



Salado Pressure Zone 1295 Booster Pump Station Project
SAWS Job No. 14-6102
Solicitation No. CO-00120

ADDENDUM No. 2

April 13, 2017

This addendum, applicable to work designated above, is an amendment to the proposal and specification documents and as such shall be a part of and included in the Contract. Acknowledge receipt of this addendum by entering the addendum number and issue date on the space provided in submitted copies of the proposal.

1. Questions/Comments

- 1.1.** Can WEG be considered an approved supplier for Large Induction Motors, contingent the specifications, ratings, features and functions are met?

Response: No. The list of acceptable motor manufacturers are listed in the project specifications. No substitute manufacturers will be considered prior to bid.

- 1.2.** Ref: Sheets C101, 102, 103, 104, D101, D102

What are the existing underground pipe and fittings materials (24", 30", 36") that the contractor will be connecting to? The drawings indicate that there is an existing 24" wye to connect to, but the Existing Conditions appears to have a 90 transitioning from horizontal to vertical. Please advise.

If there is a wye at this location, is there an existing blind flange or a MJ plug?

Response: The existing pipe material is steel. The existing piping turns down 90 degrees from the above ground horizontal piping to vertical piping below grade using two 45 degree bends. At the bottom of the vertical piping is an existing tee. On the end of the run of the tee is a blind flange. To connect the new pump station discharge header to the existing piping, remove the blind flange and connect to the existing tee.

- 1.3.** Who is the valve manufacturer for the underground valve actuator replacement?

Response: The valve is a K-Flo Series 473HP flanged butterfly valve by Crispin Valves with Rotork IW6R gear operator with 2" square nut.

- 1.4.** There is a reference to drawing C105. There is no C105 provided on indexed. Please advise.

Response: There is no drawing C-105. Ignore the call out for drawing C-105. The note will be removed from the plans.

- 1.5.** Ref: Specs 15099 and 15120, Sheet D502 Valve Schedule.

Is the Ball Valve-15099 or the Control Valve-15120 used on this project?

Response: The 10” MOV pump control valves, BCV-01, BCV-02, BCV-03 and BCV-04, are ball valves as specified in Section 15090 as indicated in the Valve Schedule. The surge anticipator valve is a diaphragm actuated valve as specified in Section 15120.

- 1.6.** Per specification on other SAWS products. Will SAWS accept Allen Bradley solution in place of the Modicon PLC & HMI. Is there a preferred control architecture.

Response: The specifications will be modified to include Allen Bradley.

- 1.7.** Section 2.2-C-1: Modbus RS 232 communication ports shall be provided using the PLC CPU serial ports.

Section 2.14-A: The Ethernet (Modbus TCP) communications network shall be configured in a star topology.

Will SAWS accept Ethernet / IP as a communication protocol?

Response: This modification will be made to the Section, see specification modifications.

- 1.8.** There are numerous concrete pipe support blocks(50+) for the above ground 24” pipe currently on site. Is there a detail for the supports? If so please provide for review.

Response: Yes. Please find details attached of the concrete pipe support blocks at the end of the document.

- 1.9.** On the supports mentioned above..., is there a respective ‘footing’ below ground?...i.e. a small ‘pier’ or a larger concrete footprint below the surface of the ground?

Response: There are no piers below the concrete pipe support blocks. See attached detail sheets for the installed concrete pipe support blocks.

- 1.10.** On the piping that is to be demoed...there are numerous miscellaneous appurtenances, what appurtenances, if any are to be turned over to SAWS?

Response: All appurtenances shall be salvaged unless otherwise noted by the SAWS inspector.

- 1.11.** The specifications say the cost for permanent power is on the ‘contractor’ ...is CPS aware of the project?

Response: CPS Energy has been contacted regarding the project and is aware.

- 1.12.** The costs associated with CPS are better covered with allowance in the bid, we respectfully request an allowance be added to the proposal to cover CPS costs.

Response: An allowance is being added via this Addendum and is attached, see the revised bid form and Section 01270.

- 1.13.** Is ductile iron an acceptable substitute for the 30” water main(...we have seen where it may be possible to purchase ductile iron with fusion bonded epoxy lining)

Response: No. Ductile iron will not be accepted.

- 1.14.** Is it anticipated that modifications will be necessary to the existing temporary pump and piping to allow for the installation of Pumps P-1295-01 and P-1295-02? (Phase I work)

Response: It is not anticipated that the existing temporary pump and piping will have to be modified for construction of the first two pumps to be placed in operation. However, the existing temporary diesel tanks will need to be relocated.

- 1.15. On sheet C-104, '30" Water Main Plan', there is a valve shown on the 24" buried discharge near the NE corner of the site. The valve is to have a new actuator installed "...to open left". We were unable to find the valve during the site visit. Is the valve inside the fence? Does the valve work...ie. Can you close it and stop water flow?

Response: The original design plans show a valve that was installed inside the fence. The location of the valve is shown based on the original design plans. The valve was installed approximately two years ago. It is anticipated that it will stop flow.

- 1.16. Same Sheet..., same plan. There is a 36" water valve shown south of where the new 36" x 30" tee is to be cut-in, is this valve operable..., does it close and stop water flow?

Response: It is anticipated that it will stop flow.

- 1.17. In regard to the plug that is to be installed by a diver, is there an interior ladder for access to the water's surface? What depth can the tank level be taken to in order to allow for a safer more productive dive?

Response: The tank has an interior ladder. The water level is dependent on many factors, including the time of the year, assume that the tank will be full.

- 1.18. We would like to ask for an extension of the question deadline for this project to be extended until Wednesday 4/12 @ 4pm? The site visit was in the afternoon on Friday. We need additional time to evaluate the complexity of this project after seen the site constraints in order to formulate all of our questions.

Response: The deadline will remain unchanged.

- 1.19. I was hoping we (Taylor) could get added as an additional generator manufacturer for upcoming bid on Salado Booster Pump Station.

I had met with one of the ladies there last year and the department was in the middle of changes with retirement of a key person and what the procedure would be once that was squared away.

Response: No. The list of acceptable generator manufacturers are listed in the project specifications. This substitution cannot be approved prior to bidding.

- 1.20. 11100 – 2.05 A. 3. This section defines witness testing of the pump and motor. Section 11312 also defines witness testing and there are conflicts between the two (2) specifications. Please clarify which section rules.

Response: No conflicts were identified between the Section 11100 and Section 11313, comply with both sections.

- 1.21. Section 11100- 2.05 A. 3. Requires test with job pumps, variable speed drives and motors. We do not find VFDs on this project. Please clarify this requirement. Can the pump factory

performance test all pumps with one job motor or must all four (4) job motors be tested with corresponding pumps?

Response: No VFDs are included in the project, thus tests may be performed at full speed conditions only. Test each pump with its individual job motor per Section 11313 2.02.B.

- 1.22. Section 11311 – 1.08 A. 1. Recommend adding “Stress relief certificates for the suction barrels, discharge heads and column pipes. Heat stress relieving should be performed on steel fabrications after welding and prior to machining.”

Response: Requirement will be added to the Section, see specification modifications.

- 1.23. Section 11311 – 1.08 A. 2. Please clarify if this specification is requiring a complete NSF 61 nameplated pump or if the manufacturer can state that their materials comply with NSF61 standards.

Response: The materials must comply with NSF 61 standards.

- 1.24. Section 11311 – 2.02. 1. Please clarify efficiency specified. Is this bowl efficiency or pump efficiency?

Response: The efficiency specified is the bowl efficiency.

- 1.25. Section 11311 – 2.04 A. Recommend replacing the words “normal thrust” with the words, “high thrust” in the 1st sentence.

Response: This modification will be made to the Section, see specification modifications.

- 1.26. Section 11313 – 2.02 G. This paragraph requires video recording of complete disassembly and reassembly of the pumps at the factory. We recommend removing this requirement for this size VTP. If not, then please clarify when the disassembly/reassembly should occur – before or after witness testing. Is the disassembly/reassembly done with the witnesses present?

Response: The purpose of this requirement is to provide a video guide to the disassembly and reassembly for the Owner’s operations and maintenance staff’s use in maintaining the pumps. The video is not required to be of the actual pumps provided, as long as it is the same basic size and model pump and procedures for assembly and reassembly of the actual pumps being supplied are identical. Thus, no witnessing of the videotaping is needed.

- 1.27. Section 11313 – 2.04 E. Testing of noise at the factory can be a problem as there are other machines/equipment running during these factory tests. Recommend deleting this paragraph and relying on a noise test in the field.

Response: This requirement will be deleted in favor of the requirement in Section 11313 3.01.D.4, so that noise testing is performed with the field tests only.

- 1.28. Section 11313 – 3.02 B. Requires a penalty for efficiency based on a specified wire to water efficiency. We cannot locate the specified wire to water efficiency.

Response: The wire to water efficiency will be determined by the pump and motor submittal based upon the pump being able to meet the minimum bowl efficiencies

specified in Section 11100. The efficiency of the motor based upon the motor manufacturer's efficiency curve will be used to compute the minimum wire to water efficiency. An allowance of no more than 2% will be applied to the motor efficiency for variations in the motor supplied and the curve provided in the motor submittal.

- 1.29. Section 16151 1.1 B. 1. Defines this spec for 500hp and greater motors at 1800 rpm. This project includes (4) 200hp/1800 rpm motors. Please clarify if the motors for the high service pumps must meet this specification.

Response: Section 16151 applies to the motors supplied for this project. If motors supplied are NEMA frame motors, they must comply with the applicable provisions of Section 16151.

- 1.30. Can we get a copy of the geotechnical report on the SAWS Salado Booster Pump Station project.

Response: Yes. Geotechnical Report - A link has been created on the SAWS website for solicitation that allows access to the report(s). Go to the solicitation on the SAWS website, then select "Geotechnical Report". This will take you to the Disclaimer Form. Enter your first and last name at the bottom and check off the box, then select Submit.

- 1.31. I am inquiring about the Salado PZ 1295 Booster Pump Station 500kw project , bidding 4/27-1pm. I am the SA sales rep. for Waukesha Pearce Industries representing Generac Industrial power systems.

I see we are currently we are not named in the specification. I would like ask for the opportunity to allow us to submit our generator package to be considered as an alternate to meet and exceed the project specification. Should we be accepted to submit, we will plan to submit a complete line by line review for consideration.

Response: Generac Industrial Power Systems is an acceptable manufacturer for the Packaged Engine Generators specified in Section 16231.

- 1.32. I have not seen that a Geo Tech report is available via the typical release..., is there a Geo Tech Report available with properly executed release?

Response: Yes. Geotechnical Report - A link has been created on the SAWS website for solicitation that allows access to the report(s). Go to the solicitation on the SAWS website, then select "Geotechnical Report". This will take you to the Disclaimer Form. Enter your first and last name at the bottom and check off the box, then select Submit.

- 1.33. There are some areas within the specs that speak of a 10 year warranty...one area specifically is the 'Heat Trace' ..., what is the warranty period for the job?

Response: The Contractor's general warranty and correction period is 24 months per paragraph 9.3 of the General Conditions.

- 1.34. Could you please define the low demand period referenced for the various shutdowns? Months/days/hours?

Response: The low demand periods vary depending upon various factors outside of seasonal and diurnal demand variations. Contractors should anticipate that shutdowns may need to be scheduled outside of normal working hours.

1.35. What specific permits will be required for construction..., if any?

Response: A sitework permit will not be required per Richard Chamberlain at City of San Antonio based on email correspondence and the Conference Memo between COSA and SAWS dated January 18, 2012. Trade personnel will need to obtain standard trade permits.

1.36. Ref: Sheets C-101, 102, 103, 104, Spec. 01040

Can the Diesel Pump and tanks be temporarily relocated during construction of the new pump station?

Response: The diesel tanks can be relocated. The diesel pump must remain in service until the first two pumping units are ready for operation. If the pump can be kept in service when relocated, relocation may be allowed.

Can the fence adjacent to the new discharge line be temporarily relocated to the right of way?

Response: The fence adjacent to the new discharge line may be taken down and replaced temporarily with a fence at the property and replaced in the original location when the discharge piping and pump station construction is completed.

After the pump station is operational and the piping removed, how does the 12" Piping connect to PZ 1400? There is no detail 1.

Response: See attached drawing PL1, 7 of 11 from the plans for the construction of the temporary piping system. Connect 12-inch ductile iron pipe from the buried gate valve shown on the south side of the skid mounted pump station. Extend 12-inch ductile iron pipe north to a 90-degree bend to vertical in line with the 90 degree bend on the end of the discharge header of the pump station. Turn the top 90-degree bend to face down and connect the required length of 12-inch ductile iron pipe vertically between the two bends. Provide a restrained coupling immediately above ground level to facilitate installation and dismantling.

Is there a sketch or drawing of the area inside the tank where the 36" plug is to be installed?

Response: Attached to this addendum is Sheet 5 of the plans for the Salado Tank with a typical tank outlet detail to be used for general reference.

2. Modifications to the Specifications

2.1. Bid Proposal

Remove the Bid Proposal in its entirety and replace with the Bid Proposal attached to this addendum.

2.2. Section 01270 Measurement and Payment

Remove Section 01270 Measurement and Payment in its entirety and replace with Section 01270 Measurement and Payment attached to this addendum.

2.3. Section 11311 Vertical Turbine Pumps

Add the following language to paragraph 1.08.A.1:

“Stress relief certificates for the suction barrels, discharge heads and column pipes. Heat stress relieving should be performed on steel fabrications after welding and prior to machining.”

In paragraph 2.04.A, replace the words “normal thrust” with the words “high thrust”.

2.4. Section 11313 Pumping Unit Testing

Delete paragraph 2.04.E in its entirety.

Add the following paragraph immediately following paragraph 3.02.E:

“F. If no guaranteed wire to water efficiency is specified, guaranteed wire to water efficiency will be determined by the pump and motor submittal based upon the pump being able to meet the minimum pump or bowl efficiencies specified in Section 11100. The efficiency of the motor based upon the motor manufacturer’s efficiency curve will be used to compute the minimum wire to water efficiency. An allowance of no more than 2% will be applied to the motor efficiency for variations in the motor supplied and the curve provided in the motor submittal.”

3. Modifications to the Drawings

3.1. Sheet C-104

Remove the reference to sheet C-105. There is no sheet C-105.

3.2. Sheet D-101

Remove the text on the suction header that reads 30” x 16” WLD X FLG STEEL TEE and replace with 30” X 18” WLD X FLG STEEL TEE.

3.3. Sheet D-502

Change the valve size of BFV-01, BFV-02, BFV-03 and BFV-04 to 18”.

ACKNOWLEDGEMENT BY BIDDER

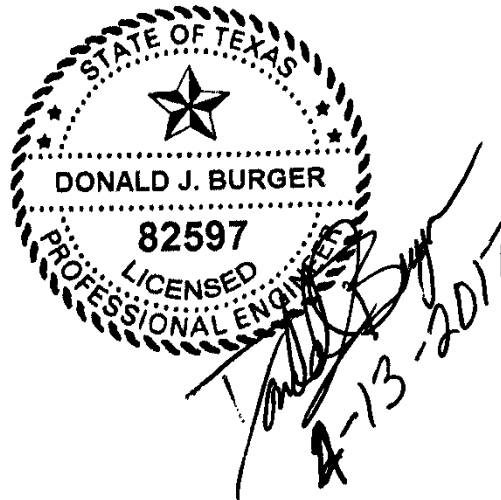
Each respondent is requested to acknowledge receipt of this Addendum No. 2 by his/her signature affixed hereto and to file same and attach with his/her proposal.

The undersigned acknowledges receipt of this Addendum No. 2 and the proposal submitted herewith is in accordance with the information and stipulations set forth.

Date

Signature

Tetra Tech, Inc.
Texas Registered Engineering Firm F-3924
700 N. Saint Mary's Street, Ste. 300
San Antonio, TX 78205



END OF ADDENDUM

ADDENDUM NO. 2

DATE: APRIL 11, 2017

PROJECT: SALADO PZ1295 BOOSTER STATION
SAN ANTONIO WATER SYSTEM

PROJECT NO.: SAWS JOB NO.: 14-6102

PREPARED BY: JOSHUA ENGINEERING GROUP, INC.
6800 PARK TEN BOULEVARD, SUITE 240-E
SAN ANTONIO, TEXAS 78213
TELEPHONE: (210) 340-2322

This Addendum forms a part of the Contract Documents and modifies the original Project Construction Documents (Specifications and Drawings dated February 2017). Work not specifically deleted, modified, changed, or altered by this Addendum shall remain in effect as part of the Contract Documents.

I. SPECIFICATIONS

ITEM NO. 1: REFERENCE SPECIFICATIONS, SECTION 16920 (SCADA System and Local Control Monitoring):

- a. Replace Paragraph 2.2 with attached revised Paragraph 2.2.

END OF ADDENDUM NO. 2



2.2 PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEM

- A. The PLC shall be a complete system that includes but is not limited to the following:
 1. PLC Central Processing Unit (CPU)
 2. PLC modules, chassis, and power supply
 3. Connection bases
 4. Connection cables
 5. Program software deliverable to Owner (SAWS)
- B. Approved Products – NO SUBSTITUTIONS

DESCRIPTION	MANUFACTURER	PART NUMBER
CPU (Processor)	Allen Bradley	1769-L30ER
I/O Power Supply Module	Allen Bradley	1769-PA4
Compact 16 Channel Analog Input Module	Allen Bradley	1769-IF16C
Fusible 16 Channel Analog IFM	Allen Bradley	1492-AIFM16-F-3
Pre-Wired Cable Analog Input	Allen Bradley	1492-ACAB025EE69
Compact 8 Channel Analog Output Module	Allen Bradley	1769-OF8C
Feed-Through 8 Channel Analog IFM	Allen Bradley	1492-AIFM8-3
Pre-Wired Cable Analog Input	Allen Bradley	1492-ACAB025D69
Compact 32 Channel Digital DC Input Module	Allen Bradley	1769-IQ32
Digital I/O Ready Cable	Allen Bradley	1492-CAB025RTN32I
Compact 32 Channel Digital DC Output Module	Allen Bradley	1769-OB32
Digital I/O Ready Cable	Allen Bradley	1492-CAB025RTN32O
Right End Cap/ Terminator	Allen Bradley	1769-ECR
Left End Cap/ Terminator	Allen Bradley	1769-ECL
Right to Left Bank Interconnection	Allen Bradley	1769-CRL3

- C. Communications:
 1. Modbus TCP communication ports shall be provided using the PLC CPU serial ports.
- D. Programming:
 1. The PLC shall use RS Logix 5000 Full Edition (93241-RLD600ENE) programming software or the latest version.
 2. All the programs and licenses shall become the property of the Owner.
 3. The Contractor to coordinate with the SCADA division of the SAWS Production Department.
- E. Spare Materials:
 1. Furnish spare materials quantity, for each of the above listed products (Paragraph B) equal to 10 per cent of amount installed, but not less than one unit/type.
 2. Extra materials shall be packaged with protective covering and identified with labels describing contents.
- F. All spare I/O points shall be wired to terminal blocks.

BID PROPOSAL

PROPOSAL OF _____ a corporation

a partnership consisting of _____

an individual doing business as _____

TO THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitations for Bids, the undersigned proposed to furnish all labor and materials as specified and perform the work required for the project as specified, in accordance with the Plans and Specifications for the following prices to wit:

BASE BID UNIT PRICES FOR:

Line No.	Item Description	Unit	QTY	Unit Bid Price	Total
1	Salado PZ 1295 Booster Pump Station	LS	1	\$	\$
2	Trench Excavation & Safety Protection	LF	180	\$	\$
3	CPS Energy Service Allowance	ALW	1	\$ 50,000.00	\$ 50,000.00
4	Mobilization & Demobilization	LS	1	\$	\$

TOTAL BASE BID PRICE	\$ _____
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ALTERNATE BID UNIT PRICES FOR:

Owner reserves the right to award a contract with or without the following additive alternate. If A-1 is accepted for the project then Line No. 4 will be removed from the Base Bid and replaced with line item A-2 to cover Mobilization and Demobilization for all work items.

Line No.	Item Description	Unit	QTY	Unit Bid Price	Total
A-1	Furnish & Install Generator & ATS	EA	1		
A-2	Mobilization & Demobilization for Alternate	LS	1		

TOTAL ALTERNATE BID PRICE	\$ _____
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TOTAL BASE BID PRICE + ALTERNATE BID PRICE	\$ _____
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The Contractor herein acknowledges receipt of the following: Addendum Nos. _____

OWNER RESERVES THE RIGHT TO ACCEPT THE OVERALL MOST RESPONSIBLE BID.

BIDDER'S SIGNATURE & TITLE

FIRM'S NAME (TYPE OR PRINT)

FIRM'S ADDRESS

FIRM'S PHONE NO. /FAX NO.

FIRM'S EMAIL ADDRESS

BID

The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **415** calendar days after the start date as set forth in the Authorization to Proceed. **The bidder understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.**

Complete the additional requirements of the Bid Proposal which are included on the following pages.

**SECTION 01270
MEASUREMENT AND PAYMENT**

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. This Section defines the method that will be used to determine the quantities of Work performed or materials supplied and establish the basis upon which payment will be made.

1.02 ADMINISTRATIVE SUBMITTALS

- A. Schedule of Values: Submit schedule on CONTRACTOR's standard form. (Refer to paragraph 1.05 of this Section and Section 01300 - Submittals for additional requirements.)
- B. Schedule of Estimated Progress Payments (Refer to paragraph 1.06 of this Section for additional requirements):
 - 1. Submit with initially acceptable Schedule of Values.
 - 2. Submit adjustments thereto with Application for Payment.
- C. Application for Payment.
- D. Final Application for Payment.

1.03 RELATED WORK

- A. Section 01300 – Submittals

1.04 PRICE

- A. Required items of Work and incidentals necessary for the satisfactory completion of the Project shall be considered incidental to the specified Work required under this contract and shall be considered as included in the unit prices for the various proposal items. The CONTRACTOR shall prepare his Proposal accordingly to allow for such items:
 - 1. Not specifically listed in the Proposal.
 - 2. Not specified in this section to be measured or to be included in one of the items listed in the Proposal.
 - 3. To include CONTRACTOR's overhead and profit.
- B. Work includes the furnishing of all labor, materials, equipment, tools, and related items for performing all operations required to complete the Project satisfactorily in place, as specified by the Contract Documents.

1.05 SCHEDULE OF VALUES

- A. Prepare a separate Schedule of Values for each phase of Work under the Agreement. Submit the Schedule of Values in accordance with Section 01370 – Schedule of Values.
- B. Use line items in the proposal as line items in the Schedule. Provide adequate detail to allow easy determination of the percentage of work completed for each item.
- C. Lump Sum Work.
 - 1. Reflect Schedule of Values format included in conformed Proposal Form, specified allowances, alternates, and equipment selected by Owner, as applicable.
 - 2. List bonds and insurance premiums, mobilization, demobilization, facility startup, and contract closeout separately.
 - 3. Separate product costs and installation costs. Break down by Division 2 through 17 for each of the Project facilities.
 - a. Product costs include cost for product, delivery and unloading, royalties and patent fees, taxes, and other cost paid directly to the supplier or vendor.
 - b. Installation costs include cost for the supervision, labor and supervision, labor and equipment for field fabrication, erection, installation, start-up, initial operation and CONTRACTOR'S overhead and profit.
 - 4. Divide principal subcontract amounts into an adequate number of line items to allow determination of the percentage of work completed for each item. These line items may be used to establish the value of work to be added or deleted from the project.
- D. An unbalanced or front-end loaded schedule will not be acceptable.
- E. Summation of the complete Schedule of Values representing all Work shall equal the Contract Price.

1.06 SCHEDULE OF ESTIMATED PROGRESS PAYMENTS

- A. Show estimated payment requests throughout Contract Times aggregating initial Contract Price.
- B. Base estimated progress payments on initially acceptable progress schedule. Adjust to reflect subsequent adjustments in progress schedule and Contract Price as reflected by modifications to the Contract Documents.

1.07 APPLICATION FOR PAYMENT

- A. Reference Article VII Contract Payments of the Contract General Conditions.
- B. Transmittal Summary Form: Attach one Summary Form with each detailed Application for Payment for each schedule and include Request for Payment of Materials and Equipment on Hand as applicable. Execute certification by authorized officer of CONTRACTOR. Provide separate form for each schedule as applicable.
- C. Preparation:
 - 1. Round values to nearest dollar.
 - 2. List each Change Order and Written Amendment executed prior to date of submission as separate line item. Totals to equal those shown on the Transmittal Summary Form for each schedule as applicable.

- 3. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form(s) for each schedule as applicable, a listing of materials on hand for each schedule as applicable and such supporting data as may be requested by Owner.
- D. Include accepted Schedule of Values for each schedule or portion of Work, the unit price breakdown for Work to be paid on unit price basis, a listing of Owner-selected equipment if applicable, and allowances, as appropriate.

1.08 MEASUREMENT – GENERAL

- A. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and specifications as specified in National Institute of Standards and Technology, Handbook 44.
- B. Whenever pay quantities of material are determined by weight, the material shall be weighed on scales furnished by CONTRACTOR and certified accurate by the state agency responsible. A weight or load slip shall be obtained from the weigh facility and delivered to the Owner's representative at the point of delivery of the material.
- C. If material is shipped by rail, the car weights will be accepted provided that actual weight of material only will be paid for and not minimum car weight used for assessing freight tariff, and provided further that car weights will not be acceptable for material to be passed through mixing plants.
- D. Vehicles used to haul material being paid for by weight shall be weighed empty daily and at such additional times as required by Owner. Each vehicle shall bear a plainly legible identification mark.
- E. All materials that are specified for measurement by the cubic yard measured in the vehicle shall be hauled in vehicles of such type and size that the actual contents may be readily and accurately determined. Unless all vehicles are of uniform capacity, each vehicle must bear a plainly legible identification mark indicating its water level capacity. All vehicles shall be loaded to at least their water level capacity. Loads hauled in vehicles not meeting the above requirements or loads of a quantity less than the capacity of the vehicle, measured after being leveled off as above provided, will be subject to rejection, and no compensation will be allowed for such material.
- F. Where measurement of quantities depends on elevation of existing ground, elevations obtained during construction will be compared with those shown on Drawings. Variations of 1 foot or less will be ignored, and profiles shown on Drawings will be used for determining quantities. Quantities will be based on ground profiles shown.
- G. Units of measure shown on the Schedule of Values shall be as follows unless specified otherwise.

Item	Method of Measurement
AC	Acre-Field Measure by Owner
CY	Cubic Yard-Field Measure by Owner within the limits specified or shown
CY-VM	Cubic Yard-Measured in the Vehicle by Volume
EA	Each-Field Count by Owner
GAL	Gallon-Field Measure by Owner
HR	Hour
LB	Pound(s)-Weight Measure by Scale
LF	Linear Foot-Field Measure by Owner
LS	Lump Sum-Unit is one; no measurement will be made

MFBM	Thousand Foot Board Measure-Delivery Invoice
SF	Square Foot
SY	Square Yard
TON	Ton-Weight Measure by Scale (2,000 pounds)

1.09 PAYMENT

- A. Reference Article VII Contract Payments of the General Conditions.
- B. General:
 - 1. The date for CONTRACTOR's submission of monthly Application for Payment shall be established at the Pre-Construction Conference.
- C. Payment for all Work shown or specified in the Contract Documents is included in the Contract Price. No measurement or payment will be made for individual items.

1.10 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- A. Payment will not be made for following:
 - 1. Loading, hauling, and disposing of rejected material.
 - 2. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
 - 3. Rejected loads of material, including material rejected after it has been placed by reason of failure of CONTRACTOR to conform to provisions of Contract Documents.
 - 4. Material not unloaded from transporting vehicle.
 - 5. Defective Work not accepted by Owner.
 - 6. Material remaining on hand after completion of Work.

1.11 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

- A. Partial payment for stored materials and equipment shall be in accordance with Article VII, Section 7.2 of the General Conditions of these Contract Documents and any revisions to said General Conditions as documented in the Supplementary Conditions.

1.12 PRICE PROPOSAL ITEMS

- A. Respondent will complete the Work for the following listed Work items for the prices listed on the Base Bid Price Proposal:

Item No. 1: Base Proposal for Salado PZ 1295 Booster Station.

- 1. Description
 - a. New Pump Station, including but not limited to:
 - 1) Vertical Turbine Pumps
 - 2) Pump Barrels (Cans)

- 3) Pump station foundation and other structural work
 - 4) Process piping and valves
 - 5) Electrical, SCADA and instrumentation
 - a) Include electrical conduit for a future generator if Bid Alternate 1 Generator is not included in the contract.
 - 6) Yard piping, valves, and tie-ins.
 - b. Site Improvements, including but not limited to:
 - 1) Demolition
 - 2) New concrete foundations and sidewalks
 - 3) Storm water management and erosion control
 - c. All appurtenances and miscellaneous improvements for a complete in-place facility.
2. Measurement – Measurement of Item No. 1 will be by lump sum and the various units of work as broken down in the Schedule of Values.
 3. Payment of the full lump sum price shall be paid for the work performed and in accordance with the Schedule of Values. Payment shall constitute full compensation to the CONTRACTOR for furnishing all: labor, equipment, tools, and material; and for performing all operations required to furnish to the Owner the project, complete in place, as specified and as indicated on the Contract Drawings and Specifications.

Item No. 2: Trench Excavation Safety Protection

1. Description – The provision of a trench excavation safety protection system for trench excavations requires to install buried yard piping in accordance with OSHA and the Texas Health and Safety Code Title 9 Safety, Subchapter C Trench Safety.
2. Measurement – Measurement of Item No. 2 will be by linear foot of trench excavated, measured along the centerline of the pipe from center of fitting to center of fitting.
3. Payment will be made for work measured and completed in accordance with the Contract Documents. Payment shall constitute full compensation to the CONTRACTOR for furnishing all: labor, equipment, tools, and materials; and for performing all operations required to furnish to the Owner the project, complete in place, as specified and as indicated on the Contract Drawings and Specifications.

Item No. 3: CPS Energy Service Allowance

1. Description – An allowance to cover costs invoiced by CPS Energy for construction of the new electric service and modifications to electric service at the Salado Pump Station site. All costs to CPS including costs for fees, engineering, construction, materials, transformers, wire and cable, and appurtenances invoiced by CPS Energy are to be paid for by this allowance. The amount of the allowance is intended to exceed the actual cost required for the CPS service.
2. Measurement – No measurement required for this allowance.
3. Payment – Payments of the allowance will be based on amount invoiced by CPS Energy.

Item No. 4: Mobilization and Demobilization

1. Description – Work item shall include mobilization and demobilization costs associated with the Salado PZ 1295 Booster Station. This shall include furnishing all labor, materials, tools, equipment and incidentals required to mobilize, demobilize, bond and insure the Work for the Salado PZ 1295 Booster Station upgrades in accordance with the Contract Documents, complete in place.
 2. Measurement - Measurement of Item No. 4 will be by lump sum as the work progresses. Mobilization proposal amount for the project shall be limited to a maximum of five percent (5%) of the subtotal proposal amount.
 3. Payment – Partial payments of the lump sum proposal for mobilization will be as follows: When 1% of the adjusted contract amount for construction items (which is defined as the total contract amount less the lump sum proposal for mobilization) is earned, 50% of the mobilization lump sum proposal will be paid. Insurance and Bonds will be paid on the initial request for payment under a sub-heading to mobilization entitled "Insurance and Bonds". The amount paid for insurance and bonds will not exceed 3% of the total contract amount for construction items. Receipts or other proof of payment for the full amount of compensation requested under the sub-heading of "Insurance and Bonds" shall be provided to the Owner with the request for payment.
 - a. When 5% of the adjusted contract amount for construction items is earned, 75% of the mobilization lump sum proposal will be paid.
 - b. No payments for this line item will be made until the following documents are submitted and approved by the Owner:
 - 1) Health and Safety Plan,
 - 2) Quality Control / Quality Assurance Plan,
 - 3) Pre-Construction Video, and
 - 4) Construction Schedule
 - c. Upon completion of all work under this contract, payment for the remainder of the lump sum proposal for mobilization will be made.
- B. Respondent will complete the Work for the following listed Work items for the prices listed on the Alternate Bid Price Proposal:

Item No. A-1: Furnish and Install Generator and ATS

1. Description – This item shall include all wiring, cable communication/instrumentation, full tank of fuel, automatic transfer switch and all incidental work to installing the generator.
2. Measurement – Measurement for the item "Furnish and Install Generator and ATS" will be by each.
3. Payment shall be for each generator and ATS installed complete, tested and ready for operation. Payment shall constitute full compensation to the CONTRACTOR for obtaining all necessary permits for the Project. CONTRACTOR shall provide permit receipts to SAWS for reimbursement.

Item No. A-2: Mobilization & Demobilization for Alternate

1. Description – This item shall include all mobilization and demobilization costs associated with Salado PZ 1295 Booster Pump Station. This shall include all labor, materials, tools, equipment and incidentals required to mobilize, demobilize, bond and insure the Work for the Salado Booster Pump Station upgrades in accordance with the

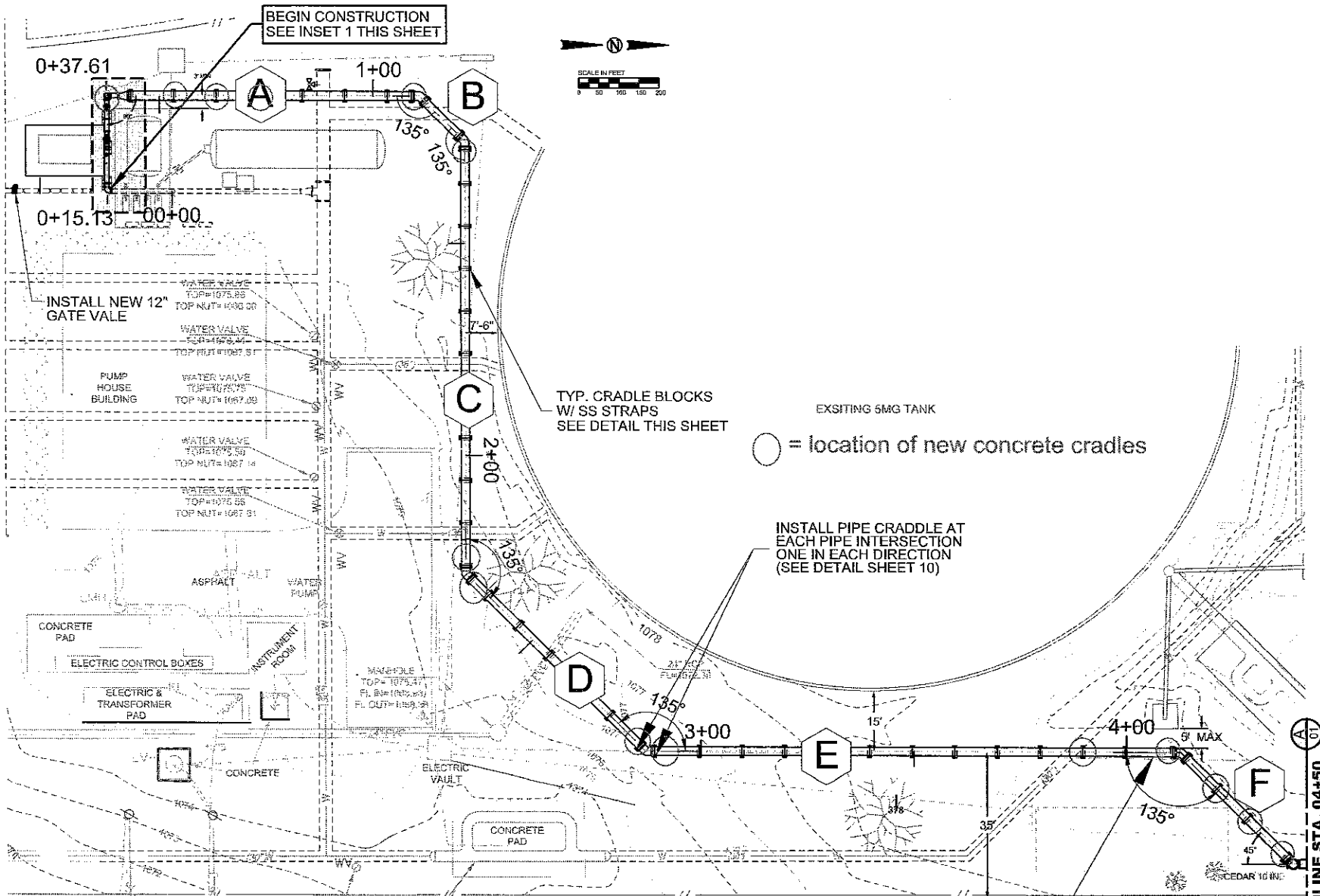
Contract documents. If A-1 is accepted then Line Item No. 4 will be removed from the Contract and replaced with this line item A-2.

2. Measurement - Measurement of Item No. A-2 will be by lump sum as the work progresses. Mobilization proposal amount for the project shall be limited to a maximum of five percent (5%) of the subtotal proposal amount.
3. Payment – Partial payments of the lump sum proposal for mobilization will be as follows: When 1% of the adjusted contract amount for construction items (which is defined as the total contract amount less the lump sum proposal for mobilization) is earned, 50% of the mobilization lump sum proposal will be paid. Insurance and Bonds will be paid on the initial request for payment under a sub-heading to mobilization entitled "Insurance and Bonds". The amount paid for insurance and bonds will not exceed 3% of the total contract amount for construction items. Receipts or other proof of payment for the full amount of compensation requested under the sub-heading of "Insurance and Bonds" shall be provided to the Owner with the request for payment.
 - a. When 5% of the adjusted contract amount for construction items is earned, 75% of the mobilization lump sum proposal will be paid.
 - b. No payments for this line item will be made until the following documents are submitted and approved by the Owner:
 - 1) Health and Safety Plan,
 - 2) Quality Control / Quality Assurance Plan,
 - 3) Pre-Construction Video, and
 - 4) Construction Schedule
 - c. Upon completion of all work under this contract, payment for the remainder of the lump sum proposal for mobilization will be made.

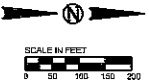
PART 2 - PRODUCTS – NOT USED

PART 3 - EXECUTION – NOT USED

END OF SECTION



BEGIN CONSTRUCTION
SEE INSET 1 THIS SHEET



0+37.61

1+00

0+15.13 00+00

INSTALL NEW 12"
GATE VALE

WATER VALVE
TOP=1075.88
TOP NUT=1080.00

WATER VALVE
TOP=1075.41
TOP NUT=1081.51

WATER VALVE
TOP=1075.99
TOP NUT=1087.09

WATER VALVE
TOP=1075.88
TOP NUT=1087.14

WATER VALVE
TOP=1075.88
TOP NUT=1087.81

PUMP
HOUSE
BUILDING

ASPHALT

CONCRETE
PAD

ELECTRIC CONTROL BOXES

INSTRUMENT
ROOM

ELECTRIC &
TRANSFORMER
PAD

CONCRETE

ELECTRIC
VAULT

CONCRETE
PAD

MANGROVE
TOP=1075.41
FL. IN=1082.53
FL. OUT=1089.08

TYP. CRADLE BLOCKS
W/ SS STRAPS
SEE DETAIL THIS SHEET

EXISTING 5MG TANK

○ = location of new concrete cradles

INSTALL PIPE CRADDE AT
EACH PIPE INTERSECTION
ONE IN EACH DIRECTION
(SEE DETAIL SHEET 10)

4" COMBINATION
AIR RELEASE VALVE
(SEE SHT 10)

A-01
B-01
MATCHLINE STA. 04+50

JOB NO.
14-6102



No.	Description	REVISIONS	
		Date	Appr.

INFORMATION	

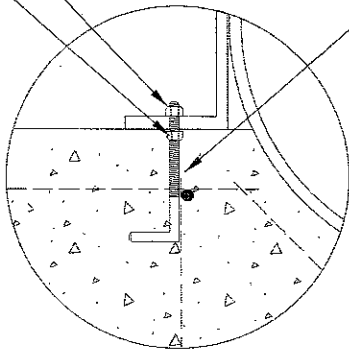
DATE	BY	FOR



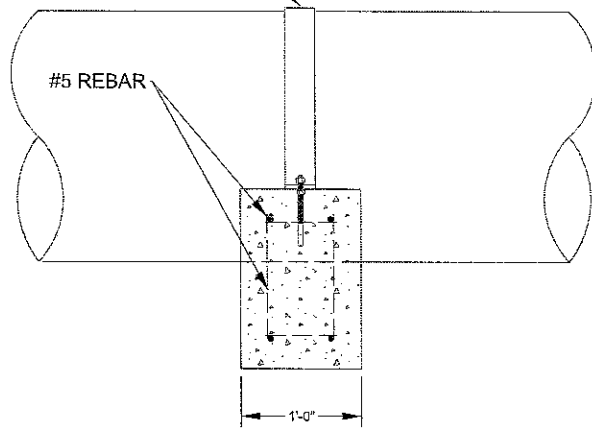
JOB NO. 14-6102
SALADO PUMP STATION
TO STONE OAK WATER MAIN
CRADLE BLOCK & STRAP

DRAWING NO.
CO
1 of 1

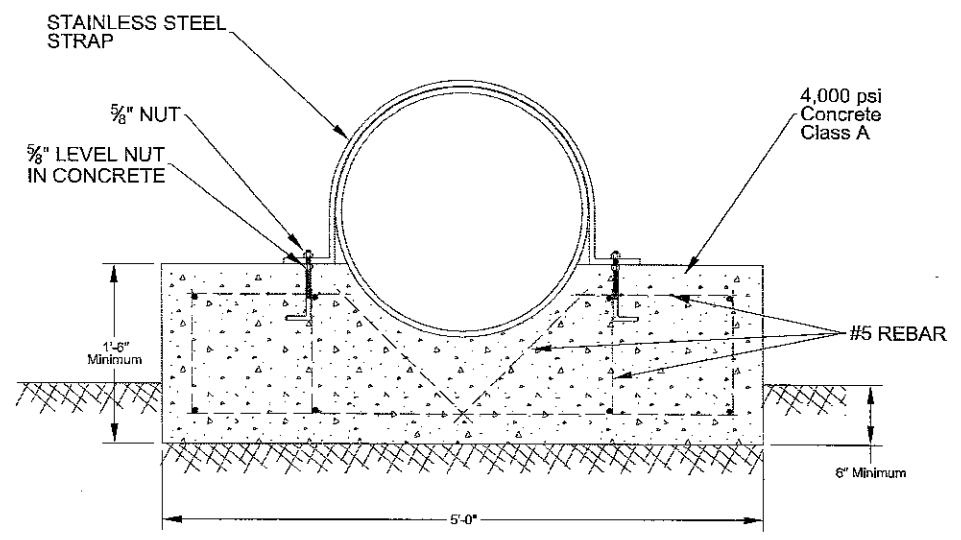
5/8" NUT
5/8" LEVEL NUT IN CONCRETE
5/8" X 6" ANCHOR IN CONCRETE



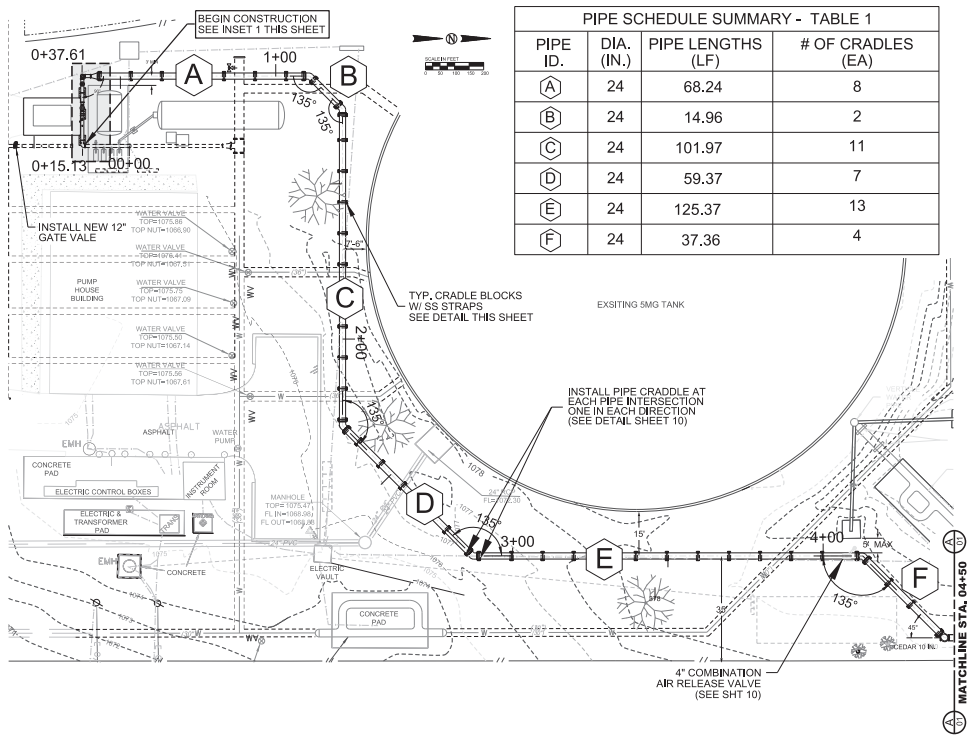
STAINLESS STEEL STRAP TO MATCH EXISTING



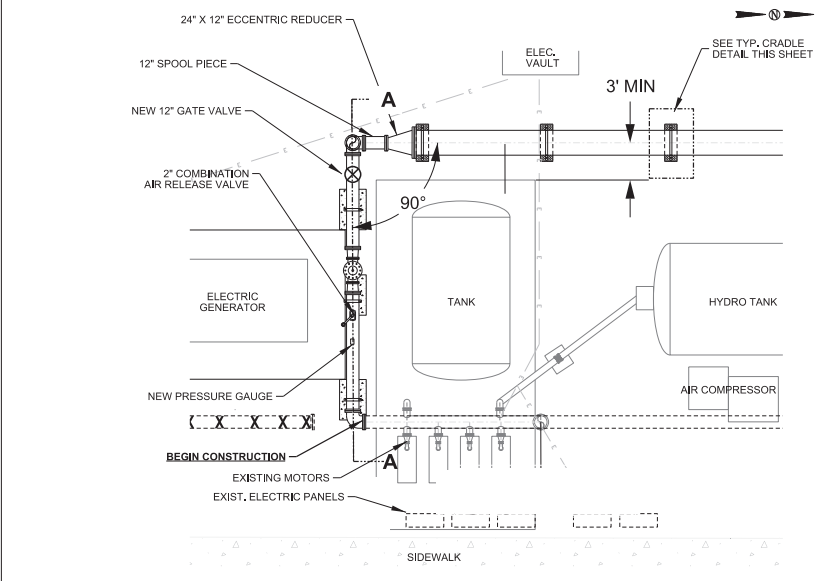
CONCRETE CRADLE DETAIL



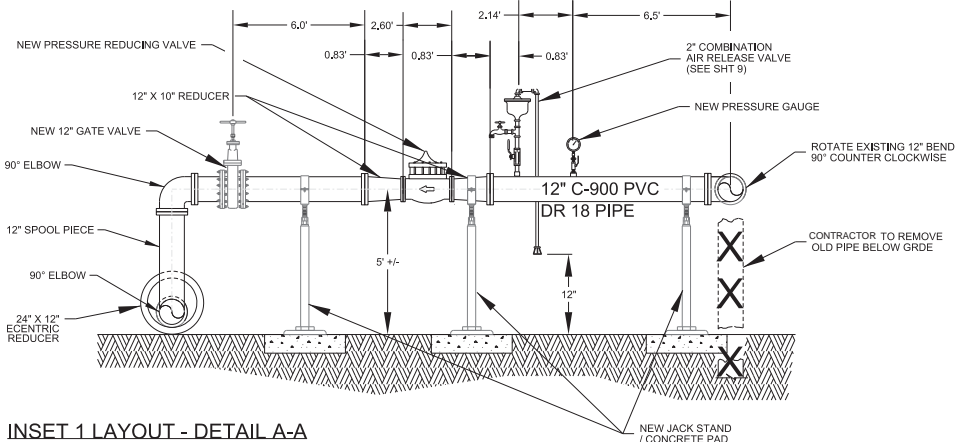
CONCRETE CRADLE DETAIL



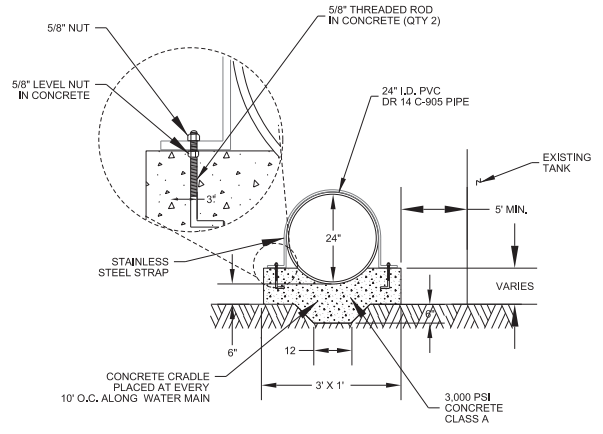
PIPE SCHEDULE SUMMARY - TABLE 1			
PIPE ID.	DIA. (IN.)	PIPE LENGTHS (LF)	# OF CRADLES (EA)
A	24	68.24	8
B	24	14.96	2
C	24	101.97	11
D	24	59.37	7
E	24	125.37	13
F	24	37.36	4



INSET 1: 12" TO 24" PIPE TRANSITION DETAIL
SCALE : 1" = 5'



INSET 1 LAYOUT - DETAIL A-A
SCALE : 1" = 5'



TYPICAL CRADLE BLOCK W/ STRAP
N.T.S.

JOB NO.
14-6102



No.	Description	Date	REVISIONS	
			Dim.	Approved

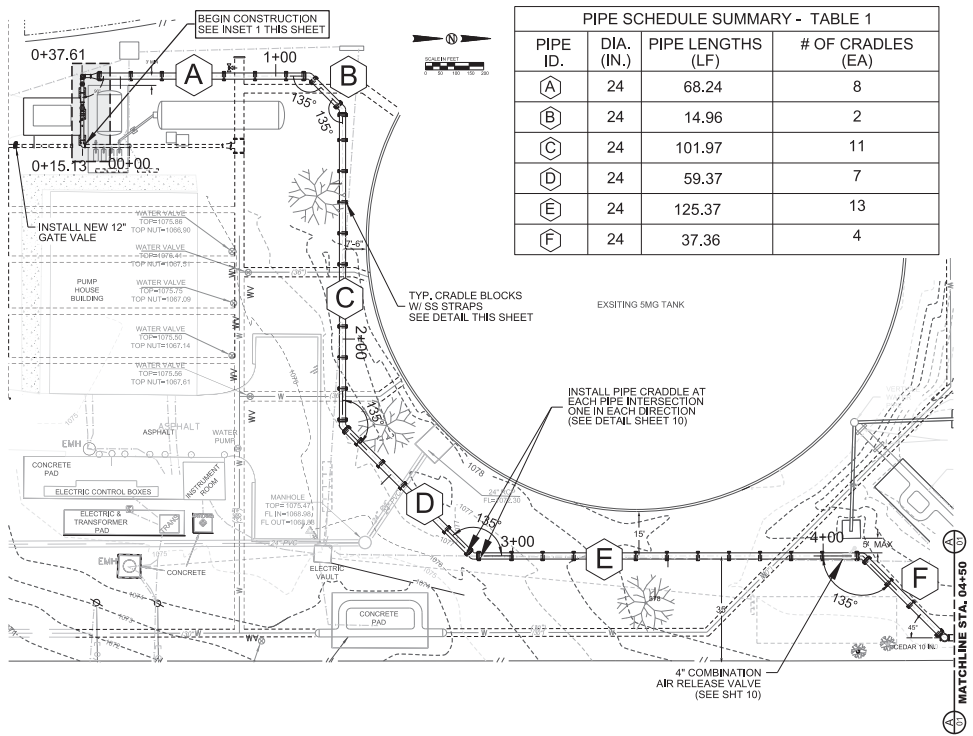


Date: 12/28/15
 Drawn By: TRJ
 Checked By: JGR
 Scale: SEE SHEET
 Approved By: JGR
 Map No.: NO MAP

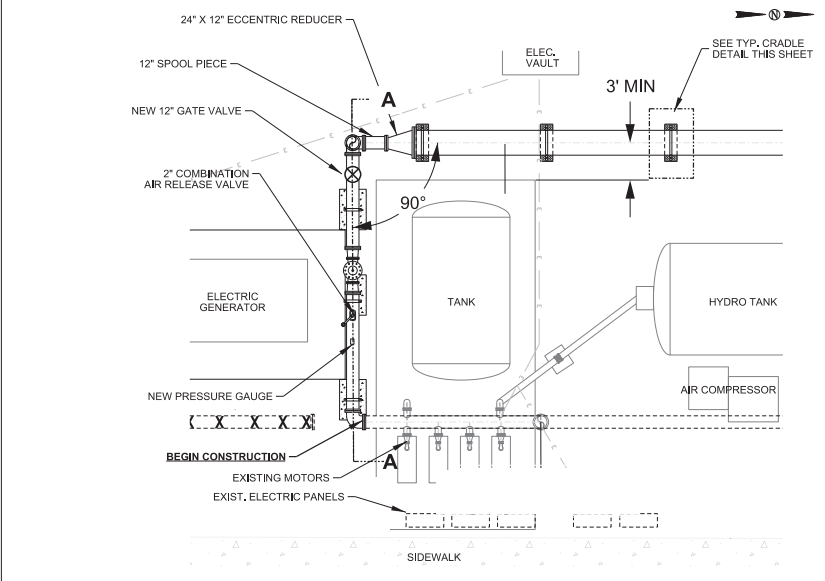


JOB NO. 14-6102
 SALADO PUMP STATION
 TO STONE OAK WATER MAIN
 ABOVE GROUND
 PIPE LAYOUT AND DETAILS

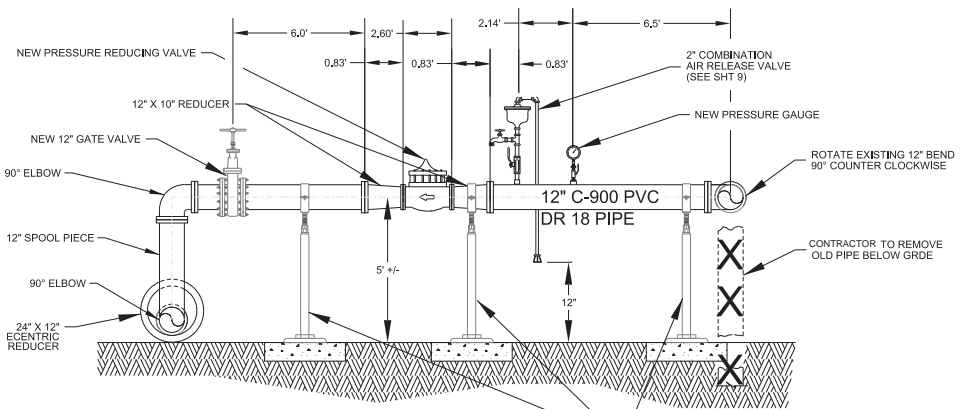
DRAWING NO.
PL1
7 of 11



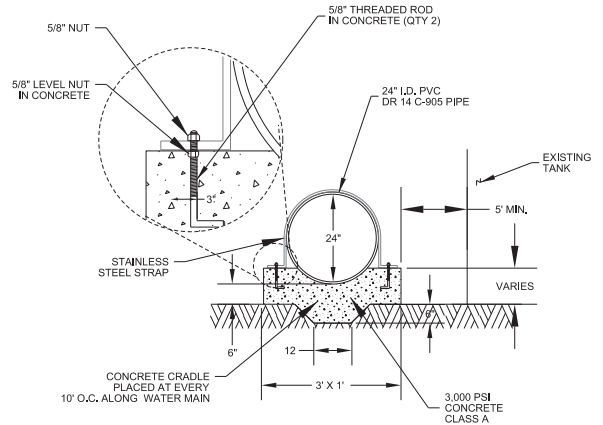
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D	24	59.37	7
E	24	125.37	13
F	24	37.36	4



INSET 1: 12" TO 24" PIPE TRANSITION DETAIL
SCALE : 1" = 5'



INSET 1 LAYOUT - DETAIL A-A
SCALE : 1" = 5'



TYPICAL CRADLE BLOCK W/ STRAP
N.T.S.

JOB NO.
14-6102



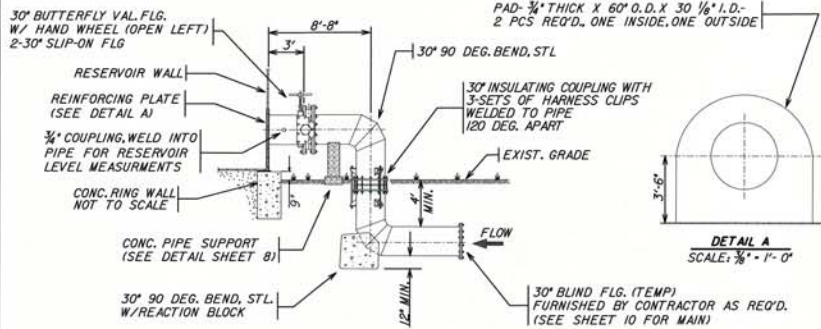
No.	Description	Date	REVISIONS	
			Dim.	Approved



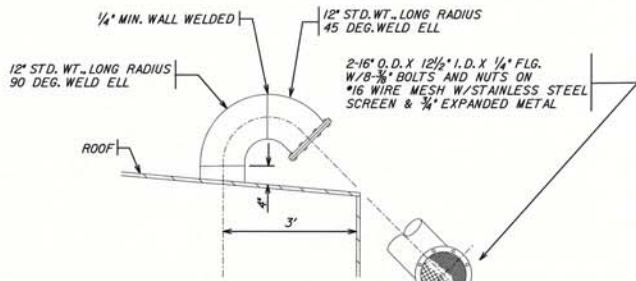
Date: 12/28/15
 Drawn By: TRJ
 Checked By: JGR
 Scale: SEE SHEET
 Approved By: JGR
 Map No.: NO MAP



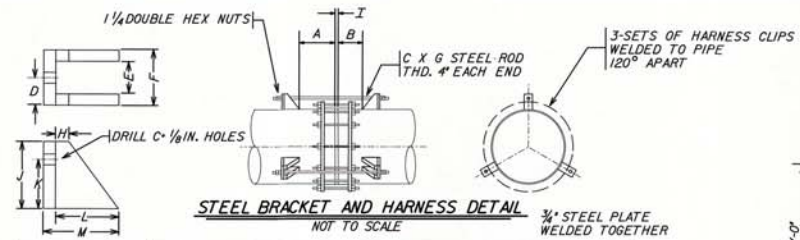
JOB NO. 14-6102
 SALADO PUMP STATION
 TO STONE OAK WATER MAIN
 ABOVE GROUND
 PIPE LAYOUT AND DETAILS



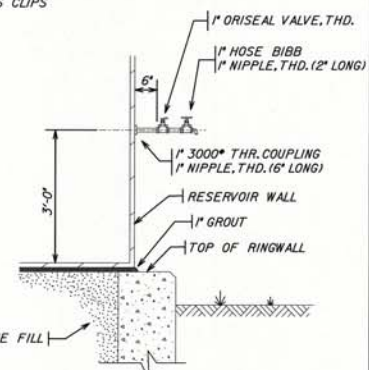
Q TYPICAL 30° TANK FILLER PIPE DETAIL
SCALE: 1/4" = 1'-5"



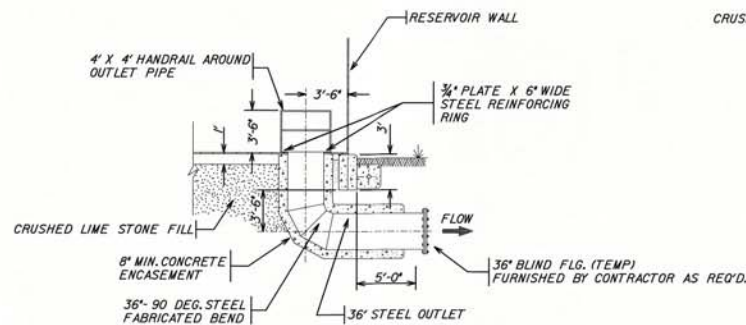
A PERIPHERAL VENT DETAIL AT TANK PERIMETER
SCALE: 3/4" = 1'-0"



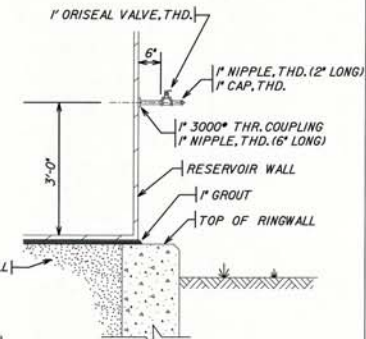
PIPE SIZE & TYPE	COUPLING HARNESS STEEL PIPE DIMENSION SCHEDULE (INCHES)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
30" O.D. STL.	12	16	1,125	2	2.5	4	45	1	75	5.5	4	6	67.5



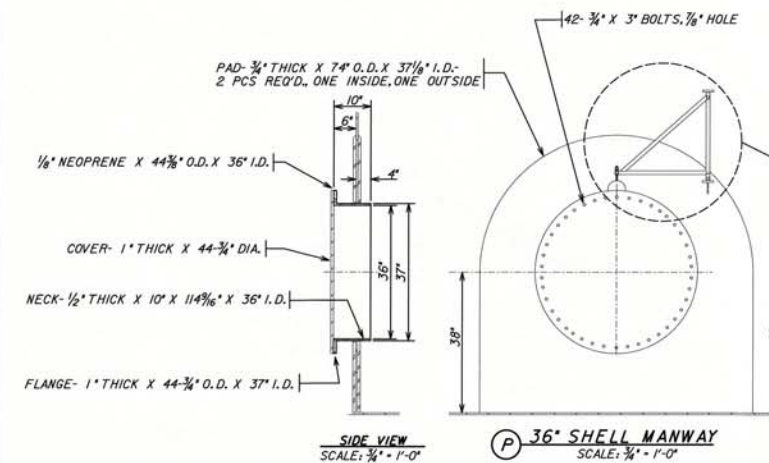
B WATER SAMPLE LINE DETAIL
SCALE: 3/4" = 1'-0"



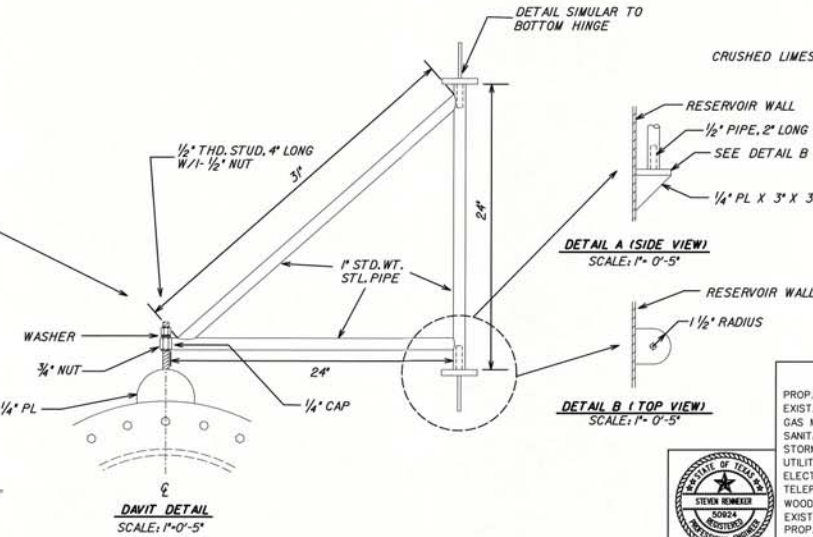
F TYPICAL 36° OUTLET PIPE DETAIL
SCALE: 1" = 5'



C LEVEL MEASUREMENT GAUGE DETAIL
SCALE: 3/4" = 1'-0"



P 36° SHELL MANWAY
SCALE: 3/4" = 1'-0"



D DAVIT DETAIL
SCALE: 1" = 0'-5"

DETAIL A (SIDE VIEW)
SCALE: 1" = 0'-5"

DETAIL B (TOP VIEW)
SCALE: 1" = 0'-5"

LEGEND

PROP. WATER MAIN
EXIST. WATER MAIN
GAS MAIN
SANITARY SEWER
STORM SEWER
UTILITY POLE LINE
ELECTRIC CABLE
TELEPHONE CABLE
WOODEN FENCE
EXIST. CONTOURS
PROP. CONTOURS
PROP. ROADWAY

6" C.I.W.
12" S.A.
24" S.T.
E
T
12" O
1070

No.	Revision	Drawn	Approved	Date

REVISIONS

SALADO TANK
VENT, MANWAY, FILLER, OUTLET, SAMPLE & LEVEL DETAILS

DEVELOPER: SAN ANTONIO WATER SYSTEM
CONT. A-8203 BUDGET PROJ.

SUBMITTED
APPROVED
MAP No.
SECT. No.
DR. CCW JCK.

JOB No. 98-6020

SHEET 5 OF 13

