



King Street Pump Station Improvements (Volume I) & ASR Lime System Improvements (Volume II) - RFCSP
Solicitation Number: CO-00670
Job No.: 20-6002 and 22-8603

ADDENDUM 2
October 12, 2023

To Respondent of Record:

This addendum, applicable to work referenced above, is an amendment to the price 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 Respondent Questionnaire.

RESPONSES TO QUESTIONS

- 1. Question: I noticed that the drawing set for this solicitation has Restricted security settings, and we are unable to make digital drawing markups. Will you please request from the Engineer an unrestricted drawing set that will allow markups for measurements, takeoffs, and notes?"**

Response: Copies of bid documents are made available in a secured PDF format to identify these documents as official original sealed documents in accordance with regulations promulgated by the Texas Board of Professional Engineers and Land Surveyors. Copies can be made by printing, exporting or other common means for the purpose of marking as needed for estimating as long as these copies are not presented or distributed as original or official documents since they have been subject to alteration by parties other than the Engineer responsible.
- 2. Question: Contract Drawings, Sheet D-305, blowers 3-4-5-6 effluent Air pipe. This Air pipe system is not on the pipe schedule shown on Sheet D-001. Please specify pipe material to be used for this pipe system or if pipe will be supplied with blowers.**

Response: Refer to the "Changes to the Plans" item No. 2 in this addendum. Air pipe system added to schedule on Drawing D-001.
- 3. Question: Specification Section 11110, Paragraph 1.02.E, due to high cost to Witness test compared to size of equipment, Witness testing is not recommended. Please remove Witness test requirement for the HSC units in this specification. Not generally recommended on equipment this size.**

Response: Witness testing is required. No changes to specifications will be made.
- 4. Question: Specification Section 11110, Paragraph 1.04.F.s/t, remove Witness test requirements for this equipment due to small size and high cost required to test relative to equipment.**

Response: Witness testing is required. No changes to specifications will be made.
- 5. Question: Specification Section 11110, Paragraph 1.06.C, section references RTDs but these are not mentioned in motor spec or on plan sheets. Remove from section.**

Response: Refer to "Changes to the Specifications" item No.2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Removed reference to RTDs in Paragraph 1.06.C.
- 6. Question: Specification Section 11110, Paragraph 1.06.H, QC requirements are excessive for this size equipment. Not all of this documentation may be available.**

Response: QC requirements are required. No changes to specifications will be made.

7. **Question: Specification Section 11110, Paragraph 1.08.D, remove maintenance tools. Pump manufacturer should not be responsible for providing these.**
Response: One set of all special tools needed for proper startup and maintenance services of equipment is required. No changes to specifications will be made.
8. **Question: Specification Section 11110, Paragraph 1.09.A, Exception to penalties.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 – Horizontal Split-Case Centrifugal Pumps and “Changes to the Specifications” item No. 3, Section 11313 - Pumping Unit Testing. Removed efficiency penalties.
9. **Question: Specification Section 11110, Paragraph 2.01, stuffing box to be set up for mechanical seal, to maintain NSF certification.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 – Horizontal Split-Case Centrifugal Pumps. All wetted pump parts to be NSF STD 61 certified for use with potable water.
10. **Question: Specification Section 11110, Paragraph 2.02.A, hydraulics have changed from when project was in planning. Please revise minimum shutoff head to 168’ to accommodate for reduced flow/head requirements in final specifications. Reduce required pump efficiency from 81% to 77%.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Revised pumping performance and design criteria.
11. **Question: Specification Section 11110, Paragraph 2.02.D, remove this statement. Pumps are not to operate at shutoff head for more than 60s. Manufacturer is not responsible for valve operation details.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Paragraph 2.02.D removed from specification.
12. **Question: Specification Section 11110, Paragraph 2.04.A.1, revise to allow casing to be ductile iron - A395 with flat face flanges.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Revised specification to include option for A395 casing with flat face flanges.
13. **Question: Specification Section 11110, Paragraph 2.04.A.2, revise to 150# flanges. Maximum pressure at shutoff head is ~74 psi plus suction.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Revised specification to 150 lb flange with flat-face dimensions.
14. **Question: Specification Section 11110, Paragraph 2.06.C, revise to allow sleeve type wear rings. L type not offered on this size equipment.**
Response: Specifications allow for various types of wear rings. No changes to specifications will be made.
15. **Question: Specification Section 11110, Paragraph 2.07.B, remove stress relief requirements for HSC baseplate. This is not required due to small size of the equipment provided.**
Response: Specification Paragraph 2.07 B applies to shaft and not the base plate. No changes to specifications will be made.
16. **Question: Specification Section 11110, Paragraph 2.09, stuffing box needs to be designed for mechanical seal in order to provide NSF certification. Please revise to allow mechanical seal or remove NSF certification requirement.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. All wetted pump parts to be NSF STD 61 certified for use with potable water.
17. **Question: Specification Section 11110, Paragraph 2.15.C, remove requirement for independent tester – pump supplier to provide certification of precision alignment as part of QC.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Independent tester requirement removed from specifications.

- 18. Question: Specification Section 11110, Paragraph 2.17, revise language so that Contractor is responsible for providing anchor bolts. Pump manufacturer shall coordinate spacing and minimum sizing.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Revised language related to anchor bolts.
- 19. Question: Specification Section 11110, Paragraph 2.23.C.2, revise thickness to state ‘per manufacturer’s recommended DFT’.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Revised thickness to reference manufacturer’s recommended DFT.
- 20. Question: Specification Section 11110, Paragraph 2.26, recommend revising test requirements. 3-Hour run tests are excessive on this size equipment. Exception to 3rd party vibration testing being performed in manufacturer facility. Remove witness test requirements for this equipment. Testing would be per HI requirements and record all data required by pertinent HI requirement.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Testing requirements are modified. Specifications do not require 3rd party vibration testing.
- 21. Question: Specification Section 11110, Paragraph 3.01.A, revise level requirements to 0.005”/ft. This is the required tolerance for HSC equipment.**
Response: Refer to “Changes to the Specifications” item No. 2, Section 11110 - Horizontal Split-Case Centrifugal Pumps. Revised level requirements to 0.005”/ft.
- 22. Question: Specification Section 11313, Paragraph 2.02.A, allow all units to be tested with factory calibrated lab motor. This section also references testing wire-to-water efficiency, which is not a guarantee requirement for either the HSC or VTP pumps on this project.**
Response: Refer to “Changes to the Specifications” item No. 3, Section 11313 - Pumping Unit Testing. Revised language to reference pump efficiency in lieu of water-to-wire efficiency.
- 23. Question: Specification Section 11313, Paragraph 2.02.B, remove this requirement. This is costly requirement considering size of the equipment being supplied.**
Response: Factory testing with job motors is required. No changes to specifications will be made.
- 24. Question: Specification Section 11313, Paragraph 2.02.F, remove this requirement. This is not offered and is excessive for the equipment being provided.**
Response: Video recordings for customer use and training is required. No changes to specifications will be made.
- 25. Question: Specification Section 11313, Paragraph 3.02, wire-to-water efficiency not stated in specification section 11110 and penalty for efficiency shall not be accepted. Remove this section.**
Response: Refer to “Changes to the Specifications” item No. 3, Section 11313 - Pumping Unit Testing. Revised language to reference pump efficiency in lieu of water-to-wire efficiency.
- 26. Question: Specification Section 11140, Paragraph 1.01.A.2, replace ‘sub-base’ with ‘surface plate assembly’.**
Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps. Revised specification language to include surface plate assembly.
- 27. Question: Specification Section 11140, Paragraph 1.03.F, specification references NSF 61. This is a raw water application. Is NSF certification necessary? Recommend removing this reference.**
Response: NSF 61 certification is necessary. No changes to specifications will be made.
- 28. Question: Specification Section 11140, Paragraph 1.04.E.1, remove reference to seismic design considerations. This is outside scope of pump suppliers’ responsibility.**
Response: Seismic design considerations are applicable. No changes to specifications will be made.
- 29. Question: Specification Section 11140, Paragraph 1.07.A.1, revise this paragraph and require that the pump manufacturer be responsible for providing a licensed well installer and pump manufacturer be responsible for**

field assembly/installation of the well pumps. Pump supplier responsible for truck, crane, tools, and rigging required to install. Contractor cannot source 3rd party well installer.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps. Added requirement for water well driller and pump installer licensed by Texas Department of Licensing and Regulation (TDLR).

30. Question: Specification Section 11140, Paragraph 1.07.B.1, remove this requirement. These are raw water pumps.

Response: NSF 61 requirements are applicable. No changes to specifications will be made.

31. Question: Specification Section 11140, Paragraph 2.02.A.1.c, revise ‘Pump Efficiency’ to ‘Bowl Efficiency’. Revise minimum bowl efficiency at rated head to 77%. 83% bowl is not achievable on any bowl assembly that will fit in 20” well casing. If pump selections provided are not acceptable this will be a no bid project.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps. Revised language to reference minimum bowl efficiency and updated pump performance criteria.

32. Question: Specification Section 11140, Paragraph 2.02.A.8, change maximum speed to 1800RPM. A 1200RPM selection will not fit in 20” well casing. If speed is limited to 1200RPM this will be a no bid project.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps. Maximum speed revised to 1800 RPM.

33. Question: Specification Section 11140, Paragraph 2.02.A.9, 14” column is acceptable only if threaded. 14” flanged column will not fit in 20” (19”ID) well casing.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps paragraph 2.03.2.a, paragraph 2.03.2.b, paragraph 2.03.2.d, and paragraph 2.06.2.b. Revised column connections to threaded connections.

34. Question: Specification Section 11140, Paragraph 2.03.A, why is NSF 61 certification required? This is untreated ground water. Please remove this requirement.

Response: NSF 61 requirements are applicable. No changes to specifications will be made.

35. Question: Specification Section 11140, Paragraph 2.03.A.1.a, replace ‘Vane Grating Basket’ with ‘conical vortex suppressor’ which is affixed to suction case of the pump.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps. Revised language from “Vane Grating Basket” to “Suction Device”.

36. Question: Specification Section 11140, Paragraph 2.03.A.2.a, revise column pipe to 3/8” minimum wall thickness.

Response: 14” schedule 40 pipe has a wall thickness greater than 3/8” and is the required minimum. No changes to specifications will be made.

37. Question: Specification Section 11140, Paragraph 2.03.A.2.b, remove flange requirements. Column needs to be threaded in order to fit in 20” well casing.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps Paragraph 2.06.2.b in this addendum. Revised specification to require threaded column connections.

38. Question: Specification Section 11140, Paragraph 2.03.A.2.c, revise to threaded connection, with carbon steel column coupling.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps Paragraph 2.06.2.b. Revised specification to require threaded column connections.

39. Question: Specification Section 11140, Paragraph 2.03.A.2.g, bearing retainer should be drop-in.

Response: Paragraph 2.03 does not exclude drop-in bearing retainer. No changes to specifications will be made.

40. Question: Specification Section 11140, Paragraph 2.04.A, remove this sentence.

Response: Refer to “Changes to the Specifications” item No. 4, Section 11140 – Vertical Turbine Pumps. Removed paragraph 2.04.A and paragraph 2.04.B.

- 41. Question: Specification Section 11140, Paragraph 2.06.1, remove reference to suction bell. Bowl assemblies need to be provided with cast iron suction case.**
Response: Reference to suction bell is required. No changes to specifications will be made.
- 42. Question: Specification Section 11140, Paragraph 2.06.2.b, remove this sentence. Columns need to be threaded in order to fit in 20" (19" ID) well casing.**
Response: Refer to "Changes to the Specifications" item No. 4, Section 11140 – Vertical Turbine Pumps Paragraph 2.06.2.b. Revised specification to require threaded column connections.
- 43. Question: Specification Section 11140, Paragraph 2.06.2.c, remove this sentence. Columns need to be threaded in order to fit in 20" (19" ID) well casing.**
Response: Refer to "Changes to the Specifications" item No. 4, Section 11140 – Vertical Turbine Pumps Paragraph 2.06.2.b in this addendum. Revised specification to require threaded column connections.
- 44. Question: Specification Section 11140, Paragraph 2.06.4, add paragraph describing surface plate assembly that is to be connected to top of well casing. Surface plate will utilize jack bolts in order to verify surface plate is level within 0.002"/ft prior to final seal welding. Surface plate assembly is to be grouted in place after verifying level.**
Response: That level of tolerance is not applicable for well pump application. No changes to specifications will be made.
- 45. Question: Specification Section 11140, Paragraph 3.01.A, add paragraph requiring pump manufacturer to provide licensed well installer responsible for field assembly and installation of the well pumps.**
Response: Refer to "Changes to the Specifications" item No. 4, Section 11140 – Vertical Turbine Pumps Paragraph 3.01 in this addendum. Paragraph added requiring licensed well installer.
- 46. Question: Specification Section 11140, Paragraph 3.01.B, add requirement that surface plate level is verified within 0.002"/ft.**
Response: That level of tolerance is not applicable for well pump application. No changes to specifications will be made.
- 47. Question: Specification Section 11140, Paragraph 3.02.A, add requirement for pump supplier to be responsible for field assembly/installation of the well pumps.**
Response: Refer to "Changes to the Specifications" item No. 4, Section 11140 – Vertical Turbine Pumps Paragraph 3.01 in this addendum. Paragraph added requiring licensed well installer.
- 48. Question: Specification Section 16150, Paragraph 2.02.S, recommend non-reverse ratchet for well pump motors to prevent excessive runaway speed in backflow condition.**
Response: Refer to "Changes to the Specifications" item No. 4, Section 11140 – Vertical Turbine Pumps Paragraph 2.05 in this addendum. Paragraph added requiring non-reverse ratchet on all vertical well pump motors.
- 49. Question: Contract Drawings, Sheet D-203/204, add permanent pipe support under 12" gate valve that completely supports weight. Pump discharge should not be anchor point for any of discharge piping.**
Response: Refer to "Changes to the Plans" section item No. 3, item No. 4, item No. 5, and item No. 6 in this addendum. Pipe support added to drawings.
- 50. Question: Contract Drawings, Sheet D-203/204, add housekeeping pad/foundation around well casing pipe extended above finish floor. Surface plate assembly will be welded to well casing after installation/leveling. Grout to be poured up to bottom surface of top plate of the surface plate assembly.**
Response: It is intent of the design for the well casing and flange to support the pump. No changes to contract drawings will be made.
- 51. Question: Specification Section 15140, 2.01.B, The Engineer is putting the design burden on the contractor; please confirm this requirement. This will increase cost a lot. Thanks.**
Response: Exact locations of pipes and pipe supports are required to be coordinated with all other trades in the field. No changes to specifications will be made.

52. Question: Per section E.2.b.iv, respondents are required to submit information on behalf of our proposed “Key Lime System Improvements Subcontractor”. MGC is unable to find any subcontractors who specialize in this type of equipment installation. We intend to self-perform the installation of this system. Could you please confirm that this is a required component of the evaluation criteria?

Response: Refer to the Supplementary Instructions to Respondents section, Paragraph E.2.b.v. It is not a requirement for the contractor to provide a specialized Key Lime System Improvements Subcontractor. This item is a component of the scored proposal evaluation. The experience of the Lime System installer will be evaluated and utilized to score the proposal. If the prime contractor plans to self-perform the Work without Key Subcontractor(s), a list shall be provided of two (2) additional projects with similar scope of Work completed in the State of Texas within the last ten (10) years. The Prime Contractor’s Key Personnel shall have participated in a minimum of one (1) of the two (2) listed projects.

53. Question: Spec 46 36 53 2.01E states that the contractor will supply the Lime but bid item 4.1 is an allowance for liquid lime slurry. Is the contractor supplying the lime or the owner?

Response: The contractor is to supply the lime. Price Proposal Item 4.1 provides an allowance for the lime. Payment to the contractor under the allowance item shall be made per Section 01 29 00 Payment Procedures Item 4.1 Liquid Lime based on actual costs incurred.

54. Siemens is specifically listed as an acceptable manufacturer for Low Voltage Motor Control Centers, specification Section 16480.

Response: Siemens is an acceptable manufacturer for low voltage motor control centers. No changes to specifications will be made.

55. While adhering to the performance requirements of the specifications, will Siemens be an acceptable manufacturer for the following specification sections?

- a. 16196 – Low Voltage AC Surge Protective Devices (SPDs)
- b. 16428 – Low Voltage Generator Quick Connect Switchboards
- c. 16469 – Distribution Dry Type Transformers
- d. 16470 – Panelboards
- e. 16475 – Low Voltage Enclosed Circuit Breakers and Safety Switches

Response: Refer to “Changes to the Specifications” item No. 5 Section 16196 – Low Voltage AC Surge Protective Devices (SPDs), item No. 6 Section 16428 – Low Voltage Generator Quick Connect Switchboards, item No. 7 Section 16461 – Distribution Dry-type Transformers, item No. 8 Section 16470 – Panelboards, and item No. 9 Section 16475 – Low Voltage Enclosed Circuit Breakers and Safety Switches. Siemens added as an acceptable manufacturer.

56. Question: Drwg. 25 C114, detail 2. Plan shows 18” DIP. The yard pipe shows 16” DI pipe. Please have engineer clarify.

Response: Refer to “Changes to the Plans” section item No. 1 in this addendum. The 16” piping should extend to the 18” D.I. pipe extension. Plan and profile revised.

CHANGES TO THE SPECIFICATIONS

1. BUILDING WAGE DECISION

- Due to updates in the General Wage Decisions for Building Construction Type, remove the wage decision documents from the solicitation in entirety and replace with the revised versions attached to this addendum (rev. 9.1.23 for General Decision Number TX20220231). This version should be utilized by the awarded contractor for this project.

2. SECTION 11110 HORIZONTAL SPLIT-CASE CENTRIFUGAL PUMPS

- Paragraph 1.06.C; DELETE the first sentence “The new high service water pumping units shall be complete, including pump, motor, RTDs and terminal boxes” and REPLACE with the following “The new high service water pumping units shall be complete, including pump, motor, and terminal boxes”.
- Paragraph 1.09.A; DELETE the fourth sentence “If the pumping units fail to meet the efficiency at Rated Point, corrective measures shall be taken as indicated in Section 11313 – Pumping Unit Testing” in its entirety.
- Paragraph 2.02.A; DELETE the Minimum Capacity TDH value of “146 ft” and REPLACE with “135 ft”.

- Paragraph 2.02.A; DELETE the Minimum shutoff head value of “180 ft” and REPLACE with “140 ft”.
 - Paragraph 2.02.A; DELETE the Minimum Pump Efficiency at BEP value of “81%” and REPLACE with “75%”.
 - Paragraph 2.02.D; DELETE in its entirety.
 - Paragraph 2.04.A.1; DELETE the first sentence “Pump casings shall be cast iron conforming to ASTM A48” and REPLACE with the following “Pump casings shall be cast iron conforming to ASTM A48 or A395 with flat-faced flanges.”
 - Paragraph 2.04.A.2; DELETE the sentence “250 lb flange rating – ANSI/ASME B16.1, Class 250 raised-face dimensions and drilling” and REPLACE with the following “150 lb flange rating – ANSI/ASME B16.1, Class 150 flat-face dimensions and drilling.”
 - Paragraph 2.04.C; DELETE the first sentence “Casings shall be of the double volute-type, split on the horizontal centerline with suction and discharge nozzles cast integrally with the lower half.” and REPLACE with the following “Casings shall be of the double suction-type, split on the horizontal centerline with suction and discharge nozzles cast integrally with the lower half.”
 - Paragraph 2.04.D; DELETE the first sentence “Suction and discharge nozzles shall be flanged, drilled and machined 250 lb flanges” and REPLACE with the following “Suction and discharge nozzles shall be flanged, drilled and machined 150 lb flanges.”
 - Paragraph 2.09.A; after the sentence “Pump shall be supplied with conventional packing” ADD the following sentence “All wetted parts of the pumps must be NSF std 61 certified for use with potable water.”
 - Paragraph 2.15.C; DELETE in its entirety and REPLACE with the following “Provide certification of precision balance on the motor rotor, coupling, and the pump rotor as part of Quality Control procedures. Provide balance certificates from each component manufacturer”.
 - Paragraph 2.17.B.1; DELETE the sentence “Pump supplier shall provide the anchor bolts and an anchor bolt template to the Contractor prior to construction of the structural equipment pad” and REPLACE with the following “Pump supplier shall provide an anchor bolt template to the Contractor prior to construction of the structural equipment pad”.
 - Paragraph 2.23.C.2; DELETE the sentence “Application (prime and finish coating): Apply 25 mils minimum total DFT of Belzona coating” and REPLACE with the following “Application (prime and finish coating): Apply Belzona coating in accordance with manufacturer’s recommended DFT”.
 - Paragraph 2.26.E; DELETE the sentence “Functional Test: Perform 3-hour continuous run test on equipment”.
 - Paragraph 3.01.A; DELETE the sentence “The tolerance for leveling will not exceed 2/1000 inch per foot length along any side of the base plate” and REPLACE with the following “The tolerance for leveling will not exceed 5/1000 inch per foot length along any side of the base plate”.
3. SECTION 11313 PUMPING UNIT TESTING
- Paragraph 2.02.A; DELETE the third sentence “Pump testing shall provide the actual measured wire-to-water efficiency” and REPLACE with “Pump testing shall provide the actual measured pump efficiency”.
 - Paragraph 3.02.A; after the first sentence “The Owner will accept the pumps after demonstration of proper functioning of all components and upon successful completion of the factory and field acceptance tests.” ADD the sentence “Pump will be acceptable only if it meets the tolerance requirements specified per Table 14.6.3.4 of ANSI HI 14.6, acceptance grade IU.”
 - Paragraph 3.02.B; DELETE in its entirety.
 - Paragraph 3.02.C; DELETE in its entirety.
 - Paragraph 3.02.D; DELETE the sentence “There is no credit for efficiency values obtained during factory testing that are greater than the guaranteed wire-to-water efficiency” and REPLACE with the following “There is no credit for efficiency values obtained during factory testing that are greater than the guaranteed pump efficiency.”
4. SECTION 11140 VERTICAL TURBINE PUMPS
- Paragraph 1.01.A.2; DELETE the first sentence “Each pumping unit shall be complete with a pump, electric motor, pedestal, sub-base, anchor bolts, and all other appurtenances specified or required for proper operation” and REPLACE with the following “Each pumping unit shall be complete with a pump, electric motor, pedestal, sub-base/surface plate assembly, anchor bolts, and all other appurtenances specified or required for proper operation”.
 - Paragraph 1.07.A; ADD the following sentence as item No.3 “Water well driller and pump installer licensed by the Texas Department of Licensing and Regulation (TDLR) with endorsements for 3-phase pumps and line shaft turbine pumps responsible for field assembly and installation of the well pumps.”

- Paragraph 2.02.A.1.c; DELETE the sentence “Minimum Pump Efficiency at rated head: 83 percent” and REPLACE with the following “Minimum Bowl Efficiency at rated head: 77 percent”.
 - Paragraph 2.02.A.2.b; DELETE the sentence “Total Design Head (TDH): 52 feet” and REPLACE with the following “Total Design Head : 55 feet”.
 - Paragraph 2.02.A.2.c; DELETE the sentence “Minimum Pump Efficiency: 77 percent” and REPLACE with the following “Minimum Bowl Efficiency: 70 percent”.
 - Paragraph 2.02.A.3.b; DELETE the sentence “Total Design Head (TDH): 90 feet” and REPLACE with the following “Total Design Head: 84 feet”.
 - Paragraph 2.02.A.3.c; DELETE the sentence “Minimum Pump Efficiency: 81 percent” and REPLACE with the following “Minimum Bowl Efficiency: 74 percent”.
 - Paragraph 2.02.A.4; DELETE the sentence “Maximum Shutoff Head: 120 feet” and REPLACE with the following “Maximum Shutoff Head: 160 feet”.
 - Paragraph 2.02.A.8; DELETE the sentence “Maximum speed: 1180 rpm” and REPLACE with the following “Maximum speed: 1800 rpm”.
 - Paragraph 2.03.A.1.a; DELETE the sentence “Anti-Vortex Vane Grating Basket: AISI Type 316 Stainless steel A351-CF8M” and REPLACE with the following “Anti-Vortex Suction Device: AISI Type 316 Stainless steel A351-CF8M”.
 - Paragraph 2.03.A.2.a; DELETE the sentence “Column Pipe: Steel, ASTM A53 Grade B Schedule 40” and REPLACE with “Column Pipe and Couplings: Steel, ASTM A53 Grade B Schedule 40”.
 - Paragraph 2.03.A.2.b; DELETE in its entirety.
 - Paragraph 2.03.A.2.d; DELETE in its entirety.
 - Paragraph 2.04.A; DELETE paragraph in its entirety.
 - Paragraph 2.04.B; DELETE paragraph in its entirety.
 - Paragraph 2.05.A; ADD the following immediately after the last sentence and number accordingly “Provide anti reverse ratchet on all vertical well pump motors”.
 - Paragraph 2.06.2.b; DELETE the sentence “Column connections: VTP-105 and VTP-106 will have flanged connections” and REPLACE with the following “Column connections for VTP-105 and VTP-106: threaded connections”.
5. SECTION 16196 – LOW VOLTAGE AC SURGE PROTECTIVE DEVICES (SPDs)
 - Paragraph 2.01.A.5; DELETE “No equal” and REPLACE with “Siemens”.
 - Paragraph 2.01.A; ADD “No equal” as item No. 6.
 6. SECTION 16428 – LOW VOLTAGE GENERATOR QUICK CONNECT SWITCHBOARDS
 - Paragraph 2.01.A; ADD the manufacturer “Siemens” as item No. 4.
 7. SECTION 16461 – DISTRIBUTION DRY-TYPE TRANSFORMERS
 - Paragraph 2.01.A; ADD the manufacturer “Siemens” as item No. 4.
 8. SECTION 16470 – PANELBOARDS
 - Paragraph 2.01.A; ADD the manufacturer “Siemens” as item No. 4.
 9. SECTION 16475 – LOW VOLTAGE ENCLOSED CIRCUIT BREAKERS AND SAFETY SWITCHES
 - Paragraph 2.01.A; ADD the manufacturer “Siemens” as item No. 4.

CHANGES TO THE PLANS

1. DRAWING C-114 – WATER PLAN AND PROFILE
 - DELETE in its entirety and REPLACE with the attached.
2. DRAWING D-001 – PROCESS GENERAL NOTES
 - DELETE in its entirety and REPLACE with the attached.
3. DRAWING D-201 – WELL NO. 3 DISCHARGE PIPING PLANS & ELEVATIONS
 - DELETE in its entirety and REPLACE with the attached.
4. DRAWING D-202 – WELL NO. 4 DISCHARGE PIPING PLANS & ELEVATIONS
 - DELETE in its entirety and REPLACE with the attached.
5. DRAWING D-203 – WELL NO. 5 DISCHARGE PIPING PLANS & ELEVATIONS
 - DELETE in its entirety and REPLACE with the attached.
6. DRAWING D-204 – WELL NO. 6 DISCHARGE PIPING PLANS & ELEVATIONS
 - DELETE in its entirety and REPLACE with the attached.

END OF ADDENDUM

This Addendum, including these 9 pages, is 22 pages with attachments in its entirety.

Attachments:

1. BUILDING WAGE DECISION (7 pages)
2. DRAWING C-114 – WATER PLAN AND PROFILE (1 page)
3. DRAWING D-001 – PROCESS GENERAL NOTES (1 page)
4. DRAWING D-201 – WELL NO. 3 DISCHARGE PIPING PLANS & ELEVATIONS (1 page)
5. DRAWING D-202 – WELL NO. 4 DISCHARGE PIPING PLANS & ELEVATIONS (1 page)
6. DRAWING D-203 – WELL NO. 5 DISCHARGE PIPING PLANS & ELEVATIONS (1 page)
7. DRAWING D-204 – WELL NO. 6 DISCHARGE PIPING PLANS & ELEVATIONS (1 page)



Mythri Krishnamoorthysujatha, P.E
Tetra Tech

"General Decision Number: TX20230231 09/01/2023

Superseded General Decision Number: TX20220231

State: Texas

Construction Type: Building

County: Bexar County in Texas.

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

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

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

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

Modification Number	Publication Date
0	01/06/2023
1	01/13/2023

2 02/03/2023
3 04/14/2023
4 08/25/2023
5 09/01/2023

ASBE0087-014 06/04/2023

Rates Fringes

ASBESTOS WORKER/HEAT & FROST
INSULATOR (Duct, Pipe and
Mechanical System Insulation)....\$ 28.95 8.39

BOIL0074-003 01/01/2021

Rates Fringes

BOILERMAKER.....\$ 29.47 24.10

ELEC0060-003 06/01/2022

Rates Fringes

ELECTRICIAN (Communication
Technician Only).....\$ 31.95 15%+6.41

ELEC0060-004 06/01/2022

Rates Fringes

ELECTRICIAN (Excludes Low
Voltage Wiring).....\$ 31.95 15%+6.41

ELEV0081-001 01/01/2023

Rates Fringes

ELEVATOR MECHANIC.....\$ 46.83 37.335+a+b

FOOTNOTES:

a. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

b. Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; Christmas Day; and Veterans Day.

ENGI0450-002 04/01/2014

Rates Fringes

POWER EQUIPMENT OPERATOR
Cranes.....\$ 34.85 9.85

* IRON0066-013 06/01/2023

Rates Fringes

IRONWORKER, STRUCTURAL.....\$ 26.00 7.53

* IRON0084-011 06/01/2023

Rates Fringes

IRONWORKER, ORNAMENTAL.....\$ 27.51 8.13

PLUM0142-009 07/01/2023

Rates Fringes

HVAC MECHANIC (Electrical
Temperature Control
Installation & Unit
Installation Only).....\$ 35.95 11.25
PIPEFITTER (Including HVAC
Pipe Installation).....\$ 35.95 11.25
Including HVAC Pipe Installation
PLUMBER.....\$ 35.95 11.25
Excludes HVAC Pipe Installation

SFTX0669-002 04/01/2023

Rates Fringes

SPRINKLER FITTER (Fire
Sprinklers).....\$ 34.60 23.30

SHEE0067-004 07/03/2023

Rates Fringes

Sheet metal worker
Excludes HVAC Duct
Installation.....\$ 30.24 15.89
HVAC Duct Installation Only.\$ 30.24 15.89

* SUTX2014-006 07/21/2014

Rates Fringes

BRICKLAYER.....\$ 22.15 0.00
CARPENTER (Acoustical Ceiling
Installation Only).....\$ 17.83 0.00
CARPENTER (Form Work Only).....\$ 13.63 ** 0.00
CARPENTER, Excludes
Acoustical Ceiling
Installation, Drywall
Hanging, Form Work, and Metal
Stud Installation.....\$ 16.86 4.17
CAULKER.....\$ 15.00 ** 0.00
CEMENT MASON/CONCRETE FINISHER...\$ 22.27 5.30
DRYWALL FINISHER/TAPER.....\$ 13.81 ** 0.00
DRYWALL HANGER AND METAL STUD
INSTALLER.....\$ 15.18 ** 0.00
ELECTRICIAN (Low Voltage
Wiring Only).....\$ 20.39 3.04
IRONWORKER, REINFORCING.....\$ 12.27 ** 0.00
LABORER: Common or General.....\$ 10.75 ** 0.00

LABORER: Mason Tender - Brick...	\$ 11.88 **	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 12.00 **	0.00
LABORER: Pipelayer.....	\$ 11.00 **	0.00
LABORER: Roof Tearoff.....	\$ 11.28 **	0.00
LABORER: Landscape and Irrigation.....	\$ 8.00 **	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 15.98 **	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 14.00 **	0.00
OPERATOR: Bulldozer.....	\$ 14.00 **	0.00
OPERATOR: Drill.....	\$ 14.50 **	0.00
OPERATOR: Forklift.....	\$ 12.50 **	0.00
OPERATOR: Grader/Blade.....	\$ 23.00	5.07
OPERATOR: Loader.....	\$ 12.79 **	0.00
OPERATOR: Mechanic.....	\$ 18.75	5.12
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03 **	0.00
OPERATOR: Roller.....	\$ 12.00 **	0.00
PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping.....	\$ 13.07 **	0.00
ROOFER.....	\$ 12.00 **	0.00
TILE FINISHER.....	\$ 11.32 **	0.00
TILE SETTER.....	\$ 14.94 **	0.00
TRUCK DRIVER: Dump Truck.....	\$ 12.39 **	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50 **	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00 **	4.11

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

=====

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16,20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

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

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

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

Union Rate Identifiers

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

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

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all

rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

Union Average Rate Identifiers

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

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

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator

(See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

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

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

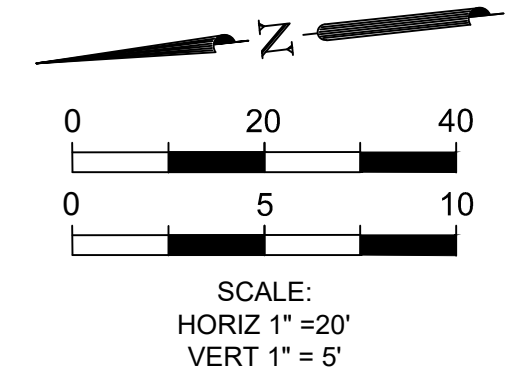
Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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

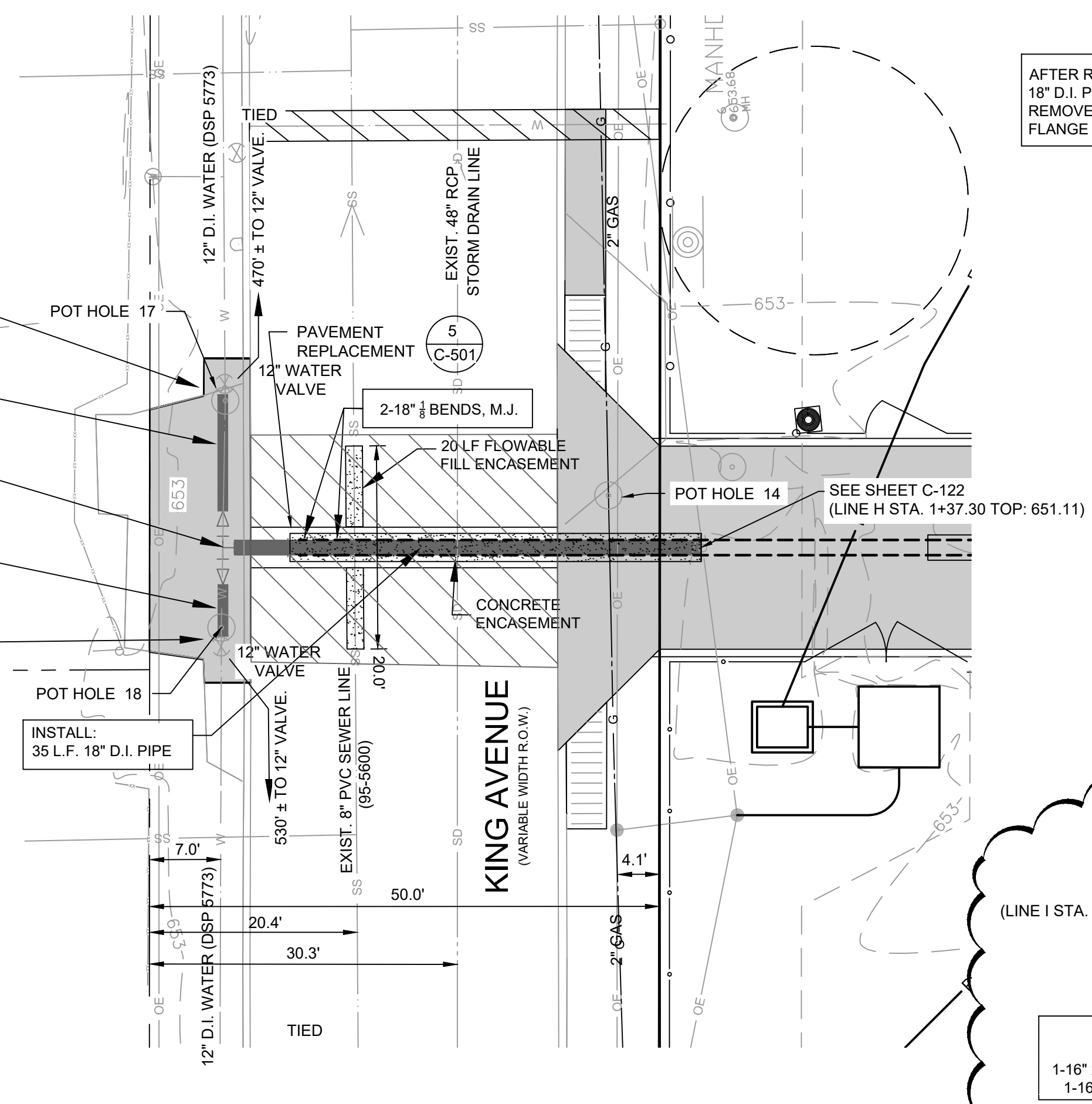
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END OF GENERAL DECISIO"

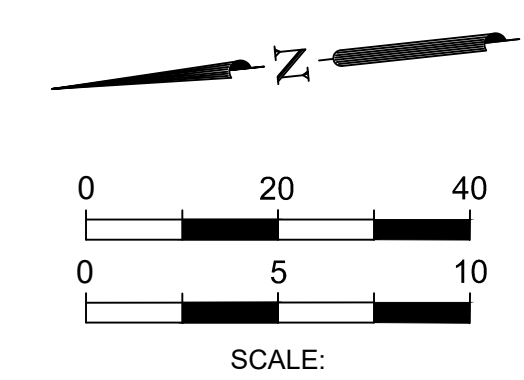
10/5/2023 9:50:02 AM - W:\WORK\KIC-1656 SAWS KING STREET PUMP STATION IMPROVEMENT\DESIGN\CIVIL\CONSTRUCTION DOCUMENTS\CIVIL DETAILS-2.DWG - ROGER MEDINA



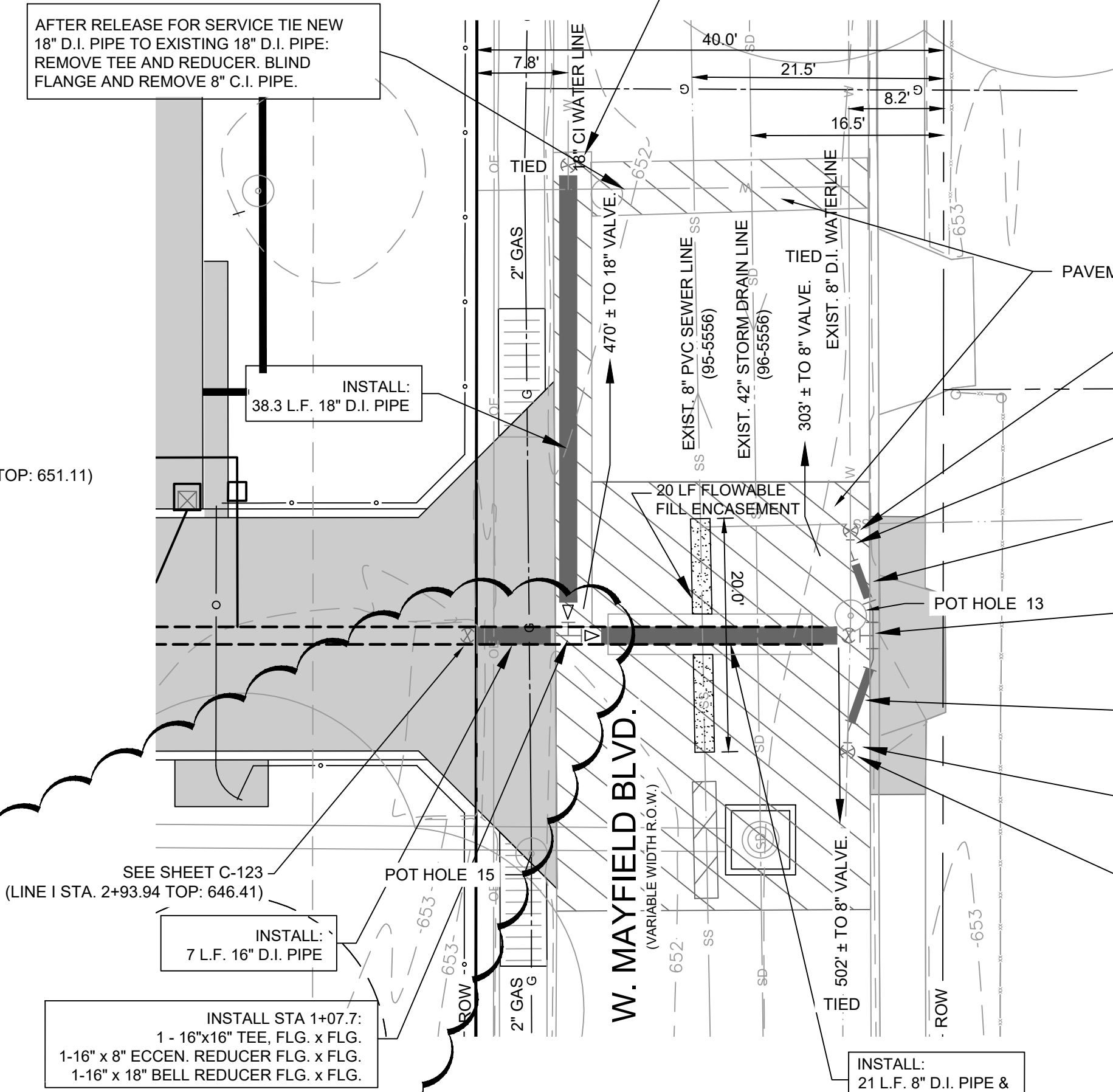
- AFTER RELEASE FOR SERVICE TIE NEW 12" D.I. PIPE TO EXISTING 12" D.I. PIPE: 1-12" CAST COUPLING
- INSTALL: 2-12" $\frac{3}{8}$ BENDS M.J. 12 L.F. 12" D.I. PIPE, CUT AS REQUIRED.
- INSTALL STA 1+07.2: 1-18"x18" CUT IN TEE, M.J. 2-18"x12" BELL REDUCER, M.J.
- INSTALL: 2-12" $\frac{3}{8}$ BENDS M.J. 9 L.F. 12" D.I. PIPE, CUT AS REQUIRED.
- AFTER RELEASE FOR SERVICE TIE NEW 12" D.I. PIPE TO EXISTING 12" D.I. PIPE: 1-12" CAST COUPLING



1 KING AVENUE WATER CROSSING PLAN



- INSTALL CUT IN: 1-18" BUTTERFLY VALVE, FLG. x FLG. 1- 6" VALVE BOX, COMPLETE
- INSTALL: 38.3 L.F. 18" D.I. PIPE
- INSTALL: 8" CUT IN VALVES WITH ANCHOR BLOCKS
- AFTER RELEASE FOR SERVICE TIE NEW 8" D.I. WATER LINE TO EXISTING 8" D.I. PIPE: 1- 8" CAST COUPLING.
- INSTALL: 2-8" $\frac{3}{8}$ BENDS, M.J. 6 L.F. - 8" D.I. PIPE, CUT AS REQUIRED.
- INSTALL: 1- 8"x8" CUT IN TEE, M.J. 1- 8" GATE VALVE, M.J. 1- 6" VALVE BOX, COMPLETE
- INSTALL: 2-8" $\frac{3}{8}$ BENDS, M.J. 6 L.F. - 8" D.I. PIPE, CUT AS REQUIRED.
- AFTER RELEASE FOR SERVICE TIE NEW 8" D.I. WATER LINE TO EXISTING 8" D.I. PIPE: 1- 8" CAST COUPLING.
- INSTALL: 8" CUT IN VALVE WITH ANCHOR BLOCKS



2 W. MAYFIELD BLVD. WATER CROSSING PLAN

- NOTES:
1. CONTRACTOR TO FIELD VERIFY DEPTHS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 2. CONTRACTOR TO PROVIDE A TRAFFIC CONTROL PLAN FOR WORK IN STREET RIGHT OF WAYS AND IF REQUIRED A TRAFFIC DETOUR PLAN.
 3. CONTRACTOR TO COORDINATE DEMOLITION AND CONSTRUCTION WITH CITY AND RESIDENTS PRIOR TO WORKING ON KING STREET AND MAYFIELD BLVD.
 4. CONTRACTOR TO PROVIDE THRUST BLOCKING AT ALL FITTINGS AND VALVES IN ACCORDANCE WITH SAWS SPECIFICATIONS.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

MARK	DATE	DESCRIPTION
1	10-04-23	ADDENDUM No. 2

STATION	EXIST. GND. CIL	PROPOSED WATERLINE	EXIST. GROUND
1+00	653.24	9 L.F. 18" D.I. WATERLINE	655
1+10	652.23	2-18" $\frac{3}{8}$ BENDS, M.J.	655
1+20	652.46	35 L.F. 18" D.I. WATERLINE	655
1+30	652.42	1-18"x18" TEE FLL EL: 647.75	655
1+40	652.02	1-18"x18" TEE FLL EL: 647.75	655
1+50	652.58	1-16" $\frac{3}{8}$ BEND	655
1+60		1-16" $\frac{3}{8}$ BEND	655
1+70		1-16" TEE, FLGXFLG	655
1+80		1-16"x8" ECC. REDUCER	655

1 KING AVENUE WATER CROSSING PROFILE

STATION	EXIST. GND. CIL	PROPOSED WATERLINE	EXIST. GROUND
0+90	653.03	21 L.F. 8" D.I. WATERLINE	660
1+00	652.52	20 L.F. 18" STEEL CASING	660
1+10	652.07	1-16" $\frac{3}{8}$ BEND	660
1+20	652.15	1-16" $\frac{3}{8}$ BEND	660
1+30	651.92	1-16" TEE, FLGXFLG	660
1+40	652.39	1-16"x8" ECC. REDUCER	660
1+50		1-8"x8" TEE	660
1+60		1-8" GATE VALVE	660

2 W. MAYFIELD BLVD. WATER CROSSING PROFILE

BAINMEDINABAIN
ENGINEERS & SURVEYORS

7073 San Pedro Avenue
San Antonio, Texas 78216
P: (210)494-7223 F: (210)490-5120
TBPE: F-1712/TBPLS: 10020900

TETRA TECH
www.tetra-tech.com

711 NAVARRO STREET, SUITE 560
SAN ANTONIO, TEXAS 78205
Ph: (210) 299-7900 Fax: (210) 226-8497

LEGEND
▲ THRUST BLOCKING

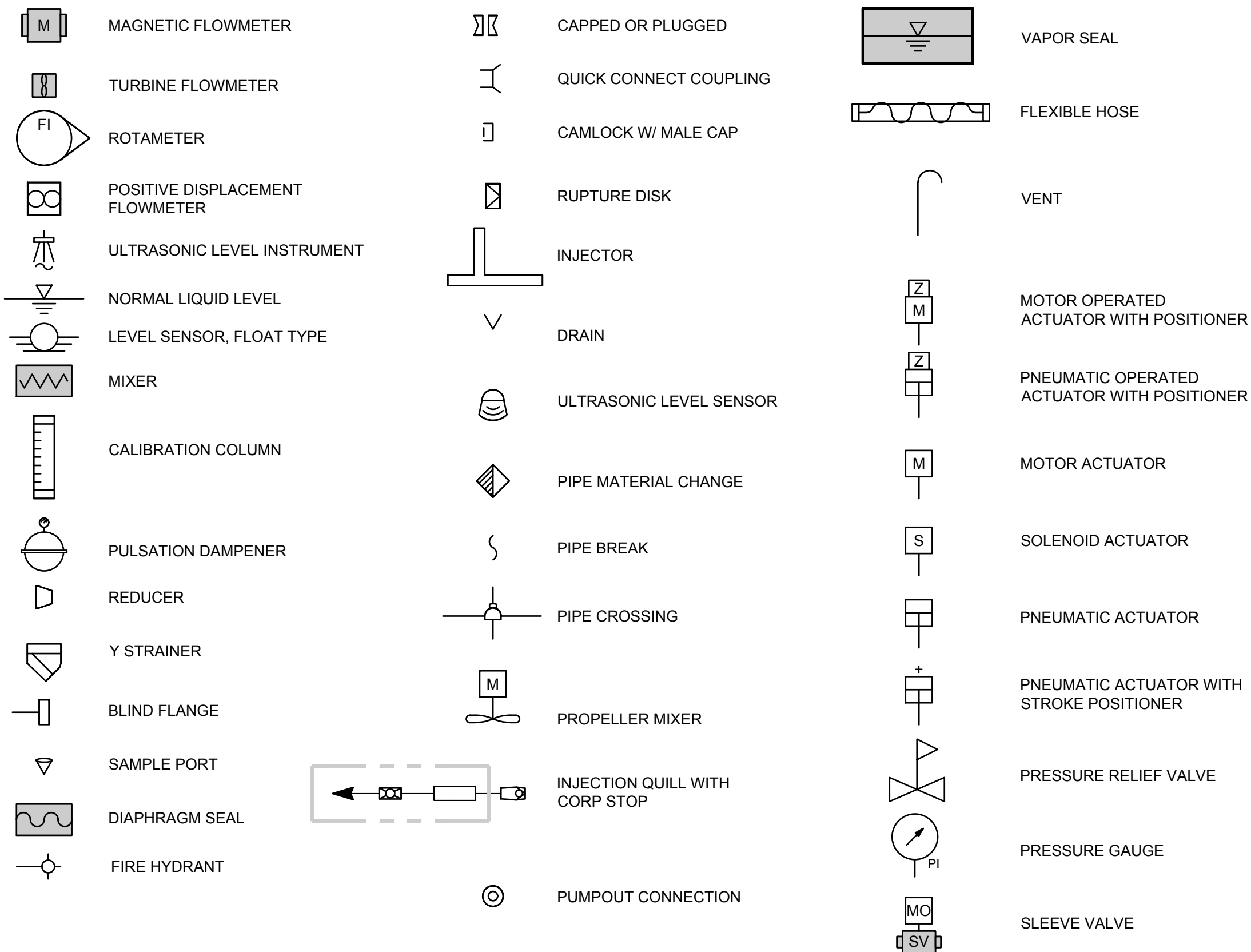
BID SET

SAN ANTONIO WATER SYSTEM

PROJ: 200-09308-20002
DESIGN: RM
DRAWN: ML
CHECKED: CB

C-114

MECHANICAL EQUIPMENT



PIPING LEGEND

FITTING/ APPURTENANCE	FLANGED				MECHANICAL JOINT				GROOVE JOINT				SOLVENT WELD			
	SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE		SINGLE-LINE		DOUBLE-LINE	
	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
BEND																
TEE																
WYE																
REDUCER																
CAP/ BLIND FLANGE					N/A	N/A	N/A	N/A								
PLUG	N/A	N/A	N/A	N/A					N/A	N/A	N/A	N/A				
BUTTERFLY VALVE																
BALL VALVE					N/A	N/A	N/A	N/A								
CHECK VALVE					N/A	N/A	N/A	N/A								
GATE VALVE																
PLUG VALVE																
AUTOMATIC CONTROL VALVE					N/A	N/A	N/A	N/A								
PINCH VALVE					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				

ABOVE GRADE PIPING
 BELOW GRADE PIPING

NOTES:

1. SURFACE PREPARATIONS PER SPECIFICATIONS 09900-PAINTING AND COATINGS.
2. ALL CHEMICALS FEED PIPING CONSISTING OF SCH 80 PVC TO BE MINIMUM 3/4" DIA UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
3. ALL EXPOSED PROCESS PIPING IS TO BE PAINTED PER THE PAINTING SPECIFICATIONS, EXCEPT STAINLESS STEEL.
4. GRAVITY SEWER IS TO BE AIR TESTED.
5. WORKING PRESSURE RATING OF FITTING TO MEET OR EXCEED THE RATING OF PIPE.
6. ALL CARBON STEEL PIPING SHALL BE RATED FOR 150 PSI WORKING PRESSURE, MINIMUM 1/4" WALL THICKNESS PER SAWS STANDARDS, REGARDLESS OF WORKING AND TEST PRESSURES INDICATED IN THE SCHEDULE ABOVE.
7. REFER TO SPECIFICATION SECTION 15076 - DOUBLE WALL CONTAINMENT PIPING FOR DOUBLE WALL CONTAINMENT PIPING, FITTINGS AND APPURTENANCES.

PIPE MATERIALS SCHEDULE							
ABBREVIATION	DESCRIPTION	BURIED	EXPOSED	EXPOSED COLOUR	MAX WORKING PRESSURE	TEST PRESSURE/TESTING SPEC	SPECIFICATIONS
BR	BRINE	NA	PVC SCH 80, SOLVENT WELD	BROWN W/ WHITE LETTERS	50	100	15063
DR,D,SS	DRAIN/SEWER	<6": PVC SCH 40; >= 6" PVC SEWER PIPE, SDR 26 W/ PVC FITTINGS	PVC SCH 80, SOLVENT WELD	DK. GRAY (34GR)	GRAVITY	15 FT WATER COLUMN/15014	15063
DRAIN	10" TANK DRAIN	N/A	CARBON STEEL, WELDED AND FLANGED	MATCH GST	15	30/15014	15055, 15056
HFA	HYDROFLUOSILICIC ACID (FLUORIDE)	PFA TUBING IN SCH 80 CPVC CONTAINMENT PIPE	CPVC SCH 80, THREADED IN SCH 80 CPVC CONTAINMENT PIPE, SOLVENT WELD	WHITE W/YELLOW BANDS	60	100/15014	15062, 15076
PW	POTABLE WATER	DUCTILE IRON, RESTRAINED RTJ AND RESTRAINED M >=4" <4" PVC SCH 40, SOLVENT WELD	<=4" PVC SCHEDULE 80; >4" CARBON STEEL	BLUE (11SF "SAFETY BLUE")	150	225/15085	15055, 15056, 15058
RW	RAW WATER	DUCTILE IRON	CARBON STEEL	TAN W/ WHITE LETTERS	150	225/15085	15055, 15056, 15058
SH	SODIUM HYPOCHLORITE (HYPO)	PVC CARRIER TUBING IN SCH 80 PVC CONTAINMENT PIPE	PVC SCH 80, THREADED IN SCH 80 PVC CONTAINMENT PIPE, SOLVENT WELD	YELLOW	60	100	15063, 15076
SMPL	SAMPLE	PVC SCH 80, SOLVENT WELD	PVC SCH 80, SOLVENT WELD OR 316 SST AS NOTED ON DRAWING	MATCH SERVICE	100	150/15014	15063, 15067
UW	UTILITY WATER	< 4" PVC SCH 80, SOLVENT WELD & COPPER	<=3" PVC SCH 80, SOLVENT WELD	LIGHT BLUE	75	150/15104	15063
SW	SOFTENED WATER	NA	PVC SCH 80, SOLVENT WELD	ALUMINUM W/ BLACK LETTERS	50	100	15063
VNT/AIR	VENT/AIR	NA	INDOOR: PVC, SCH 40; OUTDOOR: PVC, SCH 80	VENT: MD. GRAY (33GR) AIR: INDOOR- CLEAR, OUTDOOR- PLASTIC	NA	NA	15063
SF	SALT FILL	NA	316 STAINLESS STEEL	NA	12" WATER COLUMN	NA	15067



ADDENDUM NO 2

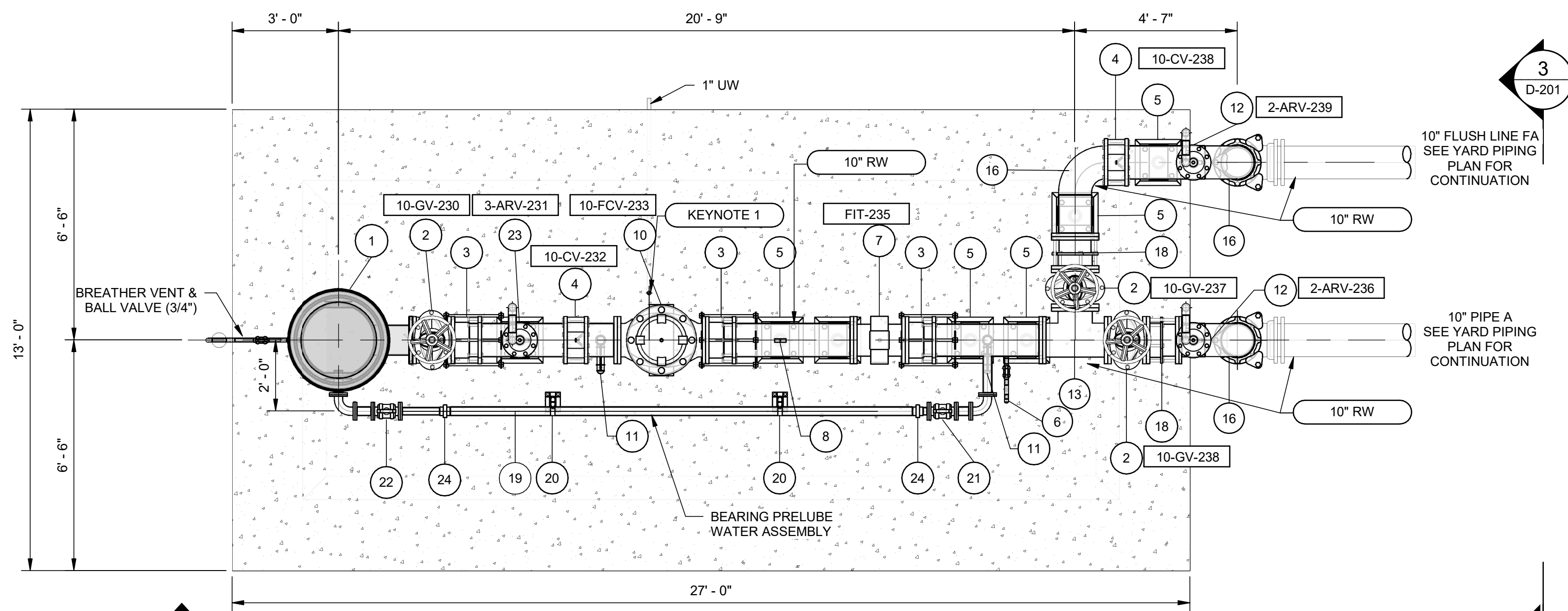


BY	DATE	DESCRIPTION
MK	10/2023	ADDENDUM NO. 2
1		

SAN ANTONIO WATER SYSTEMS
KING STREET PUMP STATION
IMPROVEMENTS
PROCESS GENERAL NOTES
LEGEND AND
ABBREVIATIONS

PROJ:	200-09308-20002
DESN:	MK
DRWN:	SG
CHKD:	FR

D-001

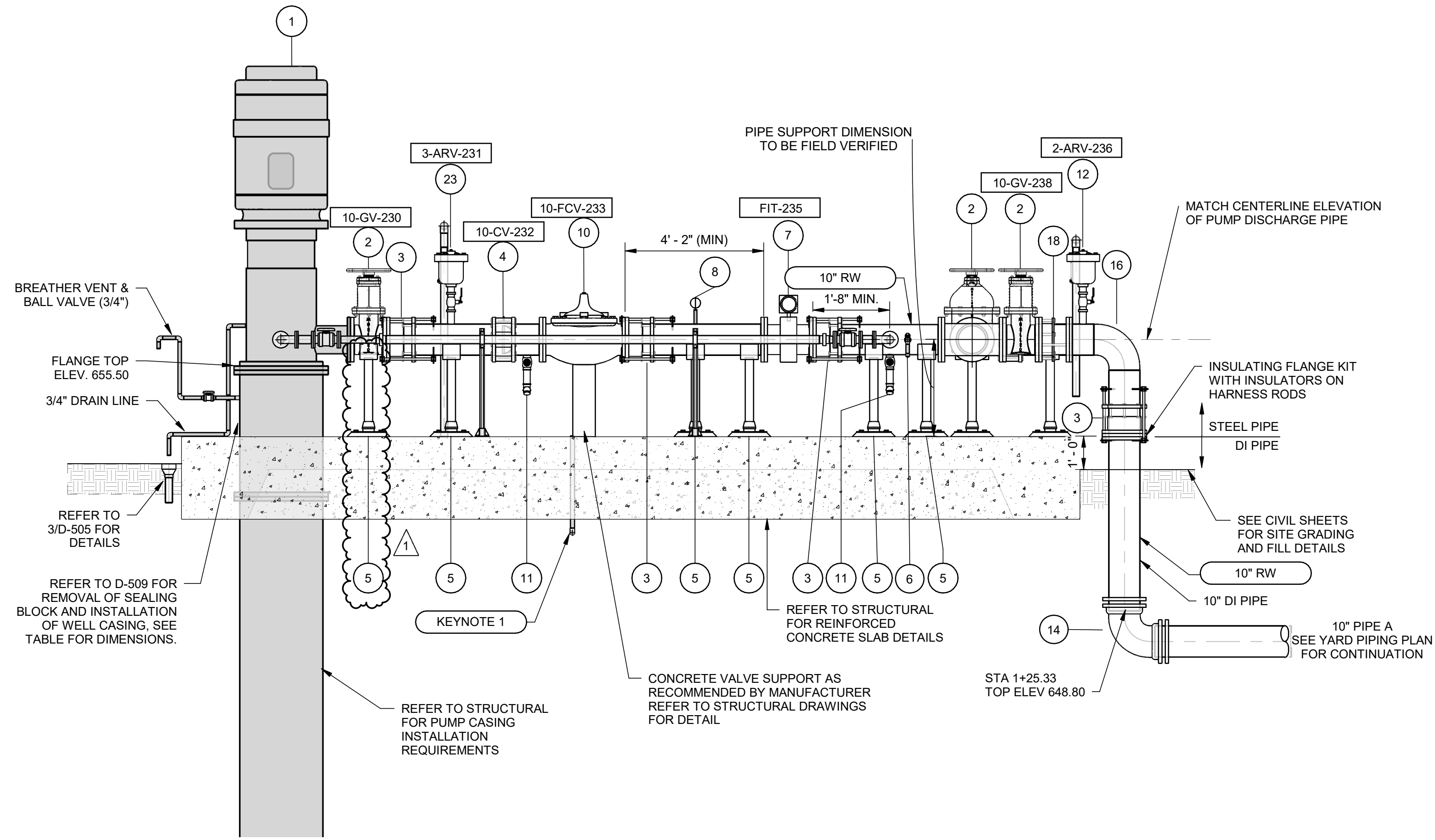


1 WELL NO. 3
SCALE: 3/8" = 1'-0"

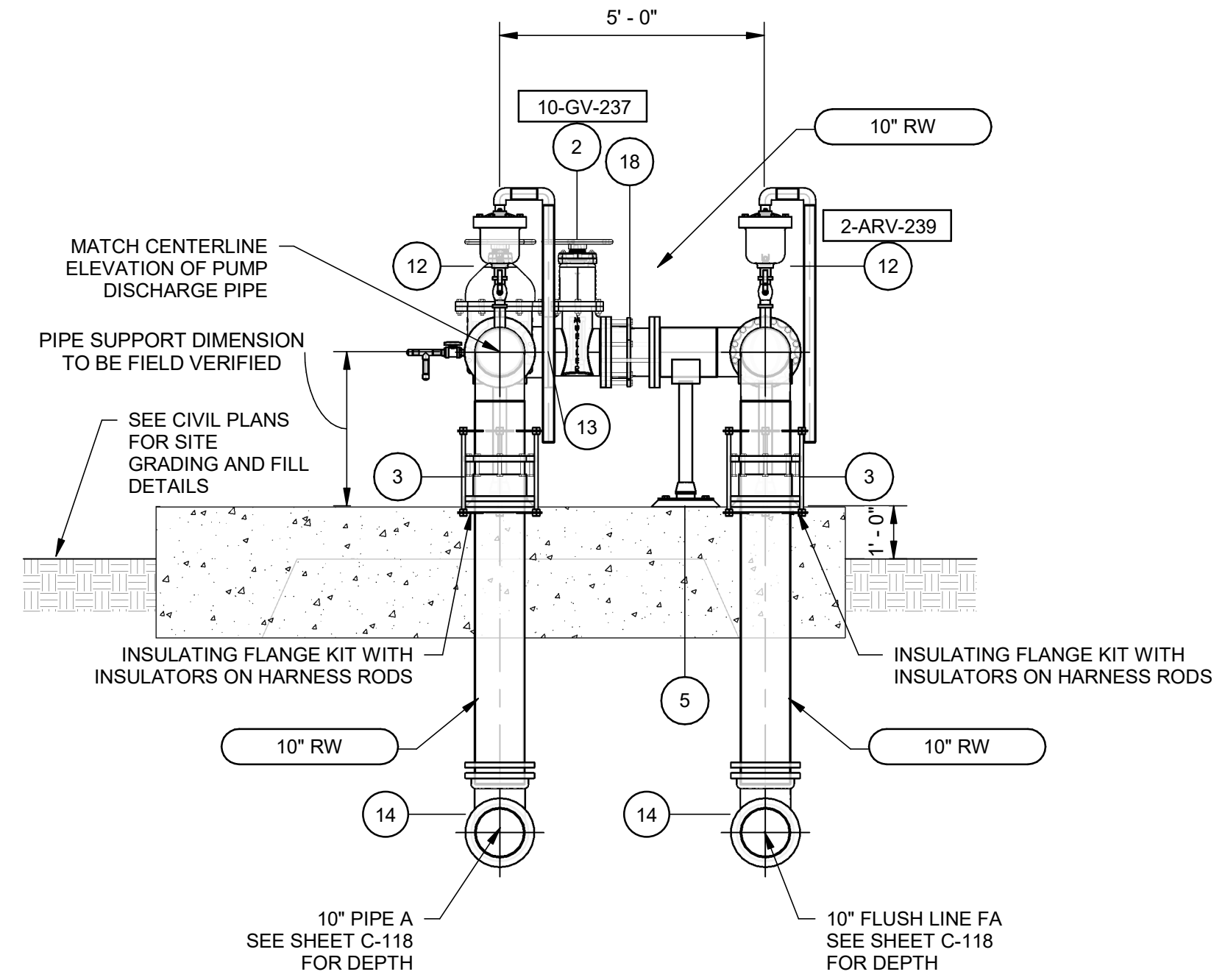
TAG	DESCRIPTION
1	WELL PUMP
2	10" GATE VALVE
3	10" FCA W/ THRUST HARNESS PER DTL 2 ON SHT D-504
4	10" DUO CHECK VALVE
5	ADJUSTABLE STANCHION SADDLE PIPE SUPPORT PER DTL 3 ON SHT D-501
6	3/4" SAMPLE TAP PER DTL 2 ON SHT D-506
7	10" FLOW METER
8	PRESSURE GAUGE AND SENSOR TRANSMITTER PER DTL 2 ON SHT D-507
9	PRESSURE GAUGE PER DTL 3 ON SHT D-506
10	10" FLOW CONTROL VALVE
11	2" DRAIN LINE
12	2" COMBINATION AIR VALVE PER DTL 1 ON SHT D-507
13	10"x10"x10" TEE
14	10" DUCTILE IRON 90° BEND (MJ X MJ, RESTRAINED)
15	10" HARNESS MECHANICAL COUPLING PER DTL 1 ON SHT C-506
16	10" 90° BEND
18	DISMANTLING JOINT PER DTL 8 ON SHT D-505
19	2" GI PIPE
20	PIPE SUPPORT NON METALLIC POST PER DTL 2 ON SHT D-501
21	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP) (3000LB) 2" G.I. NIPPLE THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2-2" G.I. NIPPLE THD (4" LONG) 2" CHECK VALVE FLOW IS TOWARD WELL PUMP
22	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP) (3000LB) 2" G.I. NIPPLE THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2-2" G.I. NIPPLE THD (4" LONG) 2" G.I. NIPPLE THD (12" LONG)
23	3" DEEP WELL AIRVACUUM VALVE PER DTL 6 ON SHT D-507
24	2" G.I. UNION THD

NOTE:
ABOVE GRADE PIPING SHALL BE INSULATED AND HEAT TRACED.

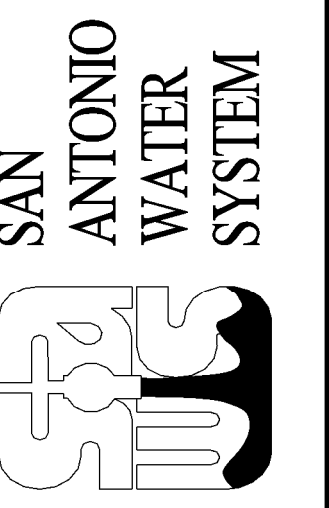
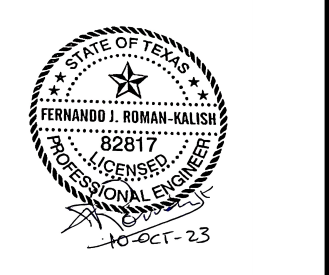
KEYNOTE:
1. 1" UW PIPE UP FOR PRESSURIZED WATER SOURCE TO CLOSE FLOW CONTROL VALVE IN ARTESIAN MODE.



2 WELL NO 3 ELEVATION
SCALE: 3/8" = 1'-0"



3 WELL NO 3 END ELEVATION
SCALE: 3/8" = 1'-0"

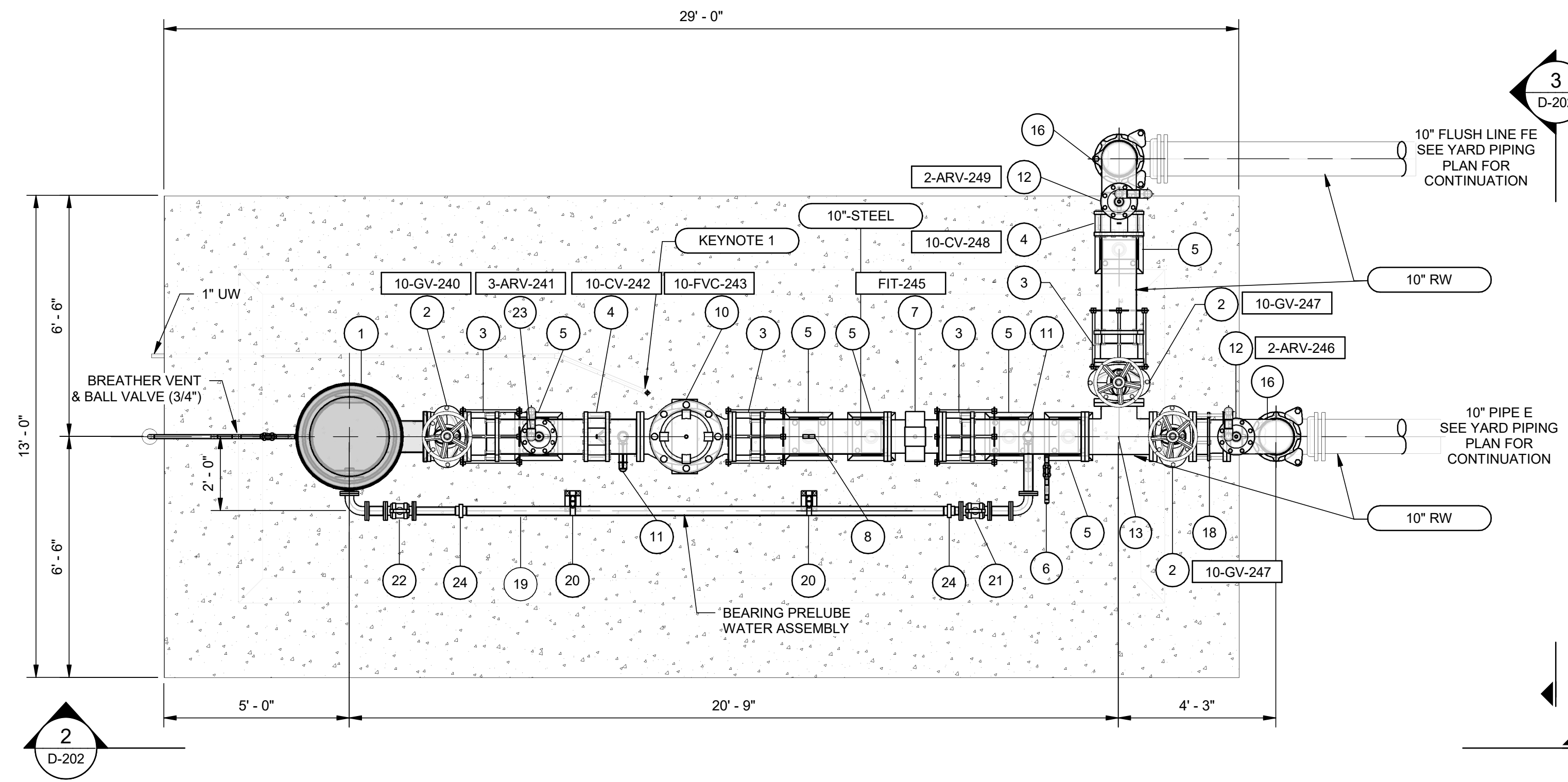


MARK	DATE	DESCRIPTION
1	10/2023	ADDENDUM NO. 2

SAN ANTONIO WATER SYSTEMS
KING STREET PUMP STATION
IMPROVEMENTS
**WELL NO. 3 DISCHARGE
PIPING PLAN &
ELEVATIONS**

PROJ:	200-09308-20002
DESN:	MK
DRWN:	SGG
CHKD:	FR

D-201

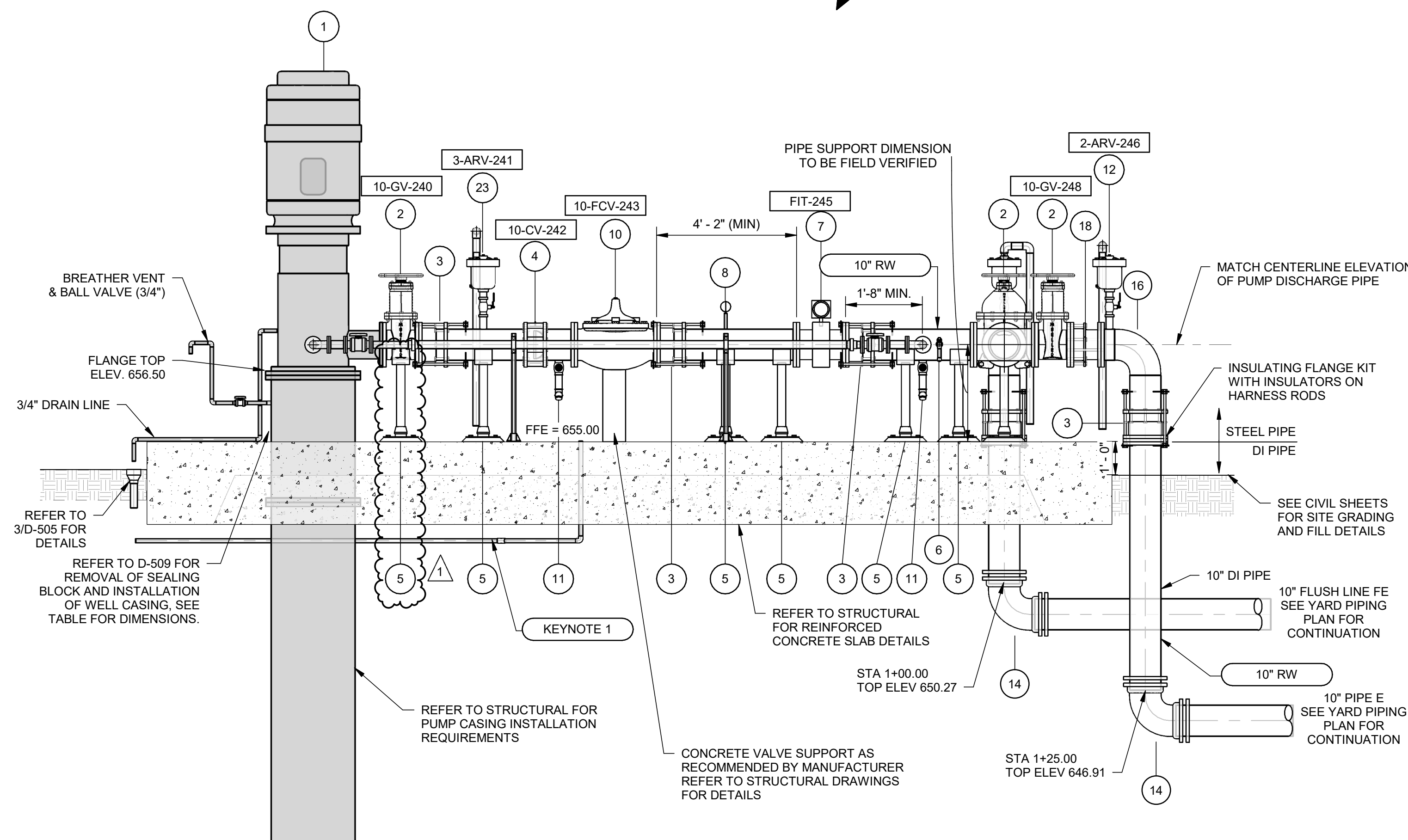


1 WELL NO. 4
SCALE: 3/8" = 1'-0"

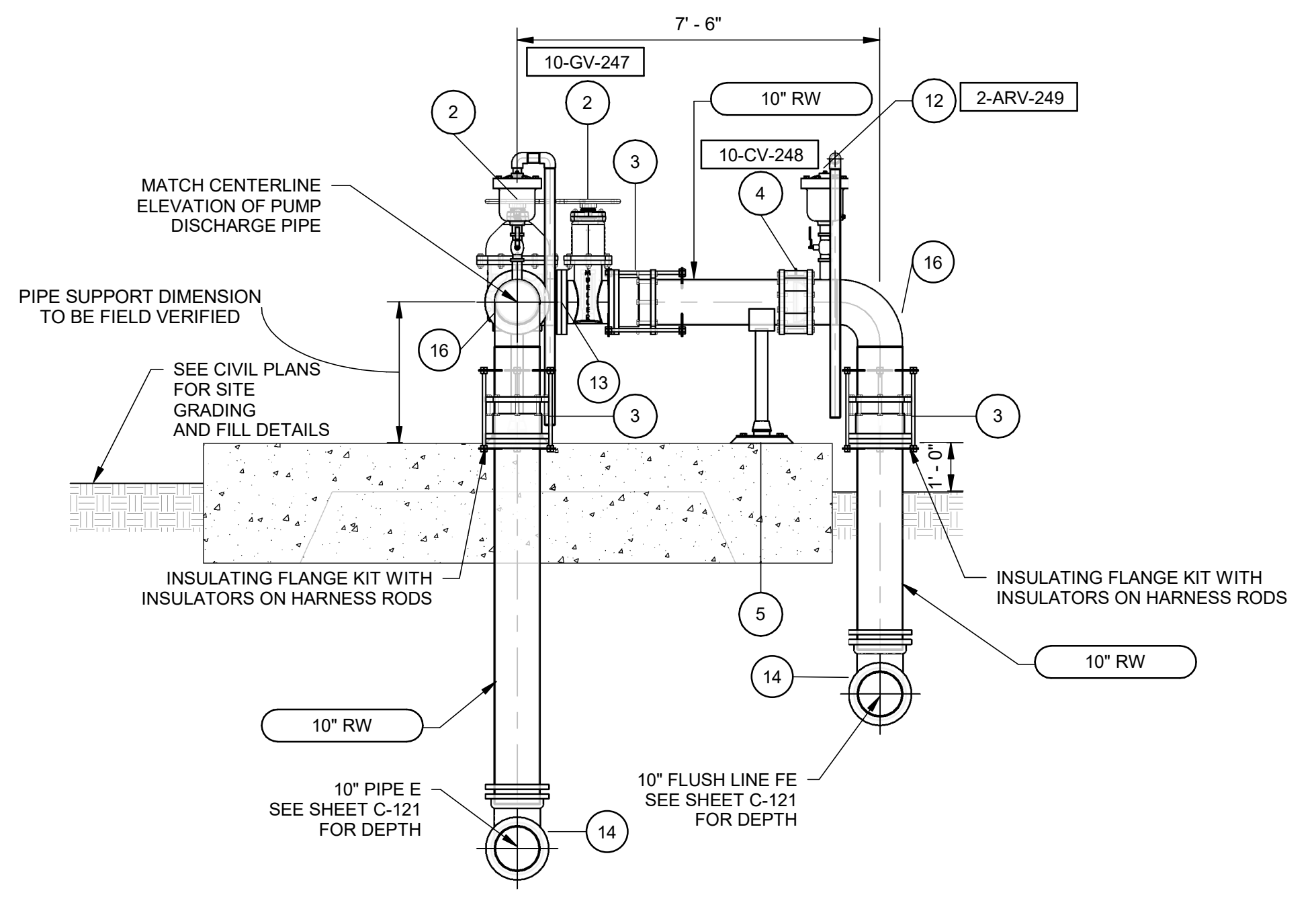
WELL NO 4 FITTING LIST	
TAG	DESCRIPTION
1	WELL PUMP
2	10" GATE VALVE
3	10" FCA W/ THRUST HARNESS PER DTL 2 ON SHT D-504
4	10" DUO CHECK VALVE
5	ADJUSTABLE STANCHION SADDLE PIPE SUPPORT PER DTL 3 ON SHT D-501
6	3/4" SAMPLE TAP PER DTL 2 ON SHT D-506
7	10" FLOW METER
8	PRESSURE GAUGE AND SENSOR TRANSMITTER PER DTL 2 ON SHT D-507
9	PRESSURE GAUGE PER DTL 3 ON SHT D-506
10	10" FLOW CONTROL VALVE
11	2" DRAIN LINE
12	2" COMBINATION AIR VALVE PER DTL 1 ON SHT D-507
13	10"x10"x10" TEE
14	10" DUCTILE IRON 90° BEND (MJ X MJ, RESTRAINED)
15	10" HARNESS MECHANICAL COUPLING PER DTL 1 ON SHT C-506
16	10" 90° BEND
18	DISMANTLING JOINT PER DTL 8 ON SHT D-505
19	2" GI PIPE
20	PIPE SUPPORT NON METALLIC POST PER DTL 2 ON SHT D-501
21	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP) (3000LB) 2" G.I. NIPPLE THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2.2" G.I. NIPPLE THD (4" LONG) 2" CHECK VALVE FLOW IS TOWARD WELL PUMP
22	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP) (3000LB) 2" G.I. NIPPLE THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2.2" G.I. NIPPLE THD (4" LONG) 2" G.I. NIPPLE THD (12" LONG)
23	3" DEEP WELL AIR/VACUUM VALVE PER DTL 6 ON SHT D-507
24	2" G.I. UNION THD

NOTE:
ABOVE GRADE PIPING SHALL BE INSULATED AND HEAT TRACED.

KEYNOTE:
1. 1" UW PIPE UP FOR PRESSURIZED WATER SOURCE TO CLOSE FLOW CONTROL VALVE IN ARTESIAN MODE.



2 WELL NO 4 ELEVATION
SCALE: 3/8" = 1'-0"



3 WELL NO 4 END ELEVATION
SCALE: 3/8" = 1'-0"

TETRA TECH
TEXAS REGISTRATION NO. F-3924
www.tetra.tech.com
711 NAVARRO ST., SUITE 560
SAN ANTONIO, TX 78205
TEL: 210.299.7900 FAX: 210.226.9497

ADDENDUM NO 2

SAN ANTONIO WATER SYSTEM

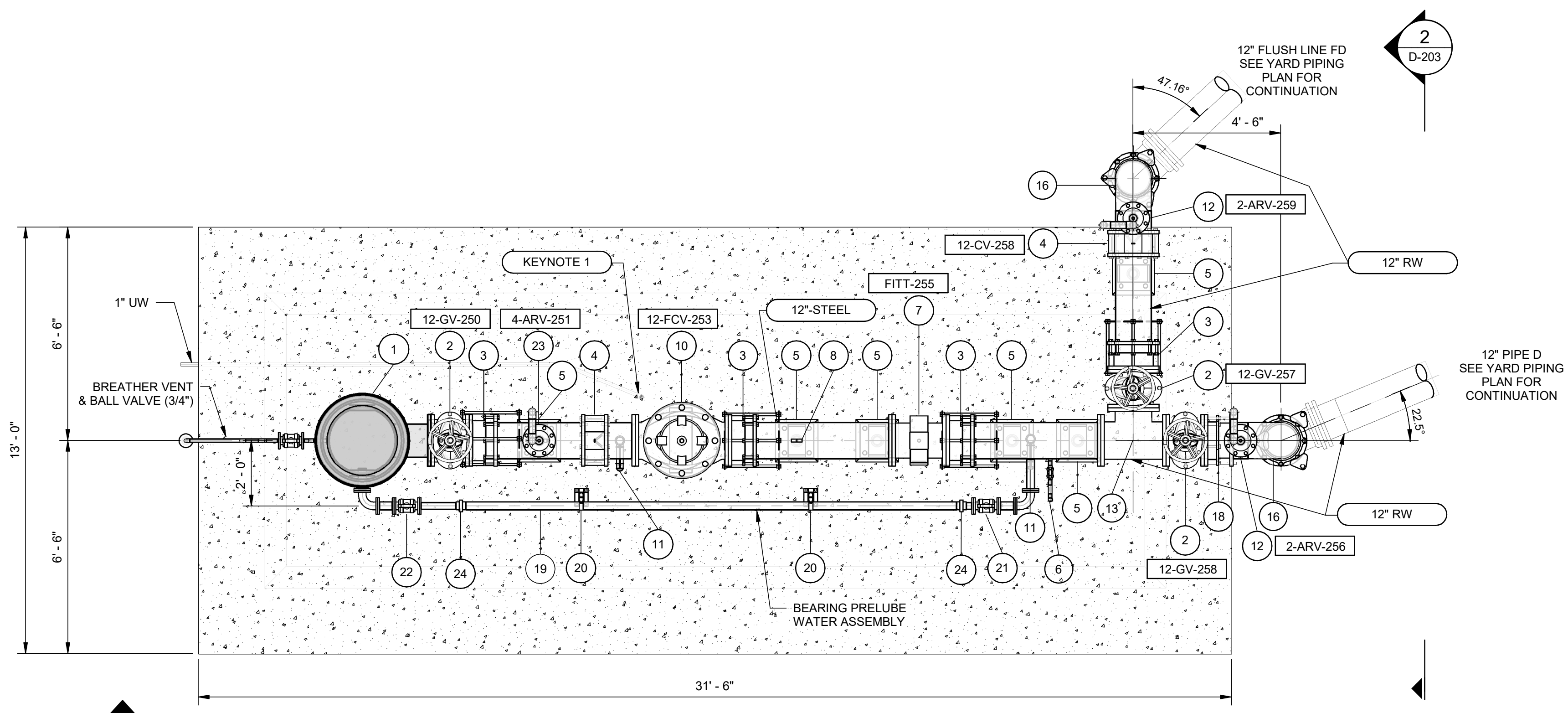
MARK	DATE	DESCRIPTION
1	10/2023	ADDENDUM NO. 2

SAN ANTONIO WATER SYSTEMS
KING STREET PUMP STATION IMPROVEMENTS
WELL NO. 4 DISCHARGE PIPING PLAN & ELEVATIONS

PROJ:	200-09308-20002
DESIN:	MK
DRWN:	SGG
CHKD:	FR

D-202

10/6/2023 11:55:59 AM C:\Users\stevie.guard\Documents\09308-D-HSPS_BLDG-2021_stevie.guard.rvt

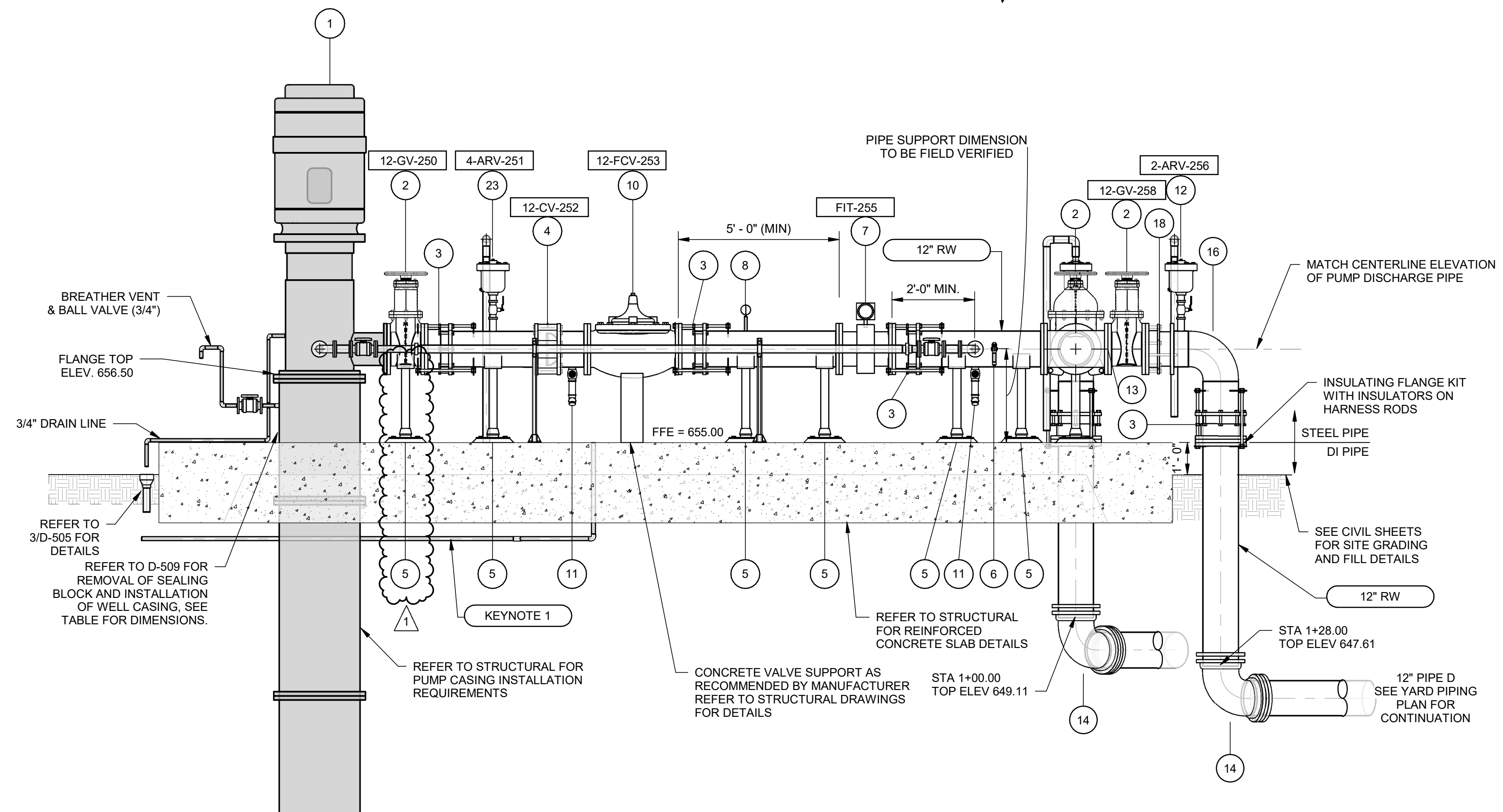


1 WELL NO. 5
SCALE: 3/8" = 1'-0"

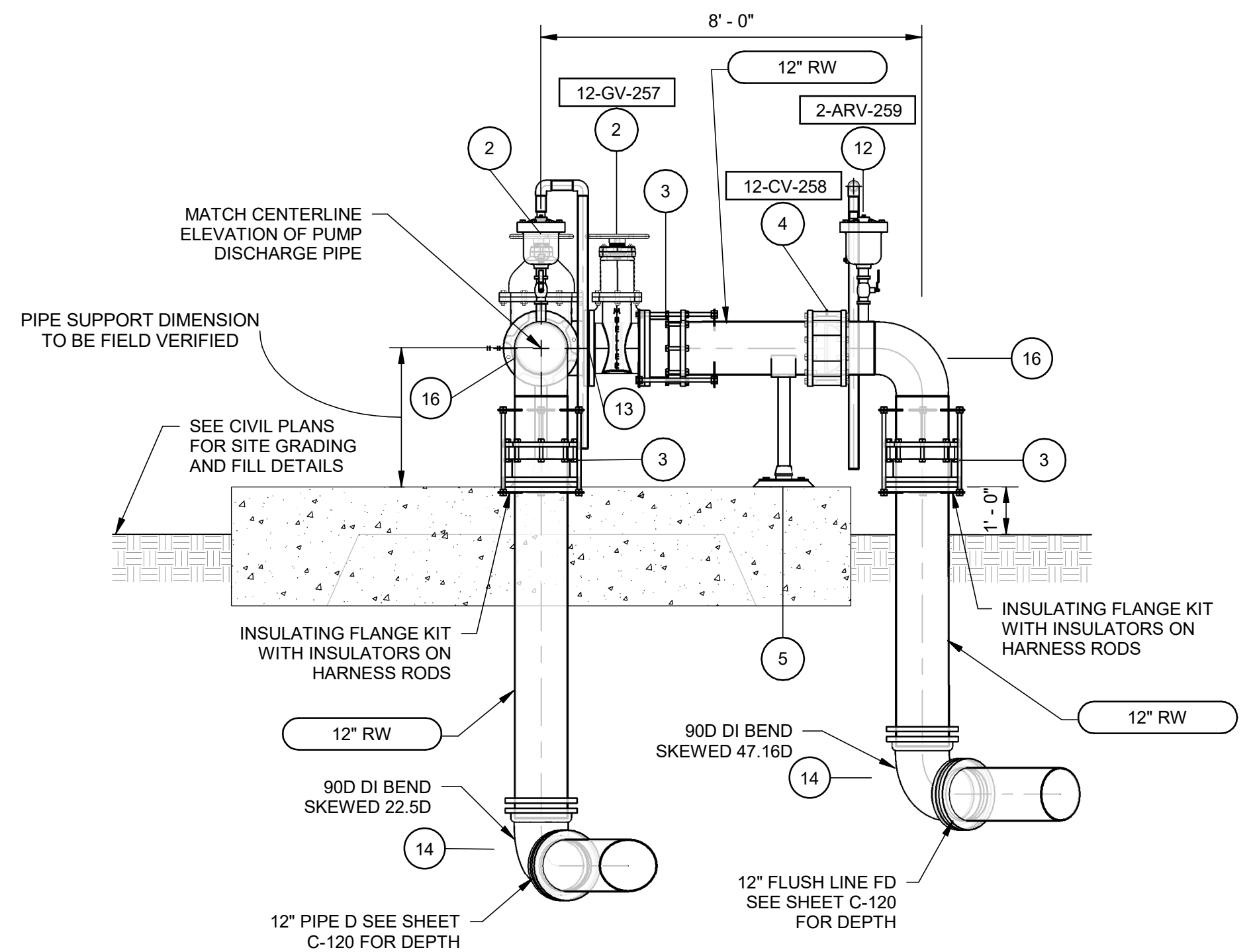
WELL NO 5 FITTING LIST	
TAG	DESCRIPTION
1	WELL PUMP
2	12" GATE VALVE
3	12" FCA W/ THRUST HARNESS PER DTL 2 ON SHT D-504
4	12" DUO CHECK VALVE
5	ADJUSTABLE STANCHION SADDLE PIPE SUPPORT PER DTL 3 ON SHT D-501
6	3/4" SAMPLE TAP PER DTL 2 ON SHT D-506
7	12" FLOW METER
8	PRESSURE GAUGE AND SENSOR TRANSMITTER PER DTL 2 ON SHT D-507
9	PRESSURE GAUGE PER DTL 3 ON SHT D-506
10	12" FLOW CONTROL VALVE
11	2" DRAIN LINE
12	2" COMBINATION AIR VALVE PER DTL 1 ON SHT D-507
13	12"x12"x12" TEE
14	12" DUCTILE IRON 90° BEND (MJ X MJ, RESTRAINED)
15	12" HARNESS MECHANICAL COUPLING PER DTL 1 ON SHT C-506
16	12" WELDED STEEL 90° BEND
18	DISMANTLING JOINT PER DTL 8 ON SHT D-505
19	2" GI PIPE
20	PIPE SUPPORT NON METALLIC POST PER DTL 2 ON SHT D-501
21	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP) (3000LB) 2" G.I. NIPPLE, THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2-2" G.I NIPPLE, THD (4" LONG) 2" CHECK VALVE FLOW IS TOWARD WELL PUMP
22	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP) (3000LB) 2" G.I. NIPPLE, THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2-2" G.I NIPPLE, THD (4" LONG) 2" G.I. NIPPLE THD (12" LONG)
23	4" DEEP WELL AIR/VACUUM VALVE PER DTL 7 ON SHT D-507
24	2" G.I. UNION THD

NOTE:
ABOVE GRADE PIPING SHALL BE INSULATED AND HEAT TRACED.

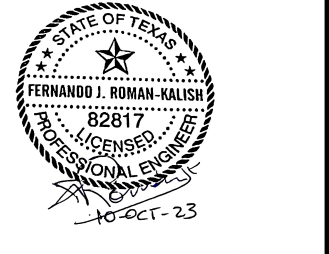
KEYNOTE:
1. 1" UW PIPE UP FOR PRESSURIZED WATER SOURCE TO CLOSE FLOW CONTROL VALVE IN ARTESIAN MODE.



C WELL NO 5 ELEVATION
SCALE: 3/8" = 1'-0"

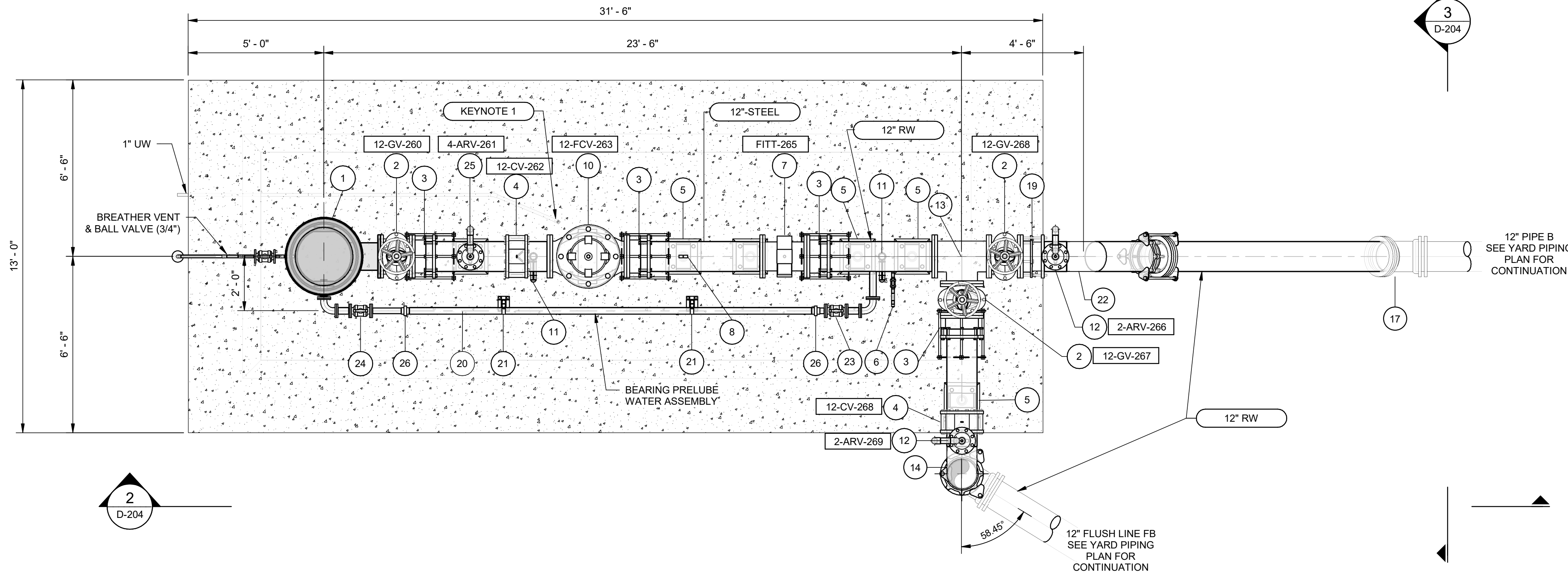


2 WELL NO 5 END ELEVATION
SCALE: 3/8" = 1'-0"



MARK	DATE	DESCRIPTION
1	10/20/23	ADDENDUM NO. 2

PROJ:	200-09308-20002
DESN:	MK
DRWN:	SGG
CHKD:	FR

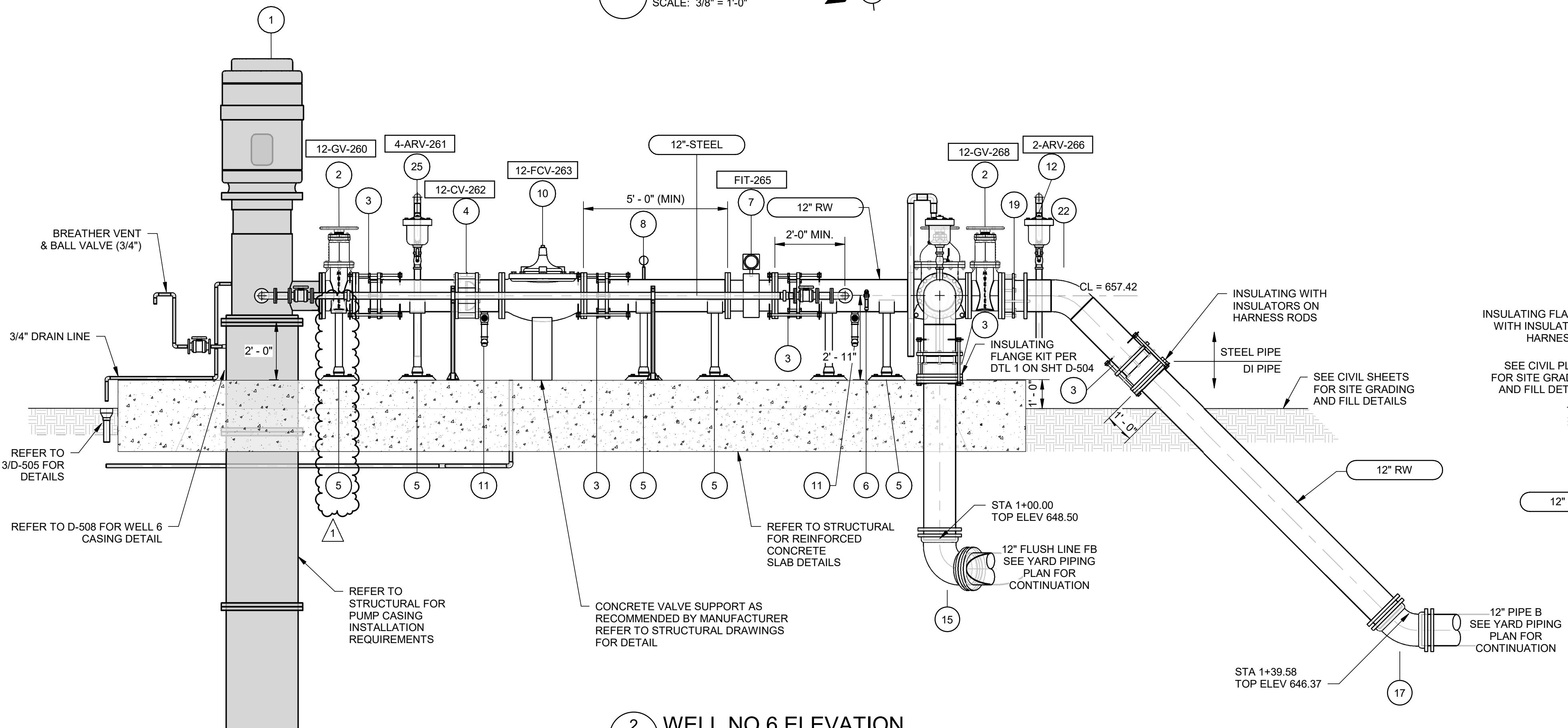


1 WELL NO. 6
SCALE: 3/8" = 1'-0"

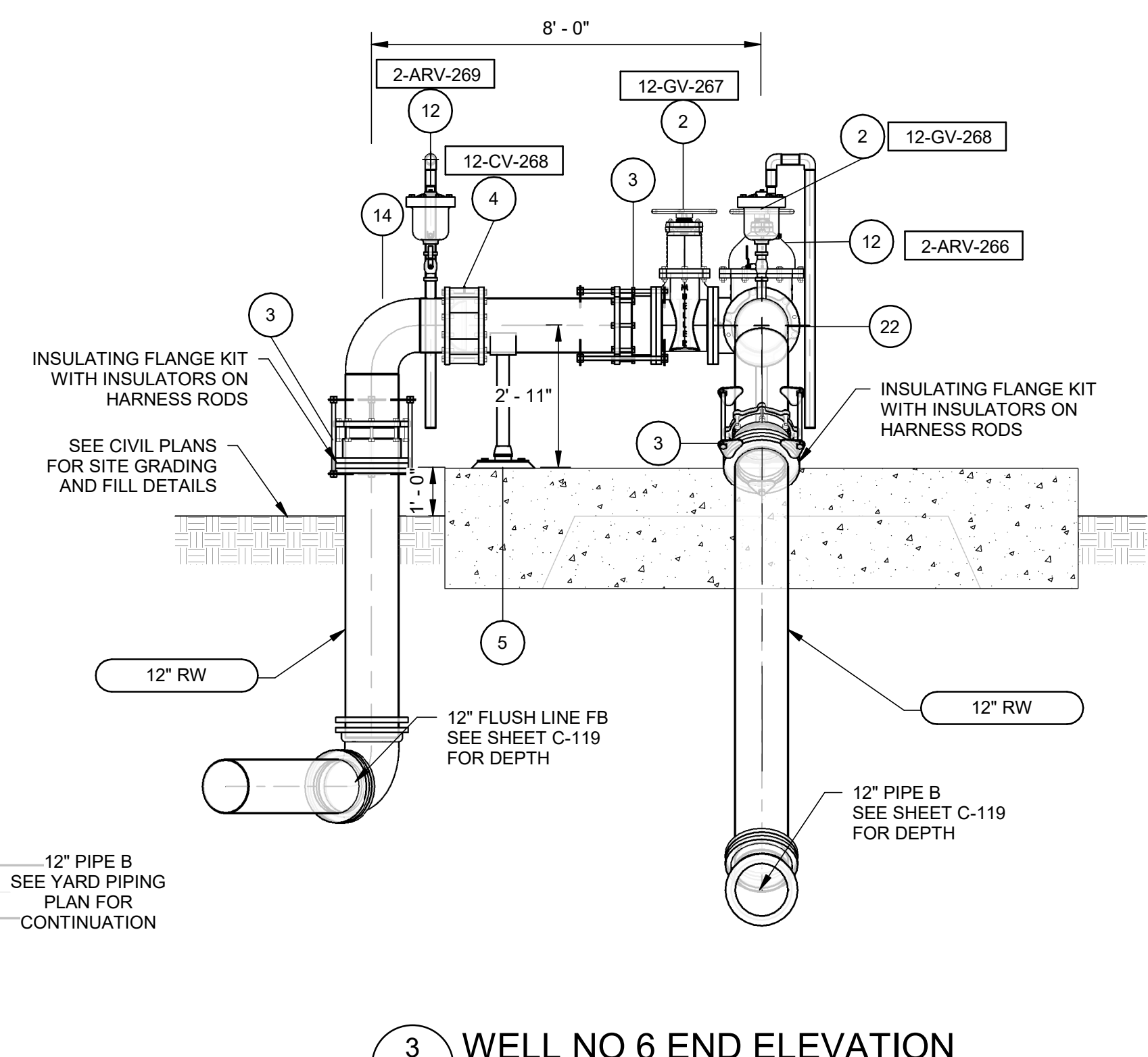
WELL NO 6 FITTING LIST	
TAG	DESCRIPTION
1	WELL PUMP
2	12" GATE VALVE
3	12" FCA W/ THRUST HARNESS PER DTL 2 ON SHT D-504
4	12" DUO CHECK VALVE
5	ADJUSTABLE STANCHION SADDLE PIPE SUPPORT PER DTL 3 ON SHT D-501
6	3/4" SAMPLE TAP PER DTL 2 ON SHT D-506
7	12" FLOW METER
8	PRESSURE GAUGE AND SENSOR TRANSMITTER PER DTL 2 ON SHT D-507
9	PRESSURE GAUGE PER DTL 3 ON SHT D-506
10	12" FLOW CONTROL VALVE
11	2" DRAIN LINE
12	2" COMBINATION AIR VALVE PER DTL 1 ON SHT D-507
13	12"x12"x12" TEE
14	12" 90° BEND
15	12" DUCTILE IRON 90° BEND (MJ X MJ, RESTRAINED)
16	12" HARNESS MECHANICAL COUPLING PER DTL 1 ON SHT C-506
17	12" DUCTILE IRON 45° BEND (MJ X MJ, RESTRAINED)
19	DISMANTLING JOINT PER DTL 8 ON SHT D-505
20	2" GI PIPE
21	PIPE SUPPORT NON METALLIC POST PER DTL 2 ON SHT D-501
22	12" 45° BEND
23	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP)(3000LB) 2" G.I. NIPPLE, THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2-2" G.I NIPPLE, THD (4" LONG) 2" CHECK VALVE FLOW IS TOWARD WELL PUMP
24	2" STEEL PIPE COUPLING, THD WELDED TO THE SIDE OF PIPE (2" TAP) (3000LB) 2" G.I. NIPPLE, THD (3" LONG) 2" BRASS GATE VALVE, THD 2" G.I. 90 DEG. ELBOW, THD 2-2" G.I NIPPLE, THD (4" LONG) 2" G.I. NIPPLE THD (12" LONG)
25	4" DEEP WELL AIR/VACUUM VALVE PER DTL 7 ON SHT D-507
26	2" G.I. UNION THD

NOTE:
ABOVE GRADE PIPING SHALL BE INSULATED AND HEAT TRACED.

KEYNOTE:
1. 1" UW PIPE UP FOR PRESSURIZED WATER SOURCE TO CLOSE FLOW CONTROL VALVE IN ARTESIAN MODE.



2 WELL NO 6 ELEVATION
SCALE: 3/8" = 1'-0"



3 WELL NO 6 END ELEVATION
SCALE: 3/8" = 1'-0"



MARK	DATE	DESCRIPTION
1	10/20/23	ADDENDUM NO. 2

PROJ:	200-09308-20002
DESN:	MK
DRWN:	SGG
CHKD:	FR