



University Ground Storage Tank No. 2
Solicitation Number: CO-00531
Job No.: 20-6009

ADDENDUM 2
August 29, 2022

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

RESPONSES TO QUESTIONS

- 1. Question: 13207.2.K indicated the perimeter drain is to be PVC but does not define what kind of PVC. Should it be SCH40 or SDR35?**
Response: The perimeter drain shall be SDR35. See Changes to the Specifications Item 4, as part of this Addendum, for pipe material clarification.
- 2. Question: Flap Valves are shown on the DWG's but we find no specification for these. Will one be issued?**
Response: Flap valves have been added to Specification 15102, Page 6, Paragraph 3.04. See Changes to Specifications Item 5, as part of this Addendum, for flap valve clarifications.
- 3. Question: We find no spec on the air release valve shown? Should it be SAWS STD 29-01 or something different?**
Response: Air release valves have been added to Specification 15102, Page 6, Paragraph 3.05. SAWS standard will be specified. See Changes to Specifications Item 6, as part of this Addendum, for air release valve clarifications.
- 4. Question: Plan sheet C-103 states a FFE at the wall of 950.0' and elevation 951.0' at the tank center, while plan sheet M-501 states a FFE at the wall of 951.17' and tank center elevation of 951.42'. Please clarify which is the correct finished floor elevations.**
Response: Finished floor elevation is 951.17' and tank center elevation is 951.42', callout for center of tank elevation on Sheet C-103 will be removed. Grade break elevation on C-103 has been revised. See Changes to the Plans Item 2, as part of this Addendum, for grade elevation clarification.
- 5. Question: Plan sheet M-501 states 12" of Freeboard; Comment: Freeboard is a function of the dome/wall interface and covered by the ACI 372 and AWWA D110, 11" is the minimum for a precast dome roof. While the minimum for cast-in-place dome roofs is 6". Please confirm the tank manufacturer is responsible for and may design the freeboard per ACI 372 and AWWA D110.**
Response: See Changes to the Plans Item 5.a, as part of this Addendum, for clarification. Freeboard above the overflow water surface elevation as shown shall be determined by the tank manufacturer.
- 6. Question: Plan sheet C-103 appears to detail FGE around the tank at 950.0', while plan sheet M-101 details 950.5'. Please confirm the FGE around the tank.**
Response: Finished grade elevation around the tank is 950.5'. Callout on Sheet C-103 will be revised. See Changes to the Plans Item 2, as part of this Addendum, for grade elevation clarification.
- 7. Question: Plan sheet M-101 notes plan sheets that are not available for details such as ladders, hatches, and handrail. Please provide.**
Response: Specifically referenced SAWS standard details can be found on the SAWS website at the following link: https://apps.saws.org/business_center/specs/design/GroundTankDrawings/
- 8. Question: Please provide the nearest feasible hookup location for construction water.**

Response: The selected Contractor shall coordinate with SAWS during mobilization for construction water access locations and requirements.

- 9. Question: Plan sheet M-101 details a minimum 8" thick floor and 24" thick footing, while specification section 13207 paragraph 1.04-K.2 states a 4" minimum floor. Please confirm the tank manufacturer is responsible for the design of the tank floor and footing.**

Response: Minimum floor thickness is 4". The tank manufacturer is responsible for the design of the tank floor and footing but shall meet the minimum specified requirements. See Changes to the Plans Item 4.d, part of this Addendum, for clarification on the minimum floor thickness.

- 10. Question: Please confirm the tank designer may adjust the vertical elevations for all through tank wall penetrations to provide the most economical and practical tank design.**

Response: Elevations for tank wall penetrations may be coordinated and adjusted during the shop drawing review process.

- 11. Question: Please confirm the GC's sitework subcontractors' superintendents shall be sufficient for on-site representation as specified in the General Conditions 5.4. It is understood the GC is fully responsible for oversight and will have a designated Project Engineer dedicated to the project.**

Response: General Contractor's Superintendent shall provide full-time on-site supervision to any Work ongoing at the site in accordance with General Conditions 5.4.

- 12. Question: General Conditions 5.8 1. states, "All materials that come in direct or indirect contact with potable water must conform to ANSI/NSF Standard 60 for direct additives and ANSI/NSF 61 for indirect additives." The National Sanitation Foundation (NSF) extends a waiver for compliance with Standard 61 for any AWWA D110 tanks larger than 350,000 gallons. For that reason, we request that this requirement be revised to "All coatings and sealants that may come into contact with the water shall meet ANSI/NSF Standard 61, as appropriate."**

Response: General Conditions shall remain unchanged.

- 13. Question: Section 01611 states Design groundwater elevation is unknown. Please confirm the tank is not to be designed to withstand hydrostatic uplift.**

Response: Groundwater was not detected in any of the site borings as indicated in the Geotechnical Data Report. Respondents can access the Geotechnical Data Report posted on the Solicitation page upon completion of a release form. Contractor foundation design shall meet all requirements of the referenced standards.

- 14. Question: Please confirm all curing methods and standards for the PCT are per Section 5.2 of AWWA D110 and not as stated in Section 03390 3.2 A.**

Response: Curing methods for the tank shall be in accordance with Section 5.2 AWWA D110 unless more stringent as indicated in Specification 13207 Part 3: Construction. The reference to Section 03390 is invalid and is not included in this specification package.

- 15. Question: A detail was provided for a sidewalk however none are shown on the plans. Please confirm there is no proposed sidewalks required.**

Response: See Flow Control Valve Structure on Sheet M-102 for concrete sidewalk application.

- 16. Question: Please provide details and elevations on the existing overflow structure of the existing GST that is to be removed.**

Response: The existing overflow structure is approximately 8' x 8'+/- with a bottom elevation of 944.9'. See Changes to the Plans Item 3, part of this Addendum.

- 17. Question: Please confirm that all special inspections are by the owner as described on plan sheet M-502.**

Response: Special inspections will be provided by Owner as per Detail A on Sheet M-502.

- 18. Question: Plan sheet C-102 appears to depict an existing grade ranging from 948' to 950'. By implementing the 8' minimum removal of existing earth required as detailed on M-101, the lowest elevation of excavation would be at 940'. The same plan sheet details a limit of excavation at 941.75'. Please confirm that the tank manufacturer may exceed this elevation to reach the required 8' minimum excavation.**

Response: The limit of excavation is revised to minimum 940.00'. See Changes to the Plans Item 4.e, as part of this Addendum.

- 19. Question: Tank Specification Section 13207 Article 1.04.K specifies tank floor minimum thickness of 4" while Contract DWG. M-101 shows an 8" thick floor. Please confirm the required floor minimum thickness.**

Response: See response to Question 9, as part of this Addendum.

- 20. Question: Tank Specification Section 13207 Article 2.07.A specifies the tank vent to be AST aluminum vent with 36" dia. minimum but does not provide fill or withdraw rates. Please provide tank venting rates so the vent size can be confirmed.**

Response: See Section 13207 Paragraph 2.07.I for tank vent rate.

- 21. Question: Tank Specification Section 13207 Article 2.07.A specifies (3) exterior wall taps for pressure transmitter, gauges and sample taps. No information is provided for wall sleeve size. Please provide the required sleeve/wall tap size.**

Response: The wall sleeve size is 3/4". See Changes to the Plans Item 4.a, as part of this Addendum, for clarification on the sample tap wall sleeve size.

- 22. Question: Tank Specification Section 13207 Article 2.07.E requires the dome hatch to be double leaf for the 36" x 42" opening. Considering the opening size and based on recent project experience, please confirm single leaf Bilco Type SS-50 42" x 36" aluminum hatch is acceptable.**

Response: Provide a double leaf hatch as specified.

- 23. Question: Tank Specification Section 13207 Article 2.07.H specifies the wall manway centerline elevation to be 3'-0" above finished grade and Contract DWG. M-501 requires the 36" dia. overflow to be at 580.00. Important to note there are efficiencies in design and construction when wall penetrations share the same centerline elevation. Please confirm final design of the wall penetrations may be determined by the tank manufacturer to provide for the most cost-effective design.**

Response: See response to Question 10, as part of this Addendum.

- 24. Question: Please confirm if Everclear Vox is required as a final acrylic sealer over the tank's exterior architectural wall coating. Using Everclear Vox in conjunction with the standard non-cementitious, high build, 100% acrylic exterior architectural coating system can provide for a more robust system.**

Response: A final acrylic sealer has been included in the coating system. See Changes to the Specifications Item 3, as part of this Addendum.

- 25. Question: Contract DWG. M-101 & M-501 indicates an overflow weir cone size of 3' x 5'. Please confirm the dimensions are for reference only and tank manufacturer can design the weir cone based on flow rate.**

Response: The tank manufacturer is responsible for the design of the weir cone. Dimensions have been removed from the plans. See Changes to the Plans Item 5.b, as part of this Addendum.

- 26. Question: Contract DWG. M-501 shows the underslab concrete encasement with #5 rebars @ 12" o.c. Please confirm the drawings are for reference only and final design of the underslab encasement shall be by tank manufacturer.**

Response: Reinforcing as shown shall be considered a minimum. See Changes to the Plans Item 6, as part of this Addendum, for additional clarification.

- 27. Question: Contract DWG. M-101 provides a detail for the 4" perforated perimeter drain under tank slab being 1'-0" inside of tank footing. Based on typical design detail and previous project experience with SAWS, we suggest the perimeter drain be provided outside of tank footing. Please confirm a standard detail of perimeter drain being at least 1'-0" outside of tank footing is acceptable.**

Response: Alternative drain options may be considered after contract award. Respondents shall prepare their proposal and Price Proposal per the plans and specifications provided.

28. Question: No information is provided on exterior ladder platform. Based on previous project experience with SAWS, a top platform or intermediate platform is required. Please confirm if any platform is required and provide associated details.

Response: An exterior ladder platform will be required to match recent SAWS projects. See Changes to the Plans Item 4.c, as part of this Addendum, for clarification on the exterior ladder platform.

29. Question: Where is the channel on C-115 to be constructed? I assume it's the 166 sy shown on C-102 and on L-101?

Response: There is no concrete channel to be constructed, C-115 is a detail to be used for reference in constructing the concrete rip-rap. See Changes to the Plans Item 1, as part of this Addendum, for clarification on the use of the detail.

30. Question: Is the road/rip rap shown on E-101 part of this project? I don't see it on the civil drawings.

Response: Disregard referenced hatching on E-101. Refer to Civil, Landscaping, and Process Mechanical drawings for required site improvements.

31. Question: Sheet L-105 shows erosion control matting at what I assume is the concrete lined channel. Please clarify.

Response: The channel in question is earthen.

32. Drawing E-101 note 13 states that a local light will be mounted on the equipment stand on the side of the tank. What is the make and model of this fixture?

Response: A specific lighting fixture has been added to the plans. See Changes to the Plans Item 7, as part of this Addendum.

33. Is third party testing of the electrical system required for this project?

Response: Third party testing shall be provided as indicated in Specification Section 16050.

34. Please consider pushing the bid date one week due to the Labor Day holiday.

Response: See Changes to the Specifications Items 1 and 2 in Addendum 1.

35. Given the Labor Day holiday, SAWS on the Monday, 9/5, on the week the bids are due, please consider pushing the bid opening one day to Thursday, September 8 to help in preparation of the bid.

Response: See response to Question #34 of this Addendum.

36. In spec section #13563 & drawing #I-104 you call out Freeze Protection Partial enclosures for the Pressure & Level Transmitters. O'Brian HEATPAK. The vendor rep is asking for more information on the enclosures.

Response: The necessary information on instruction for manufacturers and design is included in the specifications in sufficient detail for Respondents to make selections for estimates and implementation.

CHANGES TO THE SPECIFICATIONS

1. Section 02221, Page 3, Paragraph 2.2, Add the following:

"2.2 Select Fill

A. Select Fill shall be crushed limestone TxDOT Item 247, Type A Grade 1 or 2. Select fill shall be placed in loose lifts of 6-inch maximum thickness and each lift shall be compacted to a minimum of 100 percent of the maximum dry density as determined by test method ASTM D 1557 at a moisture content within 2 percent of the optimum water content. Upon compaction each lift shall be tested to verify compaction compliance before placement of subsequent lifts."

2. Section 13207, Page 3, Paragraph 1.04.F: Add the following after the last sentence:

""The geotechnical report shall be based on independent field subsurface investigations conducted by the tank manufacturer in accordance with ACI 372R Appendix A and other governing standards as referenced. All costs for subsurface investigations shall be included in the Contractor's Bid. All samples obtained from subsurface investigations shall be retained and available for inspection by the Owner or Engineer until following acceptance of

the geotechnical report. The geotechnical report prepared by the tank manufacturer shall follow the design criteria as established in AWWA D110 and ACI 372R. Any recommended modifications for subgrade preparation requirements that differ from the minimum requirements as established shall be clearly explained and justified by the tank manufacturer and submitted for review. Any use of design criteria more conservative than that established by these or other referenced standards resulting in additional subgrade preparation shall be at the expense of the contractor.”

3. Section 13207, Page 9, Paragraph 2.07: Add the following:

“2.07 Acrylic Sealer

Two coats of an acrylic sealer applied over the tank’s exterior architectural wall and roof coating compatible with the specified decorative coating system shall be applied in accordance with the manufacturer’s recommended rates and procedures for a complete coating system. Acrylic sealer shall be Everclear Vox by The Euclid Chemical Company or approved equal.”

4. Section 13207, Page 12, Paragraph K: Delete first sentence in its entirety and replace with the following:

“Perimeter Drain: A 4-inch perforated SDR35 PVC pipe shall be installed along the perimeter of the tank foundation.”

5. Section 15102, Page 6, Paragraph 3.04: Add the following:

“3.04 Flap Valves

A. Flap valve shall have cast iron body and cover. The seat and disc ring shall be bronze, and the hinge pin and cotter pins shall be stainless steel. The weighted flap valve shall have a weight attached to the lid and allow for minor sensitivity adjustment. The valve lid shall have a mechanical stop to ensure it cannot over rotate. Flange shall be drilled using an ANSI 125# template. All iron parts shall be coated to prevent corrosion. Valve shall be Troy Valve, Model A2540 or approved equal.”

6. Section 15102, Page 6, Paragraph 3.05: Add the following:

“3.05 Air Release Valves

A. “Air Release Valve shall conform to SAWS' Material Specification 29-01 "Air Release, Vacuum and Combination Air Valves.”

CHANGES TO THE PLANS

1. Sheet 7 (C-102): Replace the callout to the slope protection “Proposed 166 CY of Rip-Rap” with the following:

“PROPOSED 166 CY OF CONCRETE RIP-RAP. SEE SHEET C-115 FOR DETAILS.”

2. Sheet 8 (C-103): Make the following revisions:

- a. Revise the grade break elevation callout at the tank edge to be “950.5”.
- b. Delete “EL 951.00” in the Center of Tank call out.
- c. Delete “F.F. ELEV = 950.0” from the label on Tank No. 2.

3. Sheet 19 (C-114): Add the following to NOTES:

“4. EXISTING BOX IS APPROXIMATELY 8’ X 8’+/- WITH BOTTOM ELEVATION 944.9’.”

4. Sheet 21 (M-101): Make the following revisions:

- a. GROUND STORAGE TANK (GST) – SECTIONAL PLAN. Add a call out to the tank wall adjacent to the exterior ladder stating: “PROVIDE THREE INDIVIDUAL TAPS FOR A PRESSURE GAUGE, SAMPLE TAP AND LEVEL INDICATOR. SEE SAWS DETAIL DD-904-02. NOTE 3.”
- b. Add the following NOTE: “3. CONTRACTOR TO FIELD ROUTE A BURIED ¾” PVC SCH 80 SAMPLE LINE FROM ONE TAP TO THE LEVEL INDICATOR TRANSMITTER AT THE PANEL. SAMPLE LINE SHALL BE HEAT TRACED AND INSULATED”
- c. Add the following NOTE: “4. CONTRACTOR TO PROVIDE A MINIMUM 4’-6” X 6’-0” PASS-THROUGH LANDING PLATFORM AT THE TOP OF THE EXTERIOR LADDER COMPLETE WITH GUARDRAIL TO MATCH

THE TANK. LADDER SHALL EXTEND ABOVE THE PLATFORM 4'-0" THROUGH AN OPENING MINIMUM 1-0' FROM THE EDGE OF ALL SIDES OF THE PLATFORM. THE PLATFORM STRUCTURE AND GRATING SHALL BE GALVANIZED STEEL. ALL HARDWARE, BOLTS, NUTS, AND HINGES SHALL BE TYP 316 SS. TANK MANUFACTURER SHALL BE RESPONSIBLE FOR THE STRUCTURAL DESIGN OF THE PLATFORM, SUPPORTS, AND CONNECTIONS TO THE TANK WALL."

- d. On Section A replace "8" FLOOR SLAB THICKNESS" with "MINIMUM 4" FLOOR SLAB THICKNESS"
- e. On Section A change the subgrade limit of excavation elevation from "941.75" to "940.00"

5. Sheet 23 (M-501): Make the following revisions to Section 3:

- a. On the overflow water surface elevation, delete the reference to "FREEBOARD"
- b. On the overflow weir box, delete "5'-0" LONG BY 3'-0" WIDE" dimensional reference.

6. Sheet 24 (M-502): Add the following Note 1 applicable to Sections 1, 2 & 3:

"1. PIPE ENCASEMENT REINFORCING REQUIREMENTS AS SHOWN ARE A MINIMUM. TANK MANUFACTURER IS RESPONSIBLE TO DESIGN THE PIPE ENCASEMENT IN COORDINATION WITH THE TANK FLOOR TO ADEQUATELY DISTRIBUTE LOADS AND AVOID CRACK DEVELOPMENT IN THESE LOCALIZED AREAS."

7. Sheet 27 (E-101): Add the following after the first sentence of Note 13:

"LIGHTING FIXTURE SHALL BE HOLOPHANE MODEL: PXLW 3000, MDO, MVOLT, 40K, 80 CRI, UNM, or equal."

CLARIFICATIONS

- 1. Respondents shall use the revised Price Proposal attached to Addendum 1 issued August 26, 2022 when submitting a proposal for this project. Failure to use the revised version of the Price Proposal may result in a Respondent's proposal being found non-responsive.
- 2. Respondents shall reference the revised Supplementary Instructions to Respondents, as well as utilize the revised Evaluation Criteria forms attached to Addendum 1 issued August 26, 2022 when submitting a proposal for this RFCSP. Failure to use the revised Evaluation Criteria forms may result in a deduction of points or the Respondent being found non-responsive.

END OF ADDENDUM

This Addendum is six (6) page(s) in its entirety.



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