



Basin Pump Station Improvements Phase II Project  
SAWS Job No. 15-6004  
Solicitation No. CO-00163

**ADDENDUM No. 2**

March 30, 2018

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.** Reference Specifications Sections 01500 – Temporary Facilities and Controls & 02060 – Demolition, Paragraph 3.01 Item I. There are several specifications sections that reference a requirement for Contractor-furnished security services on the Jobsite. Spec. Section 01500 Paragraph 1.08 states that the Contractor is to provide armed 24/7 security services at all times while the work is being performed. Is this requirement 24/7 or just during regular Monday through Friday working hours?

**Response:** The requirement is to have a security guard present at all times while workers are present. When workers are not present the site must be secured.

- 1.2.** Section 01015, 1.05, F, please provide any licensing/qualification requirements for the required 24-hour uniformed guard.

**Response:** Per specification 01500 – Temporary Facilities Paragraph 1.08.A: The guard should have familiarity with SAWS facilities, security policies, communication procedures, emergency response codes, and chemical response protocols. The guard shall have NIMS-certification, first aid/AED certification, and shall meet all SAWS requirements for psychological testing.

- 1.3.** Reference Specifications Section 02060 – Demolition. The specifications state that there will be a requirement for both Lead Based Paint and Asbestos abatement as part of the project. Has the Owner performed a formal site survey that identifies and provides for the locations and test results for these hazardous materials?

**Response:** An asbestos and lead survey has been developed for SAWS on this project and has been made available for CONTRACTORS for informational purposes only. SAWS will require the execution of a SAWS disclaimer form by the CONTRACTOR as a condition of and prior to the release of the report. To complete the disclaimer form and obtain the report,

please go to the following link on SAWS website: [CO-00163 – Basin Pump Station Improvements Phase II Project](#)

- 1.4.** Specifications Section 02200 – Earthwork. This specifications section makes reference to a geotechnical study and report for the site that was performed by Arias & Associates. Can the Owner provide the bidding Contractors with a copy of this report?

**Response:** A Geotechnical Report has been developed for SAWS on this project and has been made available for CONTRACTORS for informational purposes only. SAWS will require the execution of a SAWS disclaimer form by the CONTRACTOR as a condition of and prior to the release of the report. To complete the disclaimer form and obtain the report, please go to the following link on SAWS website: [CO-00163 – Basin Pump Station Improvements Phase II Project](#)

- 1.5.** Will the Owner be providing and paying for the soils compaction and concrete sampling and testing by an independent third party or is that the Contractors responsibility? The specifications for earthwork and concrete testing responsibility are contradictory in many areas.

**Response:** The OWNER or CONSULTANT will be responsible for the independent third party testing.

- 1.6.** Reference Specifications Section 16000 – General Electrical Requirements, Paragraph 1.06 – Service and Metering states; Contractor is responsible for CPS Servicing and Metering Costs. Paragraph 1.07 – Codes, Inspection and Fees Item C. states that Owner will negotiate with the power company and pay for these costs. Please clarify the responsibility for this activity.

**Response:** Refer to part 2.8, Modifications to the Specifications herein.

- 1.7.** Please confirm that all well sites are located on SAWS property and that construction easements adjacent to these locations have been obtained for means of egress. Please confirm the extent of these easements.

**Response:** Well sites are either on property owned by SAWS or by property owned by COSA.

- 1.8.** Section 16000, 1.06, C, 1 requires CONTRACTOR to include pricing for new service from power company. Will these connection fees be paid from the allowance in bid item 12 or is this amount separate and in addition to the allowance? If to be carried in base bid, please provide the amount of fees to be charged by the power company.

**Response:** Refer to part 2.8, Modifications to the Specifications herein.

- 1.9.** Section 16000, 1.07, C & D – Please confirm the electrical charges to be paid for by the contractor.

**Response:** Refer to part 2.8, Modifications to the Specifications herein.

- 1.10.** Section 17505, 1.02, B & C, make reference to spec sections 16486 & 16487. Sections not found in bid documents.

**Response:** Refer to part 2.9, Modifications to the Specifications herein.

- 1.11.** Section 13200 “The Steel Water Tank Rehabilitation” was not located within the bid documents, please confirm location.

**Response:** Specification Section 13200 – Steel Water Tank Rehabilitation was provided under Addendum No. 1.

- 1.12.** Section 11366 2.01.4 mentions a total of 8 Hydrogen Dilution Blowers, drawing G-005 only shows a total of 4 blowers. Please confirm amount of Hydrogen Dilution Blowers for OSHG system.

**Response:** Refer to the revised Sheet G-006, attached herein, for blowers BLO-5 through BLO-8. A total of 8 blowers will be provided.

- 1.13.** Section 11310, 1.06, indicates the utilization of 0.4 Hp pumps plan call outs indicate a minimum of 0.5Hp sump pumps to be used. Please confirm Hp requirement.

**Response:** Minimum 0.4HP is acceptable

- 1.14.** Drawings S-304, S305, S-503 and S-505 show the use of Void Forms. Please confirm the governing specification for the type, use, or installation of void forms.

**Response:** Refer to part 2, Modifications to the Specifications, Item 2.4 herein.

- 1.15.** Drawing S-305, Section R, calculates the top of the pier at 734’-4”. The drilled pier table on S-301 indicates top at 732’-4”. Please confirm top of pier elevation.

**Response:** 734’-4” is correct. See updated drilled pier table on S-301, attached herein.

- 1.16.** Drawing S-302, Fluoride Storage Tank Pad, lower left corner of SOG indicates a TOC elevation of 729’-7”. This would pool water in this corner instead of flow to the sump. Should it read 731’-7” instead?

**Response:** Lower left (south-west) corner should read 731’-6”. See updated plan on S-302 attached herein.

- 1.17.** Drawing S-305, Section K, refers to a reference detail (2/S-501) for the containment curb in the upper right corner. Detail 2/S-501 is for waterstop at a slab & wall transition. Please confirm callout.

**Response:** Detail should reference C / S-304. See updated section K on S-305, attached herein.

- 1.18.** Drawing S-302 indicates a ½” continuous expansion joint full height of containment wall, between the Chemical Building and the Hypo Bulk Storage Tank Building. The note is located on the southern tank elevated pad. Drawing C-301 indicates to construct an expansion joint per Detail 6/ C-502. Detail 6/ C-502 includes a slip dowel assembly and appears to indicate a joint between the new PCC drive and sidewalk, as concrete drive is indicated. Please confirm the correct detail for the location between the two buildings?

**Response:** There should not be dowels between the Chemical Building and the Hypo Bulk Storage Tank Building. A ½” continuous expansion joint full height of the containment wall is correct. Refer to part 3, Modifications to the Drawings, Item 3.9 and 3.11 herein.

- 1.19.** Drawing C-502, Detail 6, what is the spacing of the smooth dowels? Detail 7, the reinforcement note points to what appears to be a smooth dowel like the one referenced in Detail 6, except without the cap. If this detail is to be utilized, please confirm size, length, spacing, and use location in an 8” section.

**Response:** For expansion joints between sidewalk and 8” walls, dowels shall be 5/8-inch by 18-inch with 6-inches into the wall and remainder in the sidewalk and capped, spaced on 18-inches on center. All other expansion joint dowels to be spaced at 18-inches on center.

- 1.20.** Drawing S-301, Drilled Pier Schedule, indicates (3) 27’-0” Piers @ each valve pad, on S-503. Detail 20 on S-503 indicates 4 piers. Please confirm that 4 is correct at each of the 6 locations for this detail and that 6 are required at the Future Control Valve Pad, as indicated in Detail 28/ S-505.

**Response:** 4 piers per Valve Pad and 6 piers for the Future Control Valve Pad is correct. See updated drilled pier table on S-301 attached herein.

- 1.21.** Drawing C-502, Detail 2, provides information on the concrete pavement section. The pavement is 9” thick reinforced, but does not detail what the reinforcing is. Specification section 02510 3.2.C says: For concrete pavement, install size and length of reinforcing steel and pavement thickness indicated on Drawings. Please provide the reinforcement size and spacing required.

**Response:** Refer to part 3, Modifications to the Drawings, Item 3.9 herein.

- 1.22.** Please confirm the appropriate bid item for the new site wide electrical service. Please also confirm the proper bid item for site wide improvements, i.e., concrete paving, landscaping, fencing, etc. Is there a specific improvement footprint to include with the Basin Pump Station New Chemical Facilities item?

**Response:** Site wide improvements and site wide electrical service is part of Item No. 2 Base Proposal for Basin Pump Station Existing Facilities.



**1.23.** Can you verify the requirements for the required flanges on the carbon steel piping? If we are just using the Working Pressures in the design table it appears that Class “D” Flanges would be acceptable for buried piping & Class “E” Flanges for above ground Piping. See below & please verify.

- Spec 15071 2.01C – Table #1
  - Working Pressure Buried – 150 PSI
  - Working Pressure Above Ground – 200 PSI
  - Field Test Pressure – As shown on plans – see sheet PH-100. I don’t see this page listed in the plans. Can you verify?
- Spec 15071 2.02E
  - Class E Flanges for operating Pressures up to 275 PSI
- Spec Section 15110 2.06 Butterfly Valves “F” This states that the flange pattern shall be Class 150#.

**Response:** Refer to part 2, Modifications to the Specifications, Item 2.5 and 2.6 herein.

**1.24.** In Spec Section 15130 – Flexible Joints & Couplings, the working pressure for the 48” Discharge Header is 200 psi plus a surge allowance of 100 psi = 300 psi which will require Class F flanges. All other piping has a working pressure of 150 psi plus a surge allowance of 100 psi = 250 psi which only requires a Class E flange. In both paragraphs 2.01 F and 2.02 B it calls for Class F flanges. Most of the valves are butterfly valves in Spec Section 15110, paragraph 2.06 which calls for the valves to be Class 150; therefore the valves will have a 150# flange drilling pattern which will match that of a Class E flange. Any valves which are on the discharge side of the pump station piping will need to be Class 250 to match the 250# drilling pattern of a Class F flange. Please clarify the required flanges.

**Response:** Refer to part 2, Modifications to the Specifications, Item 2.7 herein.

**1.25.** On Drawing D-201, Typical Well Plan and Elevation, both a 20” flexible coupling adapter and a harnessed mechanical coupling are indicated where the new pipe connects to the well pump flange. On Drawing D-100 the photos of the existing well pump piping shows only a harnessed flange coupling adapter at the well pump flange connection. Which assembly is correct?

**Response:** A 20” harnessed flexible coupling adapter will be required. Refer to part 3, Modifications to the Drawings, Item 3.14 herein.

**1.26.** Also on Drawing D-201 the adjustable pipe saddle supports do not show a u-bolt over the pipe; however, Detail: 2/D-502 indicates a stainless steel u-bolt over the pipe. The photos of the existing wells also do not show a u-bolt over the pipe. Which is correct?

**Response:** U-bolts over the pipe is required as shown in Detail 2/D-502.

- 1.27.** This is in reference to 42" Water Line S which shows three (3) each butterfly valves both on Drawing C-120 and on the profile on Drawing C-128; however, the Yard Piping Valve Schedule on Drawing C-122 only has 100-BFV-21 and 100-BFV-23 in the schedule. It appears that there is one 42" butterfly which is not on the schedule. Please clarify.

**Response:** Butterfly valve 100-BFV-31 has been added to the valve schedule on the revised Sheet C-122, attached herein.

- 1.28.** I found one more valve on the Yard Piping Valve Schedule which has an incorrect size; valve 100-BFV-20 should be 42" in lieu of 36" size.

**Response:** Valve 100-BFV-20 shall be a 42", yard piping valve schedule on C-122 has been updated on the revised Sheet C-122, attached herein.

- 1.29.** On Drawing C-120 Water Lines N, R and S indicate water meters (WM). These lines are 42" and 30" sizes. What type of water meter are these, and would they be inside a vault? The only water meter details are for 4" and 3" sizes.

**Response:** Water meter located on Pipe N, Pipe S, and Pipe R are not required. Refer to part 3, Modifications to the Drawings, Item 3.3 herein.

- 1.30.** The profile for 30" Water Line N (C-127) indicates three (3) butterfly valves within approximately 80 ft of pipe. This line on Drawing C-120 shows 100-BFV-15 and 100-BFV-16 and a water meter. On this drawing there are also water meters (WM) indicated on 42" Water Lines R and S, but the meters are not shown in their respective profiles on Drawing C-128.

**Response:** Water meter located on Pipe N, Pipe S, and Pipe R are not required. Refer to part 3, Modifications to the Drawings, Item 3.3 herein.

- 1.31.** On Drawings C-101 and C-102 the existing line where the new static mixer is to be inserted shows to be a 48" line; also the new Water Line L which connects this existing line to Water Line K also shows to be 48" pipe. Drawings D-100 and D-101 show the new static mixer to be 54" in existing 54" pipe. Which size is correct?

**Response:** The existing above grade piping where the new static mixer to be inserted is 54-inch. CONTRACTOR to field verify.

- 1.32.** The Yard Piping Valve Schedule on Drawing C-122 lists the incorrect size for the following valves:

100-BFV-4, 100-BFV-6, 100-BFV-9 AND 100-BFV-10 should be 24", 100-BFV-11 should be 42" and 100-BFV-24 should be 54". Also 100-BFV-3 at Well No. 3 should be shown in

the Pipe F Profile on Drawing C-124 in lieu of in Water Line G as shown on Drawing C-120.

**Response:** Refer to part 3, Modifications to the Drawings Items 3.3 and 3.4 herein.

## **2. Modifications to the Specifications**

### **2.1. Special Conditions**

Add the following item to the Special Conditions Section of the Specifications.

SC1. A Geotechnical Report has been developed for SAWS on this project and has been made available for CONTRACTORS for informational purposes only. SAWS will require the execution of a SAWS disclaimer form by the CONTRACTOR as a condition of and prior to the release of the report. To complete the disclaimer form and obtain the report, please go to the following link on SAWS website: [CO-00163 – Basin Pump Station Improvements Phase II Project](#)

SC2. An asbestos and lead survey has been developed for SAWS on this project and has been made available for CONTRACTORS for informational purposes only. SAWS will require the execution of a SAWS disclaimer form by the CONTRACTOR as a condition of and prior to the release of the report. To complete the disclaimer form and obtain the report, please go to the following link on SAWS website: [CO-00163 – Basin Pump Station Improvements Phase II Project](#)

### **2.2. Invitation to Bidders**

Change the room for the bid opening from CR-C137 with CR-C145.

### **2.3. Section 01270 – Measurement and Payment**

Page 01270-10, Paragraph 1.12.A, ADD Item No. 14:

#### **Item No. 14: Tank Structural Repair Work**

1. Description – This item shall be for the Ground Storage Tank structural design and structural repairs to be used at the direction of the OWNER. This shall include furnishing all labor, materials, and incidentals required to obtain all necessary permits including review fees, in accordance with the Contract Documents, complete in place. Any proposed repairs must be approved by the OWNER prior to commencing work covered in this item.
2. Measurement – Measurement for the item “Tank Structural Repairs” will be by lump sum.
3. Payment for this items will be negotiated on an individual basis for each out-of-scope item that is requested by the OWNER to the CONTRACTOR.

### **2.4. Section 03300 – Cast-in Place Concrete**

H. Void Forms: Biodegradable paper surface, treated for moisture resistance, structurally sufficient to support weight of plastic concrete and other superimposed loads.

**2.5. Specification 15044 – Pressure Testing of Piping**

Table 15044A – Piping Pressure Test Schedule

**Replace** 300 psi with 225 psi for Water Distribution/Potable Water for Test Pressure

**Replace** 300 psi with 225 psi for Well/Raw water Test Pressure.

**2.6. Specification 15071 – Steel Process Piping**

Paragraph 2.01.C Table 1 – Design Service Conditions

Service parameter (d) Maximum interior working pressure: **Replace** “150 pounds per square inch for buried service and 200 pounds per square inch for above ground service” with “150 pounds per square inch”

**2.7. Specification 15130 – Flexible Joints and Couplings Replace**

**Replace** Paragraph 2.01.A.1 with:

1. Working pressure:
  - a. Refer to Table 15044-A Piping Pressure Test Schedule in specification 15044 – Pressure Testing of Piping.
  - b. Surge Allowance = Unless otherwise indicated, provide for 50% of working pressure for surge in addition to working pressure. Total Pressure = Working Pressure + Surge Allowance.

**2.8. Section 16000 – Electrical – General Provisions**

1. Article 1.06.C.1– **Replace** with the following:

The cost associated with the power company work shall be covered by an allowance of \$300,000. The allowance shall be included in the Bid Proposal as line item 12 of the Base Bid.

2. **Delete** Article 1.07.C.

**2.9. Section 17505 – Operator Interface Terminal**

**Delete** Articles 1.02.B and C.

**3. Modifications to the Drawings**

- 3.1. Sheet G-004.

Replace sheet in its entirety with the attached sheet.

**3.2.** Sheet G-006.

Replace sheet in its entirety with the attached sheet.

**3.3.** Sheet C-120

Replace sheet in its entirety with the attached sheet.

**3.4.** Sheet C-122

Replace sheet in its entirety with the attached sheet.

**3.5.** Sheet C-127

Replace sheet in its entirety with the attached sheet.

**3.6.** Sheet C-129

Replace sheet in its entirety with the attached sheet.

**3.7.** Sheet C-132

Replace sheet in its entirety with the attached sheet.

**3.8.** Sheet C-301

Replace sheet in its entirety with the attached sheet.

**3.9.** Sheet C-502

Replace sheet in its entirety with the attached sheet.

**3.10.** Sheet S-301

Replace sheet in its entirety with the attached sheet.

**3.11.** Sheet S-302

Replace sheet in its entirety with the attached sheet.

**3.12.** Sheet S-305

Replace sheet in its entirety with the attached sheet.

**3.13.** Sheet D-102

Replace sheet in its entirety with the attached sheet.

**3.14.** Sheet D-201

Replace sheet in its entirety with the attached sheet.

**3.15.** Sheet D-313.

Replace sheet in its entirety with the attached sheet.

**3.16.** Sheet D-314.

Replace sheet in its entirety with the attached sheet.

**3.17.** Sheet E-022.

Detail A:

Add the following note: Demolition the entire rack including the storage tank level probe pull box and the concrete pads associated with these racks.

Modify the drawing to show the demolition of the entire rack and accessories attached to the rack in the photograph labeled as Existing Equipment. Include the demolition of the concrete pads.

**3.18.** Sheet E-1103 as provided in Addendum 1.

Notes. Add Note 3.

Note 3. LEVEL ELECTRODE SYSTEM SHALL INCLUDE FLANGED HOLDER WITH STAINLESS STEEL-WIRE SUSPENDED ELECTRODES TO BE MOUNTED ON TOP OF TANK AS SHOWN. CONTRACTOR SHALL MEASURE THE LEVELS OF THE EXISTING ELECTRODES PRIOR TO REMOVAL AND PROVIDE LEVELS AS PART OF THE SUBMITTAL FOR INSTALLATION AND LEVEL SETTING OF THE NEW ELECTRODES. CONTRACTOR SHALL PROVIDE SUBMITTALS AS REQUIRED FOR SECTION 17310. THE LEVEL ELECTRODE SYSTEM SHALL BE AS BELOW:

LEVEL ELECTRODES SHALL BE B/W CONTROLS SERIES 6013-W2.

ELECTRODE HOLDER SHALL BE B/W CONTROLS SERIES 6012-E554-13E

SUSPENSION WIRE SHALL BE B/W CONTROLS SERIES 6013-SW-\*\* (\*\* - LENGTH OF FEET)

#### 4. Clarifications

- 4.1. The Project estimate has increased from \$19 million to \$21 million.

The remainder of the bid documents remain unchanged.

This addendum is comprised of a total of 27 pages (including attachments).



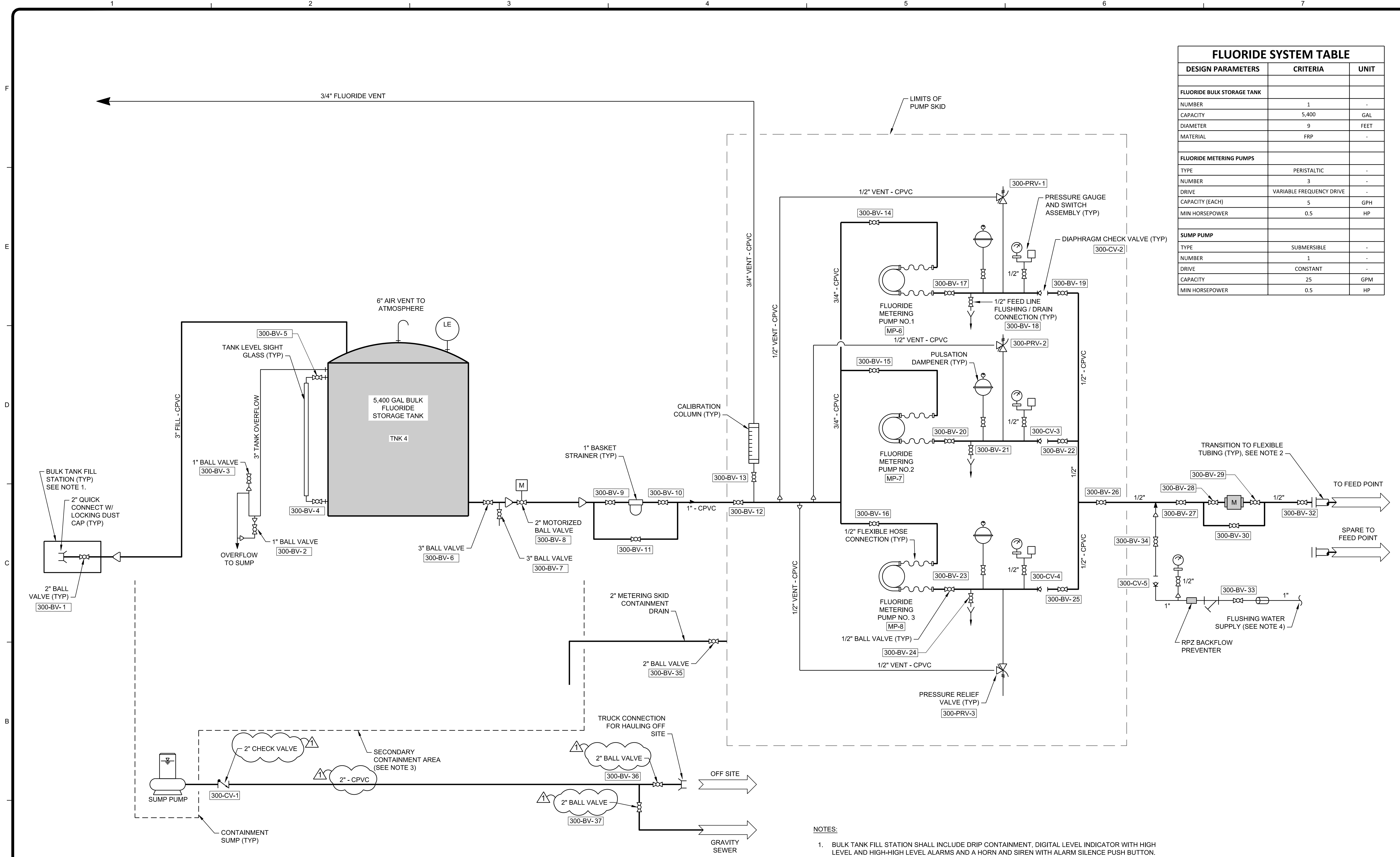
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**Don Burger, P.E.**

Tetra Tech, Inc.

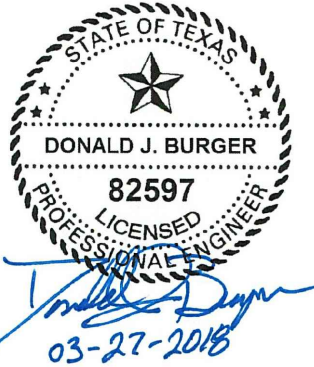
**END OF ADDENDUM NO. 2**

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FLUORIDE SYSTEM TABLE		
DESIGN PARAMETERS	CRITERIA	UNIT
FLUORIDE BULK STORAGE TANK		
NUMBER	1	-
CAPACITY	5,400	GAL
DIAMETER	9	FEET
MATERIAL	FRP	-
FLUORIDE METERING PUMPS		
TYPE	PERISTALTIC	-
NUMBER	3	-
DRIVE	VARIABLE FREQUENCY DRIVE	-
CAPACITY (EACH)	5	GPH
MIN HORSEPOWER	0.5	HP
SUMP PUMP		
TYPE	SUBMERSIBLE	-
NUMBER	1	-
DRIVE	CONSTANT	-
CAPACITY	25	GPM
MIN HORSEPOWER	0.5	HP

- NOTES:
- BULK TANK FILL STATION SHALL INCLUDE DRIP CONTAINMENT, DIGITAL LEVEL INDICATOR WITH HIGH LEVEL AND HIGH-HIGH LEVEL ALARMS AND A HORN AND SIREN WITH ALARM SILENCE PUSH BUTTON.
  - FLUORIDE FEED PIPING LOCATED OUTSIDE OF CONTAINMENT AREAS SHALL BE INSTALLED WITH DOUBLE CONTAINMENT AND LEAK DETECTION.
  - CONTAINMENT AREA FLOORS SHALL BE SLOPED TO SUMPS.
  - MAKE-UP WATER SUPPLY PROVIDED FOR FLUSHING THE CHEMICAL FEED LINES.



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ADDENDUM

SAN ANTONIO  
WATER  
SYSTEM

MARK	DATE	DESCRIPTION	BY	NG
1	03/27/18	PER ADDENDUM #2		

SAN ANTONIO WATER SYSTEM  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II  
FLUORIDE SYSTEM  
PROCESS FLOW DIAGRAM

Project No.:	15-6004
Designed By:	MMS
Drawn By:	DAC
Checked By:	DJB

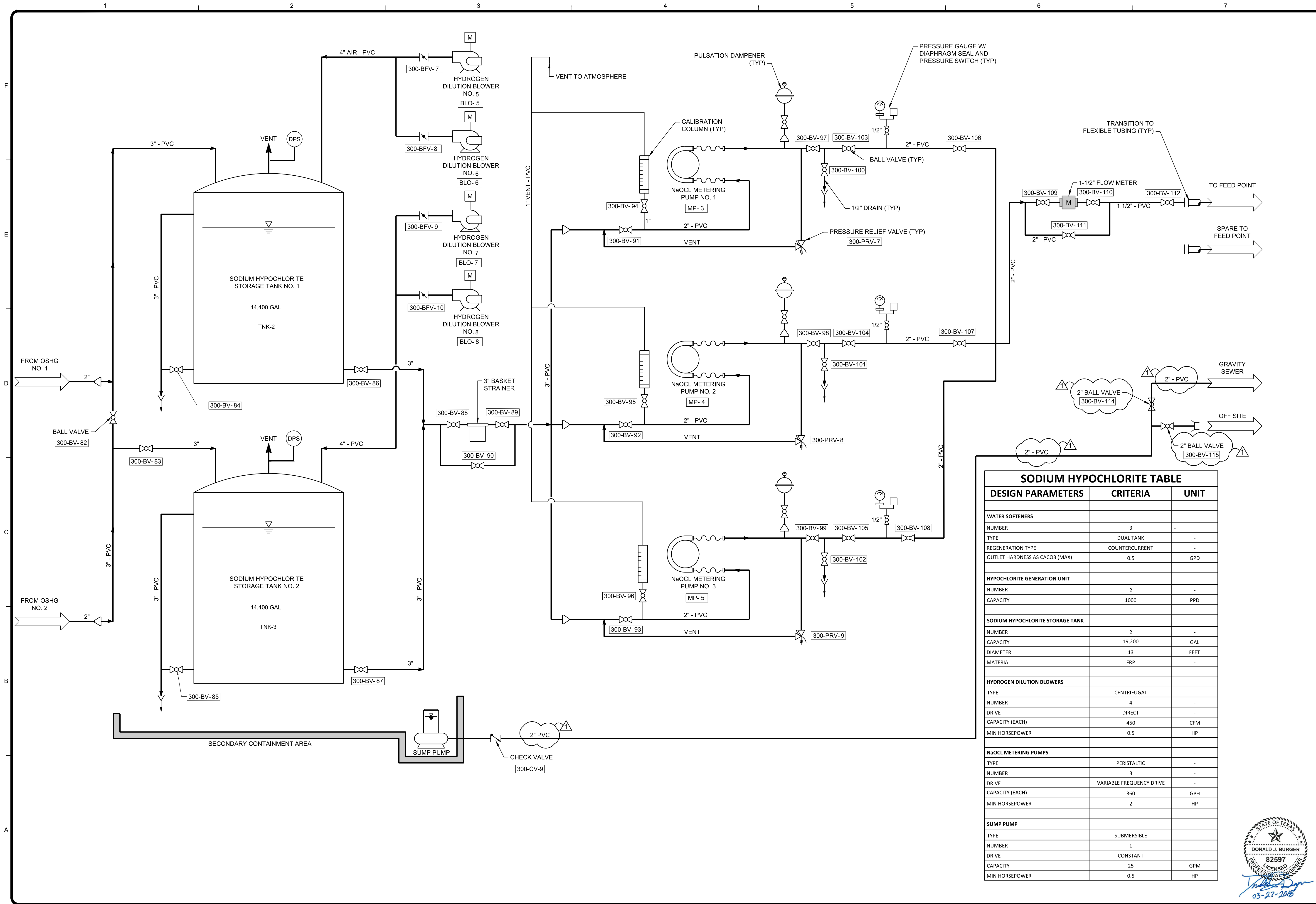
G-004

Bar Measures 1 inch

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ADDENDUM

**SAN ANTONIO WATER SYSTEM**

BY	NG								
MARK	1								

SAN ANTONIO WATER SYSTEM  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II

**SODIUM HYPOCHLORITE  
FEED SYSTEM  
PROCESS FLOW DIAGRAM**

Project No.: 15-6004  
Designed By: MMS  
Drawn By: DAC  
Checked By: DJB

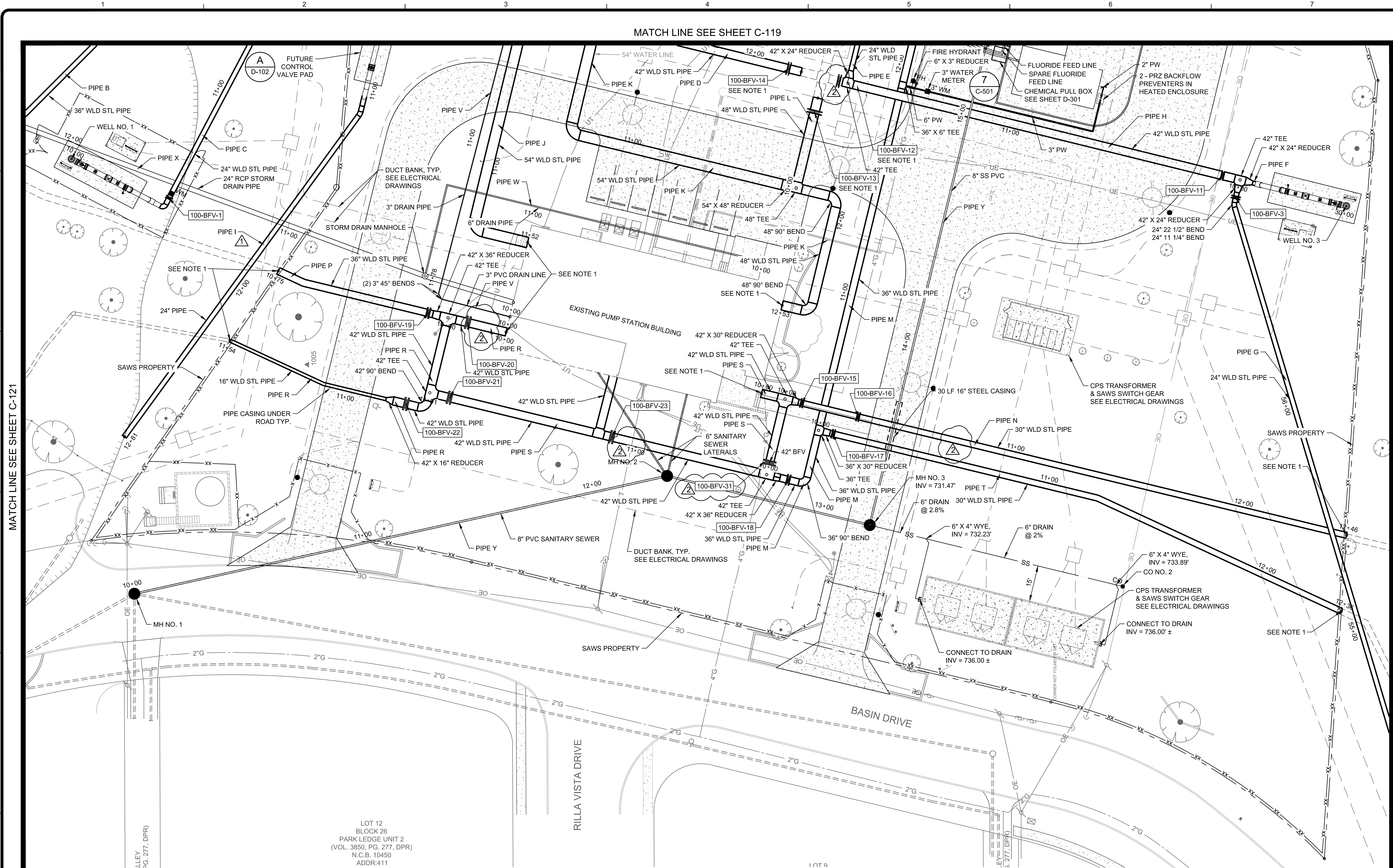
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Bar Measures 1 inch



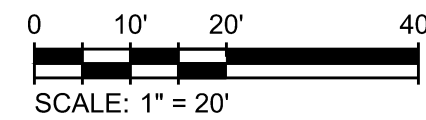
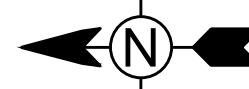
3/28/2018 8:27:14 AM - C:\PROJECTS\SAN ANTONIO\0308\200-09308- 6003\CAD\SHEETFILES\YARD PIPING PLAN IV.DWG - GARZA, NOEL



- NOTES:
1. INSTALL AN INSULATED HARNESSSED MECHANICAL COUPLING WHERE NEW AND EXISTING PIPE CONNECT.

YARD PIPING PLAN II

SCALE: 1" = 20'



SCALE: 1" = 20'

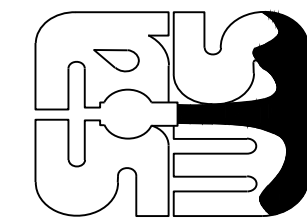


SAN ANTONIO WATER SYSTEM  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II  
YARD PIPING PLAN II

Project No.: 15-6004  
Designed By: BLE  
Drawn By: DAC  
Checked By: DJB

C-120

Bar Measures 1 inch



SAN ANTONIO  
WATER  
SYSTEM

ADDENDUM

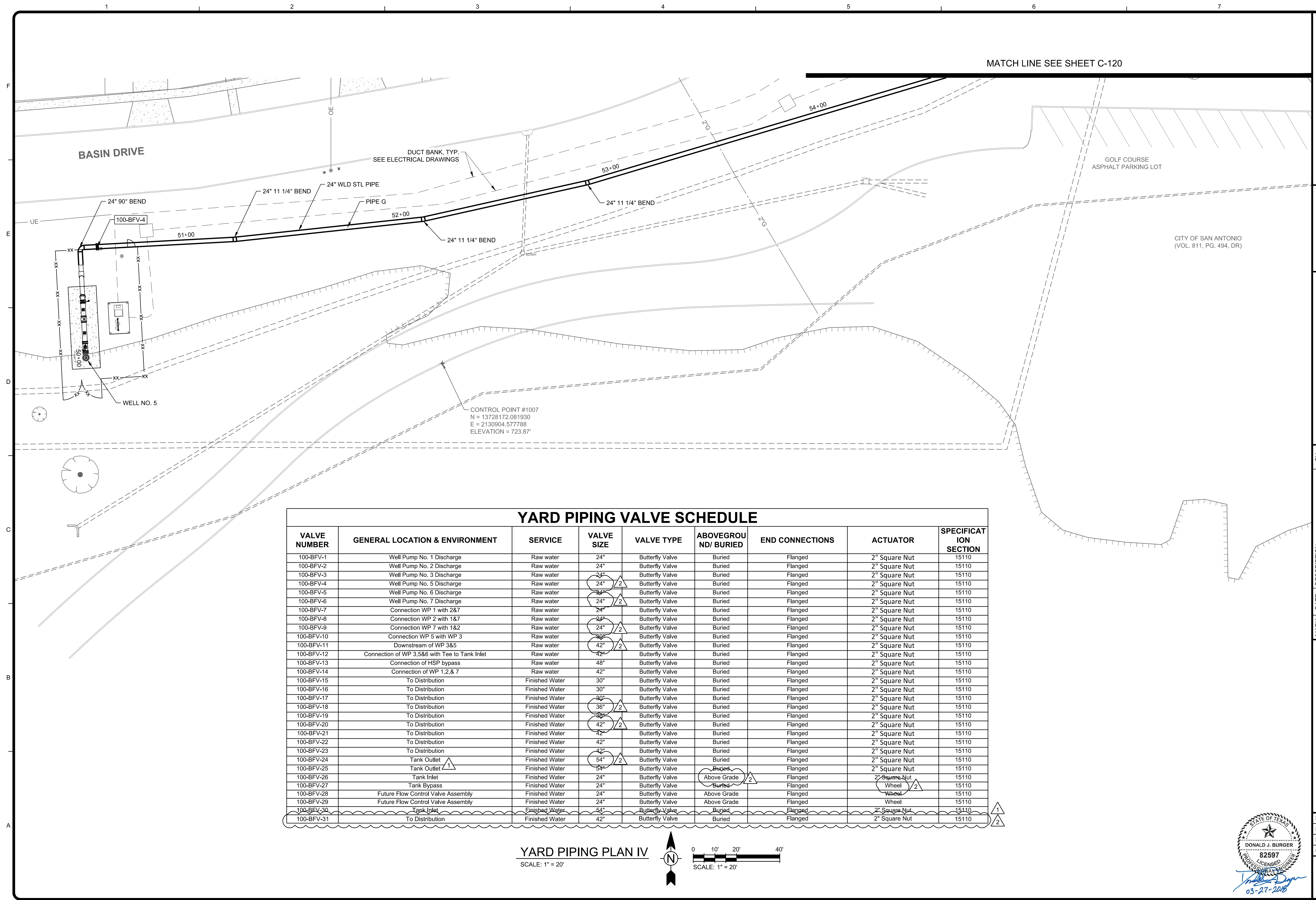


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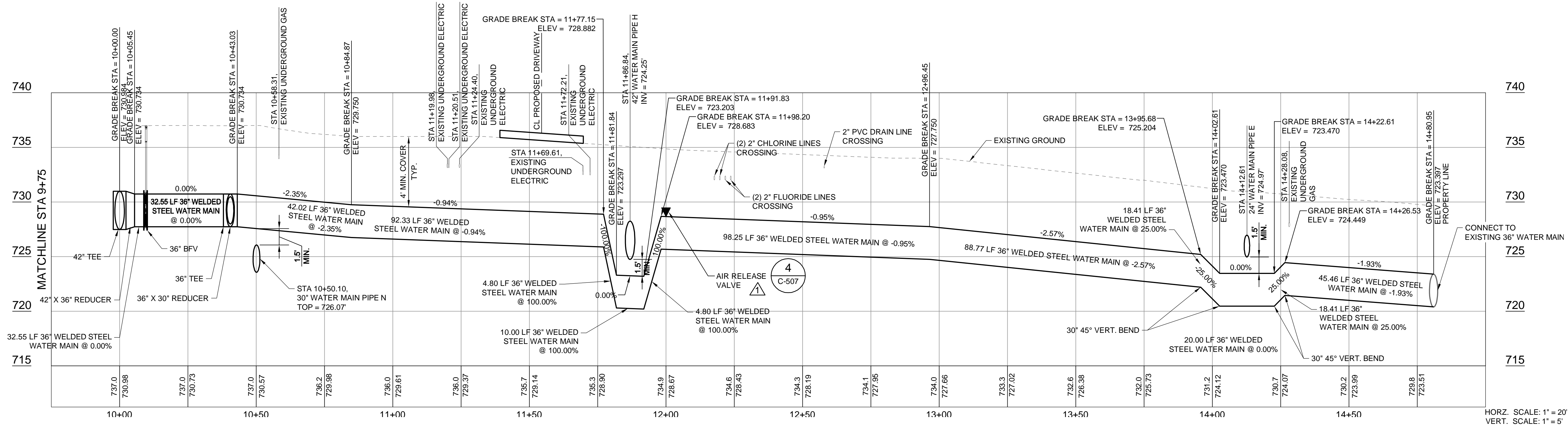


MARK	DATE	DESCRIPTION	BY	DA
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2	03/27/18	PER ADDENDUM #2		NG

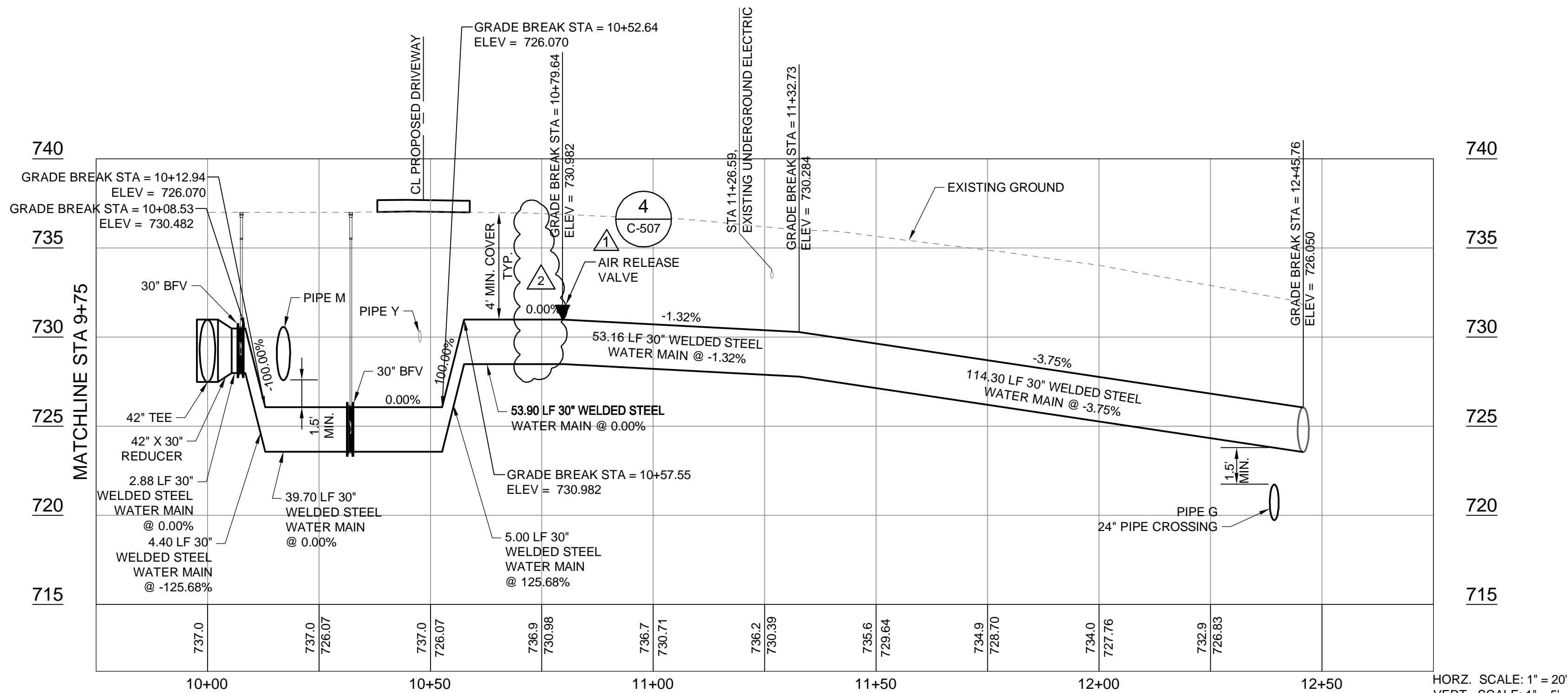


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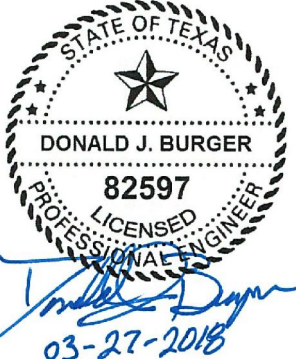
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E  
D  
C  
B  
A



PIPE M PROFILE



PIPE N PROFILE



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**ADDENDUM**

**SAN ANTONIO WATER SYSTEM**

MARK	DATE	DESCRIPTION	BY
1	03/23/18	PER ADDENDUM #1	LM
2	03/27/18	PER ADDENDUM #2	NG

**SAN ANTONIO WATER SYSTEM**  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II  
YARD PIPING PROFILES V

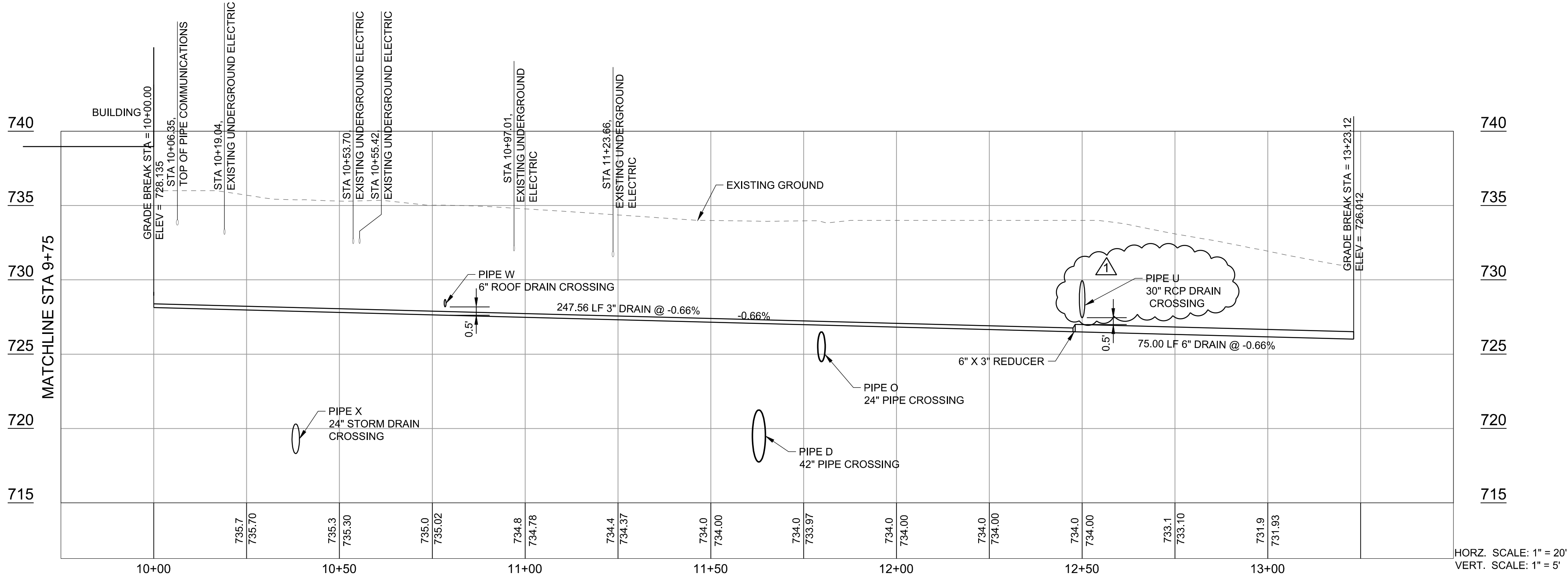
Project No.: 15-6004  
Designed By: BLE  
Drawn By: DAC  
Checked By: DJB

**C-127**

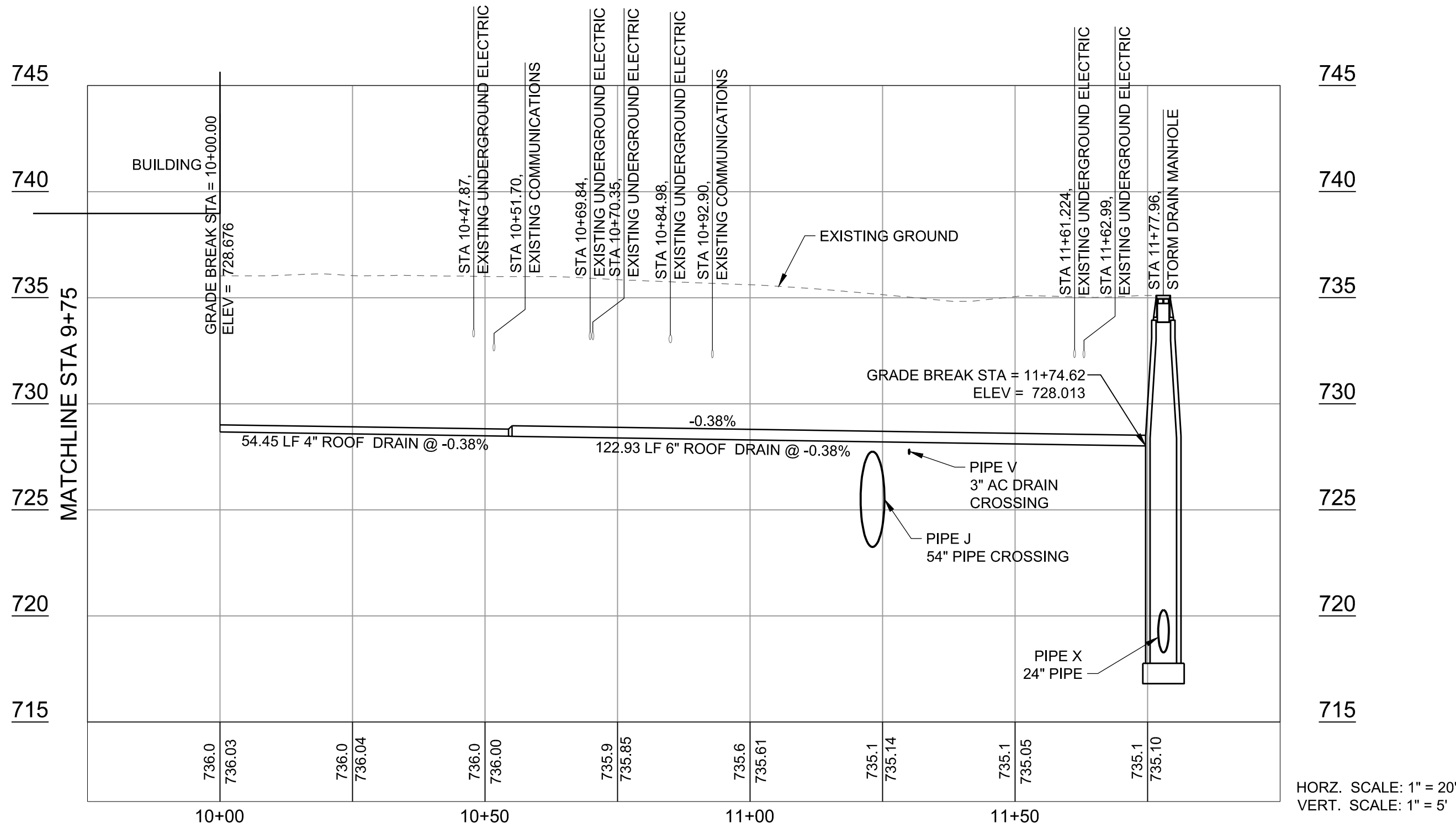
Copyright: Tetra Tech  
Bar Measures 1 inch

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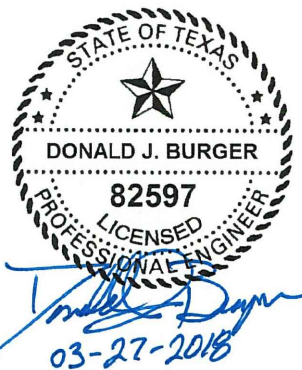
A B C D E F



PIPE V PROFILE



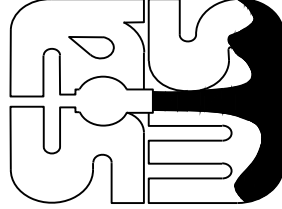
PIPE W PROFILE





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San Antonio, TX 78205  
Ph (210) 299-7900 Fax (210) 226-8497

ADDENDUM



**SAN ANTONIO WATER SYSTEM**

MARK	DATE	DESCRIPTION	BY
1	03/27/18	PER ADDENDUM #2	NG

**SAN ANTONIO WATER SYSTEM**  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II  
**YARD PIPING PROFILES VII**

Project No.: 15-8004

Designed By: BLE

Drawn By: DAC

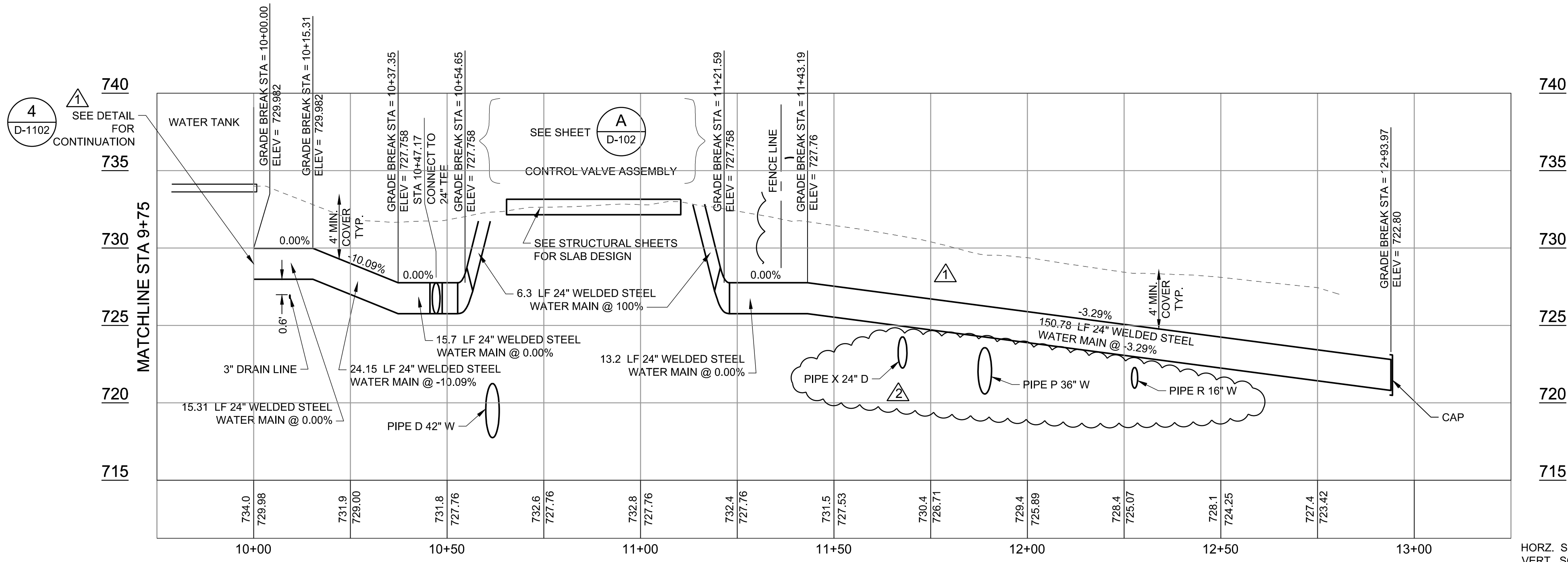
Checked By: DJB

**C-129**

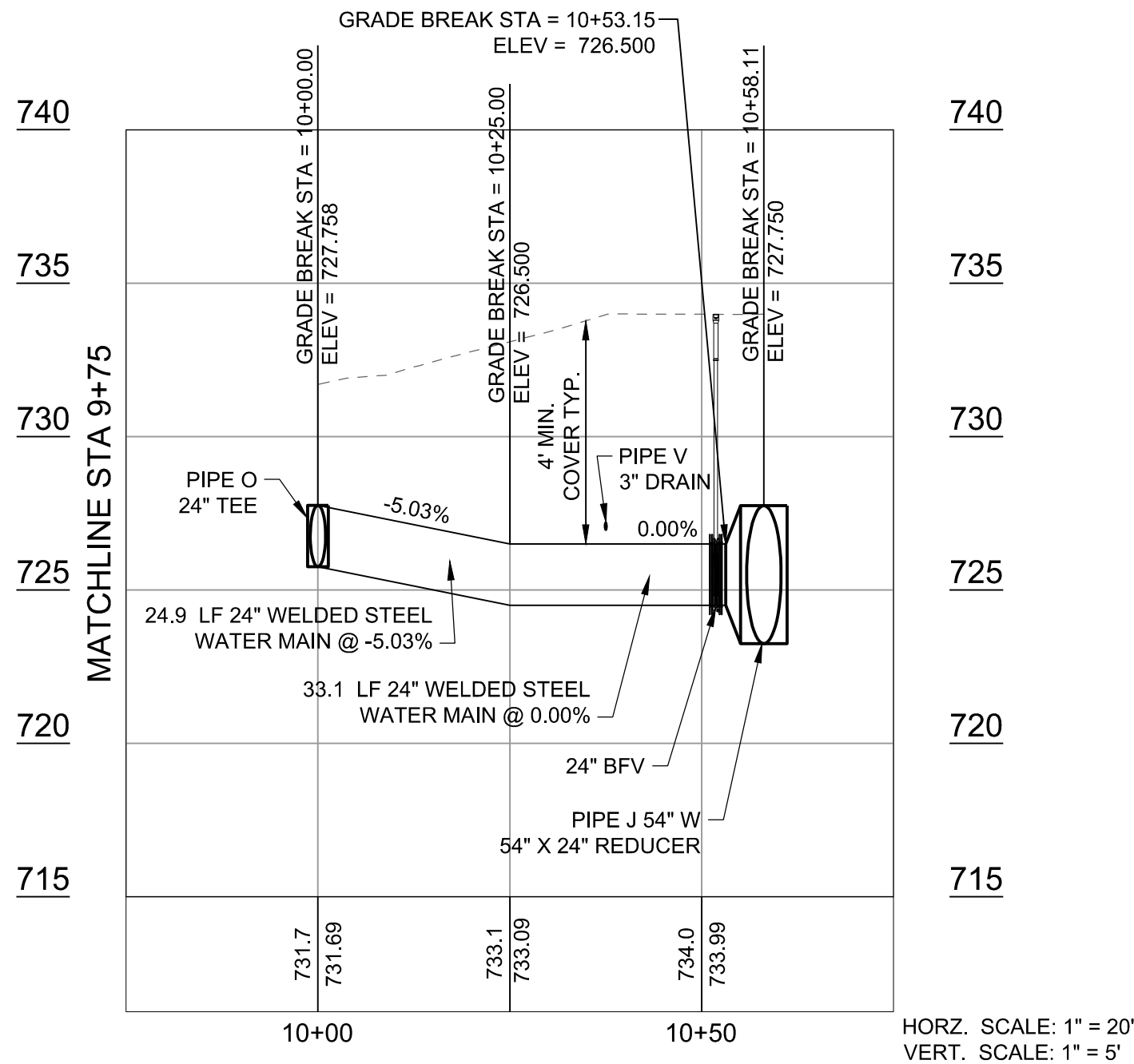
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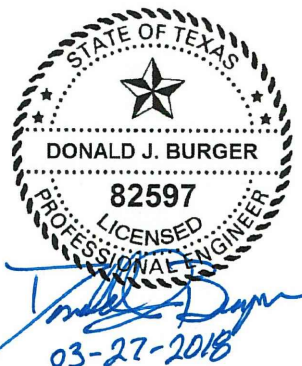
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PIPE I PROFILE



PIPE O PROFILE

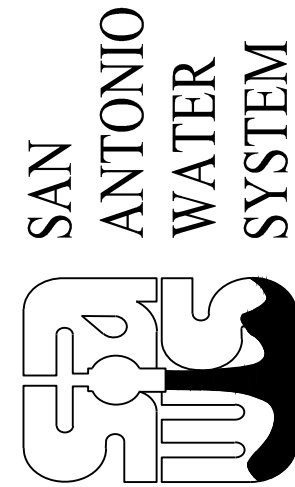


SAN ANTONIO WATER SYSTEM  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II  
YARD PIPING PROFILES X

Project No.: 15-6004  
Designed By: BLE  
Drawn By: NRG  
Checked By: DJB

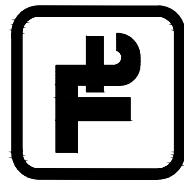
C-132

Bar Measures 1 inch

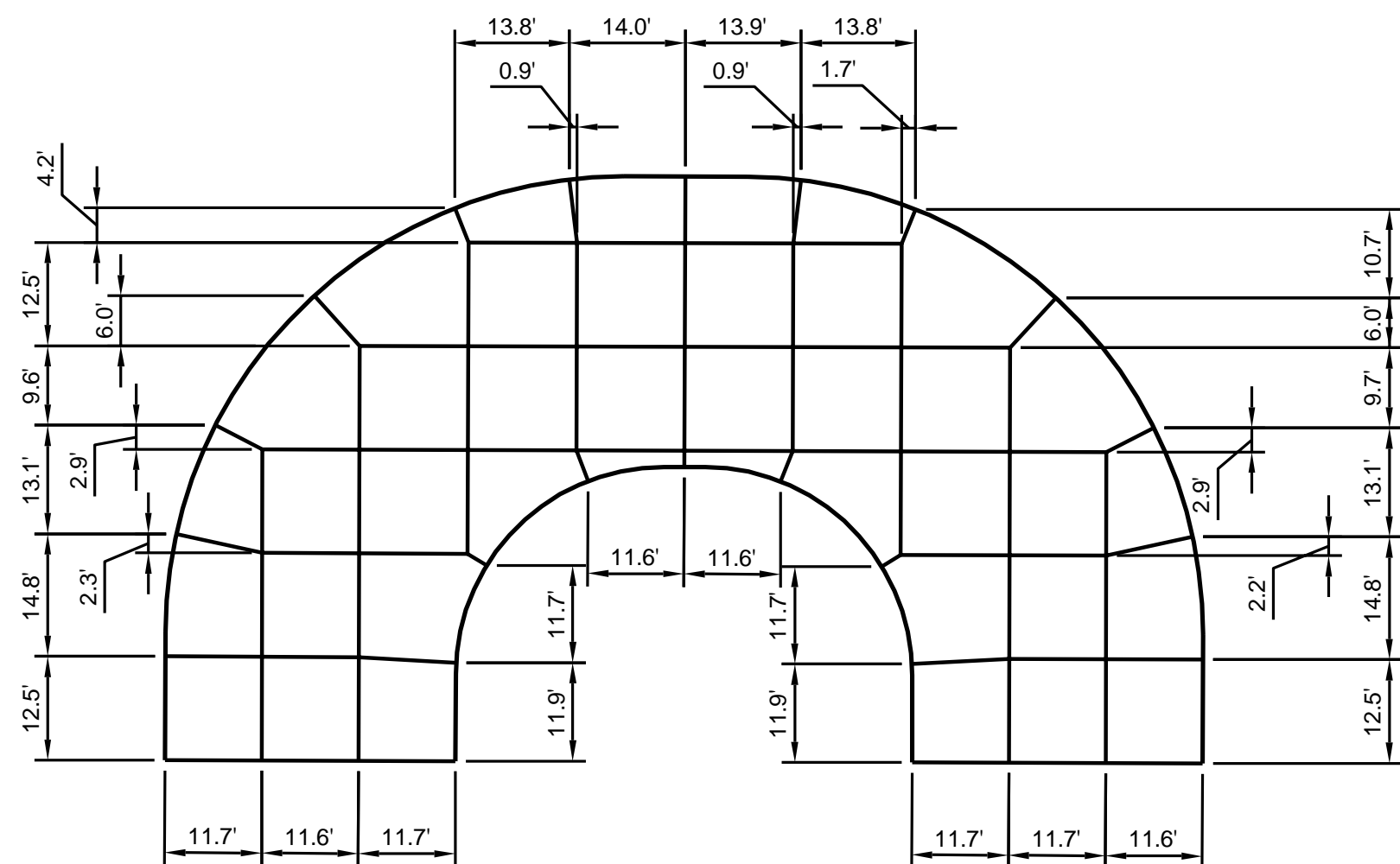


ADDENDUM

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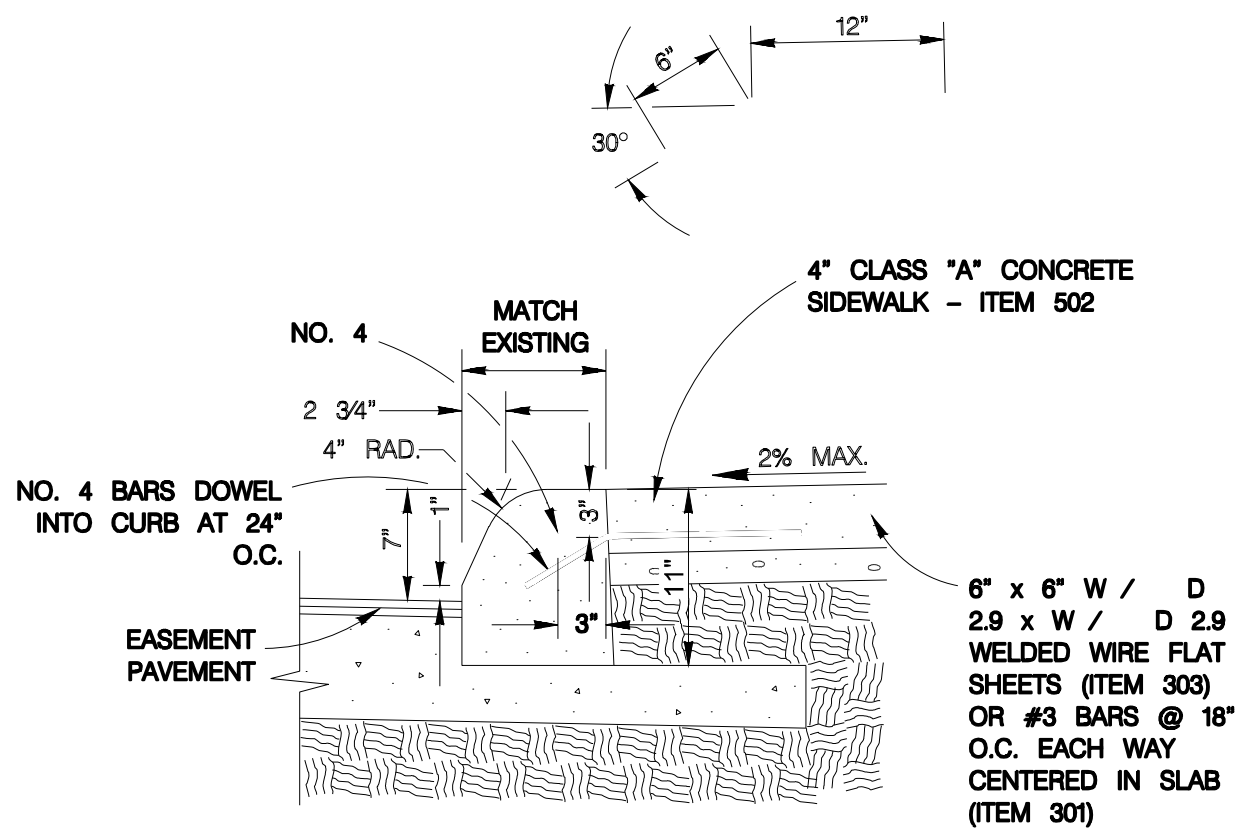


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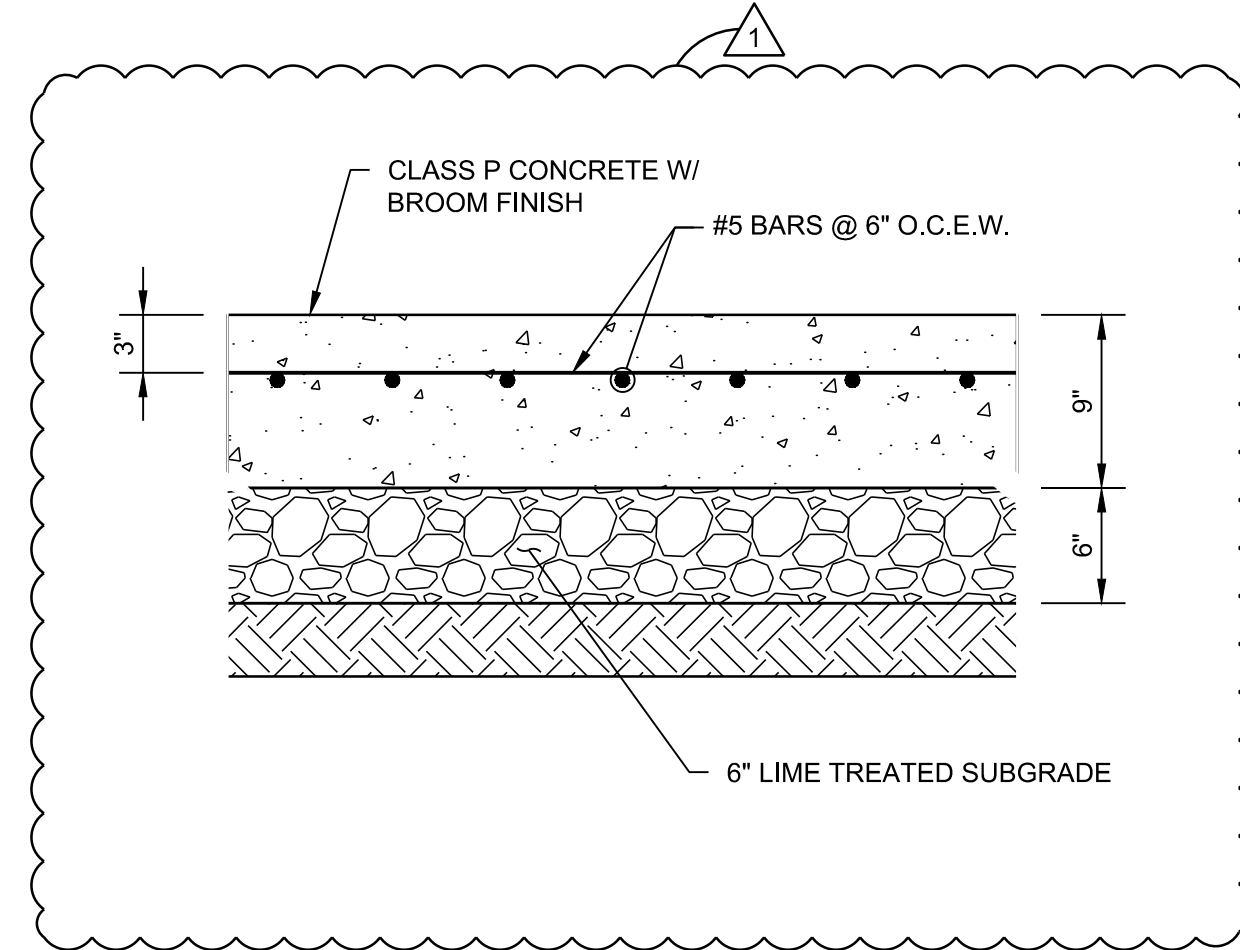
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COSA - CONCRETE SIDEWALK & CURB



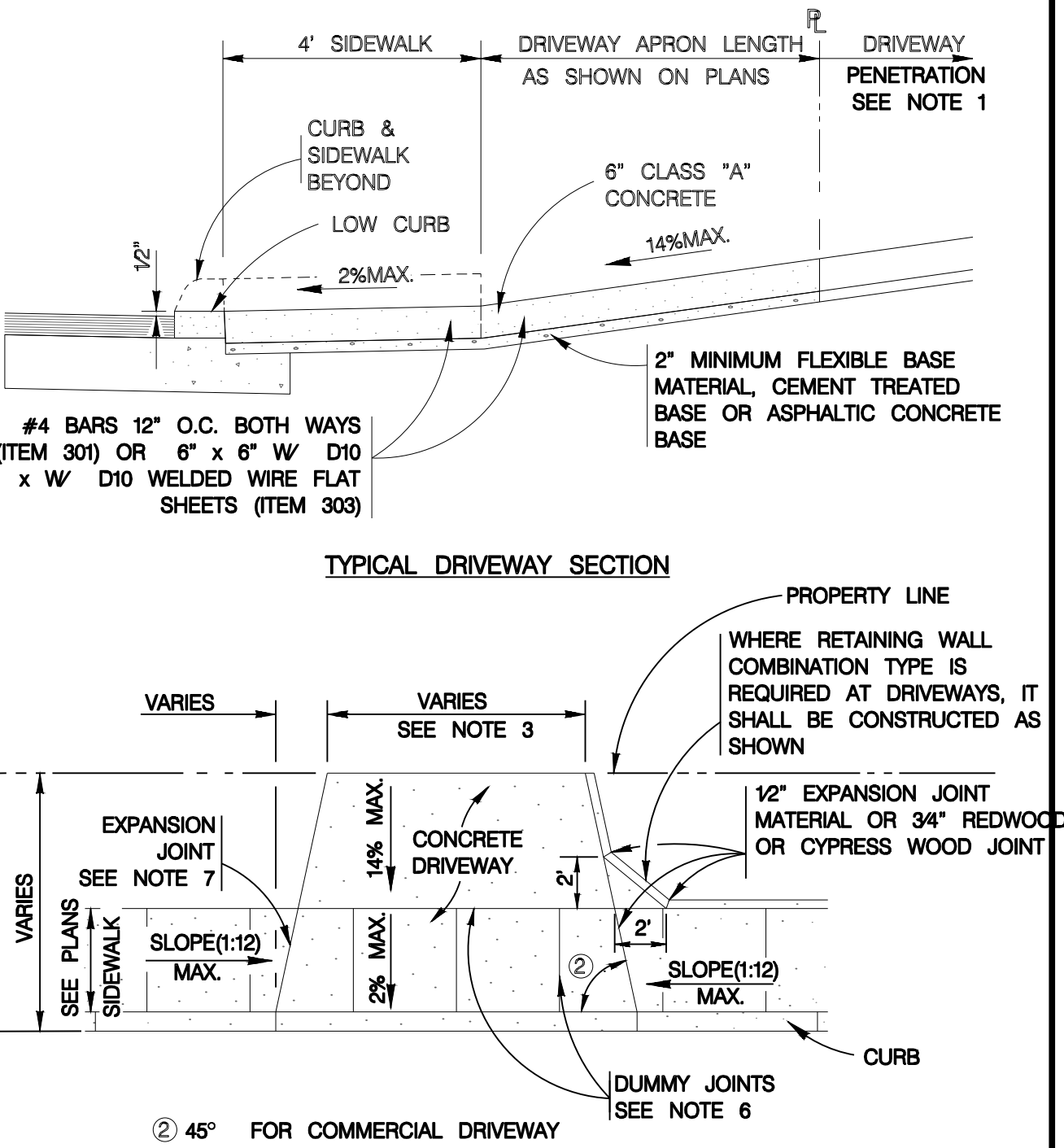
1  
DETAIL  
SCALE: N.T.S.

CONCRETE PAVEMENT SECTION



2  
DETAIL  
SCALE: N.T.S.

COSA - TYPICAL DRIVEWAY DETAIL



3  
DETAIL  
SCALE: N.T.S.

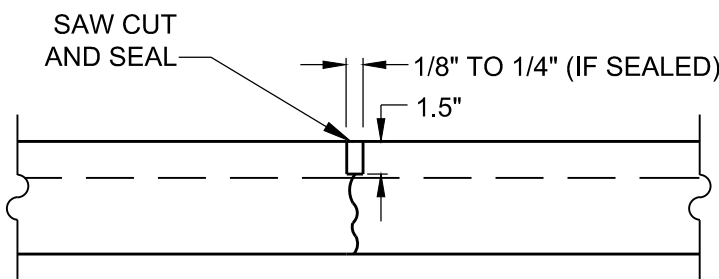
COSA - CONCRETE DRIVEWAY NOTES

CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:  
A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2.
2. 7" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:
4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
5. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB. OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
6. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%. 9

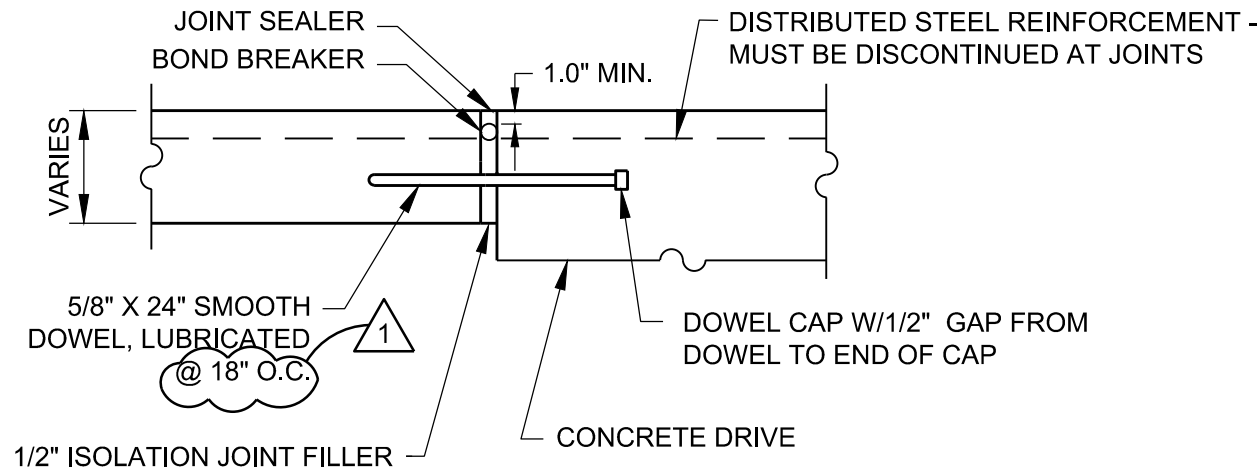
4  
DETAIL  
SCALE: N.T.S.

CONTRACTION JOINT



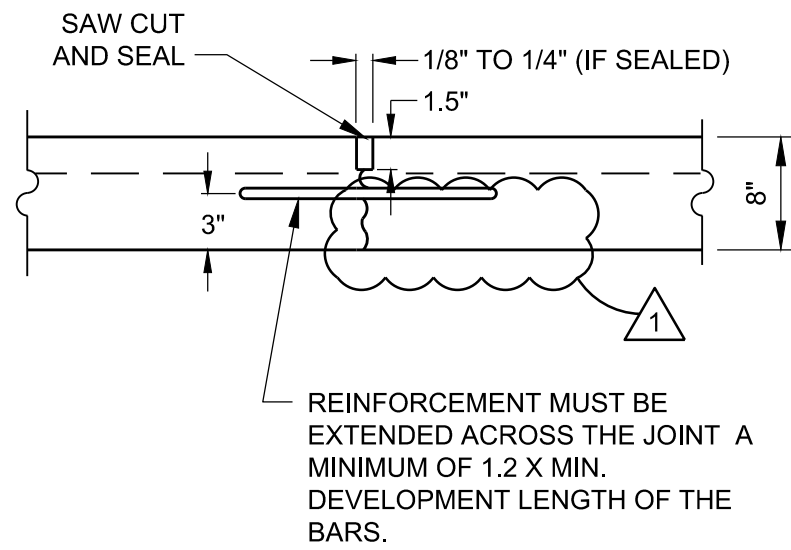
5  
DETAIL  
SCALE: N.T.S.

EXPANSION JOINT

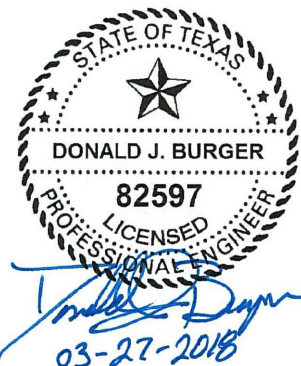


6  
DETAIL  
SCALE: N.T.S.

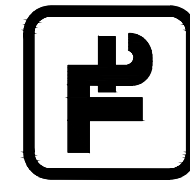
CONSTRUCTION JOINT



7  
DETAIL  
SCALE: N.T.S.



**TETRA TECH**  
Texas Registration No. F-3924



**SAN ANTONIO  
WATER  
SYSTEM**

MARK	DATE	DESCRIPTION	BY
1	03/27/18	PER ADDENDUM #2	DA

SAN ANTONIO WATER SYSTEM  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II  
CIVIL  
STANDARD DETAILS II

Project No.: 15-6004  
Designed By: BLE  
Drawn By: DAC  
Checked By: DJB

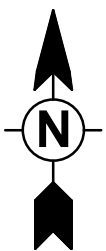
C-502

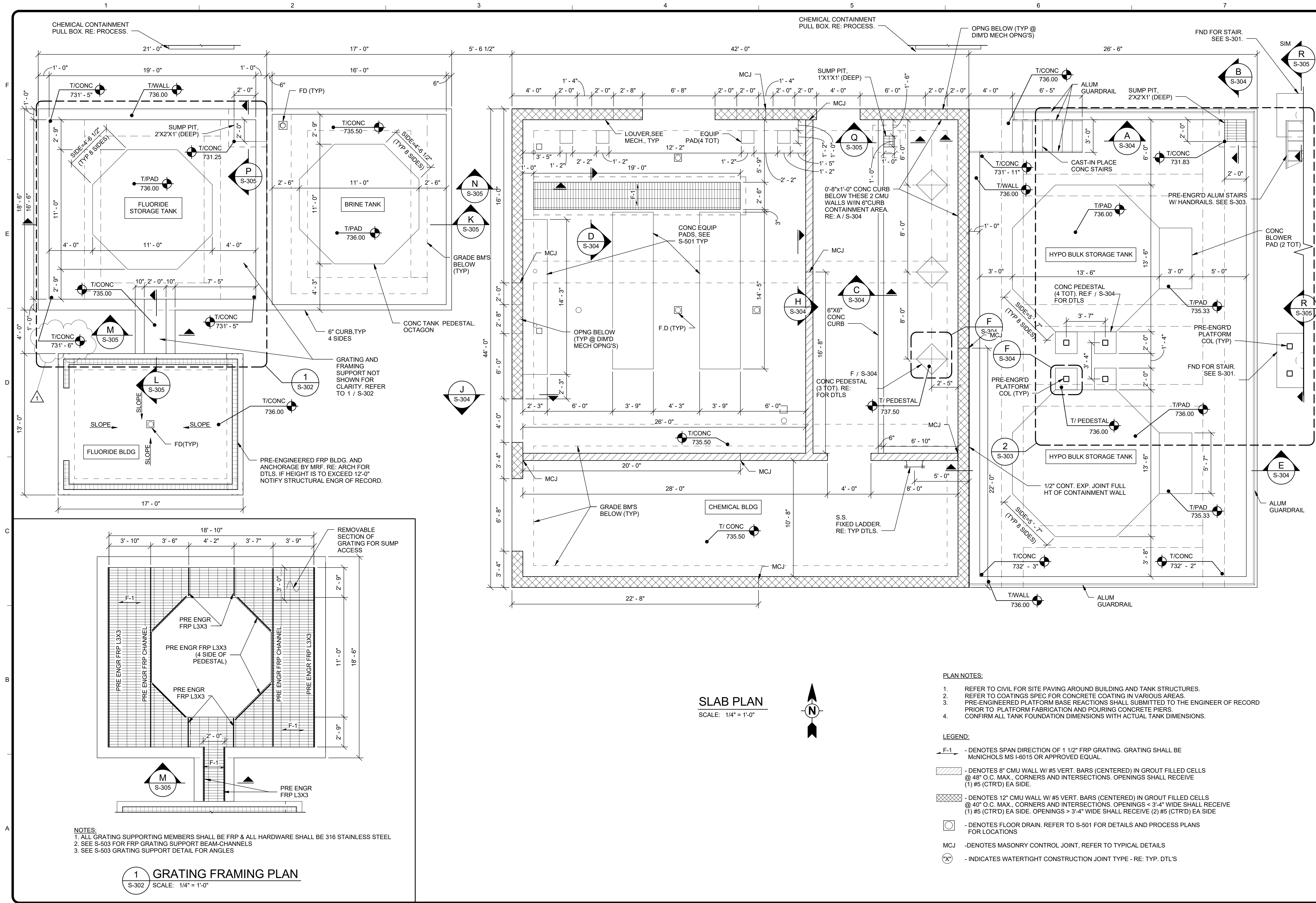
Bar Measures 1 inch

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1. SEE S-501 FOR ADDITIONAL DRILLED PIER INFO.
2. TEMPORARY CASING OF PIER HOLE MAY BE REQUIRED. CONCRETE SHALL NOT BE CAST IF MORE THAN 3" OF WATER IN BOTTOM OF THE PIER BORING. SEE SOILS REPORT FOR ADDITIONAL INFO.
3. ASSUME LENGTH OF PIERS FOR BIDDING PURPOSES ONLY. SEE SOILS REPORT FOR ADDITIONAL INFO.
4. ALL PIERS SHALL BE CAST THE SAME DAY THEY ARE DRILLED.
5. REFER TO CIVIL FOR STRUCTURE LOCATIONS





TETRA TECH

Texas Registration No. F-3924

BID SET

SAN ANTONIO WATER SYSTEM

BY PAF

DATE 03/26/18

MARK

DESCRIPTION

ADDENDUM #2

SAN ANTONIO WATER SYSTEM

BASIN PHASE II PUMP STATION

NEW CHEMICAL BUILDING

STRUCTURAL TOP SLAB

PLAN

Project No.: 200-09308-16003

Designed By: PAF

Drawn By: SPS

Checked By: JLB

S-302

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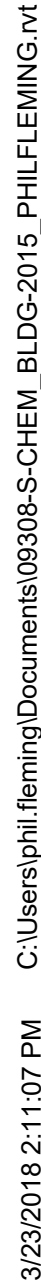
700 N. St Mar's, Suite 300

San Antonio, TX 78205

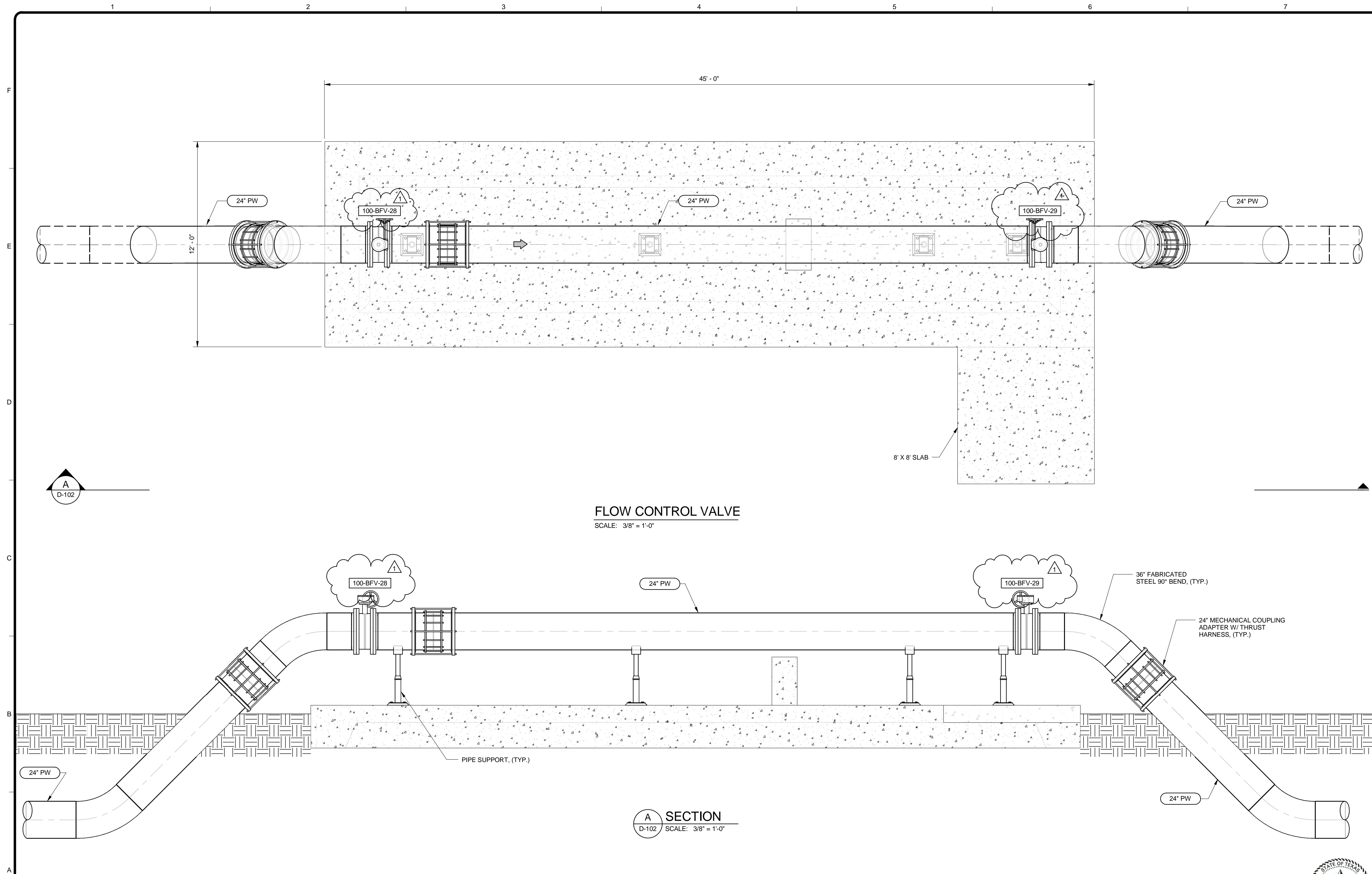
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Bar Measures 1 inch





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**SAN ANTONIO WATER SYSTEM**

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**BASIN PS**

**BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II APPENDUM**

**FUTURE FLOW CONTROL  
VALVE ASSEMBLIES**

Project No.:	200-09308-16003
Designed By:	MMS
Drawn By:	DAC
Checked By:	DJB

D-102









3/27/2018 5:21:34 PM - O:\PROJECTS\SAN ANTONIO\09309\200-09308-16003\CAD\SHEETFILES\NEW CHEMICAL BUILDING VALVE IDENTIFICATION TABLE I.DWG - GARZA, NOEL

F

E

D

C

B

A

CHEMICAL FACILITIES VALVES											
	VALVE NUMBER	GENERAL LOCATION & ENVIRONMENT	SERVICE	VALVE SIZE	VALVE TYPE	INDOORS/ OUTDOORS	END CONNECTIONS	ACTUATOR	SPECIFICATION SECTION	SUPPLIED BY:	REMARKS
103	300-BV-103	Sodium Hypochlorite Metering Pump 1 Discharge	Sodium Hypochlorite	2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Metering Pump Manufacturer	
104	300-BV-104	Sodium Hypochlorite Metering Pump 2 Discharge	Sodium Hypochlorite	2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Metering Pump Manufacturer	
105	300-BV-105	Sodium Hypochlorite Metering Pump 3 Discharge	Sodium Hypochlorite	2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Metering Pump Manufacturer	
106	300-BV-106	Sodium Hypochlorite Metering Pump 1 Discharge	Sodium Hypochlorite	2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Metering Pump Manufacturer	
107	300-BV-107	Sodium Hypochlorite Metering Pump 2 Discharge	Sodium Hypochlorite	2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Metering Pump Manufacturer	
108	300-BV-108	Sodium Hypochlorite Metering Pump 3 Discharge	Sodium Hypochlorite	2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Metering Pump Manufacturer	
109	300-BV-109	Flow Meter Isolation	Sodium Hypochlorite	1 1/2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Contractor	
110	300-BV-110	Flow Meter Isolation	Sodium Hypochlorite	1 1/2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Contractor	
111	300-BV-111	Flow Meter Bypass	Sodium Hypochlorite	1 1/2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Contractor	
112	300-BV-112	Sodium Hypochlorite Feed Isolation	Sodium Hypochlorite	1 1/2"	PVC Ball Valve	Outdoors	Solvent Welded Socket	Lever	15110	Contractor	
114	300-BV-114	Sodium Hypochlorite Containment Sump Discharge to Sewer	Sodium Hypochlorite	2"	PVC Ball Valve	Outdoors	Solvent Welded Socket	Lever	15110	Contractor	
115	300-BV-115	Sodium Hypochlorite Containment Sump Discharge to Truck	Sodium Hypochlorite	2"	PVC Ball Valve	Outdoors	Solvent Welded Socket	Lever	15110	Contractor	
116	300-BV-116	Utility Water Supply to Water Softeners	Utility Water	2"	PVC Ball Valve	Indoors	Solvent Welded Socket	Lever	15110	Contractor	
117	300-CV-2	Fluoride Metering Pump 1 Discharge, On skid	Hydrofluosilicic Acid	1/2"	PVC Diaphragm Check Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
118	300-CV-3	Fluoride Metering Pump 2 Discharge, On skid	Hydrofluosilicic Acid	1/2"	PVC Diaphragm Check Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
119	300-CV-4	Fluoride Metering Pump 3 Discharge, On skid	Hydrofluosilicic Acid	1/2"	PVC Diaphragm Check Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
120	300-CV-5	Flushing Water	Hydrofluosilicic Acid	1"	PVC Ball Check Valve	Indoors	Solvent Welded Socket	N/A	15110	Contractor	
121	300-CV-6	Brine to Water Softener 1	Brine	5/8"	PVC Ball Check Valve	Indoors	Solvent Welded Socket	N/A	15110	OSHG System Manufacturer	
122	300-CV-7	Brine to Water Softener 2	Brine	5/8"	PVC Ball Check Valve	Indoors	Solvent Welded Socket	N/A	15110	OSHG System Manufacturer	
123	300-CV-8	Brine to Water Softener 3	Brine	5/8"	PVC Ball Check Valve	Indoors	Solvent Welded Socket	N/A	15110	OSHG System Manufacturer	
124	300-CV-9	Sodium Hypochlorite Containment Sump	Sodium Hypochlorite	2"	PVC Ball Check Valve	Indoors	Flanged	N/A	15110	Contractor	
125	300-PRV-1	Fluoride Metering Pump 1 Discharge, On skid	Hydrofluosilicic Acid	1/2"	PVC Pressure Relief Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
126	300-PRV-2	Fluoride Metering Pump 2 Discharge, On skid	Hydrofluosilicic Acid	1/2"	PVC Pressure Relief Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
127	300- PRV-3	Fluoride Metering Pump 3 Discharge, On skid	Hydrofluosilicic Acid	1/2"	PVC Pressure Relief Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
128	300- PRV-4	Water Softener Combined Inlet	Potable Water	2"	PVC Pressure Regulating Valve	Indoors	Solvent Welded Socket	N/A	11366	OSHG System Manufacturer	
129	300- PRV-5	Brine Tank Inlet	Softened Water	1 1/2"	PVC Pressure Regulating Valve	Indoors	Solvent Welded Socket	N/A	11366	OSHG System Manufacturer	
130	300- PRV-6	Hardness Monitor Inlet	Softened Water	1/4"	PVC Pressure Regulating Valve	Indoors	Solvent Welded Socket	N/A	11366	OSHG System Manufacturer	
131	300- PRV-7	Sodium Hypochlorite Metering Pump 1 Discharge	Sodium Hypochlorite	2"	PVC Pressure Relief Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
132	300- PRV-8	Sodium Hypochlorite Metering Pump 2 Discharge	Sodium Hypochlorite	2"	PVC Pressure Relief Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
133	300- PRV-9	Sodium Hypochlorite Metering Pump 3 Discharge	Sodium Hypochlorite	2"	PVC Pressure Relief Valve	Indoors	Solvent Welded Socket	N/A	11242	Metering Pump Manufacturer	
134	300-SV-1	Hardness Monitor Inlet from WS-1	Softened Water	1/4"	Solenoid Valve	Indoors	Solvent Welded Socket	Solenoid	15110	OSHG System Manufacturer	
135	300-SV-2	Hardness Monitor Inlet from WS-2	Softened Water	1/4"	Solenoid Valve	Indoors	Solvent Welded Socket	Solenoid	15110	OSHG System Manufacturer	
136	300-SV-3	Hardness Monitor Inlet from WS-3	Softened Water	1/4"	Solenoid Valve	Indoors	Solvent Welded Socket	Solenoid	15110	OSHG System Manufacturer	
137	300-SV-4	Brine Tank Water Inlet	Softened Water	1"	Solenoid Valve	Indoors	Solvent Welded Socket	Solenoid	15110	OSHG System Manufacturer	
138	300-BFV-1	Hydrogen Vent Blower 1 Discharge	Hydrogen Dilution Air	6"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
139	300-BFV-2	Hydrogen Vent Blower 2 Discharge	Hydrogen Dilution Air	6"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
140	300-BFV-3	Hydrogen Vent Blower 3 Discharge	Hydrogen Dilution Air	6"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
141	300-BFV-4	Hydrogen Vent Blower 4 Discharge	Hydrogen Dilution Air	6"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
142	300-BFV-5	Hydrogen Vent	Hydrogen Dilution Air	6"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
143	300-BFV-6	Hydrogen Vent	Hydrogen Dilution Air	6"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
144	300-BFV-7	Hydrogen Dilution Blower 1 Discharge	Hydrogen Dilution Air	4"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
145	300-BFV-8	Hydrogen Dilution Blower 2 Discharge	Hydrogen Dilution Air	4"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
146	300-BFV-9	Hydrogen Dilution Blower 3 Discharge	Hydrogen Dilution Air	4"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
147	300-BFV-10	Hydrogen Dilution Blower 4 Discharge	Hydrogen Dilution Air	4"	Butterfly Valve	Indoors	Flanged	Lever	15110	Contractor	
148	100-BV-1	Chemical Injection at Static Mixer	Sodium Hypochlorite	1 1/2"	Ball Valve	Aboveground	Socket Welded	Lever	15110	Contractor	
149	100-BV-2	Chemical Injection at Static Mixer	Hydrofluosilicic Acid	1/2"	Ball Valve	Aboveground	Socket Welded	Lever	15110	Contractor	
150	100-CV-5	Chemical Injection at Static Mixer	Sodium Hypochlorite	1 1/2"	Ball Check Valve	Aboveground	Socket Welded	N/A	15110	Contractor	
151	100-CV-6	Chemical Injection at Static Mixer	Hydrofluosilicic Acid	1/2"	Ball Check Valve	Aboveground	Socket Welded	N/A	15110	Contractor	
152	300-CV-1	Fluoride Containment Sump	Hydrofluosilicic Acid	2"	PVC Ball Check Valve	Outdoors	Flanged	N/A	15110	Contractor	

NOTE:

1. NOT ALL VALVES ARE SCHEDULED, E.G. ISOLATION VALVES FOR INSTRUMENTS, PRESSURE GAUGES, SAMPLE TAPS, AND OTHER APPURTENANCES ARE NOT SCHEDULED.



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ADDENDUM

**SAN ANTONIO  
WATER  
SYSTEM**

MARK	DATE	DESCRIPTION	BY
1	03/27/18	PER ADDENDUM #2	LM

SAN ANTONIO WATER SYSTEM  
BASIN PUMP STATION IMPROVEMENT  
PROJECT PHASE II  
NEW CHEMICAL BUILDING  
VALVE IDENTIFICATION  
TABLE II

Project No.:	15-6004
Designed By:	MMS
Drawn By:	BLE
Checked By:	DJB

D-314

Bar Measures 1 inch

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