

ADDENDUM NO. 2

DATE: January 24, 2025
PROJECT: RRWTP Ion Exchange Improvements
OWNER: Warren County Water and Sewer Department
ENGINEER: AECOM
TO: Prospective Bidders
BIDS CLOSE: February 13, 2025 at 2:00 p.m., eastern standard time.
The bid opening date has been extended as indicated in the changes to specifications as part of this addendum.

TO ALL BIDDERS BIDDING ON THE ABOVE PROJECT:

All Bidders submitting a Bid on the above Contract shall carefully read this Addendum and give it full consideration in the preparation of their Bid.

CLARIFICATIONS TO CONTRACTOR QUESTIONS

Q: The Sodium Bisulfite Proposed Plan on sheet 1P-09 shows the existing and new lines as being tubing. Also, GP-07 provides detail 4 as being the penetration through the interior wall. However, based on photos w took, the existing chemical piping is Sch. 80 PVC. Please confirm the new Bisulfite piping is to be Sch. 80 PVC and provide a penetration detail for passing through the existing block wall as well as the 12" thick concrete floor at EL. 763.00.

A: Existing lines are ½" schedule 80 PVC piping. Detail 4 on sheet GP-07 has been reissued as part of this addendum to remove the tubing shown inside of the schedule 80 PVC piping. This detail should be used for penetrations through existing block walls. Detail 3 on sheet GP-07 shall be used for floor penetrations through existing concrete floors.

Q: Detail 3 on sheet GP-07 shows coring the floor one size larger than the piping that is penetrating it. This core size will not allow full flanges to pass through the core for connection below. Please provide details of what type of connection will be permitted for these areas in the basement below (ie. Uni-Flanges, Flanged Coupling Adapters, etc.).

A: Per specification 40 1513 Paragraph 3.1.A.13, "Provide flanged coupling adapters as necessary to accommodate easy of piping installation according to Contractor's layout plan." Flanged coupling adapters and dismantling joints have been added to the specifications as part of this addendum.

Q: Please provide a connection detail for the flanged piping connections of the 4" BWV lines to the existing 8" NFD lines below the operating floor. Advise what type of mechanical couplings will be required (ie. Uni-Flanges, Flanged Coupling Adapters, etc.).

A: The existing 8" NFD is ductile iron piping. Where new tee fittings are required, ductile iron tees shall be used. Connections to existing piping should utilize flanged coupling adapters where necessary.

Q: Please provide a connection detail for cutting in the new 16” Butterfly Valves into the existing piping. Advise what type of mechanical couplings will be required (ie. Uni-Flanges, Flanged Coupling Adapters, etc.).

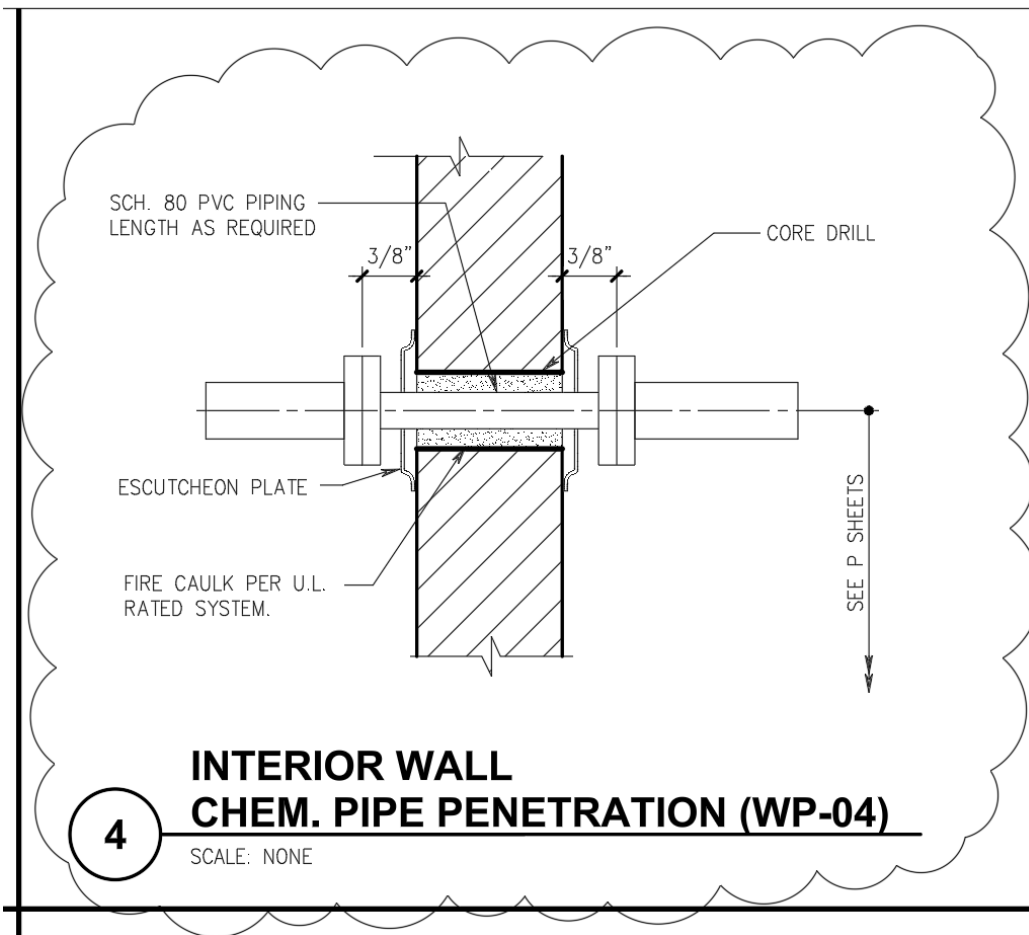
A: Per specification 40 1513 Paragraph 3.1.A.13, “Provide flanged coupling adapters as necessary to accommodate ease of piping installation according to Contractor’s layout plan.” Use of equipment such as Uni-Flanges and Flanged Coupling Adapters is acceptable.

Q: Section 43 3253, paragraph 3.3.A on field service says to “Refer to the scope of supply attached with this document for additional information.” We could not find where H&T defines the amount of trips and on-site dates they have included in their scope. Given that this work will be phased for each set of vessels, there will be several trips required. Please advise.

A: Specification 43 3253 Paragraph 3.3.A has been updated as part of this addendum. Refer to the language included in the “Revisions to Specifications” portion of this addendum.

REVISIONS TO DRAWINGS

- I. Sheet GP-07: Detail 4, delete the tubing shown passing through the schedule 80 PVC pipe. The updated detail is shown below.



- II. Sheet 1P-04: This sheet has been reissued as part of this addendum to correct a drafting error showing pipe work in Section B that does not exist.
- III. Sheet 1P-09: Replace references to "TUBING" with "SCH 80 PVC". This sheet has been reissued as part of this addendum.

REVISIONS TO SPECIFICATIONS

- I. Section 00 1113 Advertisement for Bids: replace “ January 30” with “February 13”. Bid opening has been extended. The bid opening time and location remain unchanged.
- II. Section 09 9600 High Performance Coatings: Section 2.3.C.5, replace “Acrolon 218 HS” with “High-Solids Polyurethane 250”
- III. Section 09 9673 Coating Systems for Chemical Feed Areas: This section is being added to the contract documents. The specification covers repair work to be done to the chemical containment coating within the sodium bisulfite room.
- IV. Section 40 0513 Process Piping:
 - 1. Add Paragraph 2.4 as follows:

“2.4 DISMANTLING JOINTS:

A. Materials:

- 1. Flanged Spool: AWWA Class D steel ring flange compatible with ANSI class 125 and 150 bolt circles. Provide pipe of ASTM A36 plate 1 percent cold expanded to size.
- 2. End Ring and Body: ASTM A36 steel
- 3. Gaskets: ASTM 2000 Virgin NBR suitable for water service
- 4. Bolts and Nuts: Type 316 stainless steel
- 5. Tie Rods: Type 316 stainless steel

B. Assembly Tolerance: 3 inches (76 mm)

C. Coating: Fusion bonded epoxy, NSF 61 certified

D. Pressure Rating: 150 psi (1050 kPa) working pressure

E. Manufacturers

- 1. Romac
- 2. Viking Johnson”

- 2. Add Paragraph 2.5 as follows:

“2.5 FLANGED COUPLING ADAPTERS:

A. Construction: 1 end flanged and 1 end sleeve or split-sleeve type coupling.

B. Pressure and Service: Same as connected piping.

C. Gasket: Comply with manufacturer's recommendations.

D. Bolts and Nuts: Galvanized, corrosion-resistant alloy steel.

E. Material: Cast Iron

F. Harnessing:

1) Steel Pipe:

- a) Lock or harness all flanged coupling adapters, except as otherwise shown.
- b) Coupling adapters through 12-inch nominal diameter may be harnessed with anchor studs.
- c) Harness coupling adapters larger than 12-inch nominal diameter with tie rods. Harness shall be designed in accordance with AWWA M-11.

2) Ductile Iron Pipe:

- a) Harness adapters as shown, specified or otherwise required to restrain pressure piping.
- b) Adapters 12-inch diameter or less:
 - 1. Method: 1/2-inch minimum stainless steel anchor studs in anchor boss.

2. Number of Studs: Comply with manufacturer's recommendation for test pressure and service conditions.
- c) Adapters larger than 12-inch diameter:
 1. Method: Harness assembly by tying to adjacent flange or lugs on pipe with corrosion resistant alloy steel bolts.
 2. Number of Bolts: Comply with manufacturer's recommendation for test pressure and service conditions. A minimum number of 4 bolts required per each adapter.

G. Coatings:

- 1) Coupling Interior: Factory applied.
 - a) General: Vinyl or coal tar enamel
 - b) Potable water piping: Coating shall be approved for use in contact with potable water in accordance with NSF Standard 61.
- 2) Coupling Exterior: Comply with Section 09 9600, High Performance Coatings.”

V. Section 43 3253 Ion Exchange Equipment: Add the following language to the end of Paragraph 3.3.A:

“Hungerford and Terry will provide for one service tech for 6 days over a period of 2 trips to assist with installation of the proposed unit and training of operators. Costs for additional services provided by the manufacturer as required for installation, startup, and training shall be at no additional cost to the Owner. Such costs shall be covered by the Contractor at the manufacturer’s rate of \$150 per hour (\$225 per hour in excess of 8 hours per day) including travel to and from Clayton, NJ, plus \$50 per day for meals, and all other travel and living expenses.”

END OF ADDENDUM ITEMS

Any revisions to any of the Contract Documents made by this Addendum shall be considered as the same revision to any and all related areas of the Contract Documents not specifically called out in this Addendum.

Sincerely,



John Krinks, P.E.

Enclosure:

Specification section 09 9673 Coating Systems for Chemical Feed Areas.

Drawing Sheet 1P-04

Drawing sheet 1P-09

Pre-Bid Meeting Minutes

Pre-Bid Sign in Sheet

THIS SECTION IS BEING ISSUED AS PART OF AD #2

SECTION 09 9673

COATING SYSTEMS FOR CHEMICAL FEED AREAS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 specifications sections apply to this Section.

1.2 DESCRIPTION OF WORK

- A. Section includes coating systems for repair of a portion of delaminated secondary containment coating in the sodium bisulfite chemical feed storage area, including below-grade concrete, chemical containment trenches, above-grade containment sumps, and walls. The stored chemicals are as follows:
 - 1. 38% Sodium Bisulfite
- B. The delaminated coating shall be removed and prepped for resurfacing according to manufacturer recommendations.
- C. Contractor's Base Bid shall include the removal, preparation, and coating of an area equal to 20 square feet.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Comply with the requirements specified in Division 01, Section "Product Requirements".
- B. Material shall be delivered to project site in manufacturer's original unopened containers.
- C. Material shall be stored indoors, protected from damage, moisture, direct sunlight, and temperatures below 40 deg F or above 90 deg F.

1.4 ENVIRONMENTAL CONDITIONS

- A. Surface and surrounding air temperatures must exceed 55 deg F but must be less than 90 deg F with materials at not less than 70 deg F during application. Do not apply if the relative humidity is more than 90% or the surface temperature is less than 5% above the dew point of the air in the working area.

1.5 QUALIFICATIONS OF APPLICATOR

THIS SECTION IS BEING ISSUED AS PART OF AD #2

- A. Installation shall be performed by an applicator having satisfactory experience in the application of these or similar materials or with on-site consultation by a qualified field service representative from the manufacturer.

1.6 SUBMITTALS

- A. Submittals shall follow requirements of Division 01, Section "Submittal Procedures".
- B. Prior to commencing work, submit to owner, manufacturer's technical information and installation details describing materials to be used.
- C. Owner, contractor, and manufacturer shall review and mutually agree upon color, grade, and final texture of coating system before starting installation. The acceptance of a sample will constitute the job standard by which installation will proceed.
- D. The coating supplier shall submit a written certification that the proposed coating system supplied for individual chemical rooms are compatible with the chemical being stored in that room.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Surfacer: Series 218 Mortar Clad epoxy modified cement.
- B. Primer: Series 201 Epoxoprime, penetrating polyamine cured epoxy primer.
- C. Reinforced Coating: Series 275 Novolac Stranlok fiber reinforced coating.
- D. Glaze Coat: Series 282 Tneme-Glaze, pigmented epoxy novolac.
- E. Manufacturer
 - 1. Tnemec Company, Incorporated

PART 3 - EXECUTION

3.1 PREPARATION

- A. Allow new concrete to cure for 28 days. Verify dryness by testing for moisture by using calcium chloride discs and with the "plastic film tape-down test". (Reference ASTM D 4263)
- B. Preparation
 - 1. Degrease and clean to remove all surface contaminants as needed. Mechanically abrade all concrete by means of self-contained, blasting equipment or equal, to remove all laitance and surface contaminants and provide a minimum profile similar to 40-60 grit sandpaper. (Reference ASTM D 4259 and ICRI CSP 4-5)
- C. After mechanically abrading, verify that all surfaces are clean, dry, and free of any contaminants, which could adversely affect the adhesion of the flooring system.

THIS SECTION IS BEING ISSUED AS PART OF AD #2

3.2 SPECIFICATION FOR WALLS, FLOORS, SUMPS AND TRENCH DRAINS

A. Installation

1. Surfacing: Fill all bugholes, spalled areas and surface imperfections with 218 MortarClad. Concrete block to be filled using Series 130 Envirofill.
2. Cove: Floor and wall transitions are to have a 2-inch cant or radius cove. This will provide a seamless wall to floor transition.
3. Priming: Series 201 Epoxoprime primer shall be mechanically mixed and applied in accordance with manufacturer's printed instructions and applied uniformly at a film thickness of 6.0 to 8.0 dry mils DFT. It should be topcoated after 2 hours and within 16 hours.
4. Fiber Reinforced Coating: Install Series 275 Stranlok by spray application or trowel in a minimum of 2 passes to a total dry film thickness of 40.0 – 60.0 mils DFT.
5. Glaze Coat: Series 282 epoxy novolac glaze coat shall be mechanically mixed in accordance with manufacturer's printed instructions and applied in a single application at a film thickness 8.0 - 12.0 mils DFT.
6. Joints: Active expansion, construction and control joints are to be honored unless determined otherwise by the owner or project engineer. Joints and epoxy floor terminations are to be keyed and shall be sawed through the Coating system and filled with an appropriate Polysulphide flexible sealant.

B. Job Standard: Prior to commencing the installation, the contractor shall install, with the owner's approval, a mutually agreed upon test sample to show final color and appearance of the system. This test area shall serve as a job standard for the final installation.

C. Cleanup: Remove waste materials, rubbish, and debris and dispose of them at the owner's direction. Leave work areas in a clean condition.

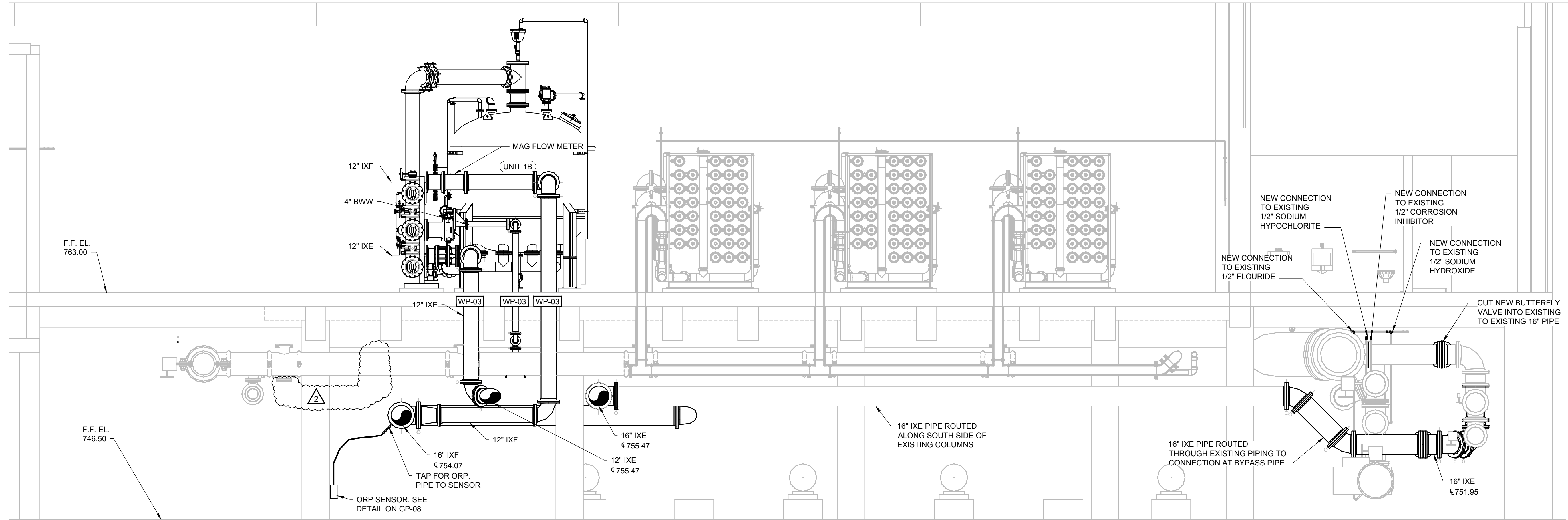
D. Protection

1. Protect the completed work from water, airborne particles or other surface contaminants until cured for a minimum of 24 hours after application.
2. Protect from traffic, physical abuse, immersion and chemical exposure until the complete system has thoroughly cured for the minimum equivalent of 24 hours at 75°F. For different temperatures, consult the manufacturer's representative about curing times.

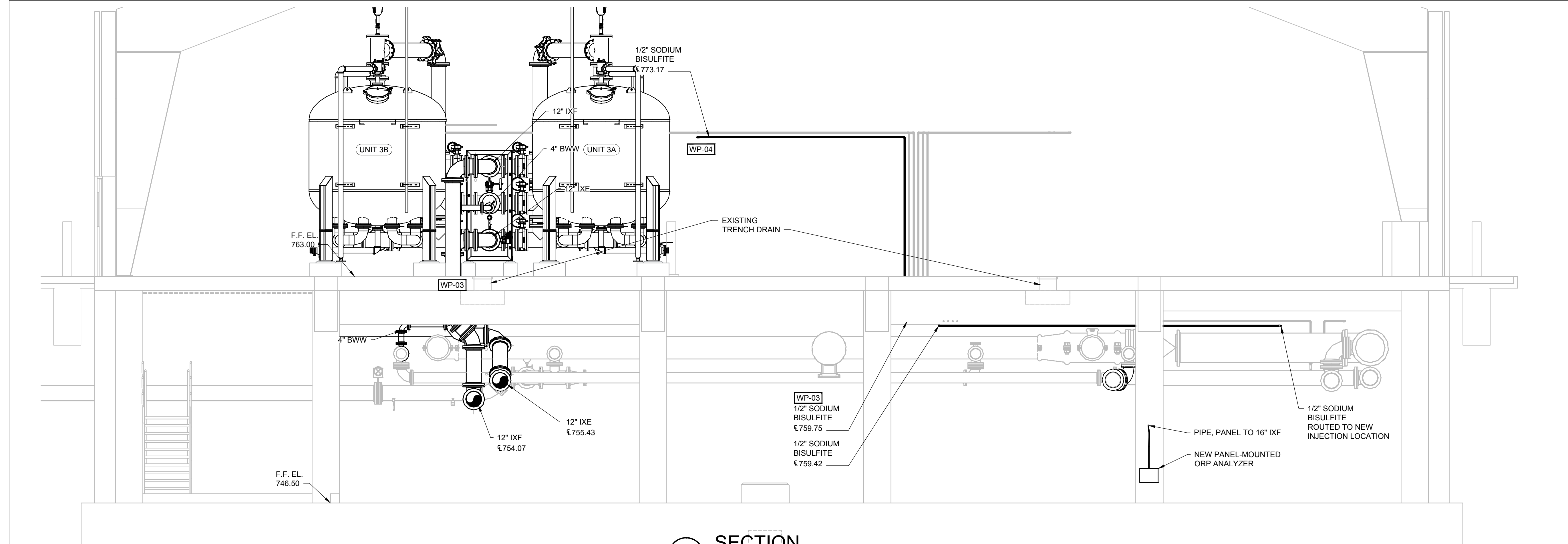
3.3 CONTRACT CLOSEOUT

A. Provide in accordance with Section 01 7700.

END OF SECTION 09 9673



B SECTION
 1P-01 Scale 1/4" = 1'-0"
 1P-02



A SECTION
 1P-01 Scale 1/4" = 1'-0"
 1P-02

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION
2	2025-01-24	ADDENDUM #2
1	2024-12-30	ISSUED FOR BID

KEY PLAN

PROJECT NUMBER

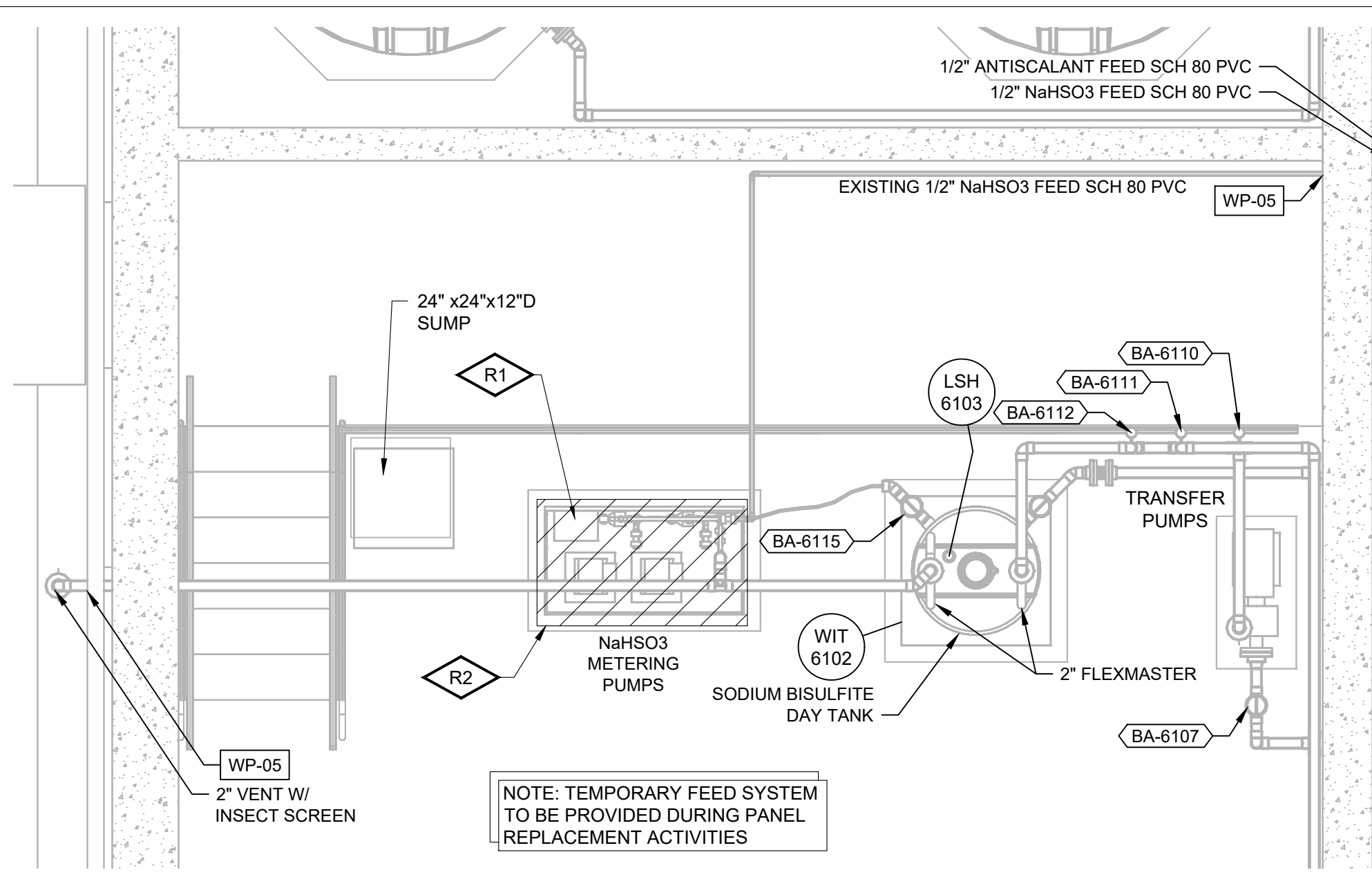
60551697

SHEET TITLE

TREATMENT PLANT
 SECTIONS

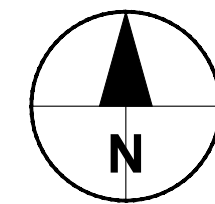
SHEET NUMBER

1P-04



SODIUM BISULFITE DEMOLITION PLAN

Scale 3/8" = 1'-0"

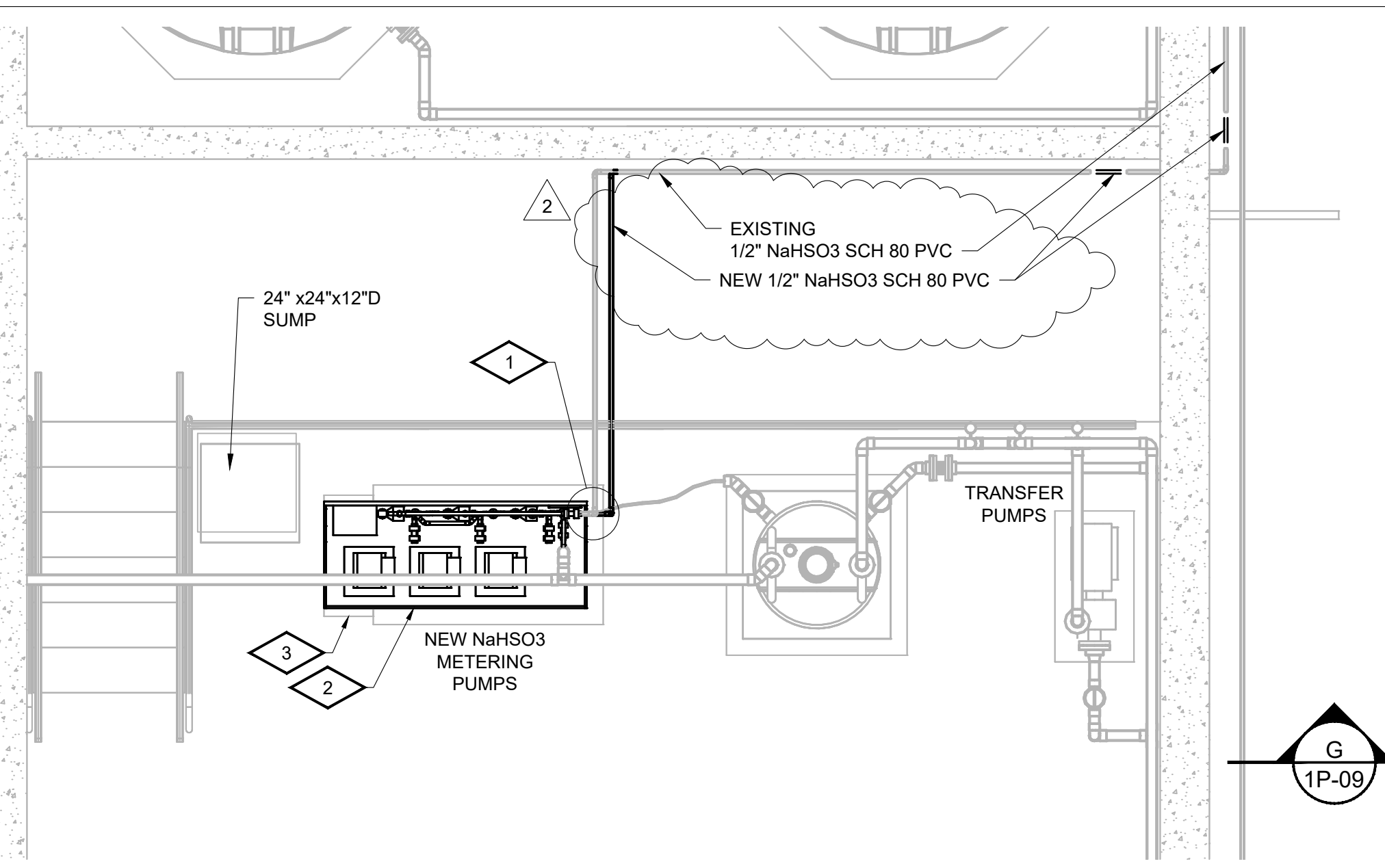
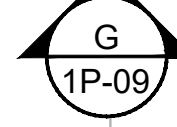


REMOVAL NOTES

- R1** PROVIDE TEMPORARY DISCONNECTION TO POWER AND COMMUNICATION WIRING, SUCTION, DISCHARGE AND VENT TUBING.
- R2** EXISTING METERING PUMP PANEL TO BE REMOVED. BOTH METERING PUMPS TO BE RETAINED FOR USE ON NEW PANEL. EXISTING METERING PUMP PANEL (WITHOUT PUMPS) TO BE RETURNED TO OWNER.
- R3** REMOVE PANEL ANCHOR BOLTS (TYP)

PLAN NOTES

- 1** RE-CONNECT EXISTING SUCTION, DISCHARGE, VENT TUBING, AND PIPING. REFER TO ELECTRICAL DRAWINGS FOR CONNECTION OF EXISTING CABLING AND NEW CABLING AND CONDUITS.
- 2** NEW 3-PUMP, 2-DISCHARGE SODIUM BISULFITE METERING PUMP PANEL. PANEL FEATURES ONE NEW PUMP. CONTRACTOR TO INSTALL TWO EXISTING PUMPS (REMOVED FROM EXISTING PANEL) ON NEW PANEL.
- 3** PROVIDE STAINLESS STEEL L BRACKETS AND ANCHOR BOLTS / FASTENERS FOR SECURING NEW METERING PUMP PANEL AS NEEDED. EXTENSION OF CONCRETE PEDESTAL IS NOT REQUIRED.



SODIUM BISULFITE PROPOSED PLAN

Scale 3/8" = 1'-0"

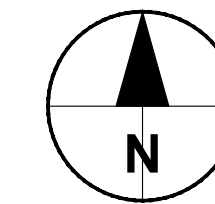
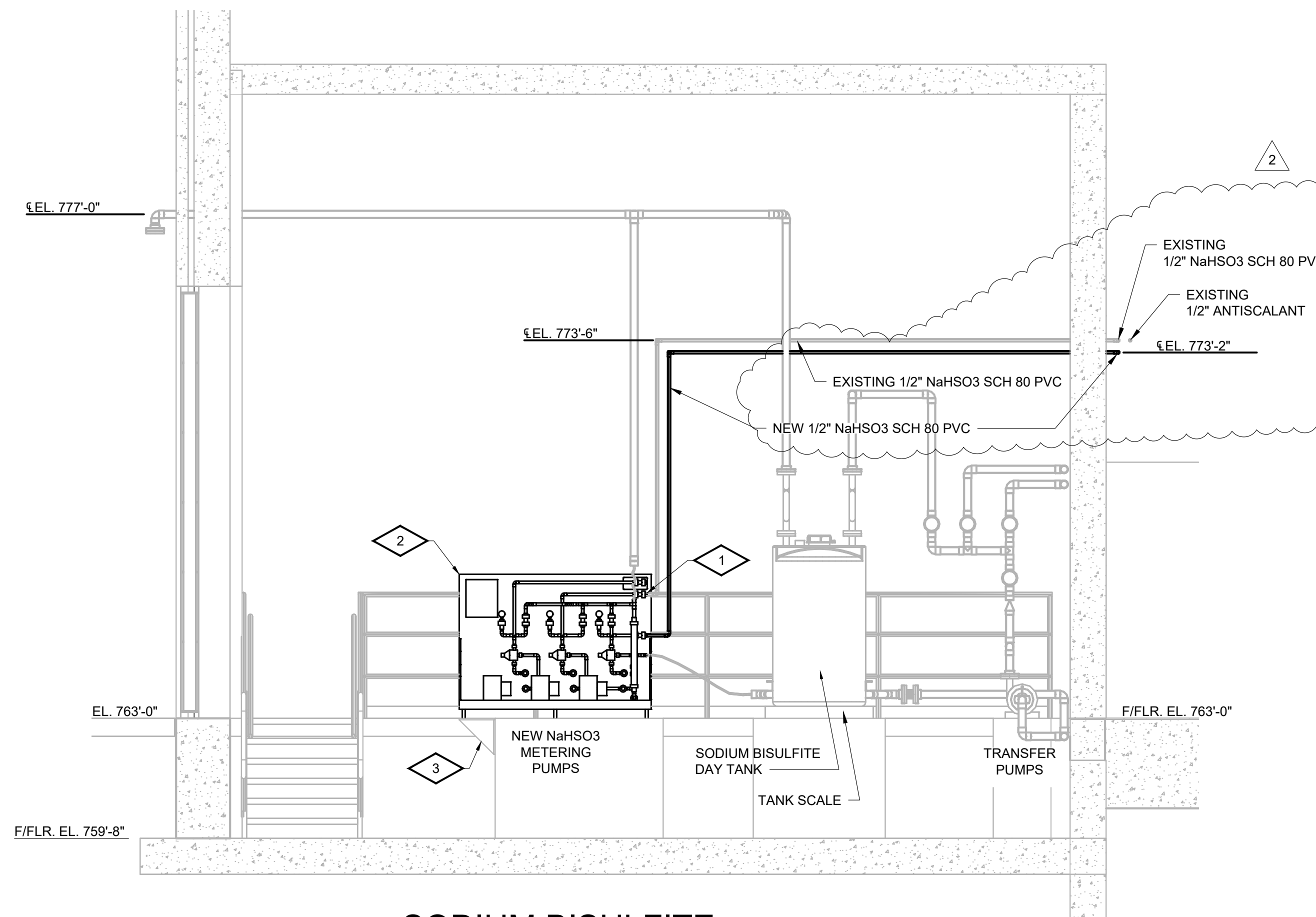
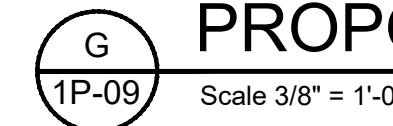


PHOTO: EXISTING BISULFITE METERING PANEL



SODIUM BISULFITE PROPOSED SECTION



Scale 3/8" = 1'-0"

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION
2	2025-01-24	ADDENDUM #2
1	2024-12-30	ISSUED FOR BID

KEY PLAN

PROJECT NUMBER

60551697

SHEET TITLE

SODIUM BISULFITE
SYSTEM IMPROVEMENTS

SHEET NUMBER

1P-09

**ATTENDANCE SHEET
RRWTP Ion Exchange Improvements**



Date: January 14, 2025		Location: 6193 Striker Road, Hamilton Township, Ohio	
Time: 10:00 AM		Meeting Topic: Pre-Bid Meeting	
Name (Print "Clearly" or include your business card)	Organization	Street Address (include your street address, city and zip code)	Phone Number
		Email Address	
BRIAN BENEDET	KECOM	brian.benedet@kecom.com	614-204-3468
Ed Turner	Warren County	ed.turner@co.warren.oh.us	513-582-5043
Andre Disbenneth	Warren County	andre.disbenneth@co.warren.oh.us	513-401-4302
NATE REUNTER	SHOOK	nreuter@shookconstruction.com	937-308-8557
Madison Paul	Building ClafTs	m.paul@buildingclafTs.com	859-791-9500
Matt McDonald	Alubon Industrial	m.mcdonald@alubon.com	231-690-1754



Warren County Water & Sewer Department

Renneker IX Improvements Pre-Bid Meeting Minutes

Date: January 14, 2025 at 10:00 AM

Project: Renneker Water Treatment Plant Ion Exchange Improvements

Meeting: Pre-Bid Meeting

Note: The statements made in this meeting, that in any way modify what is contained in the Issued for Bidding documents, are not to be considered as a change to those documents unless issued in an Addendum prior to the bid.

1. Introductions

- a. Warren County Water and Sewer Department: Owner
- b. AECOM: Engineer / Construction Administrator / SCADA Programming
- c. Inspection: To be determined

2. Summary of Work:

The project consists of adding a new 5 MGD ion exchange system inside the existing building to remove PFAS and related improvements along with improvements to the existing Socialville Booster station, high service pump station, cascade aerator, and facility lighting.

Work includes:

- Treatment Plant
 - Partial / temporary demolition of to accommodate connections to the new equipment and installation of new valves, piping, etc.
 - Partial demolition of existing floor sleeves and installation of new steel plates and concrete.
 - Connections to existing process water piping and installation of new piping, valves, and instruments.
 - Installation of Owner-procured ion exchange equipment. Equipment is provided by the Owner and installation includes new structural supports, concrete pads, field wiring of instruments, installation of loose-shipped items, painting of vessels and piping, and other ancillary components. Expected delivery of ion exchange equipment is outlines in the schedule under Section 6.
 - Purchasing and installation of ion exchange resin in each vessel and commissioning of ion exchange system.
 - Partial demolition of sodium bisulfite metering pump system and installation of a new sodium bisulfite metering pump panel with re-use of two existing pumps.
 - New chemical feed piping, valves, and injections.
 - New instrumentation including ORP analyzer and pressure transmitters.

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Renneker Water Treatment Plant Ion Exchange Improvements
Pre-Bid Meeting Minutes
January 14, 2025

- Electrical and signal connections to existing panels and integration for all new electrical and control components including flow control valves, chemical metering pumps, and instruments.
 - Socialville booster station
 - Partial / temporary demolition of to accommodate connections to the new equipment and installation of new valves, piping, etc.
 - Installation of manual and electrically actuated valves, fittings, and flow meters.
 - Electrical and signal connections to existing panels, now remote I/O and control panel, and integration for all new electrical and control components including flow control valves and instruments.
 - High service pump #4 replacement
 - Demolition of existing high service pump #4 VFD and ancillary components.
 - Installation of a new VFD for high service pump #4.
 - Installation and integration of new pump vibration sensors.
 - Installation and integration of electrical cabling, conduits and signal wiring for a complete and functioning system.
 - Cascade aerator improvements
 - Partial / temporary demolition of to accommodate connections to the new equipment and installation of new valves, piping, etc.
 - Installation of new piping, fittings, manual and electrically actuated valves, and pressure transmitter.
 - Installation of power and fiberoptic cable from existing wellfield control building to new valve and pressure transmitter at cascade aerator.
 - Installation of new location control panel and disconnects, and integration with new equipment.
 - Site lighting
 - Demolition of existing lighting fixtures on the interior and exterior of the older buildings at the Renneker water treatment plant
 - Installation of new lighting fixtures and associated hardware in place of the removed fixtures.
 - SCADA programming is performed by AECOM.
3. Contract Type:
- a. Single Prime Contractor; Stipulated Sum Price
4. Bid instructions
- a. All bids must be submitted to Warren County's office at 406 Justice Drive in Lebanon. Drop off and mailing instructions are noted in the bid instructions

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Renneker Water Treatment Plant Ion Exchange Improvements
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- i. All documents related to project including plans and specifications and addenda are available through ARC Plan Room, Columbus Branch.
 - ii. All questions should be asked in writing to the Engineer.
 1. jacob.mix@aecom.com or john.krinks@aecom.com
 - b. Bid date: Thursday January 30, 2025 at 2:00 PM
 - i. Last date to post addendum: Monday January 27, 2025 at 2:00 PM
 - ii. Last date to ask questions to be addressed in Addendum: Close of business on January 23, 2025.
5. Funding and Payment Requirements
 - a. Funding source is WSRLA (federal), and the project does have BABA and American Iron & Steel requirements.
 - b. Refer to specifications for WSRLA bid submittal and construction requirements
 - c. Davis Bacon Wage Rates must be utilized:
6. Scope of Work
 - a. Work Included in contract (outlined in Section 2 above)
 - b. Work not included in contract Ion Exchange Equipment and SCADA programming.
 - c. Allowances per section 01 2100:
 - i. \$308,000 for replacement of fiber optic cable at Renneker
 - ii. \$300,000 for replacement of fiber optic cable at Little Lower Miami Wastewater Treatment Plant
 - iii. \$300,000 for WSRLA mandatory contingency
 - iv. \$20,000 for miscellaneous electrical and instrumentation hardware required for integration between new and existing components but not otherwise shown in the contract documents.
 - d. Alternates: Provide alternative ion exchange resin manufactured by ECT2 in lieu of the specified in the base bid (Calgon CalRes)
 - e. Project schedule
 - i. Substantial completion as defined by commissioning of the ion exchange system: 275 days. The ion exchange system must be online prior to the end of 2025 and other aspects of the overall project such as the Socialville booster station, VFD replacement, cascade aerator improvements, and sight lighting can lag behind this substantial completion date.
 - ii. Final completion: 450 days
 - iii. The Owner intends to issue the notice to proceed within 30 days of opening bids.
 - iv. Expected delivery of Ion Exchange vessels: First pair mid May, second pair 3-4 weeks later, third pair 3-4 weeks after the second pair.
7. Inspections and Testing during Construction
 - a. Construction inspection will be through the Owner and AECOM.

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Renneker Water Treatment Plant Ion Exchange Improvements
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- b. All waterline testing and disinfection shall be performed by the contractor.
- 8. Permits
 - a. The Owner and AECOM is in the process of obtaining the Ohio EPA permits for drinking water approval.
 - b. Building permit is not required.
- 9. Work Restrictions
 - a. Work shall be done during reasonable hours. General policy shall be 7:00 A.M. to 7:00 P.M., Monday through Friday.
 - b. The contractor shall obtain the Owner's approval prior to weekend construction.
- 10. Questions
 - a. **Q:** What is the maximum time allowed for a shutdown. **A:** Owner will allow a maximum of 8 hours for a shut down depending on water demand.
 - b. Owner notes that any shutdown will require coordination with the plant staff. Also, the work may occur during their summer high demand period when the plant would typically run 24/7.
- 11. Facility Tour and adjourn
 - a. The attendees toured the Renneker Membrane Building.