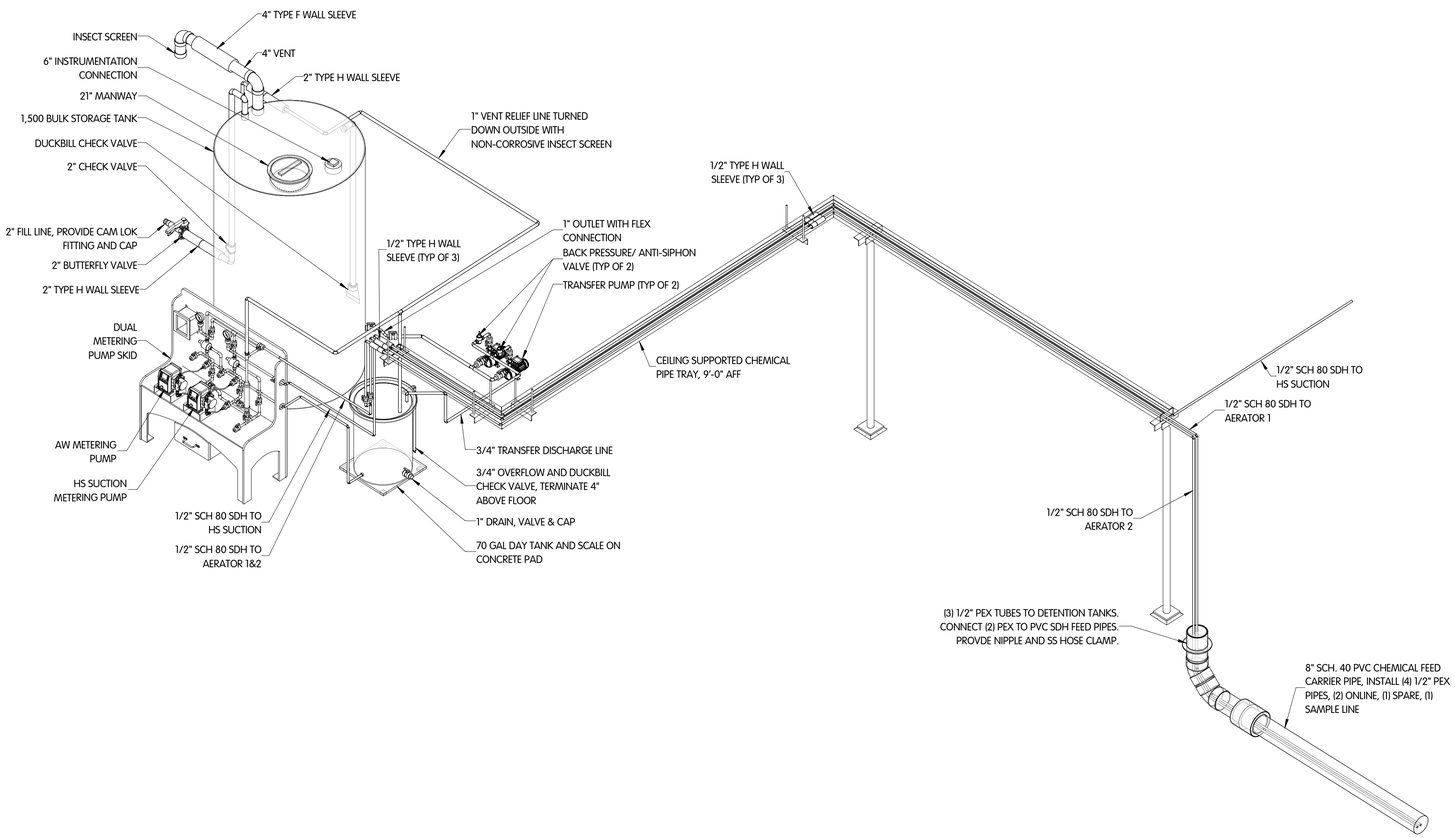


A DETAIL
1/2" = 1'-0"

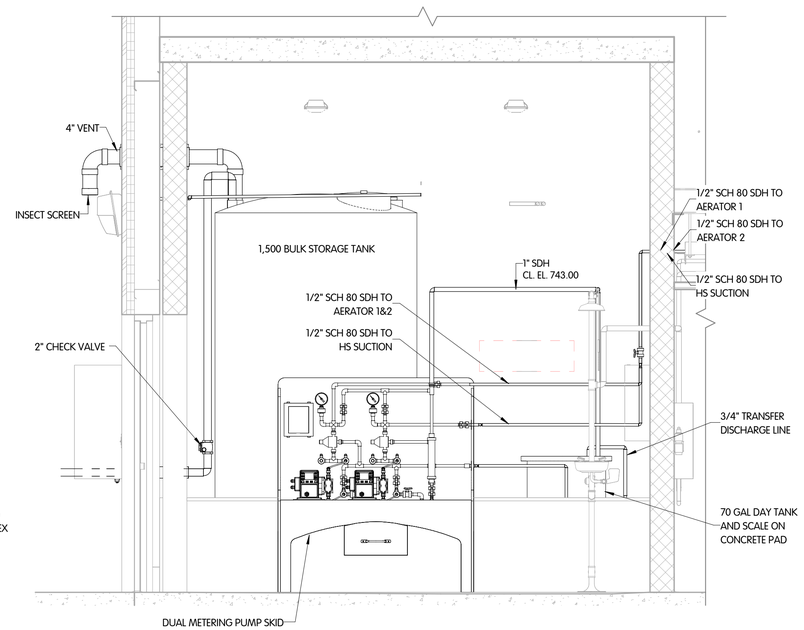


NOTES:
1. FILTER FACE PIPING PROVIDED BY THE FILTER MANUFACTURER FOR INSTALLATION BY THE CONTRACTOR. COORDINATE EXTENT OF FILTER PIPING SUPPLIED WITH FILTER MANUFACTURER.

5 SECTION
1/2" = 1'-0"



SODIUM HYPOCHLORITE FEED ISOMETRIC
NTS



7 SECTION
1/2" = 1'-0"

WATER TREATMENT BUILDING PIPING & EQUIPMENT SECTIONS, DETAILS, AND ISOMETRIC

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/31/26	ADDENDUM 2	JDM

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JOB NO.:	564-8141.001
SCALE:	1/2" = 1'-0"

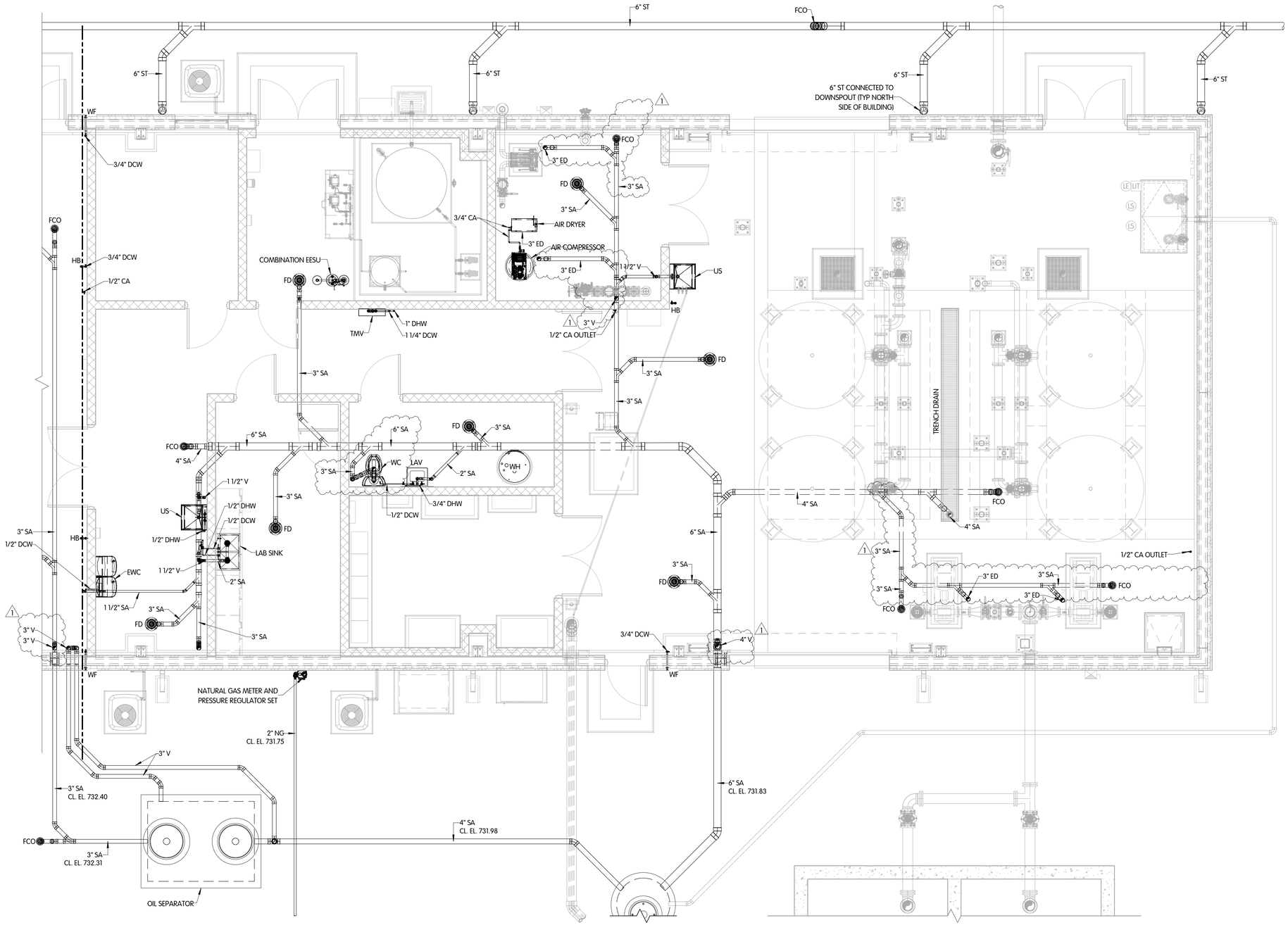
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
JDM	AAE	JDM

STATUS: ISSUED FOR BID
DATE: 9/28/26

SHEET NO.
PE-2.4
55 OF 98

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PLAN AT EL. 728.00 - EAST

1/4" = 1'-0"

KEY PLAN

WATER TREATMENT BUILDING
PLUMBING
PLAN AT EL. 735.00 - EAST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/10/26	ADDENDUM 2	JDM

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JOB NO.: 564-8141.001

SCALE: 1/4" = 1'-0"

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

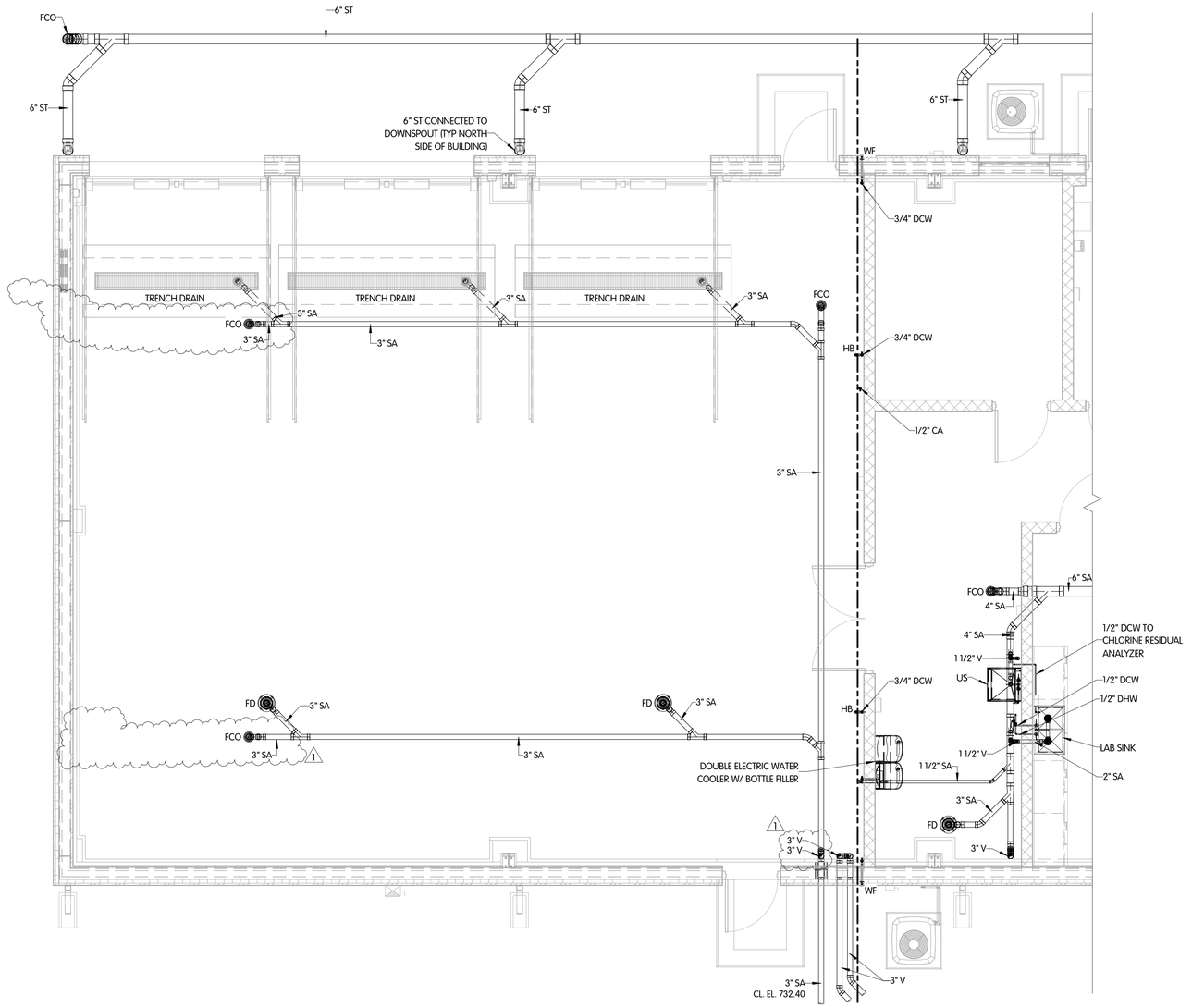
DESIGNED	DRAWN	CHECKED
LMM	ASB	BDL

STATUS: ISSUED FOR BID

DATE: 9/28/26

SHEET NO.
P-2.1
60 OF 98

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PLAN AT EL. 728.00 - WEST

1/4" = 1'-0"

NORTH

KEY PLAN

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WATER TREATMENT BUILDING
PLUMBING
PLAN AT EL. 735.00 - WEST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/29/26	ADDENDUM 2	MJP

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JOB NO.: 564-8141.001

SCALE: 1/4" = 1'-0"

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
LMM	ASB	BDL

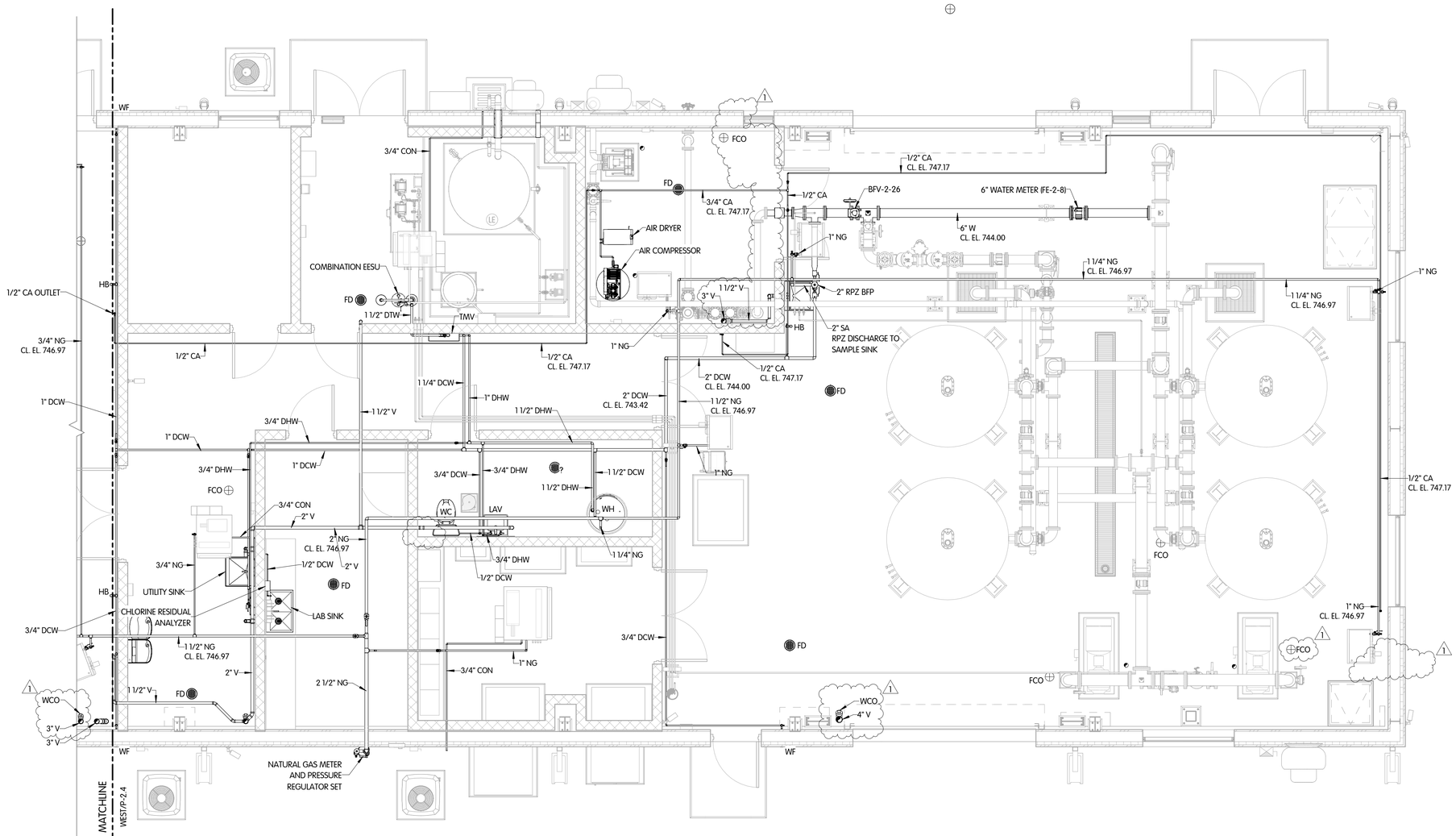
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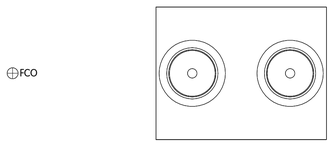
DATE: 9/28/26

SHEET NO.

P-2.2

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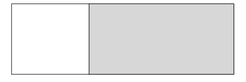






PLAN AT EL. 735.00 - EAST

1/4" = 1'-0"



KEY PLAN

WATER TREATMENT BUILDING
PLUMBING
PLAN CUT AT EL. 745.00 - EAST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	01/12/26	ADDENDUM 2	JDM

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JOB NO.: 564-8141.001

SCALE: 1/4" = 1'-0"

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
LMM	ASB	BDL

STATUS: ISSUED FOR BID

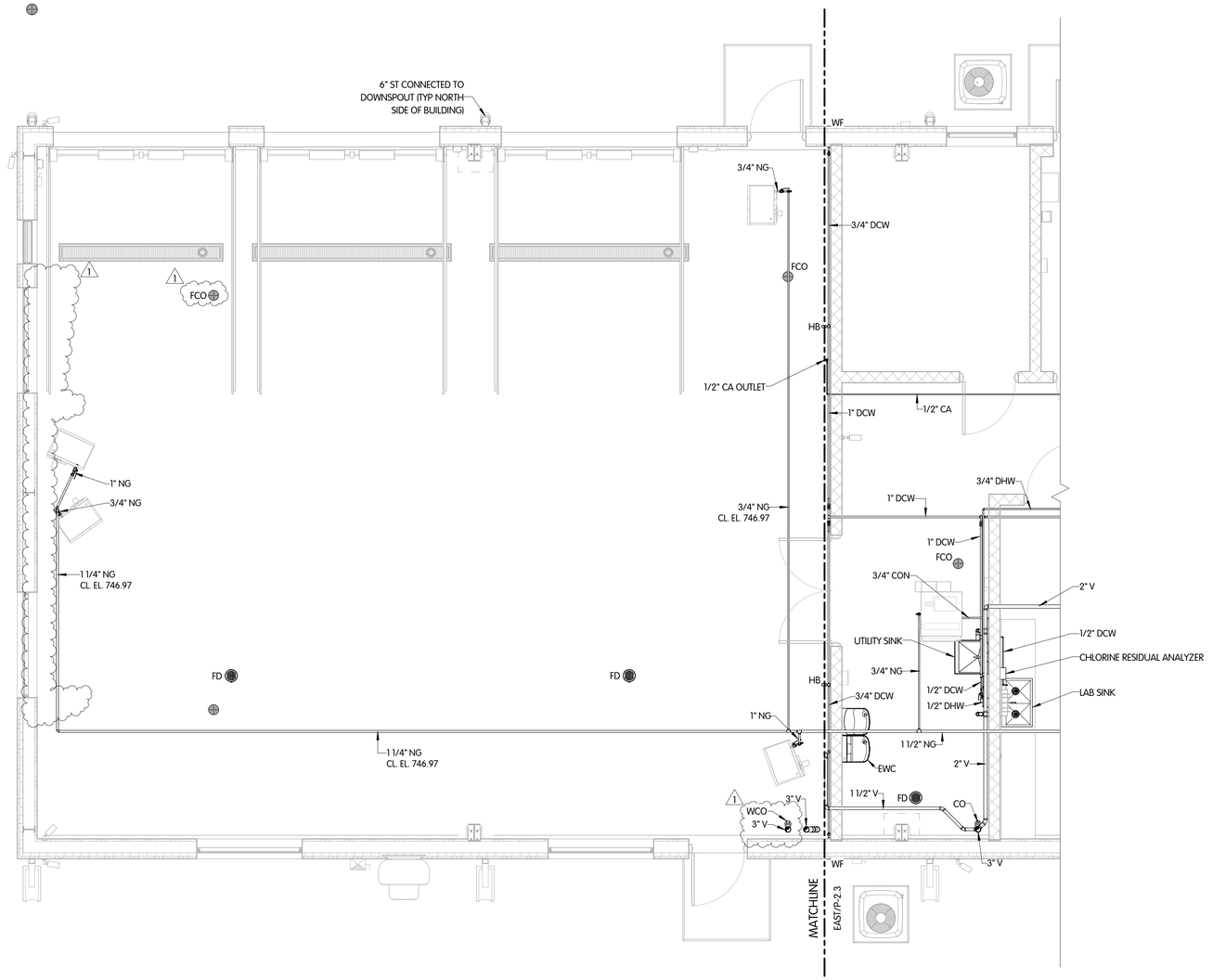
DATE: 9/28/26

SHEET NO.

P-2.3

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PLAN AT EL. 735.00 - WEST

1/4" = 1'-0"

NORTH

KEY PLAN

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WATER TREATMENT BUILDING
PLUMBING
PLAN CUT AT EL. 745.00 - WEST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/30/26	ADDENDUM 2	JDM

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JOB NO.: 564-8141.001

SCALE: 1/4" = 1'-0"

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
LMM	ASB	BDL

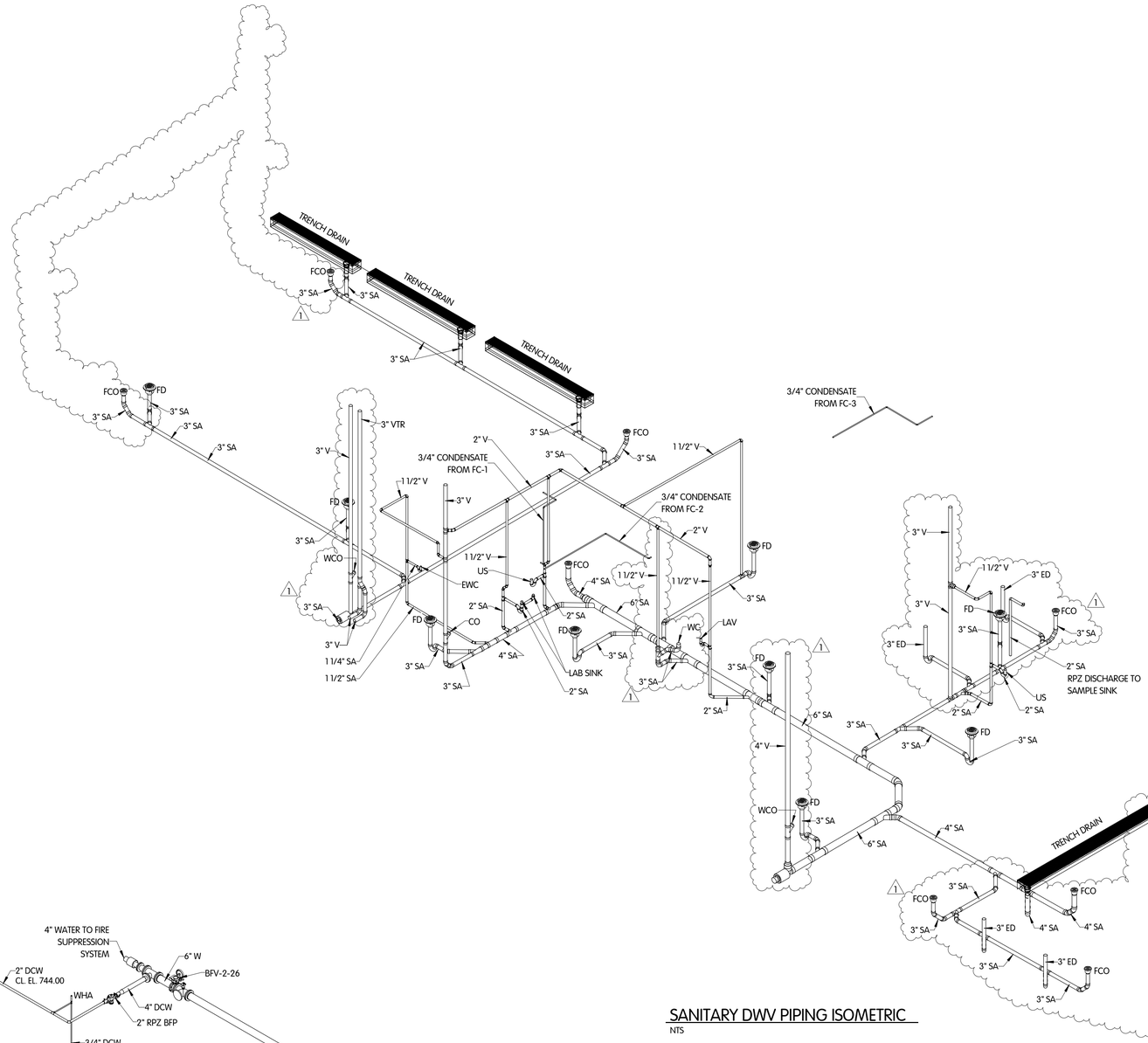
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DATE: 9/28/26

SHEET NO.

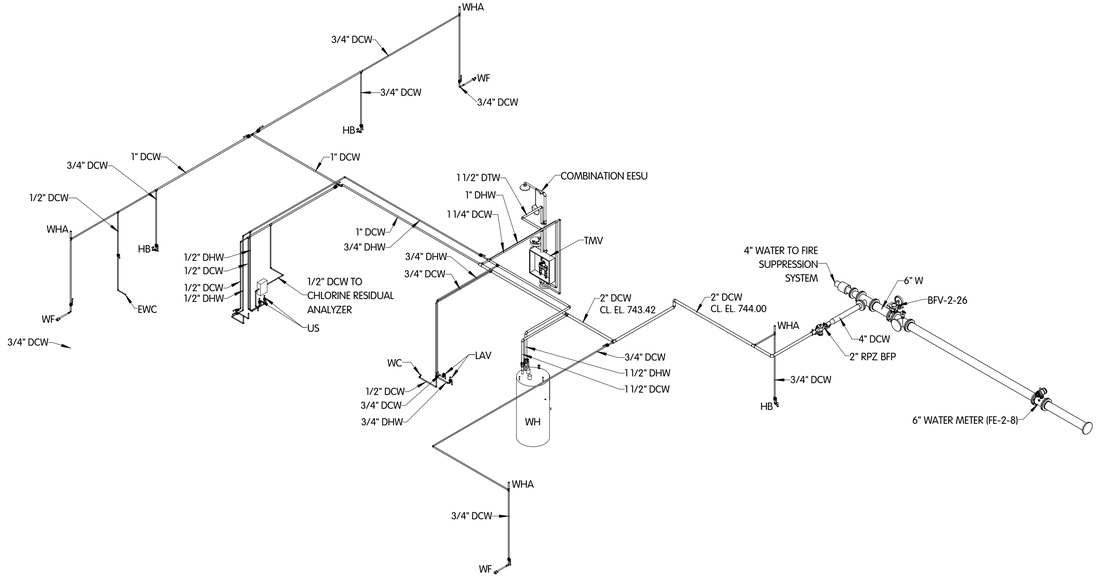
P-2.4

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SANITARY DWV PIPING ISOMETRIC

NTS



DOMESTIC WATER PIPING ISOMETRIC

NTS

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WATER TREATMENT BUILDING
PLUMBING
ISOMETRICS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	01/13/26	ADDENDUM 2	JDM

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JOB NO.: 564-8141.001

SCALE: NO SCALE

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
LMM	ASB	BDL

STATUS: ISSUED FOR BID

DATE: 9/28/26

SHEET NO.

P-2.5

64 OF 98

SINGLE-LINE DIAGRAM LEGEND

30A
FRS-R -30
FUSED DISCONNECT SWITCH.
(SWITCH SIZE, FUSE TYPE AND FUSE SIZE AS SHOWN)

30A
UNFUSED DISCONNECT SWITCH
(SWITCH SIZE AS SHOWN)

40A
THERMAL-MAGNETIC CIRCUIT BREAKER OR MOTOR CIRCUIT PROTECTOR-MCP
(TRIP SIZE AS SHOWN)

CB
HIGH OR MEDIUM VOLTAGE CIRCUIT BREAKER

12470
1000KVA
480Y/277V
LIGHTING OR POWER TRANSFORMER,THREE PHASE UNLESS NOTED OTHERWISE (CONNECTION, SIZE & RATING AS SHOWN)

FULL VOLTAGE NON-REVERSING MOTOR STARTER WITH OVERLOADS (FVNR)

R
F
FULL VOLTAGE REVERSING MOTOR STARTER WITH OVERLOADS
(FVR)

S
F
TWO SPEED MOTOR STARTER WITH OVERLOADS

VACUUM CONTACTOR

5
THREE PHASE AC MOTOR
(HORSEPOWER AS SHOWN)

600/5
AS
AM
CURRENT TRANSFORMER WITH AMMETER SWITCH, AND AMMETER
(RATIO AS SHOWN)

600/5
CURRENT TRANSFORMER WITH SHORTING BLOCK (RATIO AS SHOWN)

VS
VM
POTENTIAL TRANSFORMER WITH VOLTMETER SWITCH, AND VOLTMETER

6KV
LIGHTNING ARRESTER
(VOLTAGE RATING AS SHOWN)

TRANSIENT VOLTAGE SURGE SUPPRESSOR (TVSS)

GROUND CONNECTION

LINE OR LOAD REACTOR

K
KIRK KEY
(DASHED LINES TO INTERLOCKED DEVICES)

DRAWOUT FOR SWITCHGEAR OR MOTOR CONTROL CENTER

POWER FACTOR CORRECTION CAPACITOR - (PFCC) (SIZE PER MOTOR MANUFACTURER RECOMMENDATIONS.)

100E
HIGH OR MEDIUM VOLTAGE FUSED CUTOUT (SIZE AS SHOWN)

4/0
CABLE LIMITER (SIZE AS SHOWN)

G
450KW
800A
STAND-BY GENERATOR
(SIZE AS SHOWN)
WITH FIELD PROTECTION CIRCUIT BREAKER
(TRIP SIZE AS SHOWN)

VFD BP
VARIABLE FREQUENCY DRIVE WITH A BY-PASS OPTION (SHOWN WITH INTEGRAL EXTERNAL DISCONNECT HANDLE)

CP = CONTROL PANEL
SSRVS = SOLID STATE REDUCED VOLTAGE STARTER
(SHOWN WITH INTEGRAL EXTERNAL DISCONNECT HANDLE)

DPM
DIGITAL POWER METER

WHM
WATTHOUR METER

AUTOMATIC TRANSFER SWITCH (ATS)

MANUAL TRANSFER SWITCH (MTS)

SCHEMATIC LEGEND

OPEN CONTACTS
WITH TIME-DELAY CLOSING

CLOSED CONTACTS
WITH TIME-DELAY OPENING

OPEN CONTACTS
WITH TIME-DELAY OPENING

CLOSED CONTACTS
WITH TIME-DELAY CLOSING

FLOW SWITCH
CLOSES ON INCREASE IN FLOW

FLOW SWITCH
OPENS ON INCREASE IN FLOW

LIQUID LEVEL SWITCH CLOSES ON RISING LEVEL

LIQUID LEVEL SWITCH OPENS ON RISING LEVEL

PRESSURE OR VACUUM SWITCH CLOSES ON RISING PRESSURE

PRESSURE OR VACUUM SWITCH OPENS ON RISING PRESSURE

TEMPERATURE SWITCH
CLOSES ON RISING TEMPERATURE

TEMPERATURE SWITCH
OPENS ON RISING TEMPERATURE

LIMIT SWITCH
NORMALLY OPEN

LIMIT SWITCH
NORMALLY OPEN - HELD CLOSED

LIMIT SWITCH NORMALLY CLOSED

LIMIT SWITCH
NORMALLY CLOSED - HELD OPEN

FOOT SWITCH
OPENS BY FOOT PRESSURE

FOOT SWITCH
CLOSES BY FOOT PRESSURE

MUSHROOM HEAD, MAINTAINED ACTION (PUSH-PULL) PUSH BUTTON SWITCH
(SHOWN WITH ONLY 1 CIRCUIT)

ON
OFF
XO
2 - POSITION, MAINTAINED ACTION SELECTOR SWITCH

O
H
A
XOO
OOX
3 - POSITION, MAINTAINED ACTION SELECTOR SWITCH
H - O - A: HAND-OFF-AUTOMATIC
L - O - R: LOCAL-OFF-REMOTE
PCS: PLANT CONTROL SYSTEM
PLC: PROGRAMMABLE LOGIC CONTROLLER

INDICATES ITEMS IN A SEPARATE COMMON ENCLOSURE

XY
CONTACTOR COIL
M - MOTOR STARTER CONTACTOR
MF - MOTOR STARTER FORWARD CONTACTOR
MR - MOTOR STARTER REVERSE CONTACTOR
ML - MOTOR STARTER LOW SPEED CONTACTOR
MH - MOTOR STARTER HIGH SPEED CONTACTOR
SC - MOTOR STARTER STARTING CONTACTOR
RC - MOTOR STARTER RUN CONTACTOR
BP - BYPASS CONTACTOR
CC - CAPACITOR CONTACTOR
LC - LIGHTING CONTACTOR
IC - ISOLATION CONTACTOR
C - GENERAL CONTACTOR

XR
CONTROL RELAY COIL
CR - INSTANTANEOUS CONTROL RELAY
TR - TIME DELAY RELAY

OL
MOTOR STARTER OVERLOAD RELAY N.C. CONTACT

SOLENOID COIL
SV - SOLENOID VALVE

ETM
ELAPSED TIME METER

NORMALLY OPEN MOMENTARY ACTION PUSHBUTTON SWITCH
(SHOWN WITH ONLY 1 CIRCUIT)

NORMALLY CLOSED MOMENTARY ACTION PUSHBUTTON SWITCH
(SHOWN WITH ONLY 1 CIRCUIT)

R
PUSH-TO-TEST PILOT LIGHT WITH COLORED LENS CAP
R - RED
G - GREEN
A - AMBER
W - WHITE
B - BLUE
CL - CLEAR

F
ZERO SPEED SWITCH
(NORMALLY OPEN)

F
ZERO SPEED SWITCH
(NORMALLY CLOSED)

GENERAL ELECTRICAL ABBREVIATIONS

PVC - POLYVINYL CHLORIDE
RGS - RIGID GALVANIZED STEEL
PVC/RGS - PVC COATED RGS

MOTOR STARTER ABBREVIATIONS

FVNR - FULL VOLTAGE, NON-REVERSING
FVR - FULL VOLTAGE REVERSING
TS1W - TWO SPEED, ONE WINDING
TS2W - TWO SPEED, TWO WINDING
TSR1W - TWO SPEED REVERSING, ONE WINDING
TSR2W - TWO SPEED REVERSING, TWO WINDING

ELECTRICAL PLAN LEGEND

G — GROUND WIRE
DIRECT BURIAL CABLE
CONDUIT CONCEALED
CONDUIT EXPOSED
CONDUIT IN CONCRETE DUCT BANK
HOMERUN
CONDUIT TURNS UP
CONDUIT TURNS DOWN
CAPPED CONDUIT (FUTURE USE)
CONDUIT TEE
CADWELD CONNECTION
B — B = BUSWAY
C — C = CABLE TRAY
S — SINGLE POLE TOGGLE SWITCH
S_2 — DOUBLE POLE TOGGLE SWITCH
S_3 — THREE-WAY TOGGLE SWITCH
S_4 — FOUR-WAY TOGGLE SWITCH
S_P — TOGGLE SWITCH WITH GREEN PILOT LIGHT
S_K — KEY-OPERATED SWITCH
5 — SINGLE RECEPTACLE
3 — DUPLEX RECEPTACLE
5 — RECEPTACLE, (SINGLE) 120,30A.OR LARGER
6,8 — RECEPTACLE, (SINGLE) 240V,2POLE
4,6,8 — POWER RECEPTACLE 480V,3PH WITH DISCONNECT SWITCH (SIZE AS SHOWN)
TELEPHONE RECEPTACLE
COMPUTER RECEPTACLE
BOLLARD LIGHT FIXTURE
B 2 — CEILING MOUNTED FIXTURE
1 — WALL MOUNTED FIXTURE
1 — POLE MOUNTED FIXTURE
A 2 — FLUORESCENT FIXTURE
A 2 — FLUORESCENT TROFFER - GRID CEILING LAY IN
E 1 — EMERGENCY LIGHTING FIXTURE, (2-HEAD SHOWN)
EXIT FIXTURE (WITH DIRECTION ARROW WHERE INDICATED)
MCC — MOTOR CONTROL CENTER (MCC) OR SWITCHGEAR (SWG)
DISTRIBUTION PANEL 480V OR 480Y/277V
LIGHTING PANEL 120/208V OR 120/240V
UPS — UNINTERRUPTIBLE POWER SUPPLY
EPP — EMERGENCY POWER PACK
CP — CONTROL PANEL (SHOWN WITH EXTERNAL DISCONNECT HANDLE)
MAGNETIC MOTOR STARTER 480V, 3 PHASE
MAGNETIC MOTOR STARTER 120V, 1 PHASE
COMBINATION MAGNETIC MOTOR STARTER 480V, 3 PHASE
COMBINATION MAGNETIC MOTOR STARTER 120V, 1 PHASE
S_M — MANUAL MOTOR STARTER 480V, 3 PHASE
S_V — MANUAL MOTOR STARTER 120V, 1 PHASE
DISCONNECT SWITCH (SEE SINGLE LINE DIAGRAM FOR SIZE & TYPE)
½ — SINGLE PHASE AC MOTOR(HORSEPOWER AS SHOWN,DC INDICATES DC MOTOR)

2 — THREE PHASE AC MOTOR(HORSEPOWER AS SHOWN)
MOTOR OPERATED VALVE, 3 PHASE,WITH MAGNETIC STARTER AND CONTROLS
MOTOR OPERATED VALVE, 1 PHASE,WITH MAGNETIC STARTER AND CONTROLS
GROUND ROD WITH CADWELD CONNECTION
PP — PP= POWER POLE, LP = LIGHT POLE
AIR TERMINAL (LIGHTNING PROTECTION)
F — STROBE LIGHT (F=FIRE ALARM, G=GAS ALARM)
R/F — HEAT DETECTOR - RATE OF RISE/FIXED TEMPERATURE
P — SMOKE DETECTOR - (P = PHOTOELECTRIC, I = IONIZATION)
F — PULL STATION - FIRE ALARM
HORN, BELL, OR SIREN
HORN/STROBE COMBINATION
CA — CAPACITOR
CONTROL STATION
JB — BOX - JUNCTION, TERMINAL, PULL OR HAND HOLE
M — ELECTRIC MANHOLE
XF — TRANSFORMER (SEE SINGLE LINE FOR SIZE & TYPE)
LC — LIGHTING CONTACTOR
FT — FLOW TRANSMITTER
LT — LEVEL TRANSMITTER
PT — PRESSURE TRANSMITTER
TT — TEMPERATURE TRANSMITTER
AT — ANALYSIS TRANSMITTER (I.E. OXYGEN, TURBIDITY)
PI — INDICATOR - PRESSURE, FLOW, LEVEL, DENSITY, ANALYSIS
DT — DENSITY TRANSMITTER
ZS — LIMIT (POSITION) SWITCH
PS — PRESSURE SWITCH
TS — TEMPERATURE SWITCH (I.E. MOTOR THERMO PROTECTOR)
CS — CONVEYOR CABLE SWITCH
SS — SPEED SWITCH
FS — FLOW SWITCH
LS — LEVEL SWITCH
NS — MOISTURE SENSOR
OS — TORQUE SWITCH
VS — VIBRATION SWITCH
LC — LOAD CELL
LE — TRANSMITTER SENSING ELEMENT - LEVEL, FLOW, DENSITY, PRESSURE, ANALYSIS
S — SOLENOID
T — THERMOSTAT
H — HEATER IN MOTOR
PC — PHOTOELECTRIC CELL
G — GAS DETECTOR WITH CONTROL PANEL (GAS TYPE AS SHOWN)
T — THERMOCOUPLE
V — PNEUMATIC VALVE OPERATOR
/ — CURRENT TO PRESSURE TRANSDUCER

ELECTRICAL NOTES

1. STRUCTURAL MATERIALS ARE NOT SHOWN ON ELECTRICAL DRAWINGS. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
2. ALL ELECTRICAL EQUIPMENT ELEVATIONS SHOWN ARE TO BOTTOM OF DEVICE OR PANEL.
3. NUMBER SHOWN (I.E.11735), INDICATES A SPECIFICATION REFERENCE FOR ITEMS OTHER THAN DIVISION 16. THE ELECTRICAL ITEM UNDER THIS REFERENCE IS SUPPLIED BY ANOTHER PART OF THE CONTRACT. UNLESS OTHERWISE NOTED IN THAT SPECIFICATION, THE CONTRACTOR SHALL INSTALL AND WIRE THE ITEM PER THE DRAWINGS AND DIVISION 16 SPECIFICATIONS.
4. WHERE LINES ARE SHOWN CONNECTING ELECTRICAL EQUIPMENT, THEY ARE NOT INTENDED AS CONDUIT ROUTING. CONTRACTOR SHALL ROUTE ALL CONDUIT RUNS (SHOWN OR NOT) PER DIVISION 16 SPECIFICATIONS.
5. WP INDICATES WATERPROOF. LETTER ON OR NEXT TO LIGHT FIXTURE INDICATES TYPE, PER SECTION 16510. NUMBER WITH LIGHT FIXTURE OR RECEPTACLE INDICATES CIRCUIT NUMBER.
6. GFCI INDICATES A CIRCUIT BREAKER OR RECEPTACLE WITH A 6 MA GROUND FAULT CIRCUIT INTERRUPTER. GFEPD INDICATES A CIRCUIT BREAKER OR RECEPTACLE WITH A 30 MA GROUND FAULT EQUIPMENT PROTECTION DEVICE.
7. FOR ABOVE GRADE CONDUIT PENETRATIONS THROUGH EXTERIOR CONCRETE WALLS, PROVIDE TYPE C CONDUIT SLEEVE. FOR MASONRY WALLS PROVIDE TYPE F CONDUIT SLEEVE.
8. LEGENDS ARE FOR REFERENCE ONLY AND DOES NOT MEAN THAT ALL ITEMS ARE USED.

ELECTRICAL
LEGEND, ABBREVIATIONS, AND NOTES

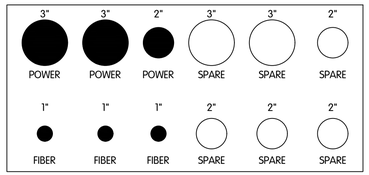
VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/30/26	ADDENDUM 2	JDM

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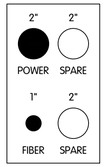
JOB NO. 564-8141.001
SCALE NONE
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED BWT | DRAWN BJD | CHECKED PEM
STATUS: ISSUED FOR BID
DATE: 9/28/26
SHEET NO. E-0.1
78 OF 98

TOL-8141001EH-E-0.1 LEGEND
10/29/2026 1:59 PM - JELLINGHAM
10/29/2026 1:59 PM



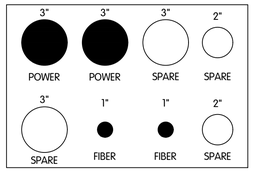
240V POWER AND FIBER FROM WATER TREATMENT BUILDING TO MH-1

A CONCRETE ENCASED DUCTBANK



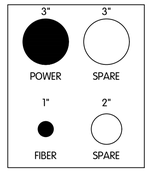
240V POWER AND FIBER FROM FILTER BUILDING TO WELL HOUSE-3 THRU MH-2

B CONCRETE ENCASED DUCTBANK



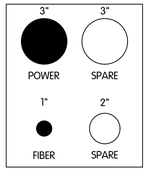
240V POWER AND FIBER BETWEEN MH-2 AND MH-3

C CONCRETE ENCASED DUCTBANK



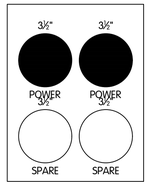
240V POWER AND FIBER FROM FILTER BUILDING TO WELL HOUSE-4 THRU MH-3

D CONCRETE ENCASED DUCTBANK



240V POWER AND FIBER FROM FILTER BUILDING TO WELL HOUSE-5 THRU MH-3

E CONCRETE ENCASED DUCTBANK



480V POWER FROM UTILITY TRANSFORMER TO ATS

F CONCRETE ENCASED DUCTBANK

CONDUIT LEGEND:

NEW

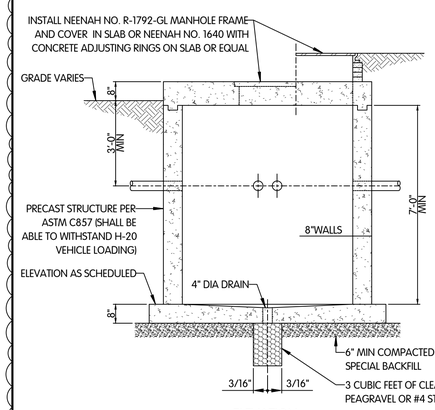
SPARE

SHEET KEY NOTES:

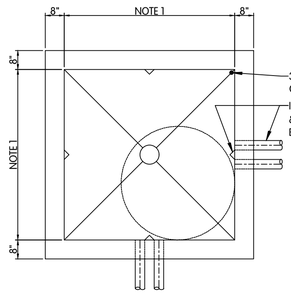
A CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF THE ELECTRIC MANHOLE BEFORE INSTALLATION. ADJUST THE LOCATION OF THE MANHOLE DEPENDING ON THE SITE CONDITIONS CONSIDERING STORMWATER SWALE IN THE AREA.

NOTES:

1. THE MINIMUM AND MAXIMUM BURIAL DEPTHS TO TOP OF ELECTRICAL DUCTS OR CABLES; AND THE SPACING BETWEEN DIFFERENT TYPE OF CABLES / CONDUITS SHALL BE IN ACCORDANCE WITH NFPA 70 ARTICLE 300.50 AND AS PER SPECIFICATION SECTION 16130- CONDUIT SURFACE METAL RACEWAYS AND ACCESSORIES. SEE TYPICAL CONCRETE ENCASED CONDUIT DETAIL ON ELECTRICAL DETAILS SHEET.



ELEVATION



PLAN

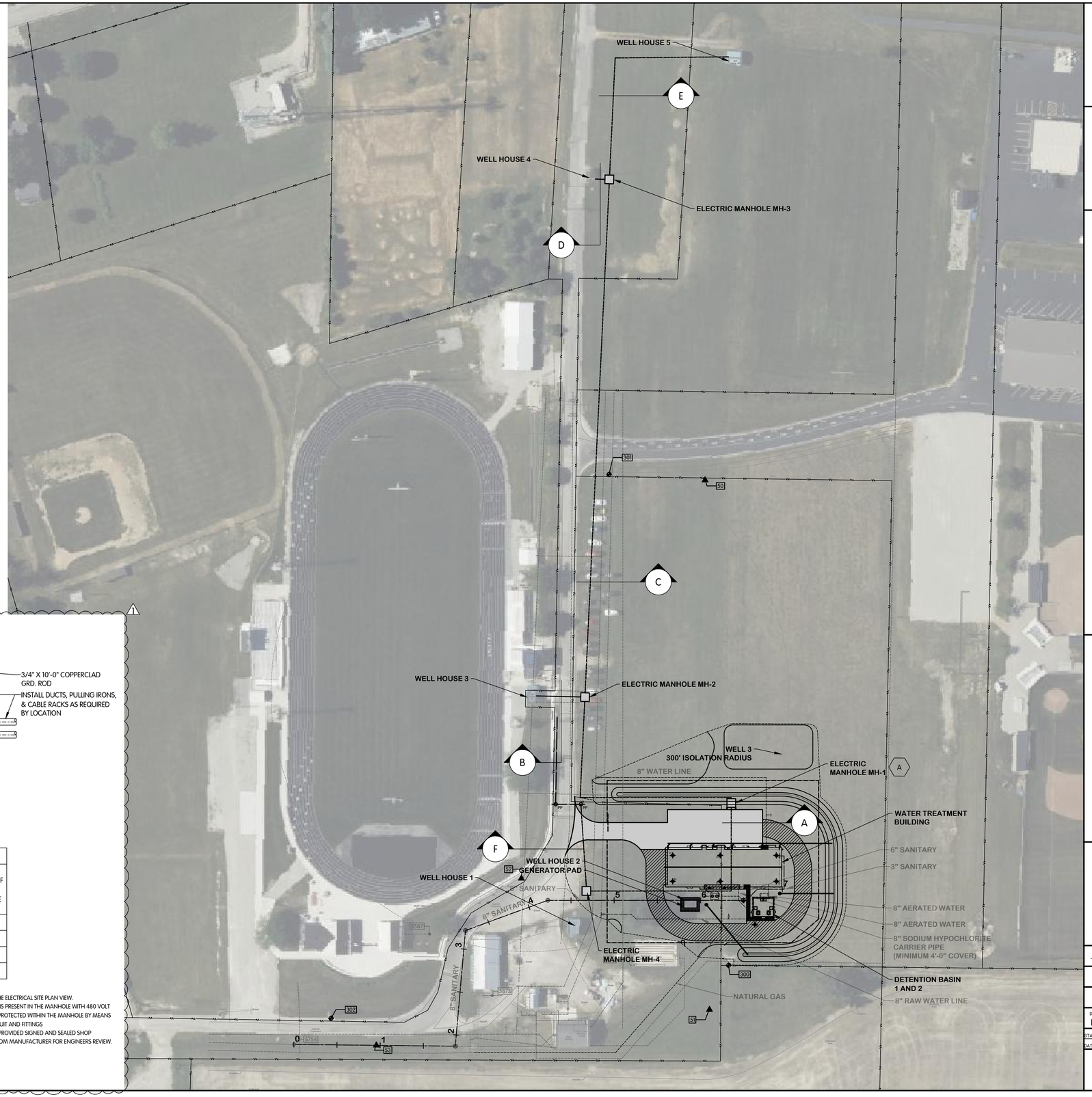
ELECTRICAL MANHOLE SCHEDULE			
MANHOLE	APPROX GRADE EL.	APPROX BOTTOM EL.	APPROX BOTTOM OF LOWEST CONCRETE DUCT
MH 1	734.13	≥ 726.13	≥ 734.13
MH 2	733.55	≥ 725.55	≥ 734.13
MH 3	733.75	≥ 725.75	≥ 734.13
MH 4	734.45	≥ 723.45	≥ 734.13

NOTES:

1. INSIDE DIMENSIONS 6'-0" UNLESS INDICATED LARGER ON THE ELECTRICAL SITE PLAN VIEW.
2. WHEN TYPE II OR IV INSTRUMENTATION CONTROL CABLING IS PRESENT IN THE MANHOLE WITH 480 VOLT POWER FEEDERS IN EXCESS OF NO. 12 AWG THEY SHALL BE PROTECTED WITHIN THE MANHOLE BY MEANS OF BARRIER SHIELDING CONSISTING OF GALVANIZED CONDUIT AND FITTINGS
3. MANHOLE MAY BE CONSTRUCTED OF PRECAST CONCRETE PROVIDED SIGNED AND SEALED SHOP DRAWINGS AND DESIGN ASSUMPTIONS ARE SUBMITTED FROM MANUFACTURER FOR ENGINEERS REVIEW.

ELECTRICAL MANHOLE DETAIL

NTS



ELECTRICAL SITE PLAN

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
5			
4			
3			
2	10/30/26	ADDENDUM 2	JDH
1			

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JOB NO.	564-8141.001
SCALE	1"=60'

THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE

DESIGNED	DRAWN	CHECKED
BWT	BJD	PEM

STATUS: ISSUED FOR BID

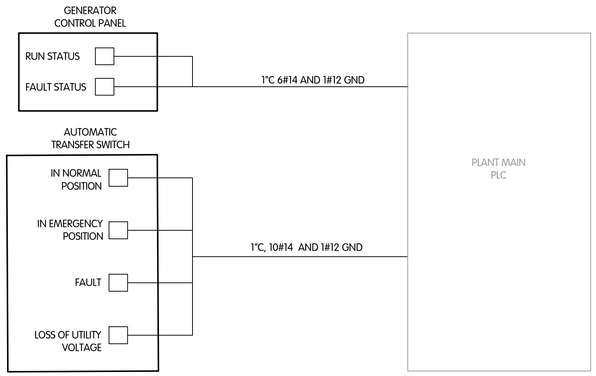
DATE: 9/28/26

SHEET NO.

E-0.2

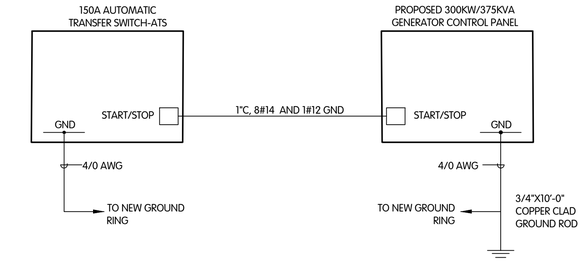
79 OF 98

TOL-8141\00\E02-E-0.2 ELECTRICAL SITE PLAN
WORKSPACE: 13.0New AELLINGHAM
10/29/2026, 3:59 PM



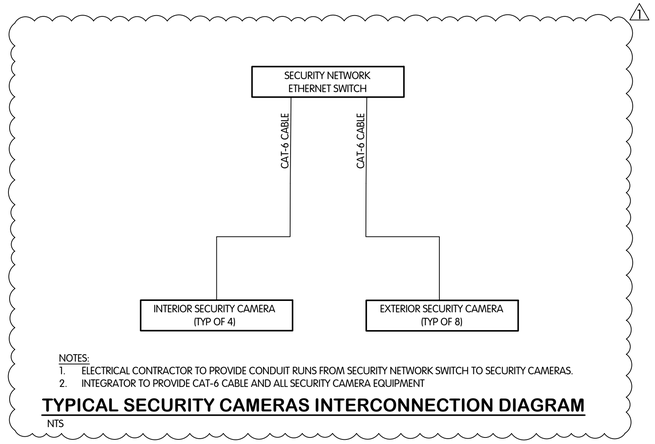
CONTROL SCHEDULE OF THE GENERATOR CONTROL PANEL AND THE AUTOMATIC TRANSFER SWITCH

NTS



PROPOSED SYSTEM GROUNDING SCHEMATIC

NTS



NOTES:
1. ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT RUNS FROM SECURITY NETWORK SWITCH TO SECURITY CAMERAS.
2. INTEGRATOR TO PROVIDE CAT-6 CABLE AND ALL SECURITY CAMERA EQUIPMENT

TYPICAL SECURITY CAMERAS INTERCONNECTION DIAGRAM

NTS

PANELBOARD DESIGNATION/TAG LP-1

LOCATION:	ELECTRICAL ROOM	**VOLTS:**	120/208v	**A.I.C. (Fully Rated):**	22K
FEEDER SIZE:	200A, 4#3/0 & 1#6GND, 2"C	**PHASES:**	3	**MAINS TYPE:**	MCB
FED FROM:	PP-1	**WIRES:**	4	**MAINS RATING:**	225 A
MOUNTING:	SURFACE			**MCB RATING:**	200 A
ENCLOSURE:	NEMA 1				

Notes:

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	AMP	POLES	A	B	C	A	B	C	POLES	AMP	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1	LIGHTING (BLOWER ROOM)	#12	20 A	1	52 VA			191 VA			1	20 A	#12	LIGHTING (ELECTRICAL ROOM & LAB ROOM)	2
3	SCALE INDICATOR PANEL (SODIUM HYPOCHLORITE ROOM)	#12	20 A	1		150 VA			200 VA		1	20 A	#12	GUH-5 (BLOWER ROOM)	4
5	LIGHTING (OFFICE)	#12	20 A	1			81 VA			295 VA	1	20 A	#12	LIGHTING (EXTERIOR)	6
7	SPRINKLER/FIRE ALARM CONTROL PANEL (PROCESS ROOM)	#12	20 A	1	300 VA			360 VA			1	20 A	#12	RECEPTACLES (RESTROOM)	8
9	RECEPTACLE (DEHUMIDIFIER, DH-1)	#12	20 A	1		348 VA			528 VA		1	20 A	#12	EF-2	10
11	RECEPTACLES (ELECTRICAL ROOM)	#12	20 A	1			360 VA			540 VA	1	20 A	#12	RECEPTACLES (GARAGE N&W WALLS)	12
13	RECEPTACLES (GARAGE S&E WALLS)	#12	20 A	1	540 VA			600 VA			1	20 A	#12	ELECTRIC WATER COOLER (EWC)	14
15	LIGHTING (GARAGE)	#12	20 A	1		577 VA			600 VA		1	20 A	#10	TRUCK UNLOADING PANEL	16
17	LIGHTING (PROCESS ROOM)	#12	20 A	1			587 VA			664 VA	1	20 A	#12	EF-5 (RESTROOM) & LIGHTING (RESTROOM / HALLWAY)	18
19	RECEPTACLES (OFFICE)	#12	20 A	1	720 VA			800 VA			1	20 A	#12	GUH-6, GUH-7, GUH-8, GUH-9 (PROCESS ROOM)	20
21	RECEPTACLES (PROCESS ROOM)	#12	20 A	1		720 VA			1000 VA		1	20 A	#12	GENERATOR JACKET WATER HEATER	22
23	GUH-1,GUH-2, GUH-3, GUH-4 (GARAGE)	#12	20 A	1			800 VA			1080 VA	1	20 A	#12	RECEPTACLES (EXTERIOR)	24
25	AIR DRYER (BLOWER ROOM)	#12	20 A	1	1300 VA			1800 VA			1	20 A	#12	MTU CABINET (ELECTRICAL ROOM)	26
27	RECEPTACLES (LAB)	#12	20 A	1		1140 VA			1200 VA		1	20 A	#12	CHEMICAL TRANSFER PUMP RECEPTACLES (SODIUM HYPOCHLORITE ROOM)	28
29	RECEPTACLES (HALLWAY)	#12	20 A	1			1260 VA			2400 VA	1	25 A	#10	FILTER CONTROL PANEL (PROCESS ROOM)	30
31	GENERATOR BATTERY CHARGER	#12	20 A	2	1200 VA			180 VA			1	20 A	#12	CHLORINE RESIDUAL ANALYZER (LAB)	32
33						1200 VA			1175 VA		2	20 A	#12	FC-2 (ELECTRICAL ROOM)	34
35	FC-1 (HALLWAY)	#12	20 A	2			967 VA			1175 VA					36
37					967 VA			1456 VA			2	20 A	#12	CU-1	38
39	RECEPTACLES (BLOWER ROOM)	#12	20 A	1		180 VA			1456 VA						40
41	RECEPTACLES (SODIUM HYPOCHLORITE ROOM)	#12	20 A	1			180 VA			400 VA	1	20 A	#12	LIT-1, LIT-3, LIT-5, LIT-8	42
43	CHEMICAL METERING PUMP CONTROL PANEL (SODIUM HYPOCHLORITE ROOM)	#12	20 A	1	400 VA			0 VA			1	20 A	--	SPARE	44
45	FIT-1, FIT-6, FIT-7, FIT-8 (PROCESS ROOM)	#12	20 A	1		400 VA			0 VA		1	20 A	--	SPARE	46
47	LIGHTING (SODIUM HYPOCHLORITE ROOM)	#12	20 A	1			70 VA			0 VA	1	20 A	--	SPARE	48
49	SPARE	--	20 A	1	0 VA			0 VA			1	20 A	--	SPARE	50
51	SPARE	--	20 A	1		0 VA			0 VA		1	20 A	--	SPARE	52
53	SPARE	--	20 A	1			0 VA			0 VA	1	20 A	--	SPARE	54
				Total Load:	10866 VA			10874 VA			10859 VA				
				Total Amps:	98.9 A			75.6 A			97.1 A				

PANELBOARD DESIGNATION/TAG PP-1

LOCATION:	ELECTRICAL ROOM	**VOLTS:**	480/277v	**A.I.C. (Fully Rated):**	18K
FEEDER SIZE:	225A, 4#4/0 & 1#4GND, 2 1/2"C	**PHASES:**	3	**MAINS TYPE:**	MLO
FED FROM:	MCC-1	**WIRES:**	4	**MAINS RATING:**	400 A
MOUNTING:	SURFACE			**MCB RATING:**	
ENCLOSURE:	NEMA 1				

Notes:

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	AMP	POLES	A	B	C	A	B	C	POLES	AMP	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1					278 VA			278 VA							2
3	OVERHEAD LIFT DOOR (D-2-5)	#12	20 A	3		278 VA			278 VA		3	20 A	#12	OVERHEAD LIFT DOOR (D-2-6)	4
5							278 VA			278 VA					6
7					278 VA			444 VA							8
9	OVERHEAD LIFT DOOR (D-2-7)	#12	20 A	3		278 VA			444 VA		3	20 A	#12	EF-1	10
11							278 VA			444 VA					12
13					444 VA			25000 VA							14
15	EF-4	#12	20 A	3		444 VA			25000 VA		3	90 A	#3	75 KVA XFMR	16
17							444 VA			25000 VA					18
19					444 VA			--			1	--	--	SPACE	20
21	EF-3	#12	20 A	3		444 VA			--		1	--	--	SPACE	22
23							444 VA			--	1	--	--	SPACE	24
25	SPACE	--	--	1	--			--			1	--	--	SPACE	26
27	SPACE	--	--	1		--			--		1	--	--	SPACE	28
29	SPACE	--	--	1			--			--	1	--	--	SPACE	30
				Total Load:	27166 VA		27166 VA			27166 VA					
				Total Amps:	98.1 A		98.1 A			98.1 A					

PANELBOARD DESIGNATION/TAG MDP-1

LOCATION:	ELECTRICAL ROOM	**VOLTS:**	120/240v	**A.I.C. (Fully Rated):**	22K
FEEDER SIZE:	600A, 2(4#350 KCMIL & 1#1GND, 3"C)	**PHASES:**	3	**MAINS TYPE:**	MCB
FED FROM:	MCC-1	**WIRES:**	4	**MAINS RATING:**	600 A
MOUNTING:	SURFACE			**MCB RATING:**	600 A
ENCLOSURE:	NEMA 1				

Notes:

CKT	CIRCUIT DESCRIPTION	WIRE SIZE	AMP	POLES	A	B	C	A	B	C	POLES	AMP	WIRE SIZE	CIRCUIT DESCRIPTION	CKT
1					10724 VA			5812 VA							2
3	WELL HOUSE #3	2/0	100 A	3		10224 VA			10724 VA		3	100 A	350	WELL HOUSE #4	4
5							5812 VA			10224 VA					6
7					10224 VA			0 VA							8
9	WEL HOUSE #5	350	100 A	3		5812 VA			0 VA		3	100 A	--	SPARE	10
11							10724 VA			0 VA					12
13	SPACE	--	--	1	--			--			1	--	--	SPACE	14
15	SPACE	--	--	1		--			--		1	--	--	SPACE	16
17	SPACE	--	--	1			--			--	1	--	--	SPACE	18
				Total Load:	26760 VA		26760 VA			26760 VA					
				Total Amps:	223 A		223 A			223 A					

ELECTRICAL
SCHEDULES AND SCHEMATICS

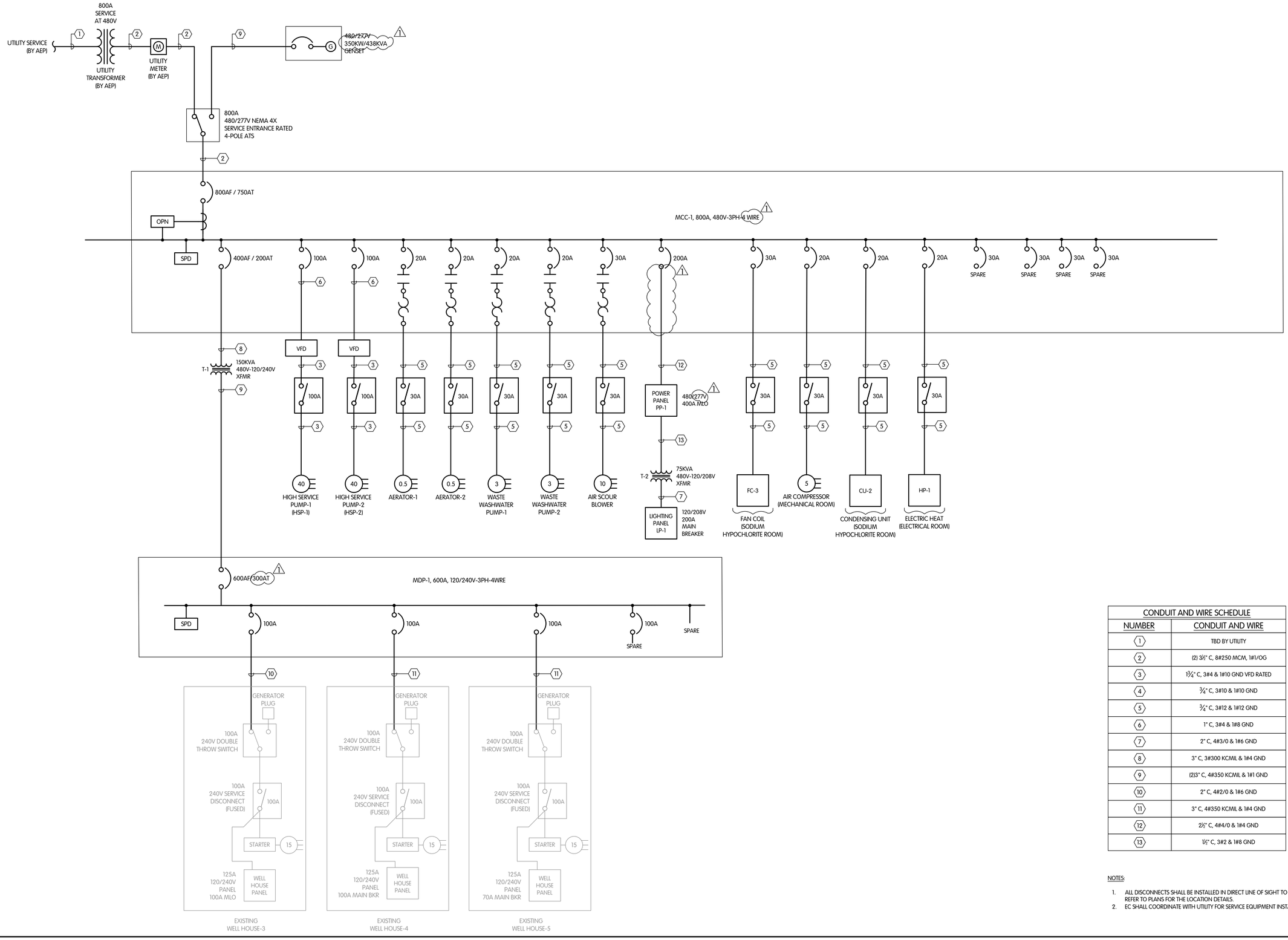
VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

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1	10/30/26	ADDENDUM 2	JDM

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JOB NO. 564-8141.001
SCALE NTS
THIS LINE SCALES 1" WHEN PLOTTED TO NOTED SCALE
DESIGNED BWT | DRAWN RLR | CHECKED PEM
STATUS: ISSUED FOR BID
DATE: 9/28/26
SHEET NO. E-0.4
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10/30/2026 8:59 AM - AELLINGHAM
10/29/2026 3:59 PM



CONDUIT AND WIRE SCHEDULE	
NUMBER	CONDUIT AND WIRE
1	TBD BY UTILITY
2	(2) 3½" C, 8#250 MCM, 1#1/OG
3	1¾" C, 3#4 & 1#10 GND VFD RATED
4	¾" C, 3#10 & 1#10 GND
5	¾" C, 3#12 & 1#12 GND
6	1" C, 3#4 & 1#8 GND
7	2" C, 4#3/0 & 1#6 GND
8	3" C, 3#300 KCMIL & 1#4 GND
9	(2)3" C, 4#350 KCMIL & 1#1 GND
10	2" C, 4#2/0 & 1#6 GND
11	3" C, 4#350 KCMIL & 1#4 GND
12	2½" C, 4#4/0 & 1#4 GND
13	1½" C, 3#2 & 1#8 GND

NOTES:

1. ALL DISCONNECTS SHALL BE INSTALLED IN DIRECT LINE OF SIGHT TO THE EQUIPMENT. REFER TO PLANS FOR THE LOCATION DETAILS.
2. EC SHALL COORDINATE WITH UTILITY FOR SERVICE EQUIPMENT INSTALLATION.

ELECTRICAL
PLANT ONE-LINE DIAGRAM

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
5	10/30/26	ADDENDUM 2	JDH

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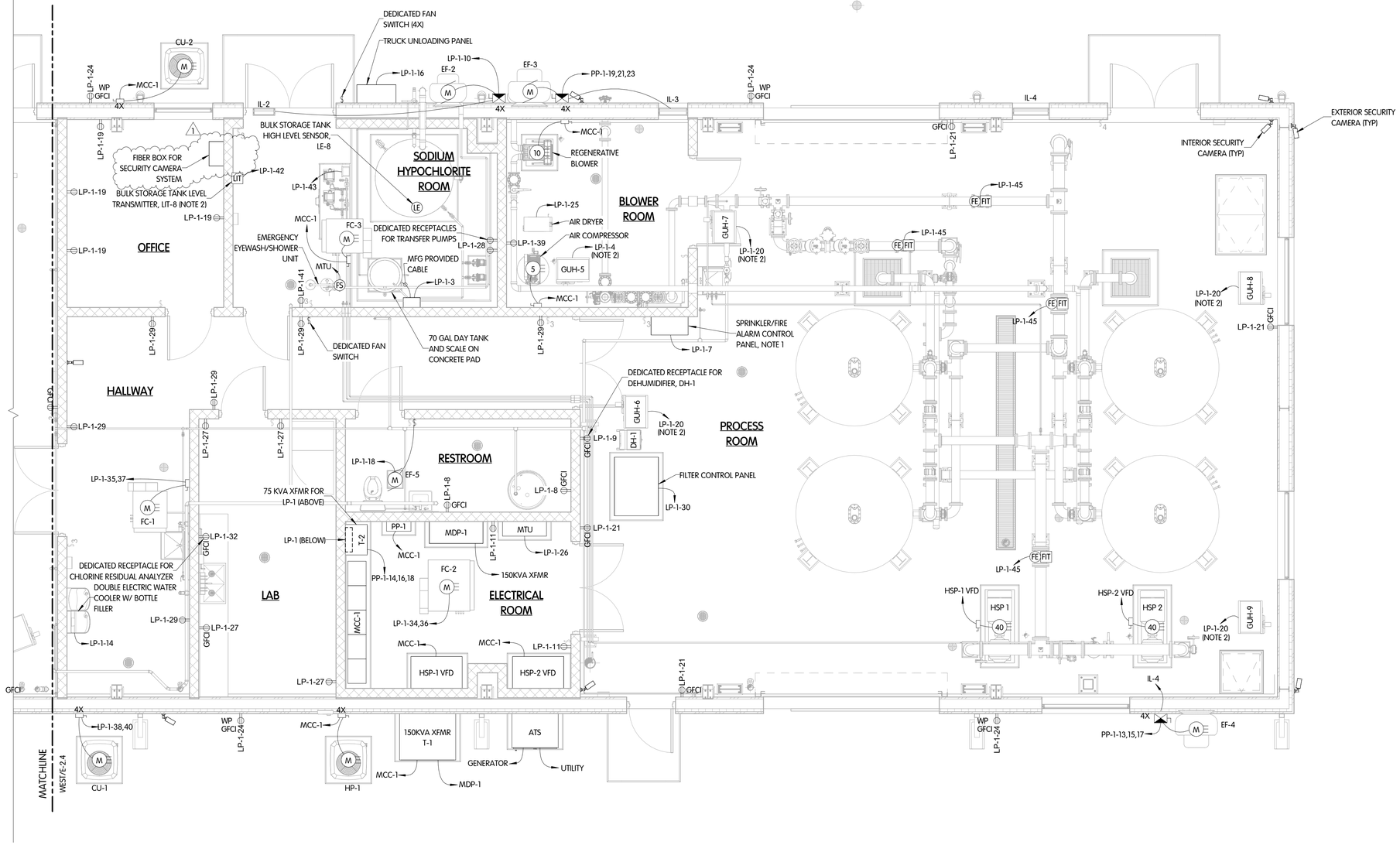
DESIGNED	DRAWN	CHECKED
BWT	AAE	PEM

STATUS ISSUED FOR BID

DATE 9/28/26

SHEET NO.
E-0.5
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10/29/2026 3:59 PM AELLINGHAM
10/29/2026 3:59 PM



PLAN AT EL. 735.00 - EAST

1/4" = 1'-0"

NOTES:

1. CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT FOR ALL THE SPRINKLER SYSTEM AND FIRE ALARM DEVICES.
2. PROVIDE AN ISOLATION SWITCH IN NEMA 12 ENCLOSURE WITH A LOCKING HASP AT DEVICE INDICATED.
3. SPACE TEMPERATURE CONTROLS TO BE CONNECTED TO CORRESPONDING EQUIPMENT PER PERTINENT MECHANICAL DRAWINGS.

KEY PLAN

WATER TREATMENT BUILDING
ELECTRICAL
POWER PLAN - EAST

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
1	10/15/26	ADDENDUM 2	JDM

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SCALE: 1/4" = 1'-0"

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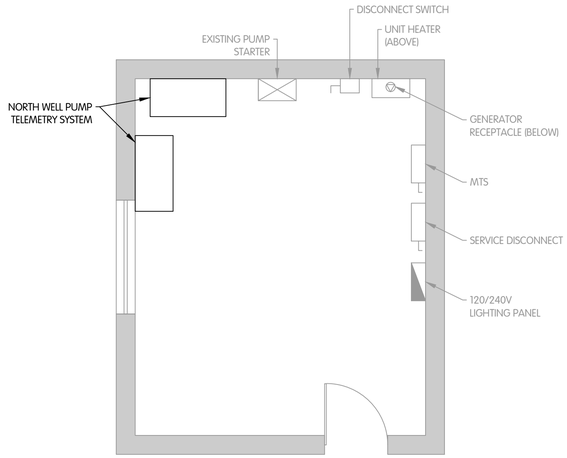
DESIGNED	DRAWN	CHECKED
BWT	AAE	PEM

STATUS: ISSUED FOR BID

DATE: 9/28/26

SHEET NO.
E-2.3
87 OF 98

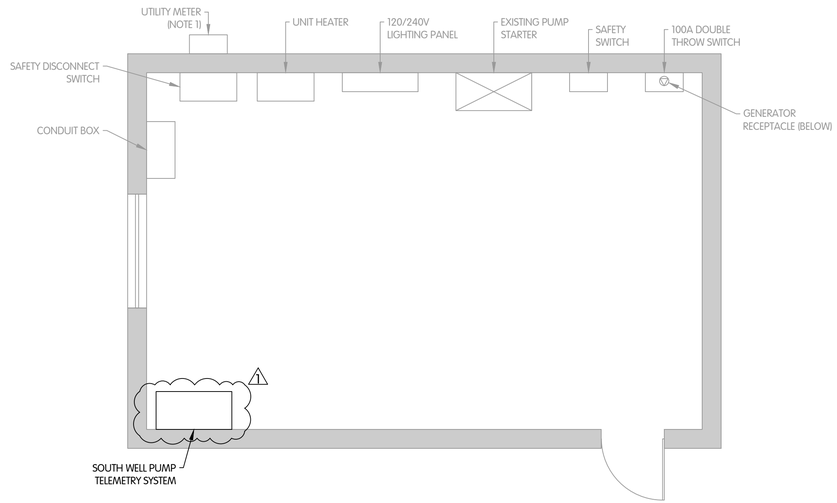
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NOTES:

1. THE EXISTING UTILITY METER LOCATED ON THE POLE ACROSS THE STREET SHALL BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND WIRE. CONTRACTOR SHALL COORDINATE WITH UTILITY BEFORE MAKING ANY CHANGES.

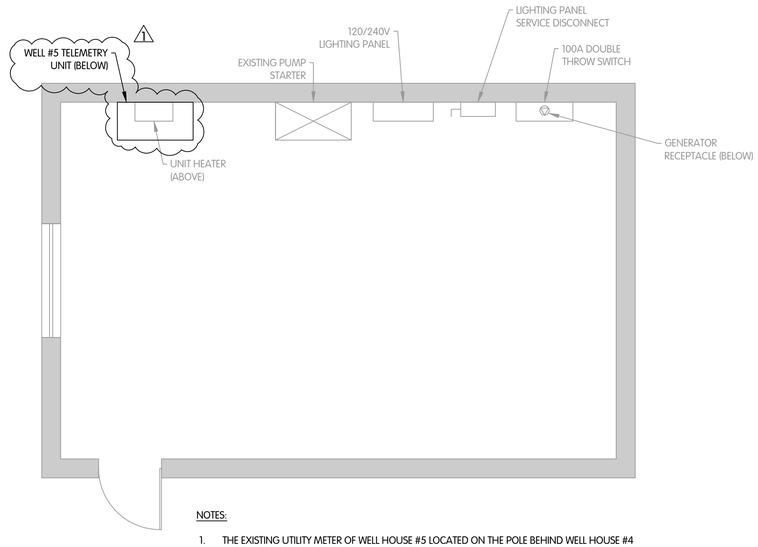
WELL HOUSE 4 - PLAN
NTS



NOTES:

1. THE EXISTING UTILITY METER LOCATED ON THE EXTERIOR WEST WALL OF THE WELL HOUSE SHALL BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND WIRE. CONTRACTOR SHALL COORDINATE WITH UTILITY BEFORE MAKING ANY CHANGES.

WELL HOUSE 3 - PLAN
NTS



NOTES:

1. THE EXISTING UTILITY METER OF WELL HOUSE #5 LOCATED ON THE POLE BEHIND WELL HOUSE #4 SHALL BE REMOVED ALONG WITH ALL ASSOCIATED CONDUIT AND WIRE. CONTRACTOR SHALL COORDINATE WITH UTILITY BEFORE MAKING ANY CHANGES.

WELL HOUSE 5 - PLAN
NTS

WELL HOUSES 3, 4, AND 5
ELECTRICAL
PLANS

VILLAGE OF ANTWERP, OHIO
NEW WATER TREATMENT PLANT

NO.	DATE	REVISIONS AFTER ISSUED FOR BID	BY
5			
4			
3			
2	10/30/26	ADDENDUM 2	JDM
1			

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BWT	AAE	PEM

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SHEET NO.

E-3.0

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TOL-8141\00\E30-E-3.0 WELL HOUSES 3 4 AND 5
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10/29/2026 3:59 PM