



ADDENDUM NO. 1

Project: ITB 26-14: Water Station 14 PFAS Treatment

Date: March 31, 2026

This Addendum shall become as fully a part of the above-named project Scope of Work, specifications, deliverables, minimum requirements or qualifications, drawings, and other requirements as if therein written and shall take full and complete charge over anything therein written contained to the contrary. Each bidder shall be responsible for reading this Addendum to ascertain to what extent and in what manner it affects the work to be performed.

THIS ADDENDUM DOES NOT CHANGE THE DUE DATE FOR INVITATION TO BID:

SOLICITATION:

Add attached Certification Regarding Lobbying Form that must be submitted with Bid.

QUESTIONS & ANSWERS:

Q1: DI pipe question. General note #5 on sheet C000-001 says all DI pipe shall be Class 52 & references spec section 33 05 19. In spec section 40 05 23 process water it calls for the DI pipe to be pressure class 350 & references spec section 33 05 19. In spec section 33 05 19 it calls for the DI pipe to be Class 50. We know the grooved pipe & spools needs to be Class 53. But for the rest of the pipe would you like PC350, CL50 or CL52?

A1: Grooved end ductile iron pipe wall thickness shall be minimum Class 53. All other ductile iron pipe shall be pressure class 350.

Section 40 05 02.23 - 5, Buried (Includes Embedded and Encased) table shall be amended as follows:

Buried (Includes Embedded and Encased)

Component	Line Size, in	Material	Rating	Conn./Joints	Spec Section	Key Notes
Pipe	1 thru 3	PVC: ASTM D1784-Class 12454-B, Dim. Per ASTM D1785	Sch. 40	SLV	40 05 31.13	8, 10
	4 thru 12 16	Ductile Iron: AWWA C151	Pr. Class 350	RPO, FLG	33 05 19	5, 6, 8, 17
	14 thru 16	Ductile Iron: AWWA C151	Pr. Class 250	RPO, FLG	33-05-19	5, 6, 17

Q2: On the 12" PEF & 12" RAW piping just before pipe support #13 there is piping and what appears to possibly be Air/Vac valves. They are not called out on the plans or shown in the P&IDs. What are these? And what sizes are they?

A2: These pipe segments and air valves have been removed from the drawings. They have been superseded by manual vent valves at both ends of the PEF and RAW headers. Please see Addenda No. 1 and the updated drawings.

- Q3: Can we place the Rinse Tank walls in one pour?**
A3: As rinse tank walls are less than 30 ft tall and 50 ft in total length, no exceptions taken to placing in one pour. Proper placement/consolidation techniques shall be followed (per the Specifications) to ensure an acceptable final product.
- Q4: Fence specs call for 6' fence fabric but drawing on sheet 24 calls for 7' fabric. What do you want?**
A4: Use the 6' fabric height specified in 32 31 13.
- Q5: In reference to the chain link fabric, specification section 32 31 13/2.01/A/1 calls out for the chain link fabric to be 1 1/4" to 1 3/4" mesh. These are 2 different mesh sizes and there is a significant cost difference between the 2. Please clarify the exact mesh size needed.**
A5: Chain link mesh fabric size should be 1-3/4".
- Q6: In the DWSRF Supplementary Conditions, Paragraph 1.19 A., there is a reference to Document 00442 - Anti-Lobbying Certification Form that is to be submitted with the Bid.**
A6: Please find the Anti-Lobbying Certification Form attached for inclusion with the Bid.
- Q7: Camera Locations / Enclosures
Proposed use of Axis T98A18-VE media converter cabinets at all camera locations. The camera is mounted directly onto the cabinet or a separate enclosure require closure to the ground? Confirm 120V AC will be provided at each camera location. Confirm fiber will be provided by others.**
A7: Media converters are required in separate NEMA 4X enclosures mounted 60" above grade in accessible locations on a wall or light pole. A 120VAC circuit and the fiber optic cable will be required for each media converter. Conductors will be required from the media converter to the camera.
- Q8: NVR / Cabinet / Storage
Spec calls for a NEMA 12 enclosure. Since the NVR appears to be located indoors in a maintenance room, can a lockable vented rack cabinet be used, or is a sealed enclosure with active cooling required?
Confirm there is no retention requirements (days of storage) just a minimum of a 6TB.
Confirm if RAID or redundant storage is required.
Spec indicates an integrated PoE switch at the NVR. Can the PoE be provided via a separate network switch or local injectors instead of an integrated PoE switch at the NVR?**
A8: It should not require a rack cabinet. NVR server should be mounted on back panel so user has access to all connection ports in 2167-B02-PNL010. Use minimum of 6TB and no RAID/redundant storage. Use Section 28 13 00-2.02 C equipment. The equipment is specified based on optimizing the physical panel size for the camera panel, PNL010, located in the maintenance room on Drawing E-B02-111.
- Q9: Cameras. Confirm if Axis Q6135-LE is required, or if equivalent PTZ cameras are acceptable.**
A9: See Section 28 13 00-2.03A for acceptable camera manufacturers.

**Q10: Completion of Similar Projects - Bidder shall submit ""
B. Successfully completed three municipal drinking water public works projects in which each project included the construction of pressure vessels.**

Question - Does construction of mean "installation of pressure vessels"?

A10: This description of relevant experience is not pertaining to the making of the pressure vessels themselves, but experience of a Contractor with the construction and installation of pressure vessels for a drinking water public works project for drinking water treatment.

Q11: Condition of the existing asphalt driveway is poor and likely to be impacted with the amount of heavy construction traffic required in order to construct this project. Should the contractors include replacement of the asphalt not shown for replacement? Or will the City pay for both removal & replacement as a change order?

A11: Assume 9,690 sf of additional existing pavement removal and replacement is required due to existing poor condition and likely impacts from construction. This quantity is in addition to what is shown on C-000-316.

Q12: Sheets 35 & 36 - Level II Tree Vegetation, and Soil Plans - show significantly more 4ft Chain Link Tree Protection Fence than Sheet 16 - Temporary Erosion and Sediment Control Plan. Which plans should be utilized?

A12: Follow Sheets 35 & 36 – Level II Tree Vegetation, and Soil Plans for tree protection fencing requirements.

Q13: Can the AISC 207 Certification requirements be waived for the Rinse Water Tank Access Ladders and the Bidder Designed Freestanding Canopies.

A13: Yes.

Q14: Can Norit 400 GAC be added to the Vancouver Water Station 14 specification as an approved equal, based on its comparable performance characteristics and industry acceptance?

A14: Bidders must meet the requirements of Section 46 61 16 including the performance guarantee requirements.

Please refer to Article 7.05 of the EJCDC Standard General Conditions of the Construction Contract for "Or Equals". Material submittals will only be reviewed for approval or denial by the Engineer during the construction phase. During the bidding process, it is the Contractor's responsibility to determine which products meet the specification to provide a bid accordingly. A product is only an approved equal if it meets the qualifications and specification requirements provided in 46 61 16. Please refer to 01 33 00 – Submittal Procedures for submittal requirements and verification of submittal accuracy.

Q15: Sheet 14 - Overall Site Plan - Note 9 Retaining Wall, Approximately 4-foot high (max) conflicts with Sheet 18 - Grading and Drainage Plan - TOW EL 275.5 vs BW 271.0 & FG 270.5 in the swale below the wall. Walls over 4ft in height require structural engineering - please advise.

A15: The top of wall elevation on the two corners should be 274.5 (1 foot lower than shown on the drawing) to match the design grade behind the wall. The revised wall height does not require structural engineering.

- Q16: Per Section 40 31 13.13, Part 2-2.07 – Coating, pipe lining and coating for pipes, valves, and related components is specified in Section 40 05 02.23 as Cement Mortar: Factory Applied, AWWA C205, NSF 61 certified. However, for steel process piping, Section 40 05 24, Part 2-2.05 – States Pipe Lining should be epoxy lining, which is widely recognized as the industry standard for corrosion protection in process systems for Carbon steel piping. Carbon Steel piping cannot be cement mortar lined, this is typically for ductile iron. Please confirm that epoxy lining in accordance with Section 40 05 24, Part 2-2.05, is acceptable for the interior lining of all carbon steel process piping, in lieu of cement mortar lining, since this cannot be used for carbon steel.**
- A16: Carbon steel pipe and fittings may be cement-mortar or epoxy lined, in accordance with Section 40 05 24, Part 2.05.

Section 40 05 02.23 - 3, Area Exposure Types: Indoor Dry, Indoor Wet, Outdoor (Exposed), Submerged table shall be amended as follows:

Lining for Pipe & Fittings	1/4 thru 3	None
	Steel, 4 thru 16	Cement Mortar: Factory Applied, AWWA C205, NSF 61 certified Polyurethane: Factory Applied, AWWA C222, NSF 61 certified Liquid Epoxy: Factory Applied, AWWA C210, NSF 61 certified

- Q17: Section 40 05 67.36, Part 1.03 indicates that the PRV specified as part of Section 43 31 13 – Vertical Pressure Vessel system is intended for water service; however, no direct reference to Section 40 05 67 is identified within Section 43 31 13. Section 40 05 67, Part 2.01 lists Cla-Val Co. as an acceptable manufacturer but does not identify a specific model. In the absence of a clear cross-reference between these sections, please confirm that Section 40 05 67 governs the PRV specification for this application and that the Cla-Val Model 90-01 is an acceptable product for use in this system.**
- A17: Confirmed.

- Q18: Per the bid documents, AIS is listed as a requirement, and the bid information includes documentation indicating a BABA exemption letter; however, in recent projects, similar BABA waivers have been revoked, so please clarify whether BABA is applicable to this project or if the exemption remains valid.**
- A18: The City sent a letter to DOH documenting the BABA waiver, which is included in Attachment A-5 to the bid documents. DOH SRF also reviewed the bid documents and approved them prior to bid. Assume the BABA waiver is applicable.

As noted, AIS is required.

- Q19: In Section 40 05 64.05, the approved valve manufacturers for the project are listed. There are concerns, based on recent experiences, that the lead times of these manufacturers for the AIS requirement could put the project at schedule risk given typical submittal time frames. For this reason, we are requesting approval for the Bray's Series 30 Wafer Butterfly Valve, with materials of construction meeting the same requirements as specified in Section 40 05 64.05 – BUTTERFLY VALVE, AWWA C504, CLASS 150B. Please confirm Bray valves are an acceptable alternative valve manufacture.**
- A19: Butterfly valves shall conform to Section 40 05 64.05 as specified. Note that wafer style connections are not permitted.

Q20: In Section 43 31 13, 2.04 Materials A. 1. It states “Minor deviations” from the list specifications listed in the section may be permitted. Can you please clarify what is seen as a minor deviation and how many deviations are allowed? Without a clear definition, this gives a vendor with an NSF-61 Certification the liberty to decide what is minor. It also allows them to avoid following parts of the specification that increase the system's cost and put its quality at risk. For example, some vendors has NSF-61 certified Systems that do not provide any lining for the manifold piping, putting the system at risk of corrosion; is this seen as a minor deviation? Also, some NSF-61-certified systems have 20” side manways, not 24” as required by the specification; is this a minor deviation? Is removing the top manway, which would provide no access to the media if there were bacterial or solids fouling, considered a minor deviation? Please define what a minor deviation is and how many are acceptable, and address the three examples above, as they provide a significant cost advantage to vendors that don’t have to follow the specification with their NSF-61 Certified Systems.

A20: Section 43 31 13, 2.04 shall be amended as follows:

A. All components in contact with water shall be NSF/ANSI/CAN 61 certified.

~~1. Minor deviations from the specifications listed in this section may be permitted if the system, as a whole, is NSF/ANSI 61 certified. Deviations from this section must be submitted to the Engineer for review and approval as described in Section 01 33 00 and paragraph 1.07 of this section.~~

Q21: In section 43 31 13 2.05 E 2. It lists out to provide two 4” spent media ports and lines. This design is only necessary for the internal cone design due to the concerns of the cone’s underdrain. A second slurry outlet would provide any benefit to other underdrains and would cause issues with the slurry out process due to the line being on the side of the vessel, creating an uneven bed during extraction. There is also no way to confidently pull “20,000 lbs,” as all carbon lots come in different weights, which would change the depth at which you would need to pull. Please confirm that for underdrain designs that don’t require a second slurry outlet line to properly remove the carbon that it does not need to be supplied

A21: Two 4” spent media ports and lines shall be provided.

Q22: In Specification Section 43 31 13, Paragraph 2.03(C), a minimum Empty Bed Contact Time (EBCT) of 9.6 minutes is specified at a system flow rate of 3,200 GPM; however, the corresponding media quantity is identified as 40,000 pounds rather than by volume. Based on the stated EBCT requirement, the calculated media volume is approximately 1,369 cubic feet. Utilizing Calgon F400 media with an apparent density of 35.6 lb/CF, as indicated in the manufacturer’s data sheet, the total media weight is estimated to exceed 40,000 pounds. Furthermore, when applying a backwash and drain density of 30.2 lb/CF, the total media required to achieve the specified EBCT equates to approximately 41,343.8 pounds. The apparent density range on a carbon data sheet is due to each lot producing a slightly different value. Just like the RSSCT and the Pilot that was run, the intent is to fill the vessel to a certain bed depth to achieve the necessary contact time to remove the contaminant of concern and meet certain performance criteria. Please confirm the EBCT requirement is intended to govern the determination of the required media volume to ensure the vessel is filled to the correct bed depth without being shorted because the carbon lot comes in on the heavier end of the range.

A22: Bidders are required to provide the cost for 240,000 lbs of media (weighed dry).

Q23: SECTION 46 61 16, 2.03 Lists the Calgon F400 or approved equal. To obtain fair and competitive pricing from multiple vendors, we request that the Norit GAC400 carbon be accepted as an approved equal. It meets all GAC media specifications and has shown similar performance in PFAS studies conducted in the area and nationwide. By listing only one carbon manufacturer, this will sole-source Calgon not only for the carbon but also for the GAC systems. As in the previous bid, vendors offer the GAC systems and carbon as a package and do not break them into separate scopes or costs. Therefore, AqueoUS Vets and New Terra would not be able to provide a bid for the systems even though they are approved vendors. Please confirm that Norit GAC400 is acceptable to bid on the project as long as all specifications requirements are met.

A23: Bidders must meet the requirements of Section 46 61 16 including the performance guarantee requirements.

Please refer to Article 7.05 of the EJCDC Standard General Conditions of the Construction Contract for "Or Equals". Material submittals will only be reviewed for approval or denial by the Engineer during the construction phase. During the bidding process, it is the Contractor's responsibility to determine which products meet the specification to provide a bid accordingly. A product is only an approved equal if it meets the qualifications and specification requirements provided in 46 61 16. Please refer to 01 33 00 – Submittal Procedures for submittal requirements and verification of submittal accuracy.

Q23: This question is in regards to Section 40 05 2.89-2 and Section 40 05 2.89-3, Lining for Pipe and Fittings, Ductile Iron – Ceramic Epoxy, Protecto 401, Factory Applied. I would like to request approval of PermoxCTF as an equal ceramic epoxy lining for ductile iron pipe and fittings for this project. PermoxCTF is a factory-applied hydrogen sulfide resistant ceramic novolac epoxy lining similar to Protecto 401 and designed for sanitary sewer environments.

A24: No exceptions taken with this substitution.

APPROVALS:



Julie Denton, Senior Procurement Specialist

Date: 03/31/26

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents of all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, United States Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Organization: _____

Street address: _____

City, State, Zip: _____

CERTIFIED BY: (type or print)

TITLE:

(signature)

(date)

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure)

<p>1. Type of Federal Action: a. contract _____ b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance</p>	<p>2. Status of Federal Action: a. bid/offer/application _____ b. initial award c. post-award</p>	<p>3. Report Type: a. initial filing _____ b. material change</p> <p>For material change only: Year _____ quarter _____ Date of last report _____</p>
<p>4. Name and Address of Reporting Entity: _____ Prime _____ Subawardee Tier _____, if Known:</p> <p>Congressional District, if known:</p>	<p>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</p> <p>Congressional District, if known:</p>	
<p>6. Federal Department/Agency:</p>	<p>7. Federal Program Name/Description:</p> <p>CFDA Number, <i>if applicable</i>: _____</p>	
<p>8. Federal Action Number, if known:</p>	<p>9. Award Amount, if known:</p> <p>\$ _____</p>	
<p>10. a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i></p>	<p>b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i></p>	
<p>11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</p>	<p>Signature: _____</p> <p>Print Name: _____</p> <p>Title: _____</p> <p>Telephone No.: _____ Date: _____</p>	
<p>Federal Use Only</p>	<p>Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)</p>	

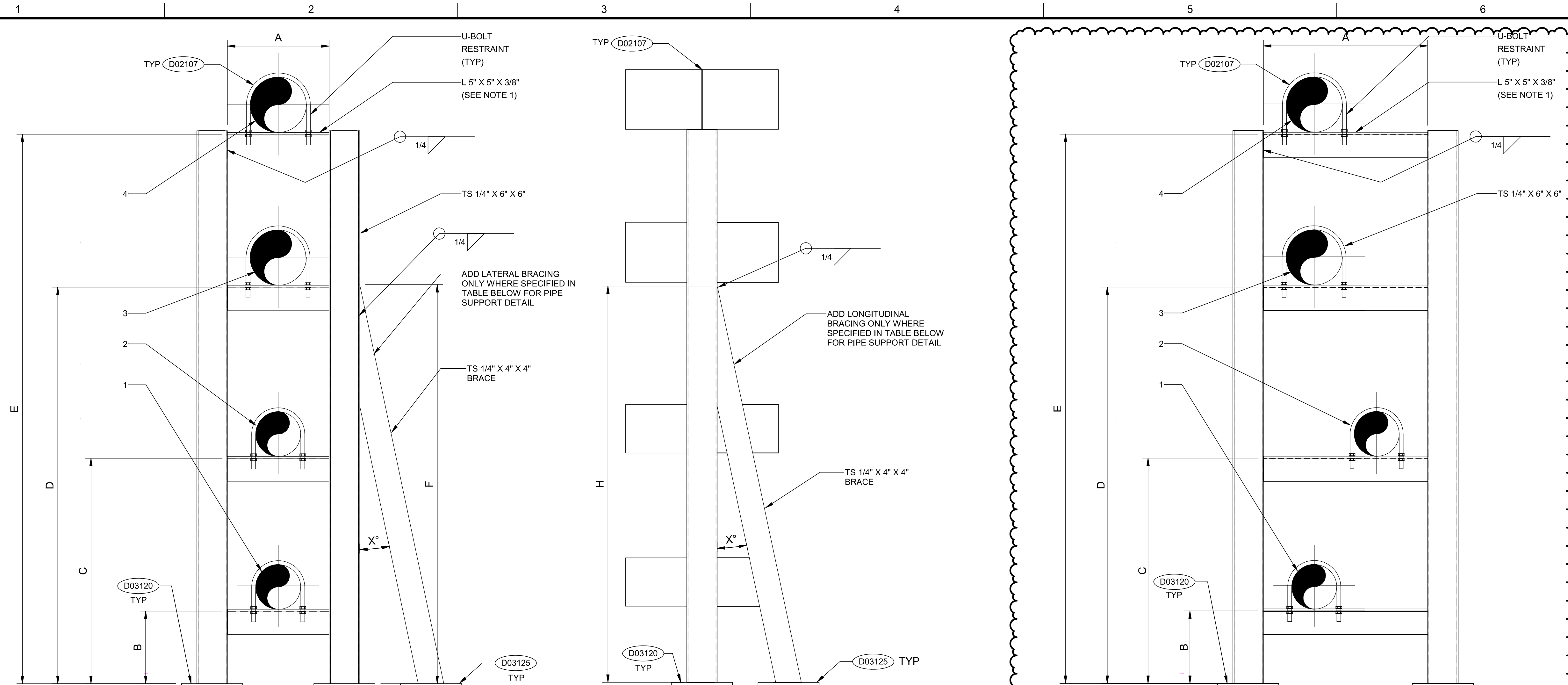
INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitations for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Included prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503



NOTES:
 1. ALL STRUCTURAL MEMBERS SHALL BE GALVANIZED CARBON STEEL AS SPECIFIED IN SECTION 05 50 00.
 2. EACH PIPE RACK SHALL HAVE A MINIMUM OF TWO CROSS MEMBERS FOR STABILITY

1 PIPE SUPPORT DETAIL 1
 SCALE: 1" = 1'-0"

NOTES:
 ADD LONGITUDINAL BRACING ONLY WHERE SPECIFIED IN TABLE BELOW FOR PIPE SUPPORT DETAIL

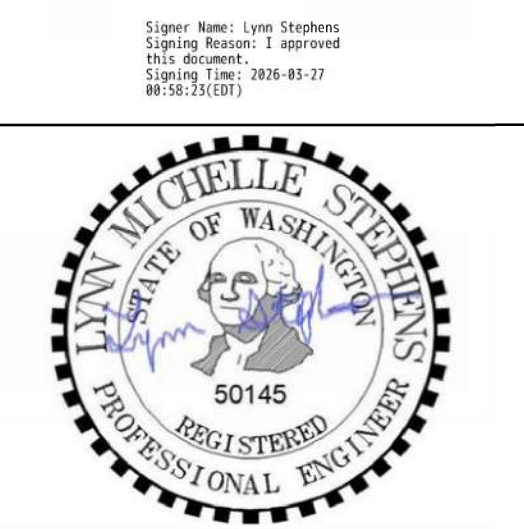
2 PIPE SUPPORT DETAIL SIDE
 SCALE: 1" = 1'-0"

NOTES:
 1. ALL STRUCTURAL MEMBERS SHALL BE GALVANIZED CARBON STEEL AS SPECIFIED IN SECTION 05 50 00.
 2. OFFSET PIPE SUPPORT RACK APPLICABLE ONLY FOR SUPPORT NUMBERS 17, 18, AND 19.

3 PIPE SUPPORT DETAIL 2
 SCALE: 1" = 1'-0"

PIPE SUPPORT NO.	PIPES				DIMENSIONS								
	PIPE SIZE 1	PIPE SIZE 2	PIPE SIZE 3	PIPE SIZE 4	A	B	C	D	E	F	G	H	J
	1	10"	16"	NA	NA	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	NA	NA	2'-11 11/16"	2'-1 1/2"	2'-11 11/16"
2	10"	16"	NA	NA	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	NA	NA	NA	NA	NA	NA
3	10"	16"	NA	NA	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	NA	NA	NA	NA	NA	NA
4	10"	16"	16"	NA	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	NA	NA	NA	NA	NA
5	10"	16"	16"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	5'-10 1/4"	2'-1 1/2"	NA	NA
6	10"	16"	16"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	NA	NA	NA	NA
7	10"	16"	16"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	5'-10 1/4"	2'-1 1/2"	5'-10 1/4"	2'-1 1/2"
8	16"	NA	NA	NA	1'-5 11/16"	NA	2'-11 11/16"	5'-10 1/4"	NA	NA	NA	NA	NA
9	10"	16"	16"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	5'-10 1/4"	2'-1 1/2"	NA	NA
10	10"	12"	12"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	5'-10 1/4"	2'-1 1/2"	NA	NA
11	10"	12"	12"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	NA	NA	NA	NA
12	10"	12"	12"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	5'-10 1/4"	2'-1 1/2"	NA	NA
13	10"	12"	12"	10"	1'-5 11/16"	0'-8 1/4"	2'-11 11/16"	5'-10 1/4"	8'-6 7/8"	5'-10 1/4"	2'-1 1/2"	5'-10 1/4"	2'-1 1/2"
14	10"	NA	NA	NA	1'-5 11/16"	NA	2'-11 11/16"	NA	8'-6 7/8"	NA	NA	NA	NA
15	10"	NA	NA	NA	1'-5 11/16"	NA	2'-11 11/16"	NA	8'-6 7/8"	NA	NA	NA	NA
16	10"	NA	NA	NA	1'-5 11/16"	NA	2'-11 11/16"	NA	8'-6 7/8"	5'-10 1/4"	2'-1 1/2"	NA	NA
17	10"	10"	8"	10"	2'-6"	0'-8 3/8"	3'-2 5/16"	6'-1 15/16"	8'-6 11/16"	NA	NA	NA	NA
18	10"	10"	8"	10"	2'-6"	0'-8 3/8"	3'-2 5/16"	6'-1 15/16"	8'-6 11/16"	NA	NA	NA	NA
19	10"	10"	8"	10"	2'-6"	0'-8 3/8"	3'-2 5/16"	6'-1 15/16"	8'-6 11/16"	NA	NA	NA	NA
20	10"	NA	NA	NA	1'-5 11/16"	NA	2'-11 11/16"	NA	9'-6 7/8"	NA	NA	NA	NA
21	10"	NA	NA	NA	1'-5 11/16"	NA	2'-11 11/16"	NA	9'-6 7/8"	5'-10 1/4"	2'-1 1/2"	5'-10 1/4"	2'-1 1/2"
22	4"	4"	NA	NA	1'-5 11/16"	1'-1 13/16"	3'-1 11/16"	NA	NA	NA	NA	NA	NA

NOTE: EACH PIPE RACK SHALL HAVE A MINIMUM OF TWO CROSS MEMBERS FOR STABILITY.
 4 D02000 - NUMBERED PIPE SUPPORT SCHEDULE
 SCALE: 12" = 1'-0"



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS		
REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: C.CYR
 DRAWN: T.LEMON
 CHECKED: K.HAY
 CHECKED: J.HESBY
 APPROVED: L.STEPHENS

FILENAME: 180318-D-00V21.rvt
 BC PROJECT NUMBER: 180318
 CLIENT PROJECT NUMBER: PRJ100893

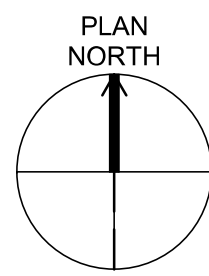
PROCESS

PIPE SUPPORT STANDARD DETAILS 2

DRAWING NUMBER: D-000-005

SHEET NUMBER OF: 69 OF 124

Plot Date: 3/24/2026 4:29:16 PM Path: Autodeskt.Docs\180318 - WS 14 PFAS Treatments Design\180318-D-00V21.rvt



VESSEL CENTERPOINT
COORDINATE SCHEDULE

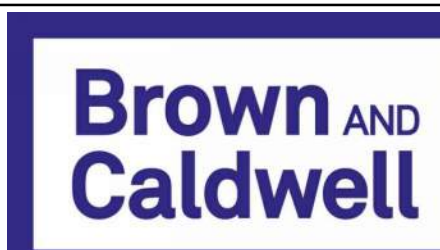
VESSEL NO.	NORTHING	EASTING
F0100	132556.87	1102833.96
F0200	132556.87	1102854.45
F0300	132559.60	1102874.18
F0400	132563.60	1102894.30
F0500	132567.51	1102913.92
F0600	132571.51	1102934.02

GENERAL NOTES:

- SEE PROCESS AND INSTRUMENTATION DIAGRAMS FOR EXTENT OF PRESSURE VESSEL SYSTEM SUPPLIER SCOPE OF SUPPLY.
- VESSEL CENTERPOINT COORDINATES PROVIDED IN TABLE ON THIS SHEET.
- PROVIDE MINIMUM 5 PIPE DIAMETERS UPSTREAM AND 2 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT PIPE FOR FLOW METER INSTALLATION UNLESS OTHERWISE NOTED.
- REFER TO ISOMETRIC DRAWING D-P01-901 AND D-P01-902 FOR LAYOUT OF ABOVE GRADE PIPING HEADERS.
- PIPE SUPPORT NUMBERS ON THIS SHEET CORRESPOND TO PIPE SUPPORTS IN TABLE ON D-000-005.
- PROVIDE HEAT TRACING AND INSULATION ON EXPOSED PIPING AS SHOWN ON PROCESS AND INSTRUMENTATION DIAGRAMS.

KEYNOTES:

- FROM RAW WATER TIE-IN AT U03.
- TO FINISHED WATER TIE-IN AT U03.
- MINIMUM 12" CLEARANCE BETWEEN PIPE TRANSITION TO BELOW GRADE AND EQUIPMENT PAD.
- SEE CIVIL FOR CONTINUATION.
- INSTALL RAIN CANOPY OVER SAMPLE TAP AREA - TYP. ALL VESSELS. SEE KEY NOTE #4 ON S-P01-101 FOR DETAILS.
- PIPE SUPPORTS FOR ELEVATED PIPE AROUND VESSELS DESIGNED BY VESSEL SUPPLIER.
- PIPE SUPPORT DESIGN FOR MANIFOLD AREA BY VESSEL SUPPLIER.
- 4'-6" BY 4'-6" CONCRETE PAD, SEE DETAIL S06003.
- 6'-6" BY 6'-6" CONCRETE PAD, SEE DETAIL S06003.
- 2" BALL VALVE FOR FUTURE CHEMICAL INJECTION ON 8" RWS LINE.
- MINIMUM 5" CLEARANCE BETWEEN EDGE OF BASEPLATE AND EDGE OF CONCRETE.
- PROVIDE CATHODIC PROTECTION FOR BURIED PIPING, FITTINGS, AND APPURTENANCES IN ACCORDANCE WITH SECTION 33 14 42.
- SLEEVE COUPLING PER SPEC 40 05 06.



PORTLAND, OREGON

Signer Name: Lynn Stephens
Signing Reason: I approved
this document.
Signing Time: 2026-05-27
08:58:34(EDT)



ISSUED FOR BID



WS14 PFAS
TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED: C.CYR

DRAWN: T.LEMON

CHECKED: K.HAY

CHECKED: J.HESBY

APPROVED: L.STEPHENS

FILENAME

180318-D-00V21.rvt

BC PROJECT NUMBER

180318

CLIENT PROJECT NUMBER

PRJ100893

PROCESS

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN

PFAS TREATMENT PLAN
SCALE: 3/16" = 1'-0"

Plot Date: 3/25/2026 10:09:12 PM Path: AutoDesk_Docs://180318 - WS 14 PFAS Treatments Design/180318-D-00V21.rvt

DRAWING NUMBER
D-P01-101

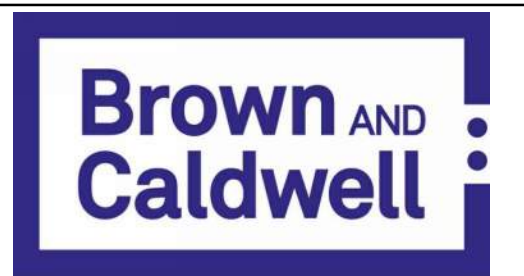
71 SHEET NUMBER OF 124

GENERAL NOTES:

- SEE PROCESS AND INSTRUMENTATION DIAGRAMS FOR EXTENT OF PRESSURE VESSEL SYSTEM SUPPLIER SCOPE OF SUPPLY.
- REFER TO ISOMETRIC DRAWING D-P01-301 AND D-P01-302 FOR LAYOUT OF ABOVE GRADE PIPING HEADERS.
- REFER TO MECHANICAL AND STRUCTURAL DETAIL SHEETS FOR ALL EQUIPMENT PAD AND ANCHORING DETAILS.
- PIPE SUPPORT NUMBERS ON THIS SHEET CORRESPOND TO PIPE SUPPORTS IN TABLE ON D-000-005.
- PROVIDE HEAT TRACING AND INSULATION ON EXPOSED PIPING AS SHOWN ON PROCESS AND INSTRUMENTATION DIAGRAMS.

KEYNOTES:

- 11.25-DEG ELBOW.
- FROM RAW WATER TIE-IN AT U03.
- TO FINISHED WATER TIE-IN AT U03.
- PIPE SUPPORTS FOR ELEVATED PIPE AROUND VESSELS DESIGNED BY VESSEL SUPPLIER.
- TO RINSE WATER TANK.
- 2" BALL VALVE FOR FUTURE CHEMICAL INJECTION ON 8" RWS LINE.
- 10" VESSEL INLET WILL PRIMARILY BE USED FOR RAW WATER. DURING BACKWASHING, THIS LINE WILL CONTAIN RWD.
- PIPE SUPPORTS ATTACHED TO VESSELS AND IN THE VALVE MANIFOLD AREA ARE SHOWN FOR EXAMPLE ONLY - VESSEL SUPPLIER TO DESIGN ELEVATED PIPE SUPPORTS ATTACHED TO VESSEL AND PIPE SUPPORTS IN VESSEL VALVE MANIFOLD AREA.
- SLEEVE COUPLING PER SPEC 40 05 06.
- PROVIDE CATHODIC PROTECTION FOR BURIED PIPING, FITTINGS, AND APPURTENANCES IN ACCORDANCE WITH SECTION 33 14 42.



PORTLAND, OREGON

Signer Name: Lynn Stephens
 Signing Reason: I approved
 this document.
 Signing Time: 2026-09-27
 09:58:24(EDT)



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: C.CYR
 DRAWN: T.LEMON
 CHECKED: K.HAY
 CHECKED: J.HESBY
 APPROVED: L.STEPHENS

FILENAME

180318-D-00V21.rvt

BC PROJECT NUMBER

180318

CLIENT PROJECT NUMBER

PRJ100893

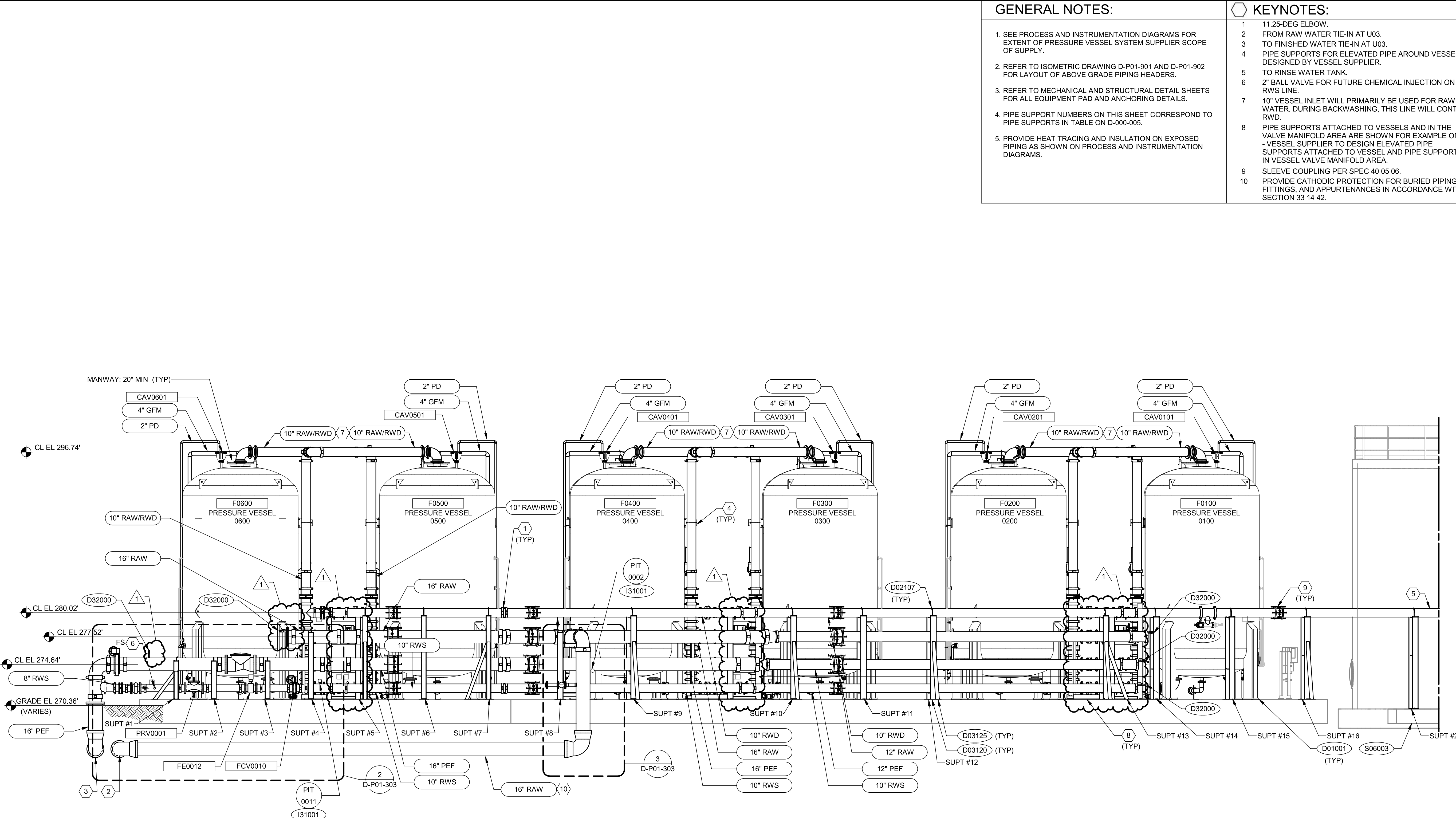
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PFAS TREATMENT SECTION 1

DRAWING NUMBER

D-P01-301

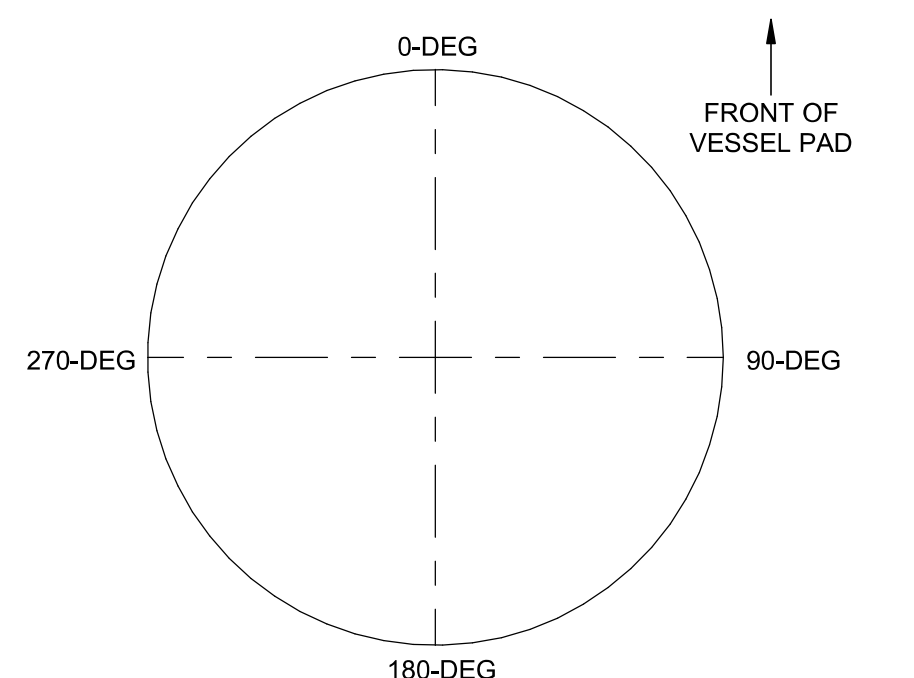
72 SHEET NUMBER OF 124



SECTION 1
 D-P01-101 SCALE: 3/16" = 1'-0"

Plot Date: 3/25/2026 9:59:11 PM Path: AutoDesk_Docs:\180318 - WS 14 PFAS Treatments Design\180318-D-00V21.rvt

VESSEL NOZZLE SCHEDULE							
NOZZLE NO.	NOZZLE SIZE/DESCRIPTION	SURFACE OF PENETRATION	ROTATION (0100, 0300, AND 0500)	ROTATION (0200, 0400, AND 0600)	FITTING TYPE	DISTANCE FROM CENTER OF VESSEL	DISTANCE FROM BOTTOM OF VESSEL
N1	4" GAC Fresh Media (Inlet)	Top	0 DEG	0 DEG	150# Flange	1'-6"	N/A
N2	4" GAC Spent Media 1 (Outlet)	Sidewall	30 DEG	330 DEG	150# Flange	N/A	1'-7"
N3	1/2" GAC 25% Sample Tap	Sidewall	75 DEG	285 DEG	150# Flange	N/A	9'-5"
N4	1/2" GAC 50% Sample Tap	Sidewall	80 DEG	280 DEG	150# Flange	N/A	6'-3"
N5	1/2" GAC 75%/IX 25% Sample Tap	Sidewall	85 DEG	275 DEG	150# Flange	N/A	2'-10"
N6	1/2" IX 50% Sample Tap	Sidewall	90 DEG	270 DEG	150# Flange	N/A	0'-6"
N7	1/2" IX 75% Sample Tap	Sidewall	95 DEG	265 DEG	150# Flange	N/A	0'-11"
N8	2" Undercone Vent	Sidewall	70 DEG	255 DEG	150# Flange	N/A	0'-9"
N9	2" Air/Vacuum Valve	Top	50 DEG	310 DEG	150# Flange	2'-11"	N/A
N10	10" Influent Connection	Top	0 DEG	0 DEG	150# Flange	0'-0"	N/A
N11	10" Effluent Connection	Bottom	270 DEG	90 DEG	150# Flange	0'-0"	N/A
N12	4" GAC Spent Media 2 (Outlet)	Bottom	0 DEG	0 DEG	150# Flange	0	N/A
M1	20" Manway	Top	0 DEG	0 DEG	Flat Face	3'-9"	N/A
M2	24" Manway	Sidewall	0 DEG	0 DEG	Flat Face	N/A	2'-2"
M3	18x14" Manway	Bottom	15 DEG	15 DEG	Flat Face	0	N/A



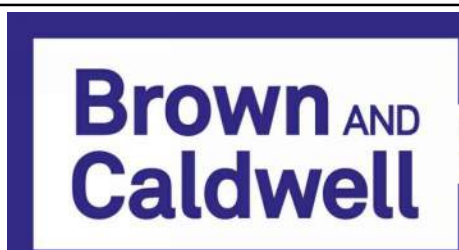
VESSEL NOZZLE ROTATION SCHEMATIC
NTS

GENERAL NOTES:

- SEE PROCESS AND INSTRUMENTATION DIAGRAMS FOR EXTENT OF PRESSURE VESSEL SYSTEM SUPPLIER SCOPE OF SUPPLY.
- PROVIDE MINIMUM 5 PIPE DIAMETERS UPSTREAM AND 3 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT PIPE FOR FLOW METER INSTALLATION UNLESS OTHERWISE NOTED.
- ENLARGED SECTIONS ARE REPRESENTATIVE OF ALL PRESSURE VESSEL TRAINS.
- VALVE MANIFOLDS SHALL BE CONFIGURED TO PROVIDE MINIMUM 6" RADIAL CLEARANCE AROUND ALL VALVE HANDWHEELS. DIMENSIONS AND LAYOUT SHOWN ON DRAWINGS ARE FOR GENERAL REPRESENTATION PURPOSES AND MUST BE COORDINATED WITH SYSTEM SUPPLIER.
- REFER TO MECHANICAL AND STRUCTURAL DETAIL SHEETS FOR ALL EQUIPMENT PAD AND ANCHORING DETAILS.
- PRESSURE VESSEL UNDERDRAIN SYSTEM AND NOZZLES SUBJECT TO CHANGE BASED ON PRESSURE VESSEL SUPPLIER DESIGN.
- GRADE AND TOP OF SLAB ELEVATIONS VARY; REFER TO CIVIL AND STRUCTURAL DRAWINGS FOR DETAILS.
- PROVIDE HEAT TRACING AND INSULATION ON EXPOSED PIPING AS SHOWN ON PROCESS AND INSTRUMENTATION DIAGRAMS.

KEYNOTES:

- SEE CIVIL FOR CONTINUATION.
- ALL VALVES WITHIN THE GAC VENDOR PACKAGE SHALL HAVE HANDWHEELS.
- ALL CONNECTIONS WITHIN THE GAC VENDOR PACKAGE SHALL HAVE FLANGED CONNECTIONS.
- PIPE SUPPORTS FOR ELEVATED PIPE AROUND VESSELS DESIGNED BY VESSEL SUPPLIER.
- ALL SAMPLE AND VENT VALVES MUST BE INDIVIDUALLY LOCKABLE.
- DAVIT ON MANWAY COVER.
- NOZZLE ROTATIONS ARE APPROXIMATE AND BASED ON ONE EXAMPLE MANUFACTURER. THE NOZZLES ARE NOT INTENDED TO BE EXACT FOR A SPECIFIC MANUFACTURER. NOZZLE ROTATIONS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 43 31 13.13 FOR REVIEW AND APPROVAL BY THE ENGINEER.
- PROVIDE CATHODIC PROTECTION FOR BURIED PIPING, FITTINGS, AND APPURTENANCES IN ACCORDANCE WITH SECTION 33 14 42.



PORTLAND, OREGON

Signer Name: Lynn Stephens
Signature: I approve this document.
Stamping Date: 2025-01-27
08:58:24(EST)



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: C.CYR

DRAWN: T.LEMON

CHECKED: K.HAY

CHECKED: J.HESBY

APPROVED: L.STEPHENS

FILENAME

180318-D-00V21.rvt

BC PROJECT NUMBER

180318

CLIENT PROJECT NUMBER

PRJ100893

PROCESS

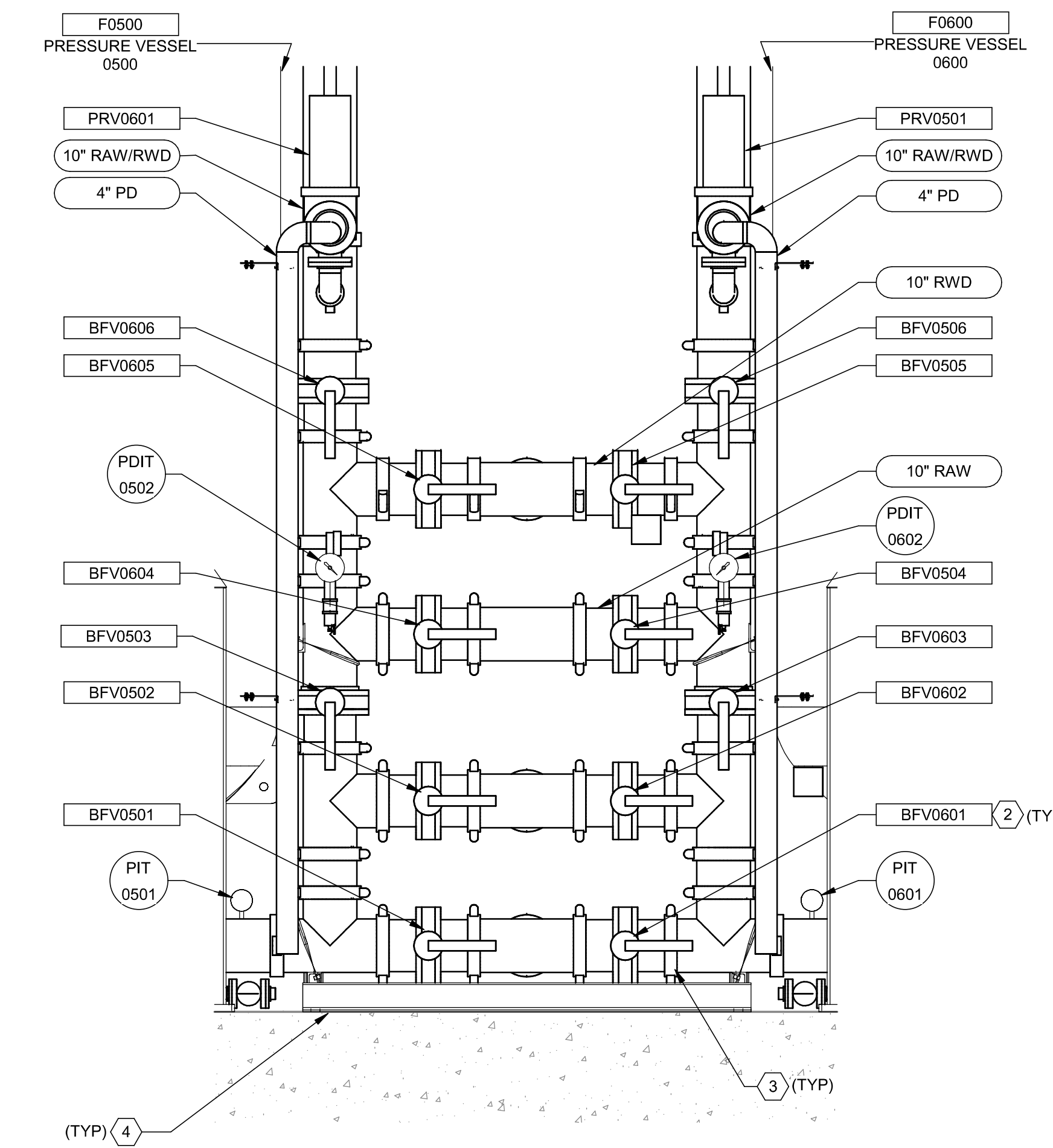
PFAS TREATMENT SECTION 2 AND DETAIL

DRAWING NUMBER

D-P01-302

SHEET NUMBER

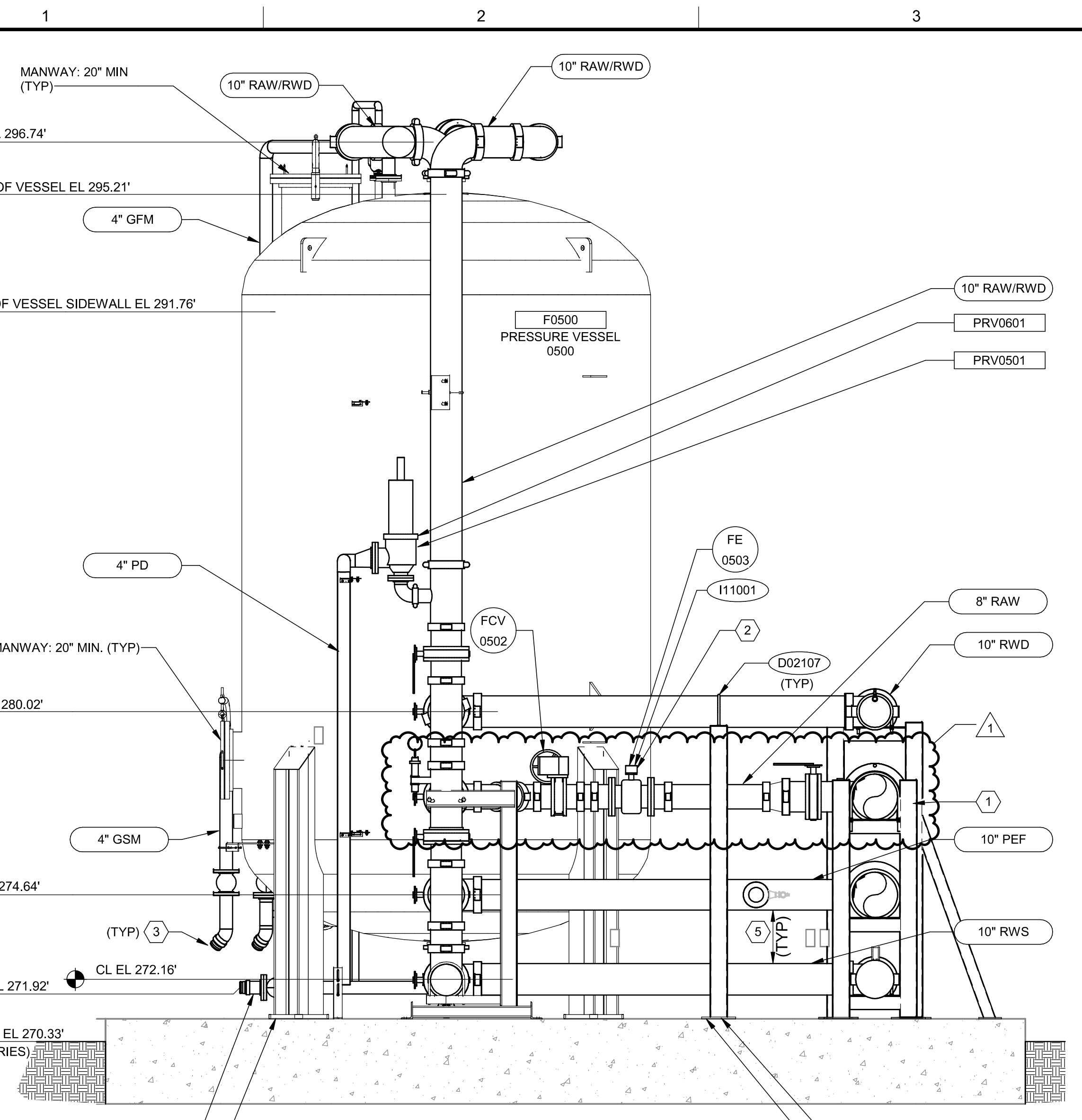
73 OF 124



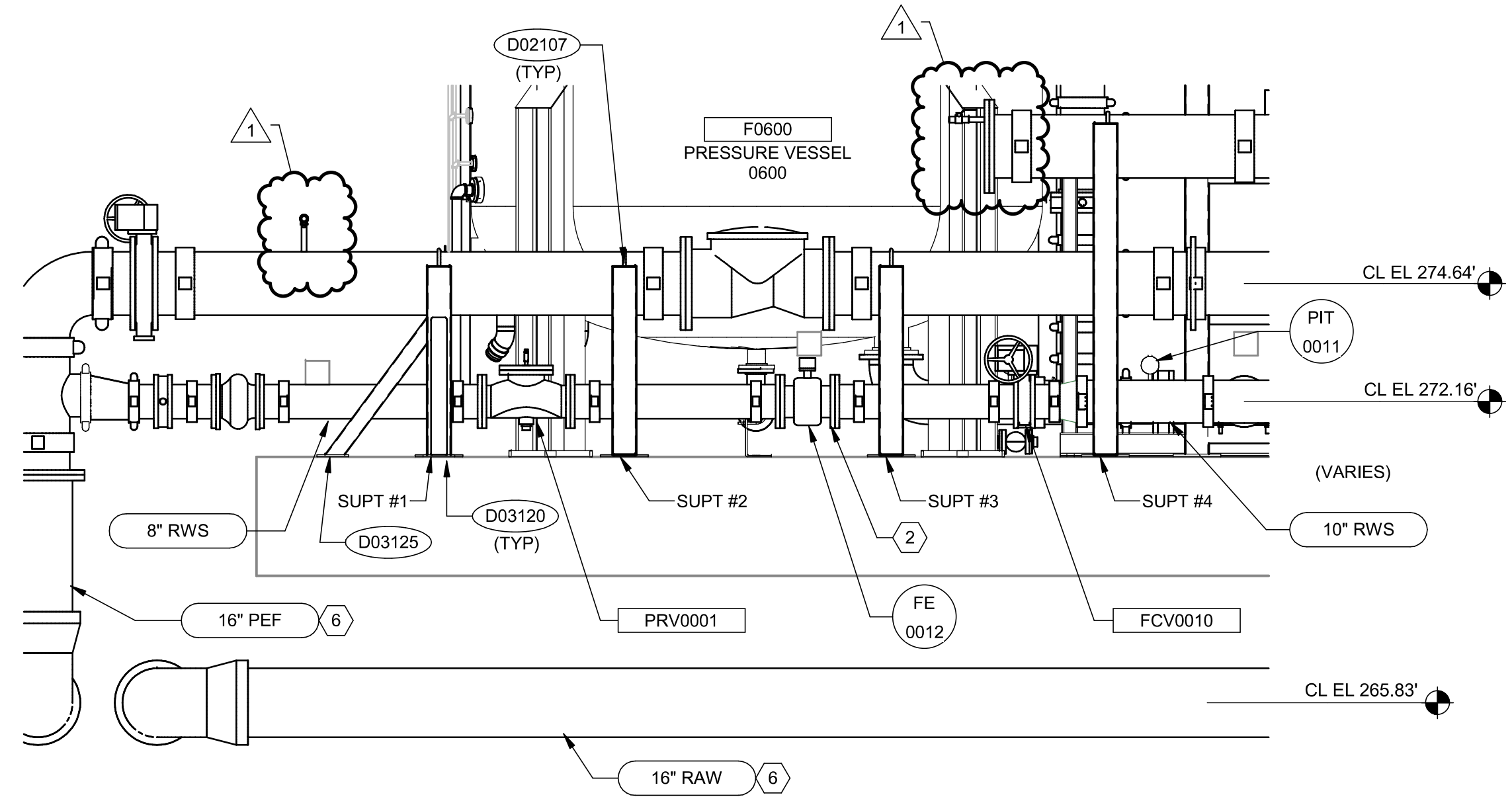
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D-P01-302 SCALE: 1/2" = 1'-0"

2 SECTION
D-P01-101 SCALE: 3/8" = 1'-0"

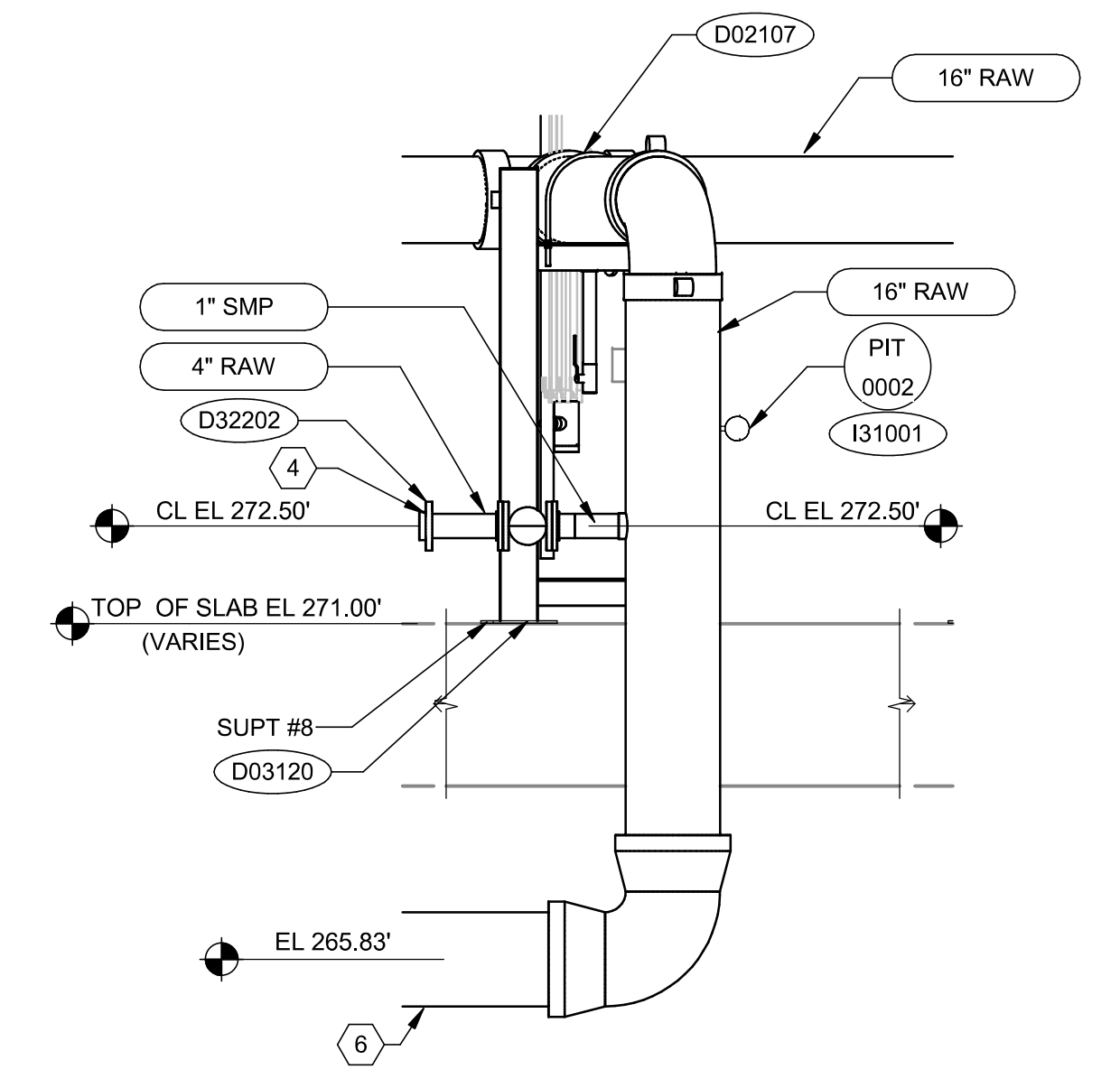
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1 SECTION
D-P01-101 SCALE: 3/8" = 1'-0"



2 SECTION
D-P01-301 SCALE: 3/8" = 1'-0"



3 SECTION
D-P01-301 SCALE: 3/8" = 1'-0"

GENERAL NOTES:

1. SEE PROCESS AND INSTRUMENTATION DIAGRAMS FOR EXTENT OF PRESSURE VESSEL SYSTEM SUPPLIER SCOPE OF SUPPLY.
2. PROVIDE MINIMUM 5 PIPE DIAMETERS UPSTREAM AND 3 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT PIPE FOR FLOW METER INSTALLATION UNLESS OTHERWISE NOTED.
3. ENLARGED SECTIONS ARE REPRESENTATIVE OF ALL PRESSURE VESSEL TRAINS.
4. VALVE MANIFOLDS SHALL BE CONFIGURED TO PROVIDE MINIMUM 6" RADIAL CLEARANCE AROUND ALL VALVE HANDWHEELS. DIMENSIONS AND LAYOUT SHOWN ON DRAWINGS ARE FOR GENERAL REPRESENTATION PURPOSES AND MUST BE COORDINATED WITH SYSTEM SUPPLIER.
5. REFER TO MECHANICAL AND STRUCTURAL DETAIL SHEETS FOR ALL EQUIPMENT PAD AND ANCHORING DETAILS.
6. PIPE SUPPORT NUMBERS ON THIS SHEET CORRESPOND TO PIPE SUPPORTS IN TABLE ON D-000-005.
7. PROVIDE HEAT TRACING AND INSULATION ON EXPOSED PIPING AS SHOWN ON PROCESS AND INSTRUMENTATION DIAGRAMS.

KEYNOTES:

1. INSTALL BLIND FLANGE.
2. PROVIDE MINIMUM 5 PIPE DIAMETERS UPSTREAM AND 3 PIPE DIAMETERS DOWNSTREAM OF STRAIGHT PIPE FOR FLOW METER INSTALLATION UNLESS OTHERWISE NOTED.
3. CAMLOCK TRUCK CONNECTIONS SHALL BE INSTALLED 2 FT AFF.
4. 4" VACTOR CONNECTION.
5. MINIMUM 12" CLEARANCE BETWEEN PIPES STACKED VERTICALLY.
6. PROVIDE CATHODIC PROTECTION FOR BURIED PIPING, FITTINGS, AND APPURTENANCES IN ACCORDANCE WITH SECTION 33 14 42.



Signer Name: Lynn Stephens
Signature Revision: 1 approved
this document:
Signature Type: 2016-03-27
08:58:34 (EST)



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

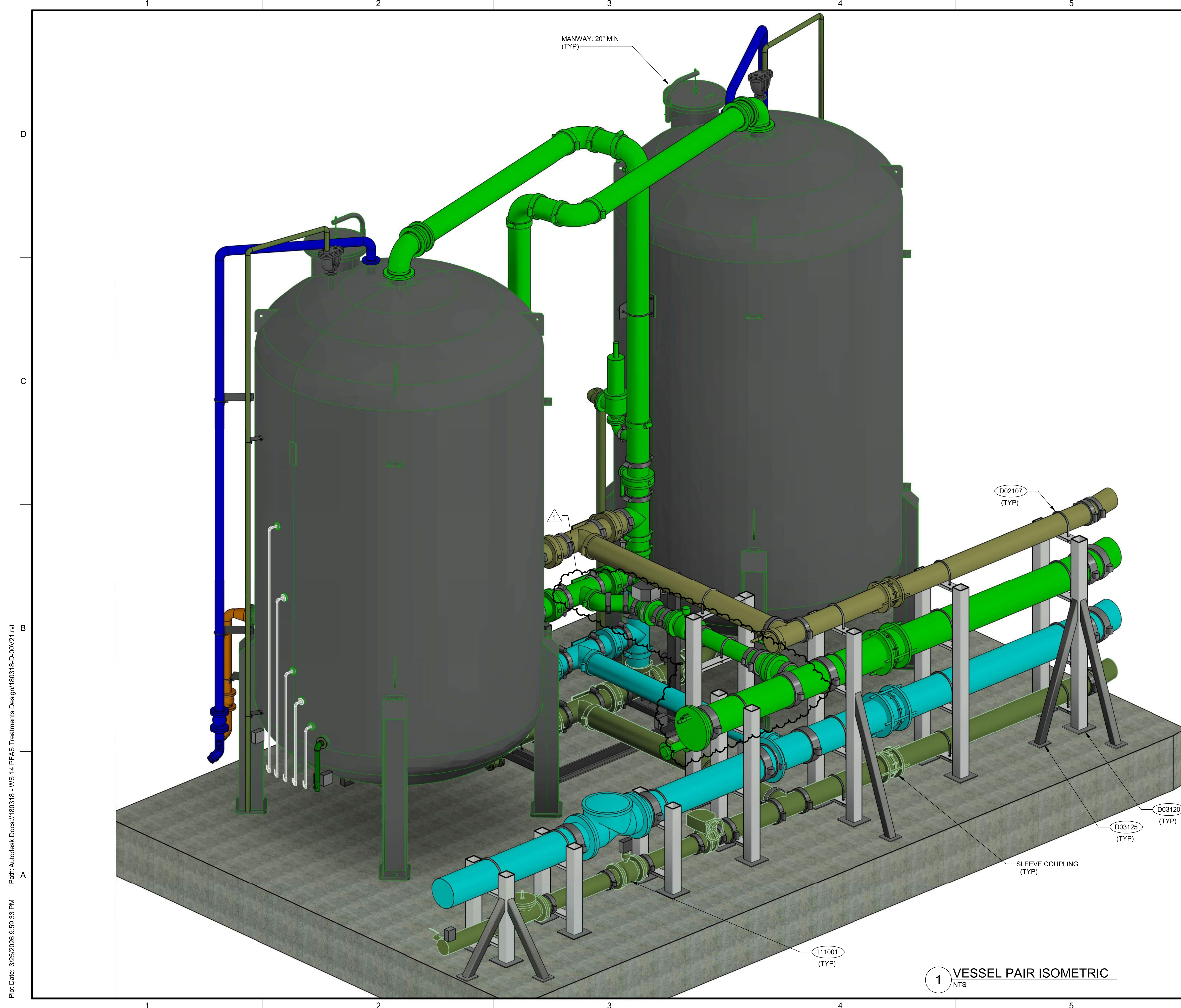
DESIGNED: C.CYR
DRAWN: T.LEMON
CHECKED: K.HAY
CHECKED: J.HESBY
APPROVED: L.STEPHENS

FILENAME: 180318-D-00V21.rvt
BC PROJECT NUMBER: 180318
CLIENT PROJECT NUMBER: PRJ100893

PFAS TREATMENT SECTION 3

DRAWING NUMBER: **D-P01-303**
SHEET NUMBER OF: 74 OF 124

Plot Date: 3/26/2026 7:14:32 AM Path: Autodeskt.Docs\180318 - WS 14 PFAS Treatments Design\180318-D-00V21.rvt



- GENERAL NOTES:**
1. SEE PROCESS AND INSTRUMENTATION DIAGRAMS FOR EXTENT OF PRESSURE VESSEL SYSTEM SUPPLIER SCOPE OF SUPPLY.
 2. VALVE MANIFOLDS SHALL BE CONFIGURED TO PROVIDE MINIMUM 6" RADIAL CLEARANCE AROUND ALL VALVE HANDWHEELS. DIMENSIONS AND LAYOUT SHOWN ON DRAWINGS ARE FOR GENERAL REPRESENTATION PURPOSES AND MUST BE COORDINATED WITH SYSTEM SUPPLIER.
 3. REFER TO MECHANICAL AND STRUCTURAL DETAIL SHEETS FOR ALL EQUIPMENT PAD AND ANCHORING DETAILS.
 4. PIPE SUPPORTS ATTACHED TO VESSELS AND IN THE VALVE MANIFOLD AREA ARE SHOWN FOR EXAMPLE ONLY - VESSEL SUPPLIER TO DESIGN ELEVATED PIPE SUPPORTS ATTACHED TO VESSEL AND PIPE SUPPORTS IN VESSEL VALVE MANIFOLD AREA.
 5. PROVIDE HEAT TRACING AND INSULATION ON EXPOSED PIPING AS SHOWN ON PROCESS AND INSTRUMENTATION DIAGRAMS.



Signer Name: Lynn Stephens
 Signing Reason: I approved this document.
 Signing Time: 2/26/25 09:18:25 (EST)



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: C.CYR
 DRAWN: T.LEMON
 CHECKED: K.HAY
 CHECKED: J.HESBY
 APPROVED: L.STEPHENS

FILENAME
 180318-D-00V21.rvt
 BC PROJECT NUMBER
 180318
 CLIENT PROJECT NUMBER
 PRJ100893

PROCESS

PFAS TREATMENT ISOMETRIC VIEW 1

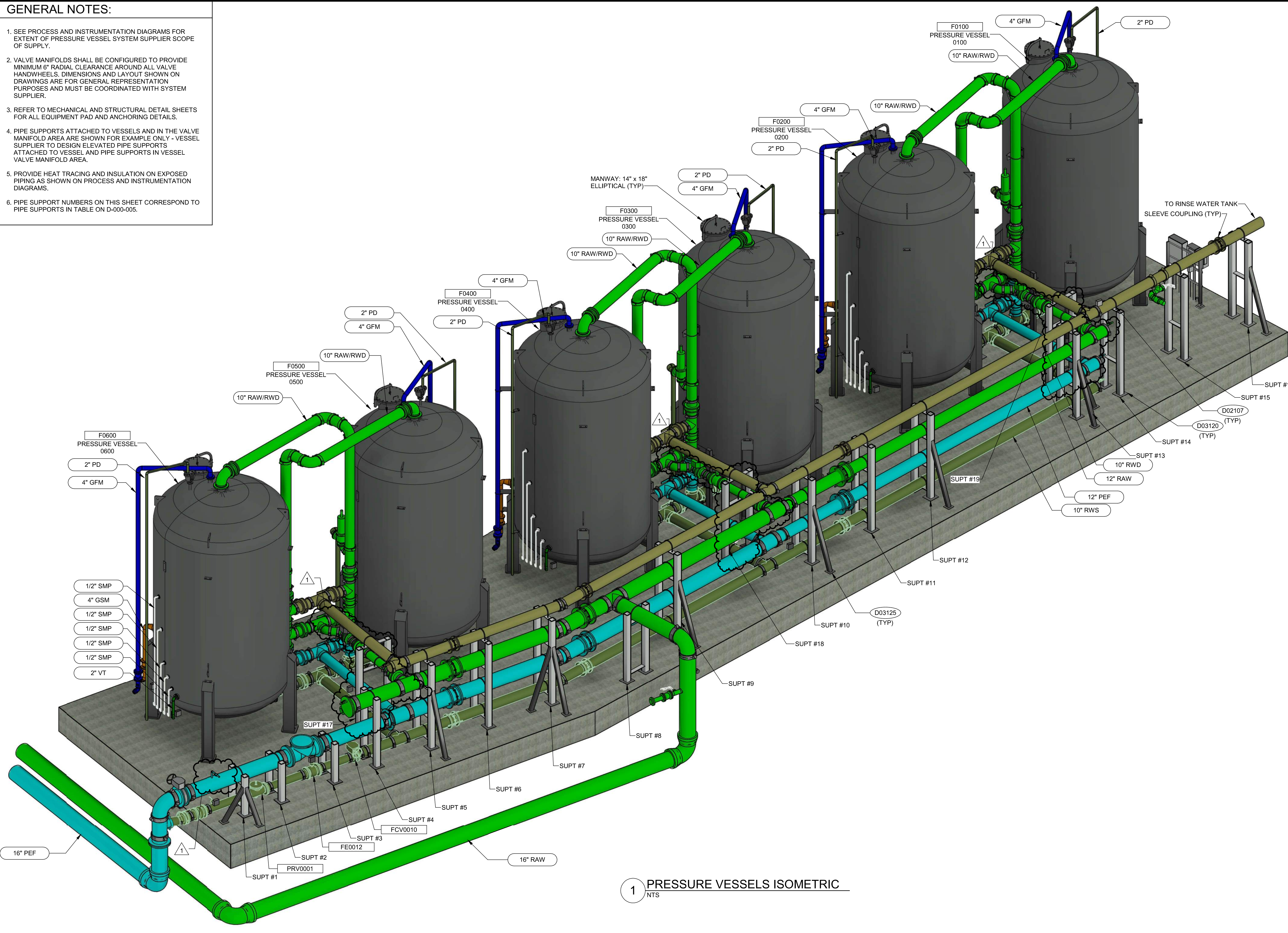
DRAWING NUMBER
D-P01-901
 SHEET NUMBER OF
 75 OF 124

1 VESSEL PAIR ISOMETRIC
 NTS

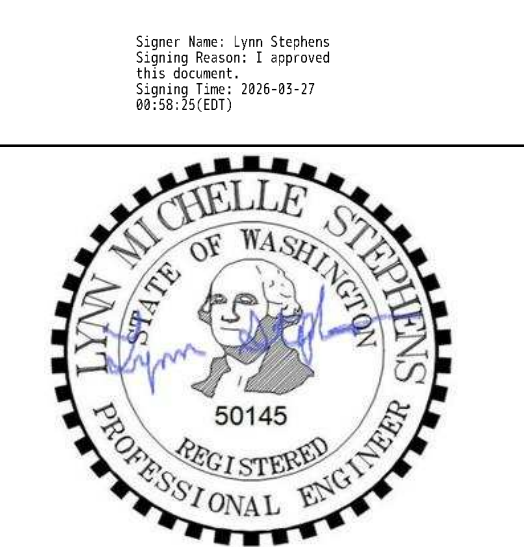
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GENERAL NOTES:

1. SEE PROCESS AND INSTRUMENTATION DIAGRAMS FOR EXTENT OF PRESSURE VESSEL SYSTEM SUPPLIER SCOPE OF SUPPLY.
2. VALVE MANIFOLDS SHALL BE CONFIGURED TO PROVIDE MINIMUM 6" RADIAL CLEARANCE AROUND ALL VALVE HANDWHEELS. DIMENSIONS AND LAYOUT SHOWN ON DRAWINGS ARE FOR GENERAL REPRESENTATION PURPOSES AND MUST BE COORDINATED WITH SYSTEM SUPPLIER.
3. REFER TO MECHANICAL AND STRUCTURAL DETAIL SHEETS FOR ALL EQUIPMENT PAD AND ANCHORING DETAILS.
4. PIPE SUPPORTS ATTACHED TO VESSELS AND IN THE VALVE MANIFOLD AREA ARE SHOWN FOR EXAMPLE ONLY - VESSEL SUPPLIER TO DESIGN ELEVATED PIPE SUPPORTS ATTACHED TO VESSEL AND PIPE SUPPORTS IN VESSEL VALVE MANIFOLD AREA.
5. PROVIDE HEAT TRACING AND INSULATION ON EXPOSED PIPING AS SHOWN ON PROCESS AND INSTRUMENTATION DIAGRAMS.
6. PIPE SUPPORT NUMBERS ON THIS SHEET CORRESPOND TO PIPE SUPPORTS IN TABLE ON D-000-005.



1 PRESSURE VESSELS ISOMETRIC
NTS



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

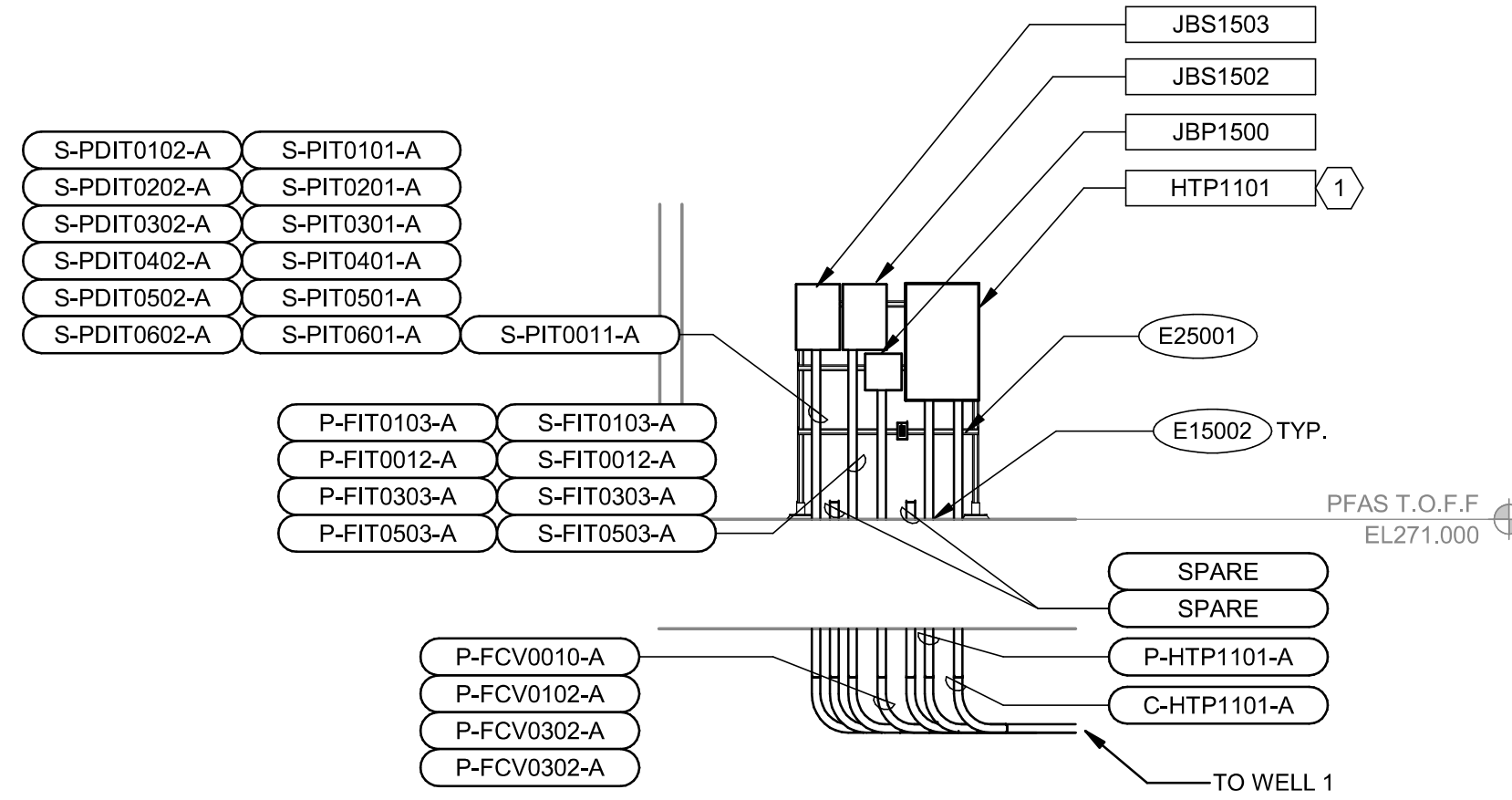
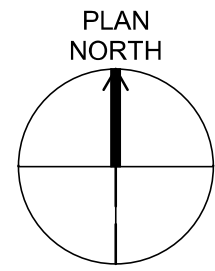
DESIGNED: C.CYR
 DRAWN: T.LEMON
 CHECKED: K.HAY
 CHECKED: J.HESBY
 APPROVED: L.STEPHENS

FILENAME: 180318-D-00V21.rvt
 BC PROJECT NUMBER: 180318
 CLIENT PROJECT NUMBER: PRJ100893

PFAS TREATMENT ISOMETRIC VIEW 2

DRAWING NUMBER: **D-P01-902**
 SHEET NUMBER OF: 76 OF 124

Plot Date: 3/25/2026 10:00:26 PM Path: AutoDesk Docs\180318 - WS 14 PFAS Treatments Design\180318-D-00V21.rvt



GENERAL NOTES:

- THIS DRAWING ONLY SHOW 2" CONDUIT AND GREATER, FOR MODEL COORDINATION PURPOSES. NOT ALL POWER AND CONTROL CONDUITS ARE SHOWN.

KEYNOTES:

- HEAT TRACE PANEL HTP1101 SHALL BE FED FROM WELL 1 MCC 1 VIA TRANSFORMER XFMR1101.
- LOCAL CONTROL STATION SHALL BE INTEGRAL TO THE FLOW CONTROL VALVE. SEE DRAWING I-P01-101
- FURNISH AND INSTALL DISCONNECTING MEANS FOR THE FIT.



Signature: James Cook
 Signature Number: 37632
 State: WASHINGTON
 License Number: 37632
 Date: 03/25/2026



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.NURSUWITO
 DRAWN: B.NURSUWITO
 CHECKED: J.COOK
 CHECKED: M.MAISONVILLE
 APPROVED: J.COOK

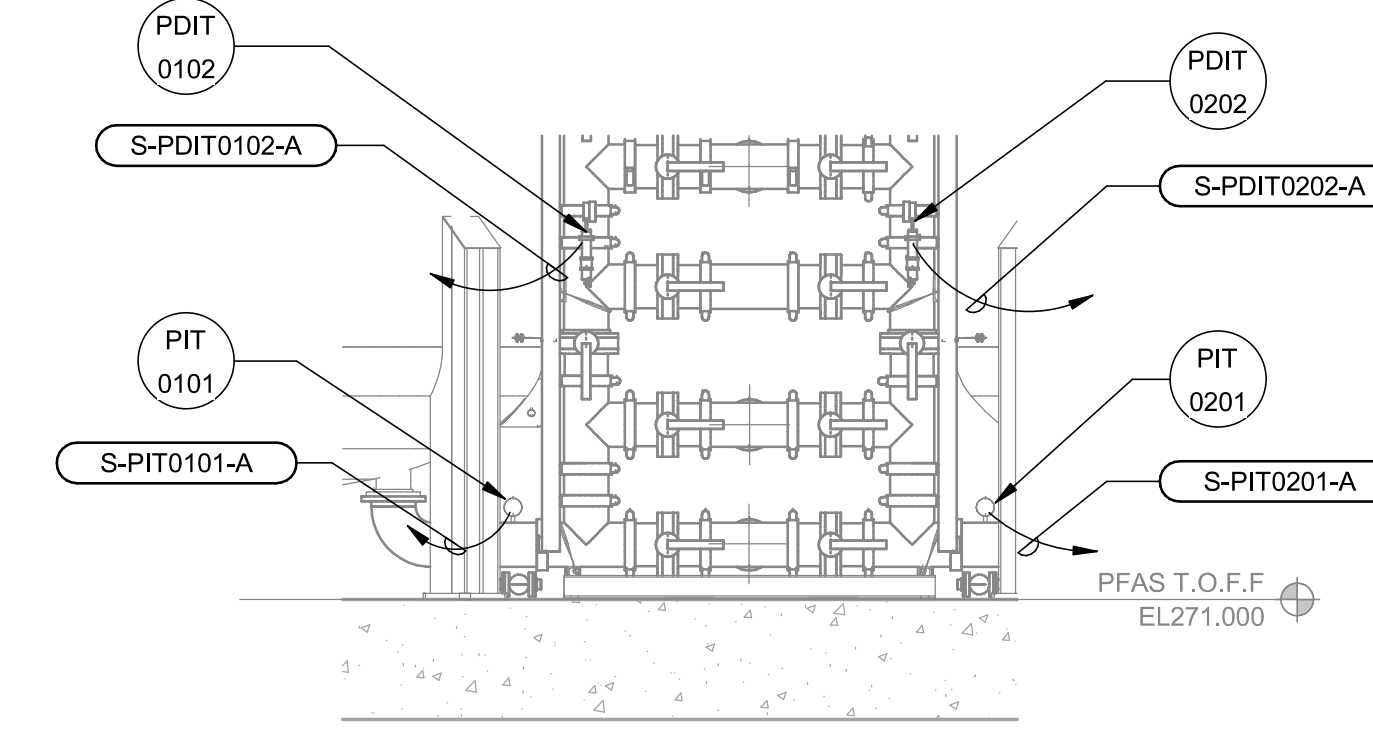
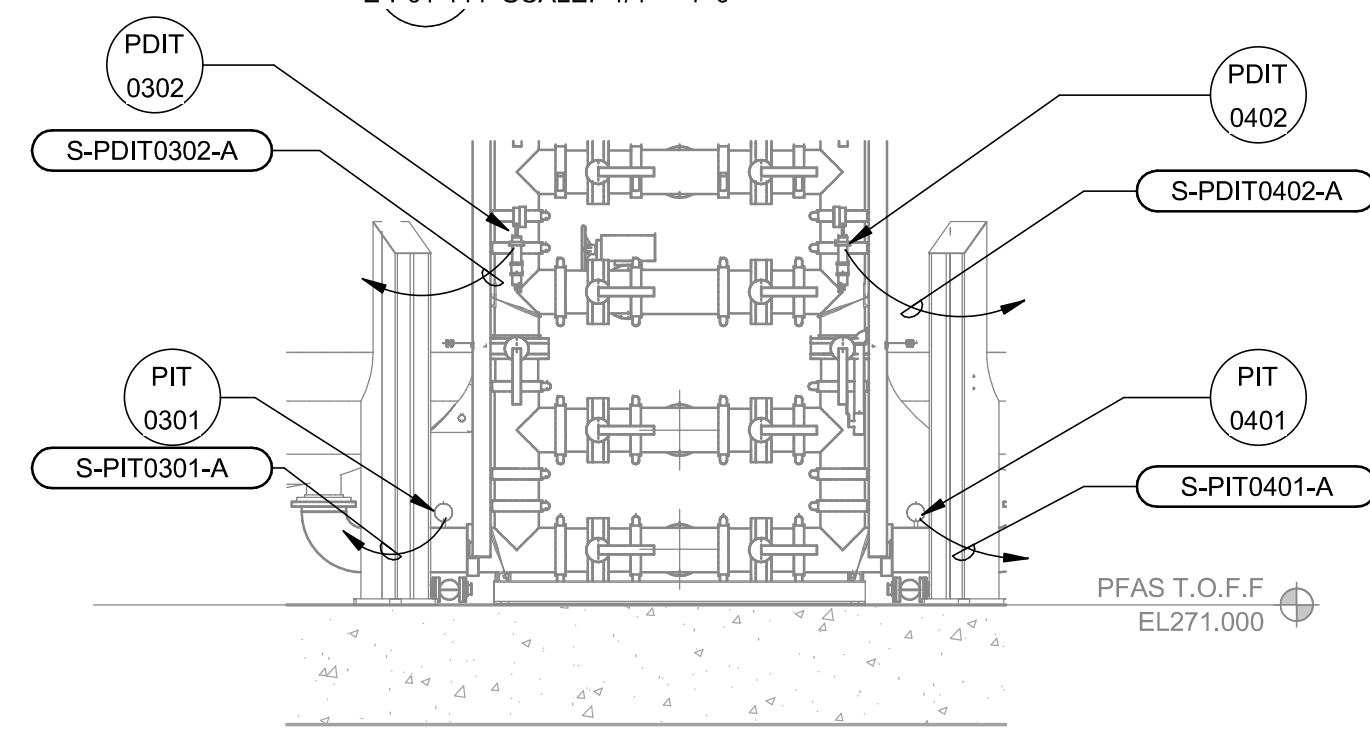
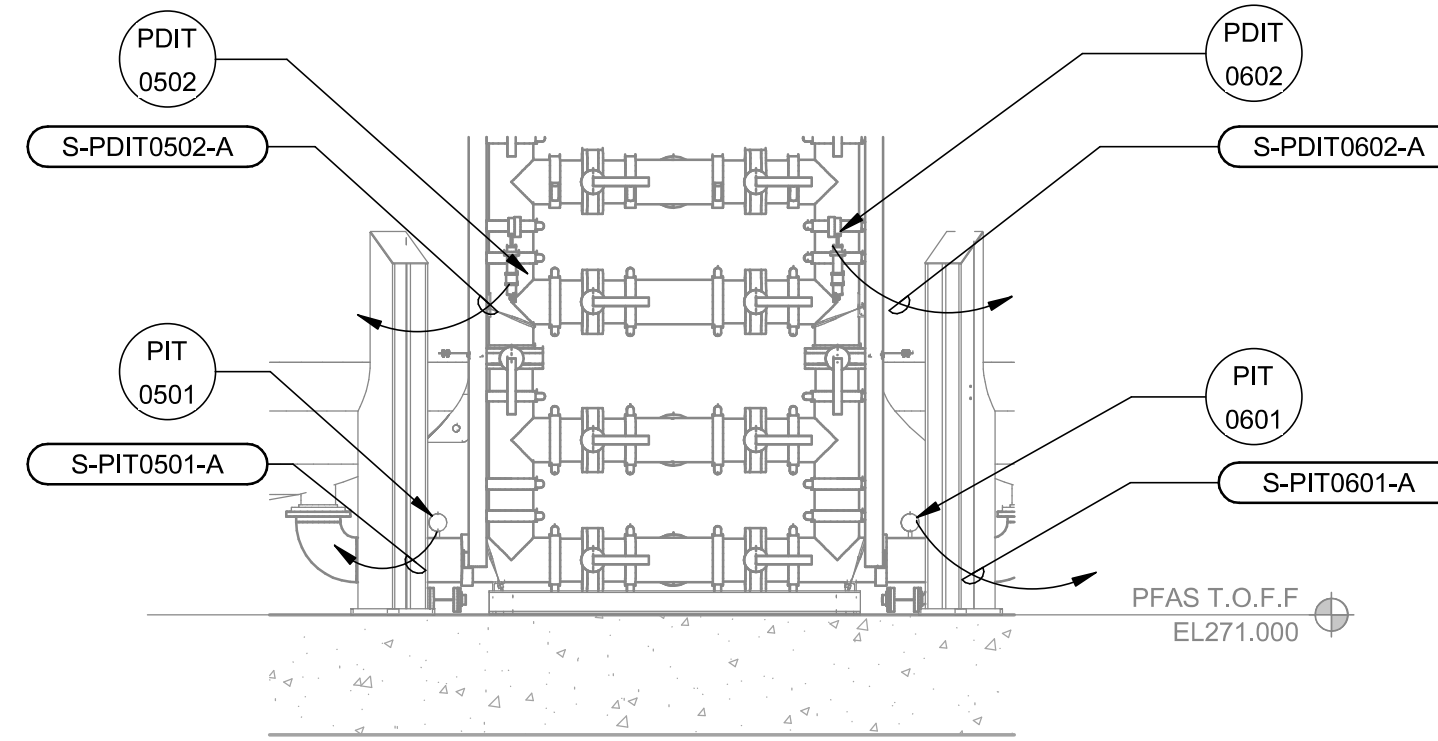
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ELECTRICAL

PFAS TREATMENT POWER, CONTROL AND SIGNAL PLAN

DRAWING NUMBER: **E-P01-111**

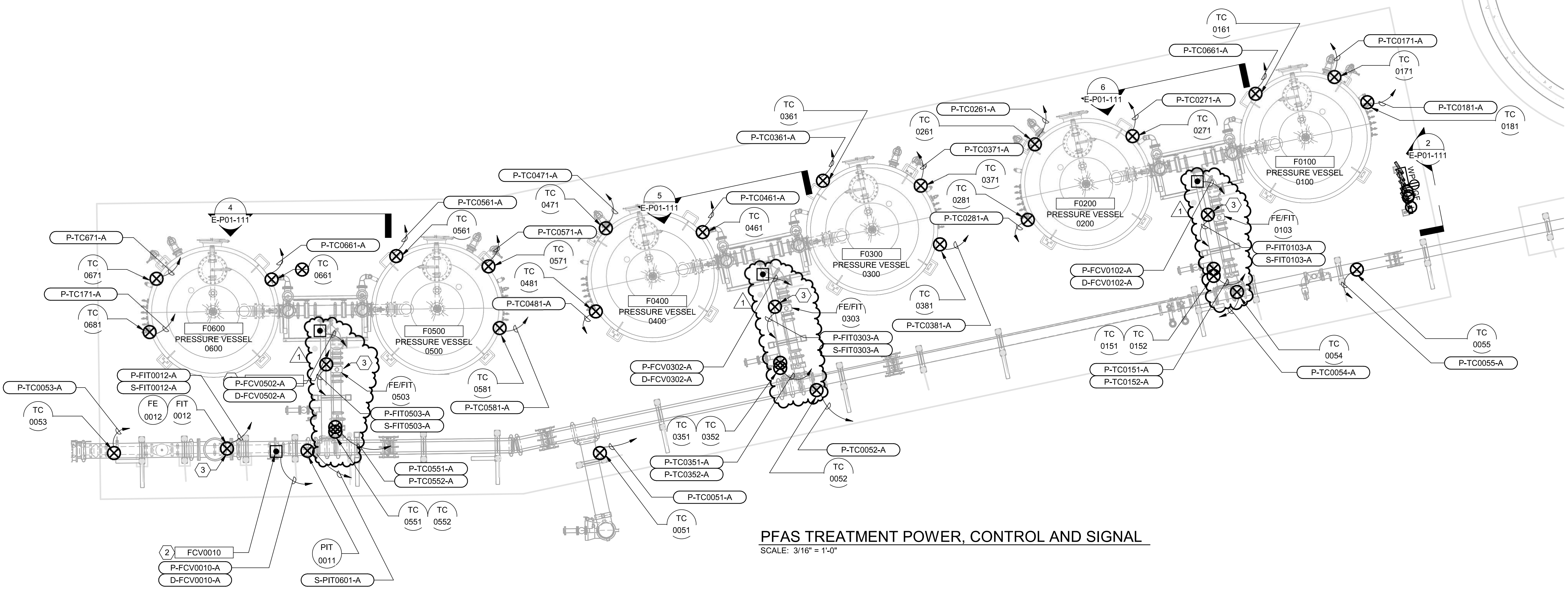
102 SHEET NUMBER OF 124



4 SECTION PLAN
E-P01-111 SCALE: 1/4" = 1'-0"

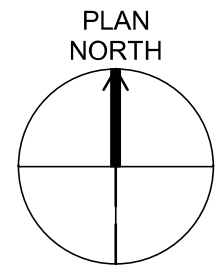
5 SECTION PLAN
E-P01-111 SCALE: 1/4" = 1'-0"

6 SECTION PLAN
E-P01-111 SCALE: 1/4" = 1'-0"

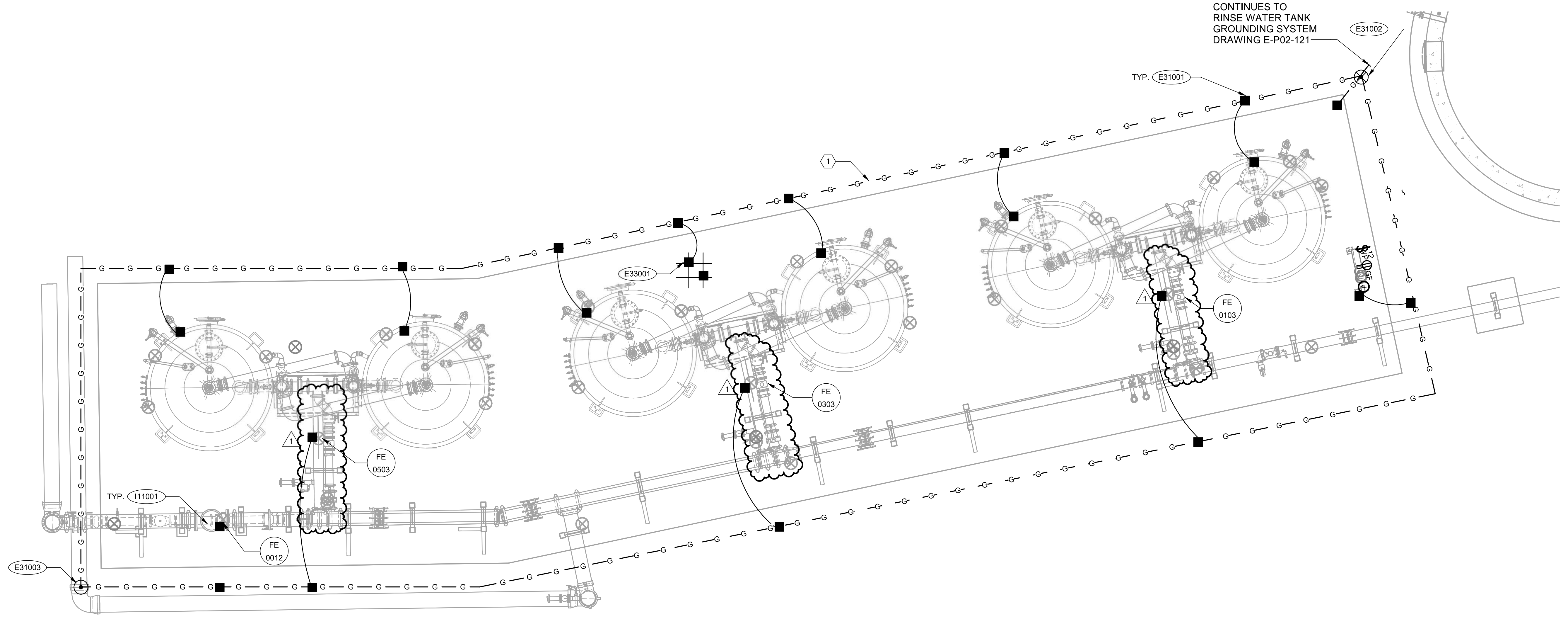


PFAS TREATMENT POWER, CONTROL AND SIGNAL
SCALE: 3/16" = 1'-0"

Plot Date: 3/25/2026 10:17:16 AM Path: AutoDesk_Docs\180318 - WS 14 PFAS Treatments Design\180318-E-00V21.rvt



KEYNOTES:
 1 #4/0 AWG BARE COPPER GROUND RING CONDUCTOR SHALL BE INSTALLED AT 30 INCHES MINIMUM BELOW GRADE AROUND THE PERIMETER OF THE PFAS TREATMENT FACILITY.



Plot Date: 3/25/2026 8:55:10 AM
 Path: AutoDesk_Docs\180318 - WS 14 PFAS Treatments Design\180318-E-00V21.rvt

PFAS TREATMENT GROUNDING, RECEPTACLE AND LIGHTING

SCALE: 3/16" = 1'-0"



PORTLAND, OREGON

Signer Name: James Cook
 Signing Reason: I approved this document.
 Signing Time: 2026-03-26 21:51:46 (EDT)



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS		
REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

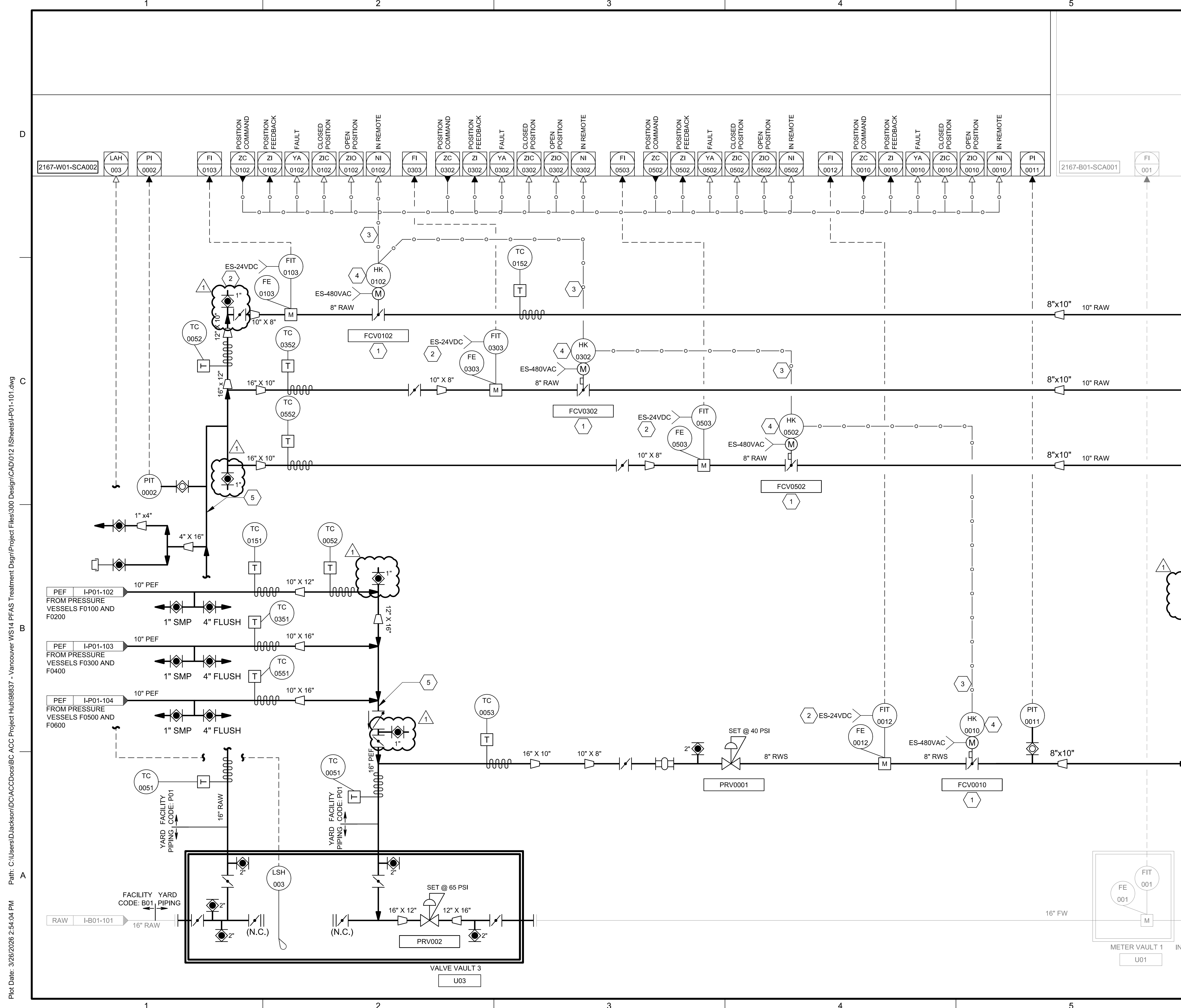
LINE IS 2 INCHES AT FULL SIZE
 DESIGNED: B.NURSUWITO
 DRAWN: B.NURSUWITO
 CHECKED: J.COOK
 CHECKED: M.MAISONVILLE
 APPROVED: J.COOK

FILENAME: 180318-E-00V21.rvt
 BC PROJECT NUMBER: 180318
 CLIENT PROJECT NUMBER: PRJ100893

ELECTRICAL
PFAS TREATMENT GROUNDING AND LIGHTING PLAN

DRAWING NUMBER
E-P01-121

105 SHEET NUMBER OF 124

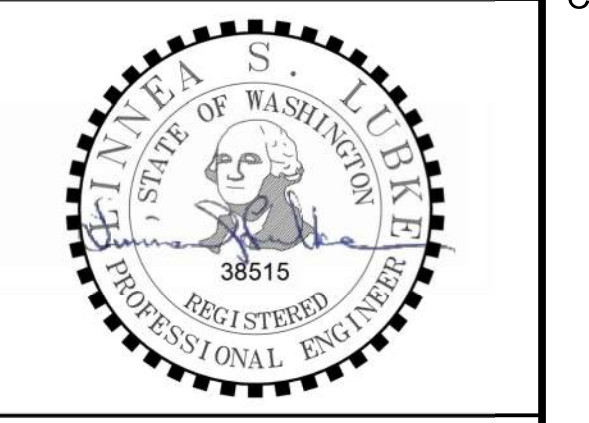
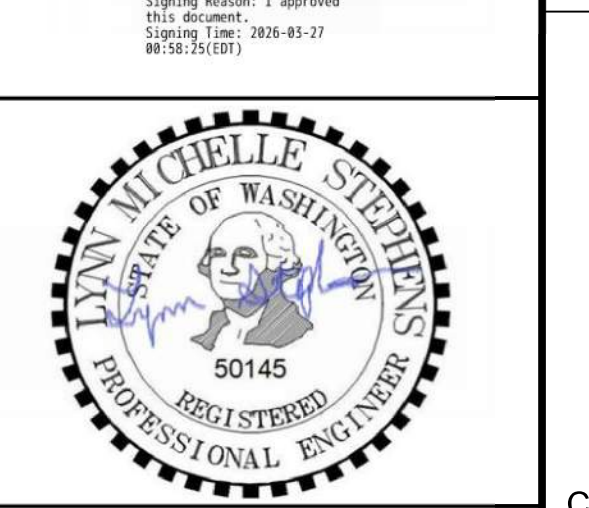


GENERAL NOTES

- EQUIPMENT TAGS PRECEDED BY SITE CODE "2167" AND BY FACILITY CODE AS DESIGNATED ON THE SHEET.
- ALL HEAT TRACES SHALL BE FED FROM THE HEAT TRACE PANEL HTP1101.
- HEAT TRACE WIRING AND INSULATION IS OUTSIDE OF THE VESSEL SUPPLIER SCOPE OF SUPPLY.

KEYNOTES

- MOTORIZED FLOW CONTROL VALVE FAILS LAST.
- SOURCE 24 VDC INSTRUMENT POWER FROM SCA002 PANEL.
- PROFINET DATA LINK BETWEEN FLOW CONTROL VALVE AND SCA002 PANEL.
- PROVIDE ACTUATOR WITH A LOCAL CONTROL STATION (CS) WITH DEVICES SPECIFIED IN SECTION 40 05 57.23.
- 1-INCH TAP FOR CARBON ACCEPTANCE CONTAINER.



ISSUED FOR BID



WS14 PFAS TREATMENT DESIGN

REVISIONS

REV	DATE	DESCRIPTION
1	03/25/26	ADDENDUM 2

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: L.LUBKE
DRAWN: B.NURSUWITO
CHECKED: J.COOK
CHECKED: L.STEPHENS
APPROVED: L.STEPHENS / L.LUBKE

FILENAME: I-P01-101.dwg
BC PROJECT NUMBER: 180318
CLIENT PROJECT NUMBER: PRJ100893

INSTRUMENTATION

PFAS TREATMENT CONTROL

DRAWING NUMBER: I-P01-101
SHEET NUMBER OF: 108 OF 124

Plot Date: 3/26/2026 2:54:04 PM Path: C:\Users\l.lubke\OneDrive\Documents\BC ACC Project Hub\98837 - Vancouver WS14 PFAS Treatment\Design\Project Files\300 Design\I-P01-101.dwg