



**WATER RESOURCES INTEGRATION PROGRAM (WRIP) PHASE 2,
PUMP STATION IMPROVEMENTS
SAWS Job No. 16-8604
SAWS Solicitation No. CO-00339**

**ADDENDUM 2
July 2, 2020**

To Bidder of Record:

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

Attention: Proposals will be received either Electronically or through sealed proposals, until 2:00 pm (CDT), July 16, 2020.

RESPONSES TO QUESTIONS

1. None.

CHANGES TO THE SPECIFICATIONS

Request For Competitive Sealed Proposals

1. Page IV-1, last paragraph, DELETE “Answers to the questions will be posted to the web site by **10:00 AM (CT) on July 1, 2020** as a separate document or included as part of an addendum.” And REPLACE with “Answers to the questions will be posted to the web site by **4:00 PM (CDT) on July 7, 2020** as a separate document or included as part of an addendum.”
2. Page IV-2, first paragraph, DELETE “until **10:00 AM (CDT), July 10, 2020.**” And REPLACE with “until **2:00 PM (CDT), July 16, 2020.**”
3. Page IV-2, last paragraph, DELETE “submit a request by **July 9, 2020 by 2:00 PM CDT** to receive access” and REPLACE with “submit a request by **July 15, 2020 by 2:00 PM (CDT)** to receive access”.
4. Page IV-2, last paragraph, DELETE “will be accepted after **July 9, 2020 by 2:00 PM (CDT).**” And REPLACE with “will be accepted after **July 15, 2020 by 2:00 pm (CDT).**”

Specification Section 15065 – Steel Process Piping

1. Paragraph 2.02.A; DELETE paragraph 2.02.A in its entirety and REPLACE with:
“A. Except as otherwise noted, steel pipe, fittings and specials shall be made of carbon steel plate conforming ASTM A572 Grade 42 or ASTM A36 with modified minimum yield strength of 42,000 psi and a minimum tensile strength of 60,000 psi, or coil conforming to ASTM A1018 SS Grade 40 with a minimum yield strength of 42,000 psi and a minimum tensile strength of 60,000 psi or the chemical and physical properties of ASTM A139 Grade C, fabricated in accordance with AWWA C200, spiral seam. Steel made of Grade 45 or higher will not be allowed. For pipe sizes up to 12-inches, the Contractor may substitute steel pipe ASTM A53 “Welded and Seamless Steel Pipe”. The thickness shall be designed for 66 percent of minimum yield stress at hydrostatic test pressure. Minimum wall thickness shall not be less than 1/4 inch or the standard wall thickness for each pipe diameter, whichever is more stringent. Pipe sizes are to be nominal to the outside diameters conforming to AWWA C200.”
2. Paragraph 2.02.A.1 and Paragraph 2.02.A.2 are to remain.
3. Paragraph 2.02; immediately following paragraph 2.02.L ADD

“M. Provide epoxy lining in accordance with AWWA C210 (Liquid Epoxy Coating Systems of the Interior and Exterior of Steel Water Pipelines). Interior epoxy lining shall be applied and inspected prior to installation of the pipe. Epoxy lining shall be Tnemec 140 Pota Pox or engineer approved equal. Lining system shall be NSF 61 approved. Total interior lining system shall be a minimum of 14 mils DFT.”

Specification Section 17300 - Process Control Systems General Provisions

1. Paragraph 1.01.D: DELETE “As a first tier subcontractor to the General Contractor,” and capitalize “provide”.
2. Paragraph 1.06.C.2.a: DELETE paragraph and renumber subsequent paragraphs.
3. Paragraph 1.05.D: DELETE subparagraphs 1.05.D.1 and 1.05.D.2 and REPLACE with the following:
 - “1. Prime Controls
1725 Lakepointe Dr.
Lewisville, TX 75057
Phone: 972-221-4849
 2. Control Panels USA
16310 Bratton Lane, Suite 100
Austin, Texas 78728
Phone: 512.863.3224
 3. RLC Controls Inc.
8115 Hicks Hollow
McKinney, Texas 75071
Phone: 972.542.7375
 4. Walker Industrial
408 W. Nakoma Dr.
San Antonio, Texas 78216
Phone: 210.824.9000
 5. Tesco Controls, Inc.
1221 Abrams Rd., Suite 327
Richardson, TX 75081
Phone: 714.255.8590”
4. Paragraph 1.06.C.3: DELETE subparagraphs 1.06.C.3.a and 1.06.C.3.b and REPLACE with the following:
 - “a. Signature Automation
14679 Midway Road, Suite 205
Addison, Texas 75001
Phone: 469-619-1241
 - b. Prime Controls
1725 Lakepointe Dr.
Lewisville, TX 75057
Phone: 972-221-4849
 - c. Control Panels USA
16310 Bratton Lane, Suite 100
Austin, Texas 78728
Phone: 512.863.3224
 - d. Walker Industrial
408 W. Nakoma Dr.
San Antonio, Texas 78216
Phone: 210.824.9000
 - e. Tesco Controls, Inc.
1221 Abrams Rd., Suite 327

CHANGES TO THE PLANS

Drawing C-1109 – Yard Piping Plan West Quadrant

1. Detail 1 – 8” Blow off Detail; DELETE callout “8” Plug Valve, class 400, FlxFl” and REPLACE with “8” High Performance Butterfly Valve, 300 psi rating, FLxFL”.
2. Detail 1 – 8” Blow off Detail; DELETE symbol for 8” plug valve and REPLACE with symbol for 8” butterfly valve.

Drawing C-1111 – Yard Piping Profiles II

1. Pipe C Profile; DELETE the TOP OF PIPE elevations located at the bottom of the detail “681.87”, “681.62” and “681.33”
2. Pipe C Profile; DELETE the following callout at STA 11+87.55: “STA 11+87.55 HORIZ ANG PT”.
3. Pipe C Profile; DELETE the following callout at STA 11+96.86: “STA 11+96.86 HORIZ ANG PT”.

Drawing C-1112 – Yard Piping Profiles III

1. Pipe E Profile (Tank Inlet); DELETE the following callout “48-OBFV-214 TOP ELEV = 672.75” and REPLACE with “48-OBFV-214 TOP ELEV = 676.75”.

Drawing C-1901 – Civil Standard Details I

1. Detail 6 – 8” Pipe Inspection Access Vault Plan View; DELETE callout “18” Plug Valve, class 300 with handwheel” and REPLACE with “18” Ball Valve, 300 psi rating with Handwheel”.
2. Detail 6 – 8” Pipe Inspection Access Vault Plan View; DELETE symbol for 18” plug valve and REPLACE with symbol for 18” Ball valve.
3. Detail 6 – 8” Pipe Inspection Access Vault Section View; DELETE callout “18” Plug Valve, class 300 with handwheel” and REPLACE with “18” Ball Valve, 300 psi with Handwheel”.
4. Detail 6 – 8” Pipe Inspection Access Vault Section View; DELETE symbol for 18” plug valve and REPLACE with symbol for 18” Ball valve.

Drawing C-1908 – Air Valve Assembly Vault Details

1. Detail A – Vault Section; DELETE callout “6” Plug Valve, class 400 with handwheel” and REPLACE with “6” High Performance Butterfly Valve, 300 psi with handwheel”.
2. Detail A – Vault Section; DELETE symbol for 6” plug valve and REPLACE with symbol for 6” butterfly valve.
3. Detail B – Vault Section; DELETE symbol for 6” plug valve and REPLACE with symbol for 6” butterfly valve.

Drawing CP-2001 – Cathodic Protection Abbreviations, Legend and TS Schedule

1. Remove and Replace sheet in its entirety with the revised version attached to this Addendum.

Drawing CP-2101 – Cathodic Protection Overall Site Plan Anderson Pump Station

1. Remove and Replace sheet in its entirety with the revised version attached to this Addendum.

Drawing CP-2104 – Cathodic Protection System Layout Pipe C

1. Remove and Replace sheet in its entirety with the revised version attached to this Addendum.

Drawing D-1201 – PZ 930 Pump Plan and Section

1. Section A – PZ 930 Pump Section; the callout for the 2” Tap Drain; DELETE “4/D-1904” and REPLACE with “4/D-1901”

Drawing D-1302 – Booster Pump Pad Sections

1. Section A; pipe support callout closest to the pump discharge flange; DELETE “3/D-1901” and REPLACE with “2/D-1902”

Drawing D-1402 – Surge Tank Sections and Details

1. Section B; flange coupling adaptor callout closest to the surge tank outlet connection; DELETE “5/D-1901” and REPLACE with “6/D-1902 (TYP)”.

2. Section B; flange coupling adaptor callout closest to the surge tank outlet connection; ADD "WITH THRUST HARNESS"
3. Section B; pipe support callout; DELETE "3/D-1901" and REPLACE with "2/D-1902"

Drawing D-1502 – Ground Storage Tank Details I

1. Detail 1; adjustable pipe support callout; DELETE "3/D-1902" and REPLACE with "2/D-1902"

Drawing D-1503– Ground Storage Tank Details II

1. Detail 2; adjustable pipe support callout; DELETE "3/D-1902" and REPLACE with "2/D-1902"

Drawing D-1902 – Process Details II

1. Detail 2 – Stanchion Pipe Support ; ADD the following callout "Pipe support material shall be schedule 40 steel pipe."
2. Detail 7 – Ball Valve Support; ADD the following note "5. This detail anticipates the valve being supplied with feet or other supports in the middle of the valve. If the valve does not have integrally cast feet on the valve body and instead needs to be supported at the flange ends, the Contractor shall submit a shop drawing for a valve support that is per the manufacturer's recommendations and considers the loading on the concrete slab, including calculations, that is signed and sealed by a civil or structural engineer registered in the State of Texas. This work is considered part of the contract and will be performed at no additional cost to SAWS."

Drawing D-1905 – Valve Schedule I

1. Line 15 – 30-OPRV-201; DELETE "PIPE C" and REPLACE with "PIPE B"

Drawing E-1004 – Cable & Conduit Schedule

1. Delete Keynote 1 next to conduit and cable ID 525.

Drawing E-1103 – Enlarged Electrical Site Plan - II

1. Correct the scale on the plan view to be 1" = 20'.

Drawing E-1201 – PZ930 Pump Station Electrical Plan

1. Modify Note 1 to read "PULL NEW WIRE IN EXISTING SPARE CONDUIT IN THE SLAB BETWEEN THE MANHOLE AND THE PUMP AND ASSOCIATED PUMP DISCHARGE EQUIPMENT. CONDUIT IS SHOWN BOLD FOR CLARITY ONLY. CONDUIT 763, 764, AND 777 FROM THE MANHOLE TO OPRV-205 AND THE OPRV CONTROL PANEL ARE NEW."

Drawing E-1202 – PZ930 Pump Station Section and Details

1. In the Section View, at the flow transmitter rack, delete the housekeeping pad. Rack shall sit directly on structural pad with grout beneath the baseplates.
2. In Detail C, for the flow transmitter, modify the ground beneath the rack to show as concrete.

Drawing E-1301 – Booster Pump Station Electrical Plan

1. Replace sheet in its entirety with attached sheet E-1301, showing the grounding plan around the pump station.

Drawing E-1304 – Booster Pump Section

1. In the Section View, for the heat trace control cabinet, show equipment rack to sit on a housekeeping pad.
2. In Detail E, for the heat trace control cabinet, show equipment rack to sit on a housekeeping pad.

Drawing E-1606 – Heat Trace Schematics

1. Replace sheet in its entirety with attached sheet E-1606, adding a Schematic 4 for the surge tank.

Drawing E-1904 – Standard Details - IV

1. Add new sheet E-1904.

Drawing E-2902 – Standard Details - II

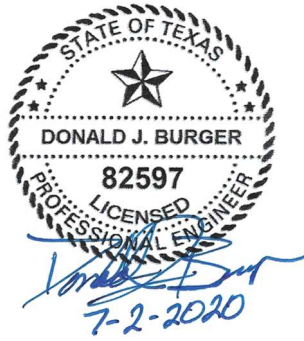
1. Add new sheet E-2902.

CLARIFICATIONS

1. None

END OF ADDENDUM

This Addendum is 12 pages in its entirety.



Don Burger, P.E.
Tetra Tech

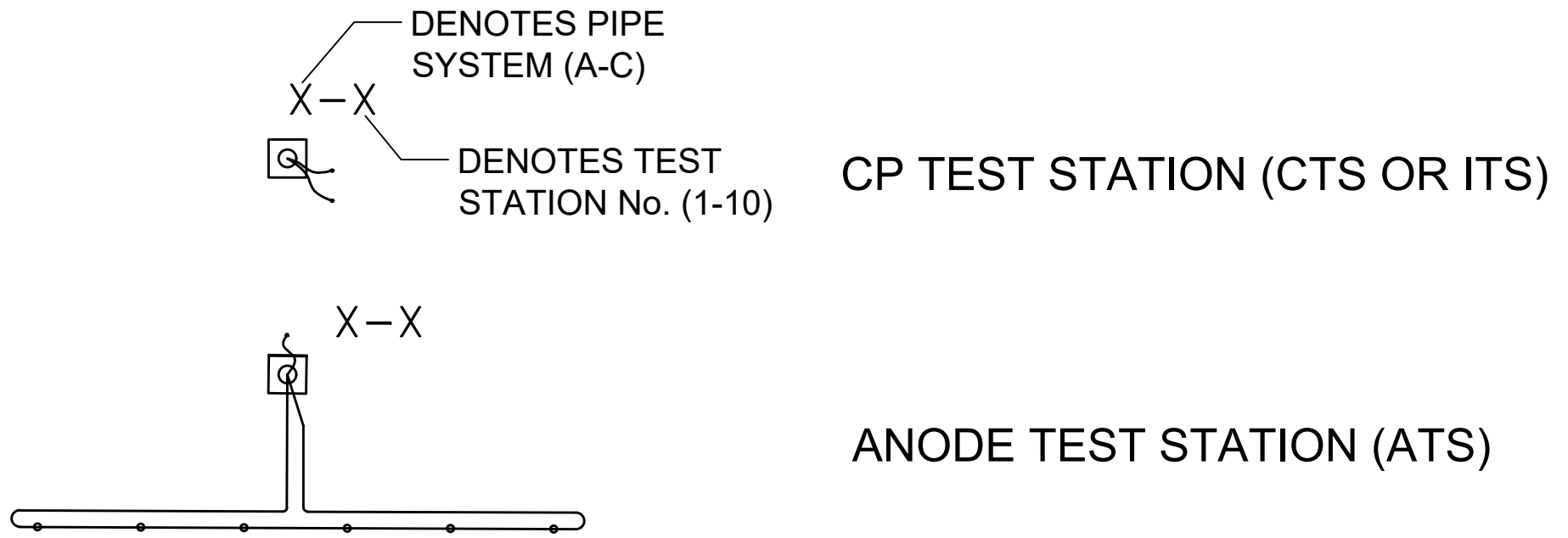
LIST OF STANDARD ABBREVIATIONS

Al	ALUMINUM	No	NUMBER
AWG	AMERICAN WIRE GAUGE	NTS	NOT TO SCALE
AWWA	AMERICAN WATER WORKS ASSOCIATION	OC	ON CENTER
ATS	ANODE TEST STATION	PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
BFV	BUTTERFLY VALVE	PB	PULLBOX
BLK	BLACK	PTS	POTENTIAL TEST STATION
CCP	CONCRETE CYLINDER PIPE	PVC	POLYVINYL CHLORIDE
CP	CATHODIC PROTECTION	REF	REFERENCE
CSE	COPPER SULFATE ELECTRODE	REQ	REQUIRED
CTS	CASED-CROSSING TEST STATION	SCH	SCHEDULE
Cu	COPPER	SPECS	SPECIFICATIONS
DIA	DIAMETER	STA	STATION
ELEC	ELECTRICAL	STL	STEEL
EXIST	EXISTING	STRD	STRANDED
Fe	IRON	TS	TEST STATION
FCA	FLANGED COUPLING ADAPTER	TYP	TYPICAL
FTS	FOREIGN-LINE TEST STATION	VAR	VARIOUS
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE	WL	WATER LINE
ITS	INSULATING-JOINT TEST STATION	WSP	WELDED STEEL PIPE
MIN	MINIMUM	XLPE	CROSS LINKED POLYETHYLENE /USE-2
Mg	MAGNESIUM	Zn	ZINC

CORROSION CONTROL GENERAL NOTES

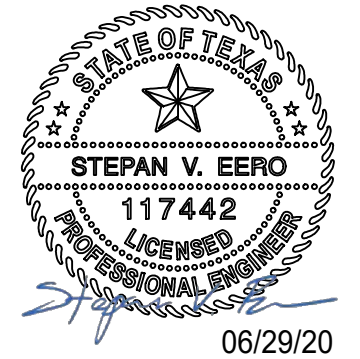
- ALL MATERIALS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS AND PROJECT SPECIFICATIONS.
- ALL CATHODIC PROTECTION LOCATIONS AS SHOWN ARE APPROXIMATE. WHERE NECESSARY DUE TO EXISTING SITE CONDITIONS, AT-GRADE APPURTENANCES AND ANODE GROUND BEDS CAN BE INSTALLED UP TO 15 FEET FROM THE SPECIFIED LOCATIONS. FINAL SYSTEM AS-BUILT CONFIGURATION SHALL BE DOCUMENTED.
- TEST STATIONS SHALL BE INSTALLED AS CLOSE TO OVER THE CENTERLINE OF THE PIPELINE AS POSSIBLE.
- ELECTRICALLY BOND ALL NON-WELDED PIPE JOINTS, INCLUDING THOSE ON PIPE, FITTINGS, VALVES, ETC., EXCEPT THOSE SPECIFIED TO BE ELECTRICALLY INSULATED IN ACCORDANCE WITH DTL 2, SHEET CP-2903.

CORROSION CONTROL LEGEND



Pipe Segment	TS No.	Location	TS Type	Structure(s)	No. and Size of Mg Anodes	Detail
A	A-1	SEE CP-2102	ITS	PROP 48-IN STL WL 48-IN WL SEGMENT II	N/A	DTL 1, SHEET CP-2901
	A-2		ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902
	A-3		ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902
	A-4		ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902
	A-5		ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902
	A-6	ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902	
	A-7	ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902	
	A-8	ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902	
	A-9	ATS	PROP 48-IN STL WL	(10) TEN ANODES - 32LBS EACH	DTL 1, SHEET CP-2902	
	A-10	ITS	SEE CP-2103	PROP 36-IN X 66-IN STL REDUCER EXIST 66-IN CROSS	N/A	DTL 1, SHEET CP-2901
B	B-1	ITS		PROP 48-IN STL WL 7.5 MG CONCRETE GST 60-IN OUTLET	N/A	DTL 1, SHEET CP-2901
	B-2	ITS		PROP 60-IN STL WL EXIST 60-IN WL	N/A	DTL 1, SHEET CP-2901
	B-3	ATS		PROP 48-IN STL WL	(4) FOUR ANODES - 32LBS EACH	DTL 1, SHEET CP-2902
	B-4	ATS		PROP 48-IN STL WL	(4) FOUR ANODES - 32LBS EACH	DTL 1, SHEET CP-2902
	B-5	ATS	PROP 48-IN STL WL	(4) FOUR ANODES - 32LBS EACH	DTL 1, SHEET CP-2902	

1 CP TEST STATION SCHEDULE - ANDERSON PS
SCALE: NONE



TETRA TECH
Texas Registration No. F-3924
www.tetra-tech.com
711 Navarro St, Suite 560
San Antonio, TX 78205
Ph (210) 299-7900 Fax (210) 226-8487

BID SET
DREIYM ENGINEERING
2026 E. Ben White Blvd
Austin, TX 77708
TBP# FIRM No. F-16324

SAN ANTONIO WATER SYSTEM

MARK	DATE	DESCRIPTION	BY	SVE
1	06/20	PER ADDENDUM #2		

SAN ANTONIO WATER SYSTEM
WRIP PHASE 2 PS IMPROVEMENTS
PROJECT: ANDERSON PS
CATHODIC PROTECTION ABBREVIATIONS, LEGEND AND TS SCHEDULES

Project No.:	200-09308-17002
Designed By:	SVE
Drawn By:	SVE
Checked By:	BJB

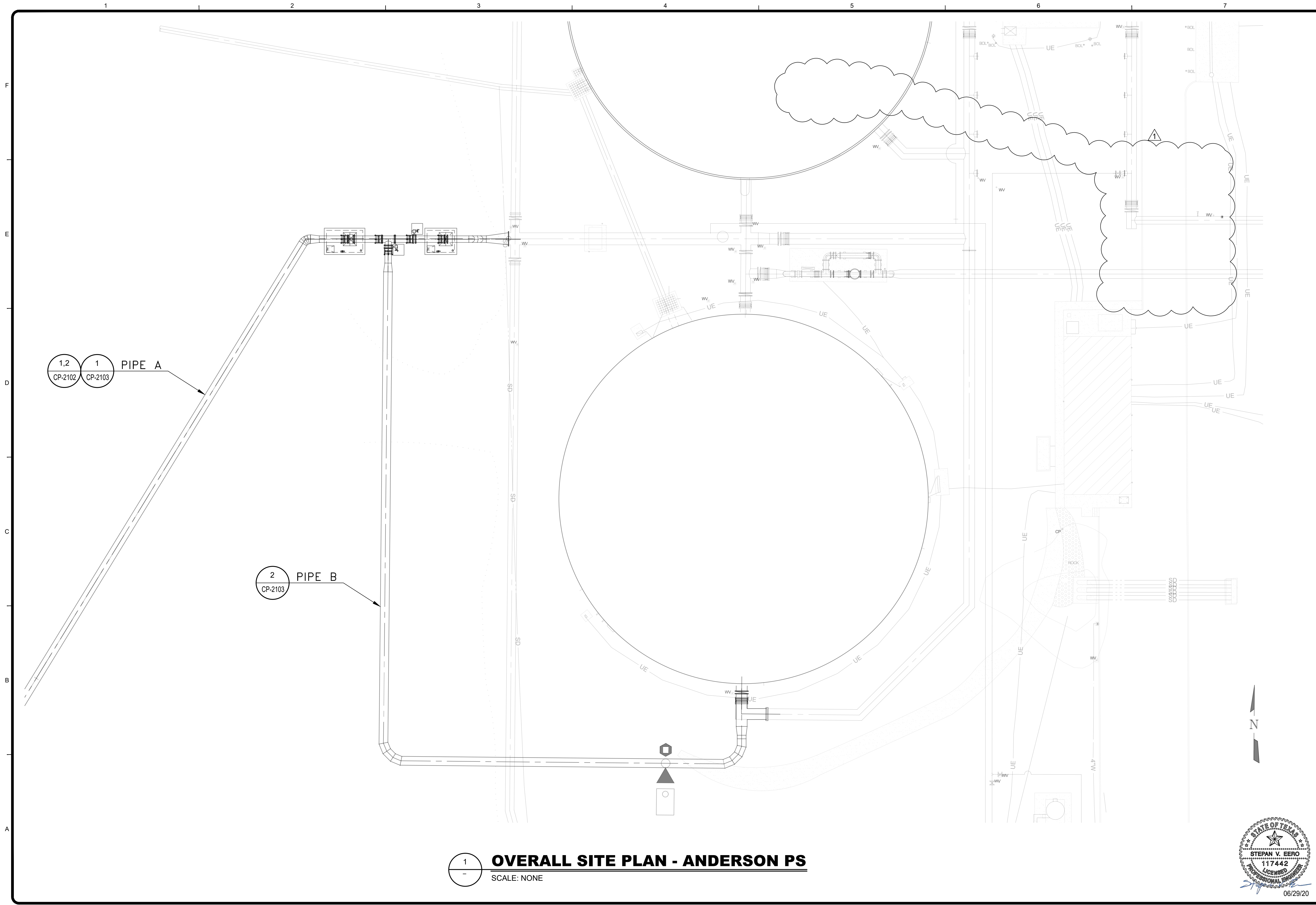
CP-2001

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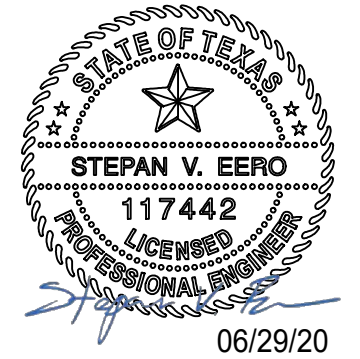
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Bar Measures 1 inch

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1 **OVERALL SITE PLAN - ANDERSON PS**
SCALE: NONE



<p>TETRA TECH Texas Registration No. F-3924 www.tetratech.com 711 Navarro St, Suite 560 San Antonio, TX 78205 Ph (210) 299-7900 Fax (210) 226-6467</p>	
<p>BID SET</p> <p>DREIYM ENGINEERING 2026 E. Ben White Blvd Austin, TX 77706 TBP# FIRM No. F-16324</p>	
<p>SAN ANTONIO WATER SYSTEM</p>	
<p>BY</p>	<p>SVE</p>
<p>MARK</p>	<p>DESCRIPTION</p>
<p>1</p>	<p>PER ADDENDUM #2</p>
<p>SAN ANTONIO WATER SYSTEM WRIP PHASE 2 PS IMPROVEMENTS PROJECT: ANDERSON PS CATHODIC PROTECTION OVERALL SITE PLAN ANDERSON PUMP STATION</p>	
<p>Project No.:</p>	<p>200-09308-17002</p>
<p>Designed By:</p>	<p>SVE</p>
<p>Drawn By:</p>	<p>SVE</p>
<p>Checked By:</p>	<p>BJB</p>
<p>CP-2101</p>	
<p>06/29/20</p>	
<p>Copyright: Tetra Tech</p>	

Bar Measures 1 inch

A B C D E F

1 2 3 4 5 6 7



1



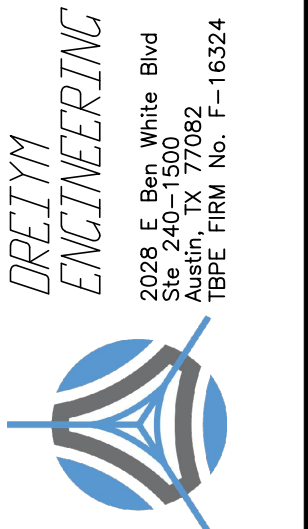
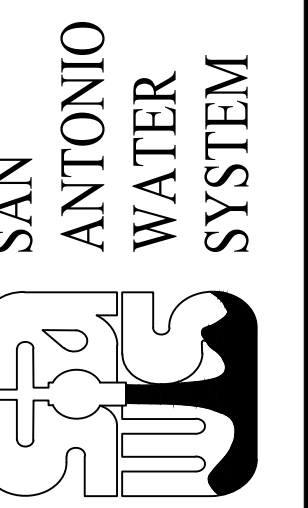
SAN ANTONIO WATER SYSTEM
 WRIP PHASE 2 PS IMPROVEMENTS
 PROJECT - ANDERSON PS
 CATHODIC PROTECTION
 SYSTEM LAYOUT
 PIPE C

Project No.: 200-09308-17002
 Designed By: SVE
 Drawn By: SVE
 Checked By: BJB

CP-2104

Bar Measures 1 inch

MARK	DATE	DESCRIPTION	BY
1	06/20	PER ADDENDUM #2	SVE



2025 E. Ben White Blvd
 Austin, TX 777082
 TPPE FIRM No. F-16324

BID SET



TETRA TECH
 Texas Registration No. F-3924
 www.tetra.tech.com
 711 Navarro St, Suite 560
 San Antonio, TX 78205
 Ph (210) 299-7900 Fax (210) 226-8487

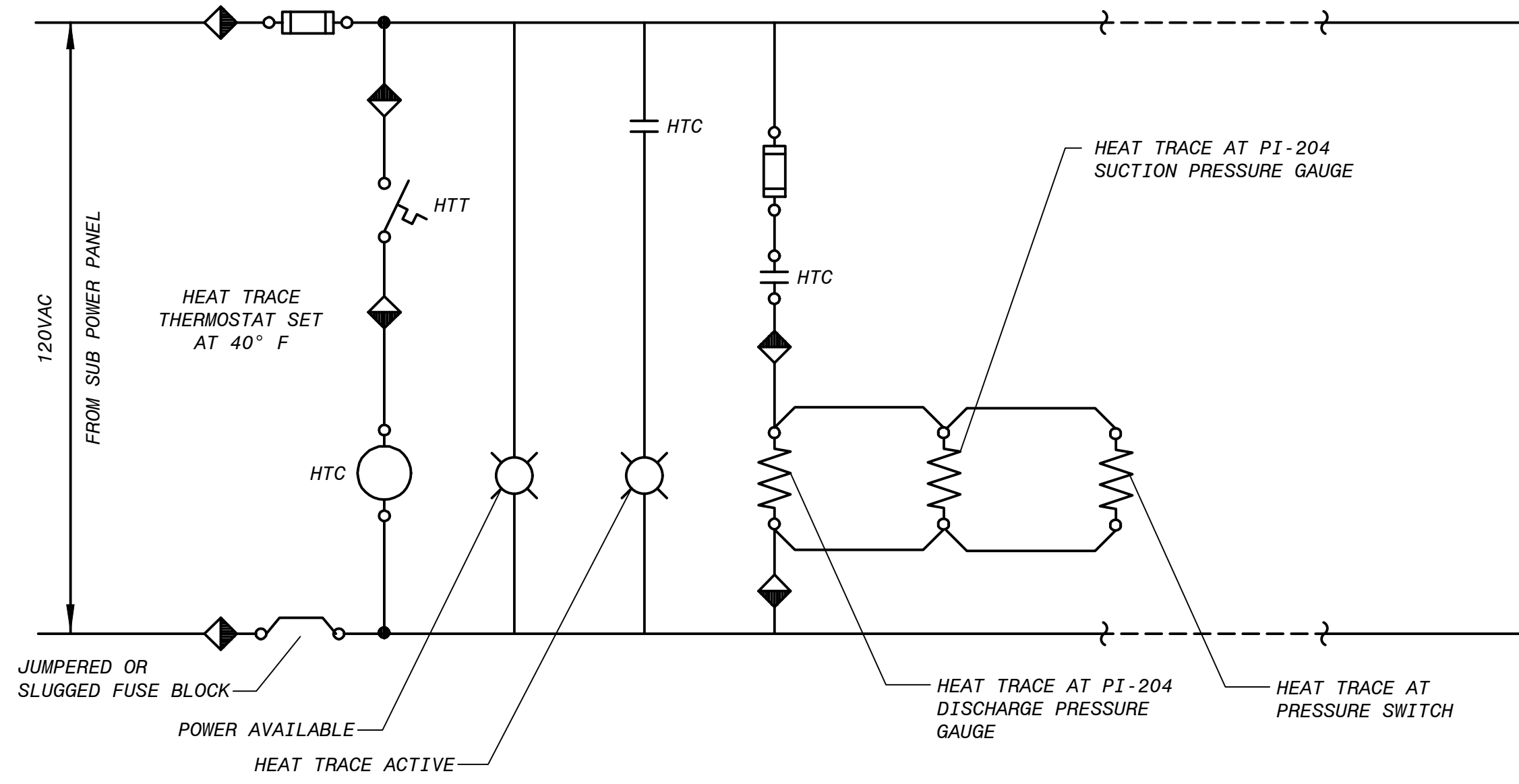
6/29/2020 1:30:43 PM - Z11947_SAWS WRIP PUMP STATIONS PHASE III DRAWINGS(OLD PEARSALELECTRICAL)WORKING1947_E-1606.DWG - JUSTIN HO

LEGEND:

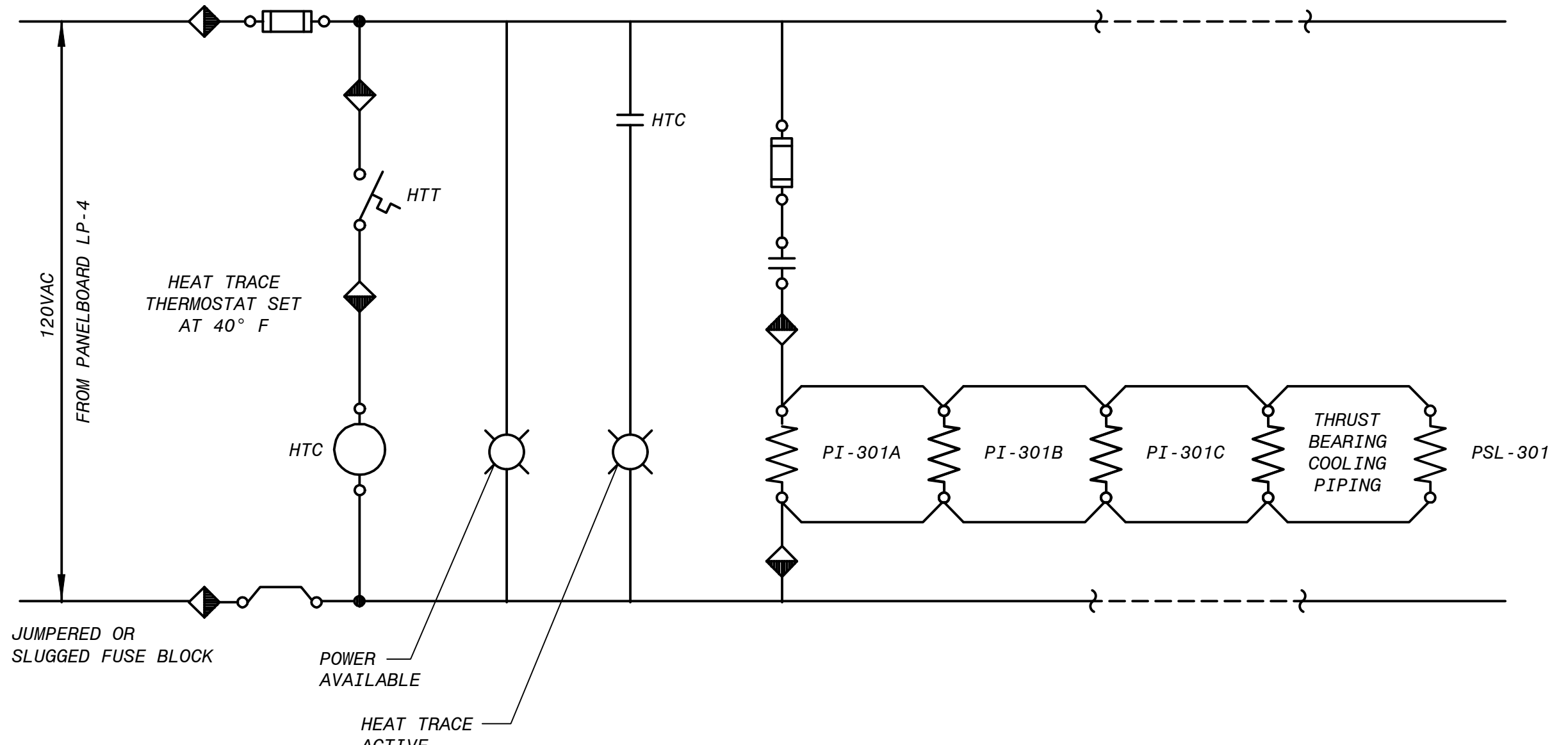
◆ TERMINAL POINT IN HEAT TRACE CONTROL CABINET DARK SIDE INDICATES CONNECTION INTERNAL TO PANEL.

NOTES:

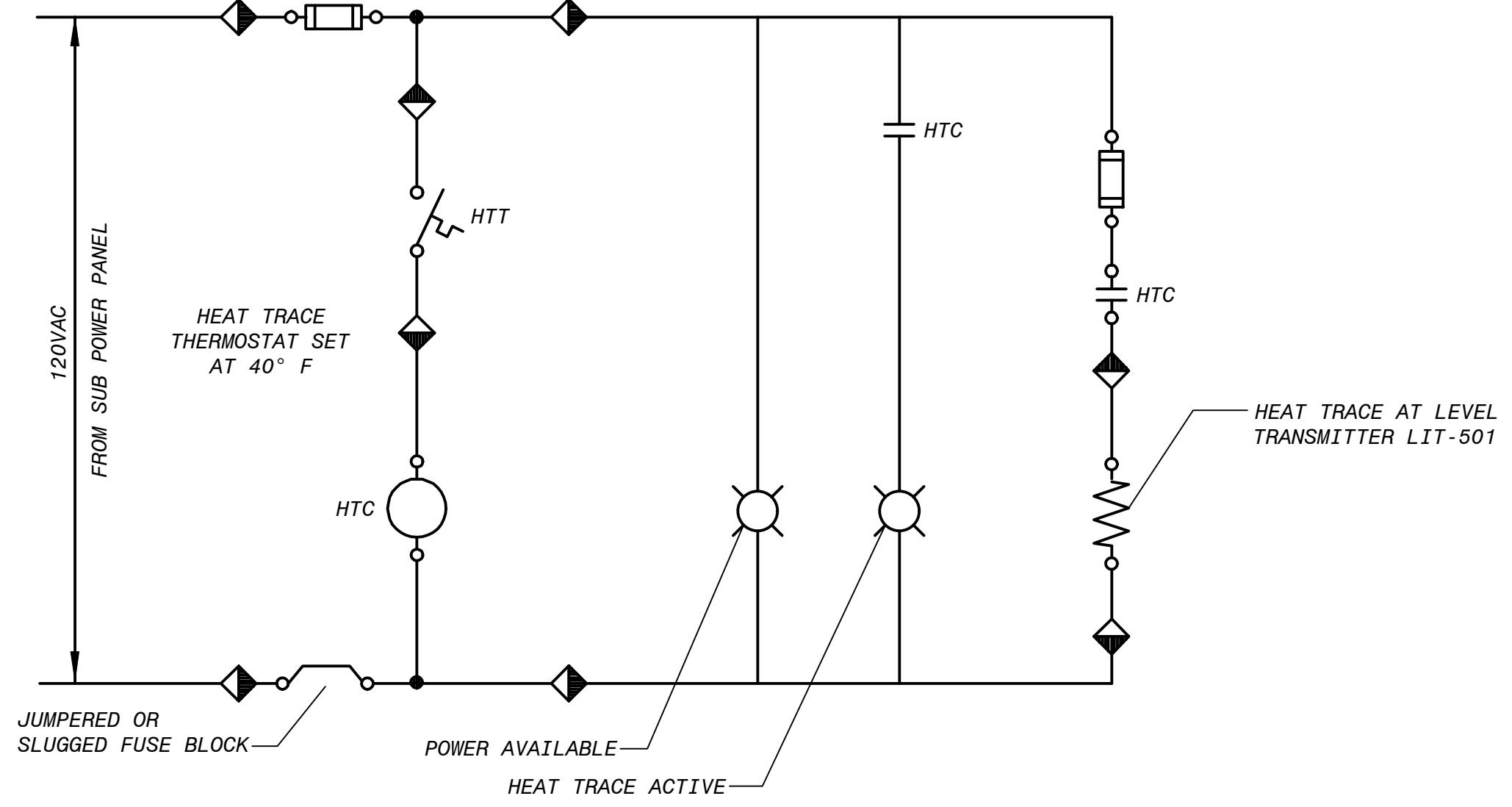
1. NOT ALL HEAT TRACING CONNECTIONS ARE SHOWN.
2. COORDINATE HEAT TRACING WITH THE MECHANICAL DRAWINGS AND SPECIFICATIONS.



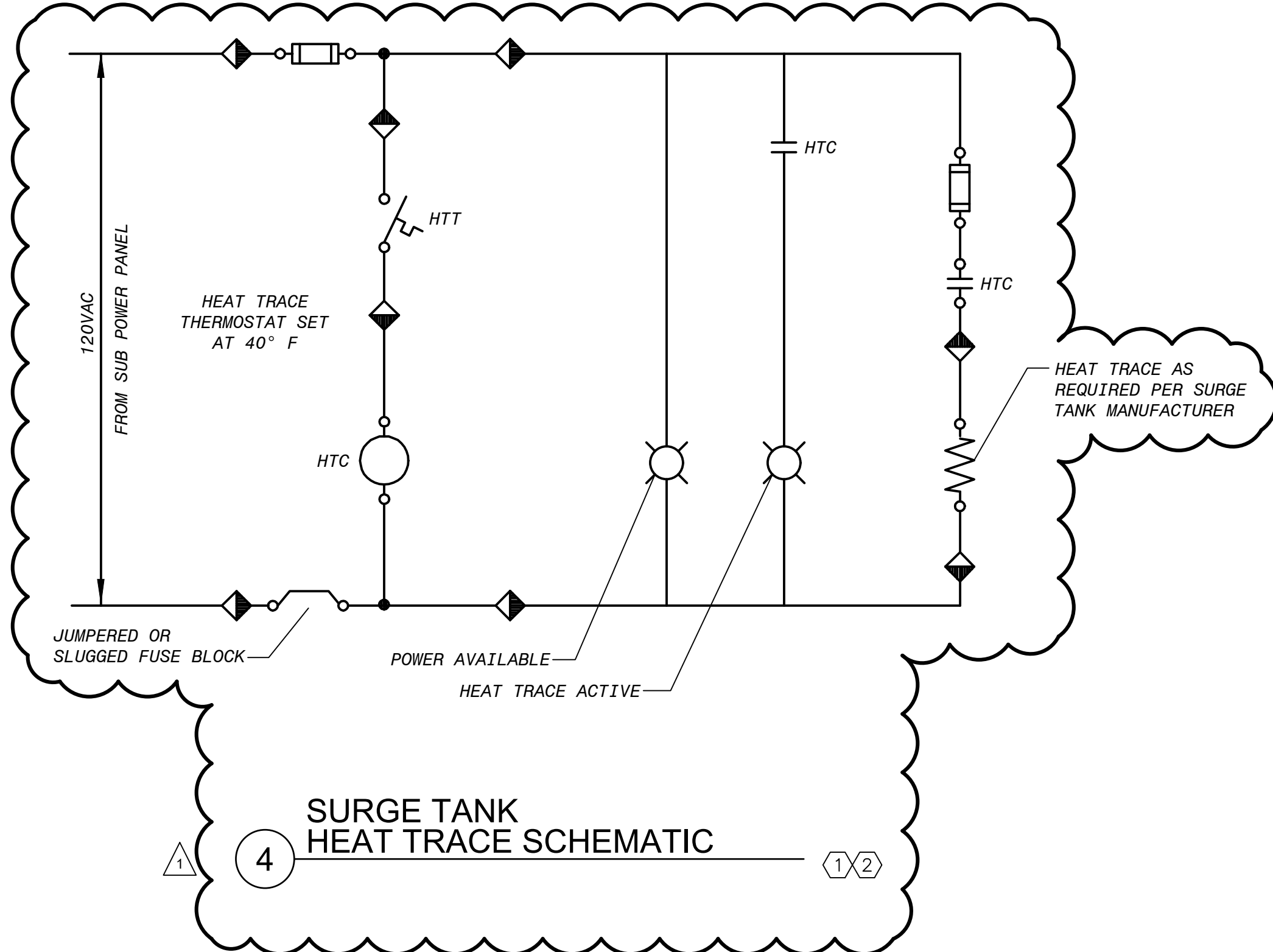
1 PZ930 HEAT TRACE SCHEMATIC
(TYP. FOR ALL PUMPING CIRCUITS)



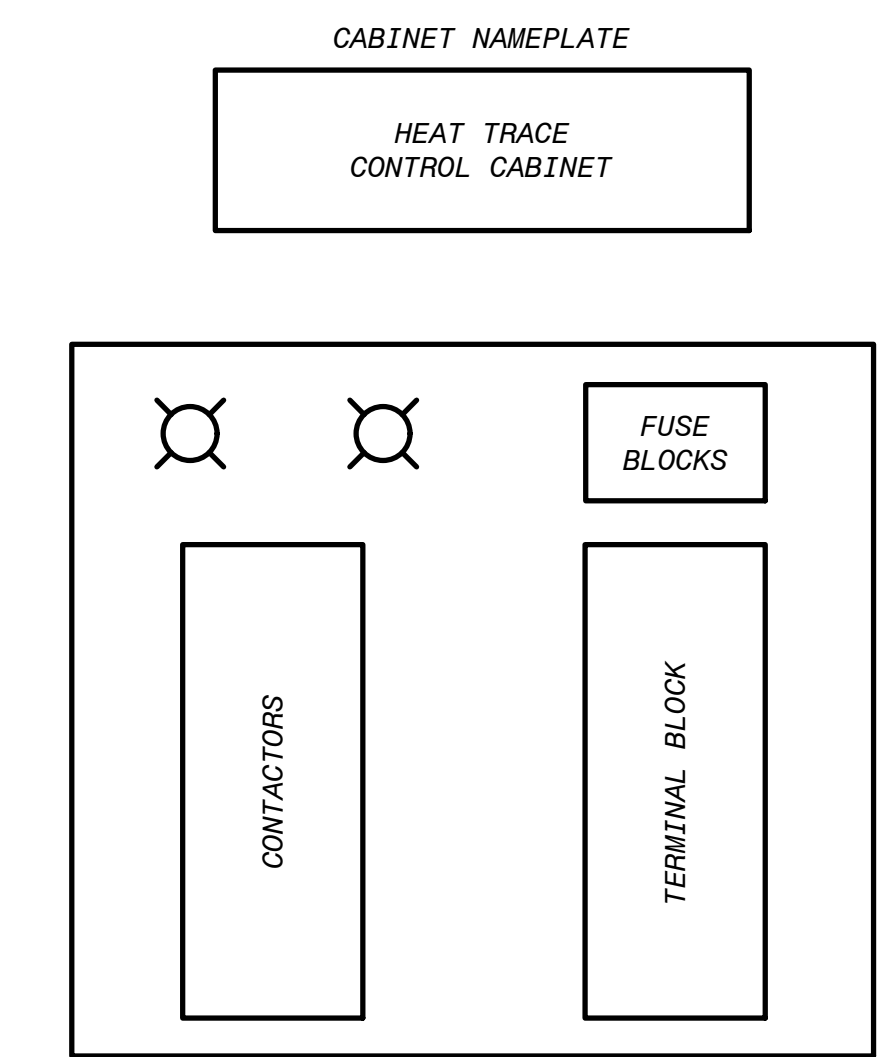
3 BOOSTER PUMP HEAT TRACE SCHEMATIC
(TYPICAL)



2 GROUND STORAGE TANK HEAT TRACE SCHEMATIC
TYPICAL OF (3) TYPICAL FOR RECHARGE PAD, SURGE VALVE, SURGE TANKS



4 SURGE TANK HEAT TRACE SCHEMATIC



HEAT TRACE CONTROL CABINET DIAGRAM
(TYPICAL)

TETRA TECH
Texas Registration No. F-3924
www.tetra.tech.com
700 N. St Mary's, Suite 300
San Antonio, TX 78205
Ph (210) 298-7900 Fax (210) 226-8487

GAI
Gurta & Associates, Inc.
CONSULTING ENGINEERING
Registration No. F-2593
13717 Neuron Road
Dallas, Texas 75244
Fax: 972-460-7125
email: kgg@gaiconsulting.com

SAN ANTONIO WATER SYSTEM

MARK	DATE	DESCRIPTION	BY

SAN ANTONIO WATER SYSTEM
WRIP PHASE 2 PS IMPROVEMENTS
PROJECT: OLD PEARSALL ROAD PS

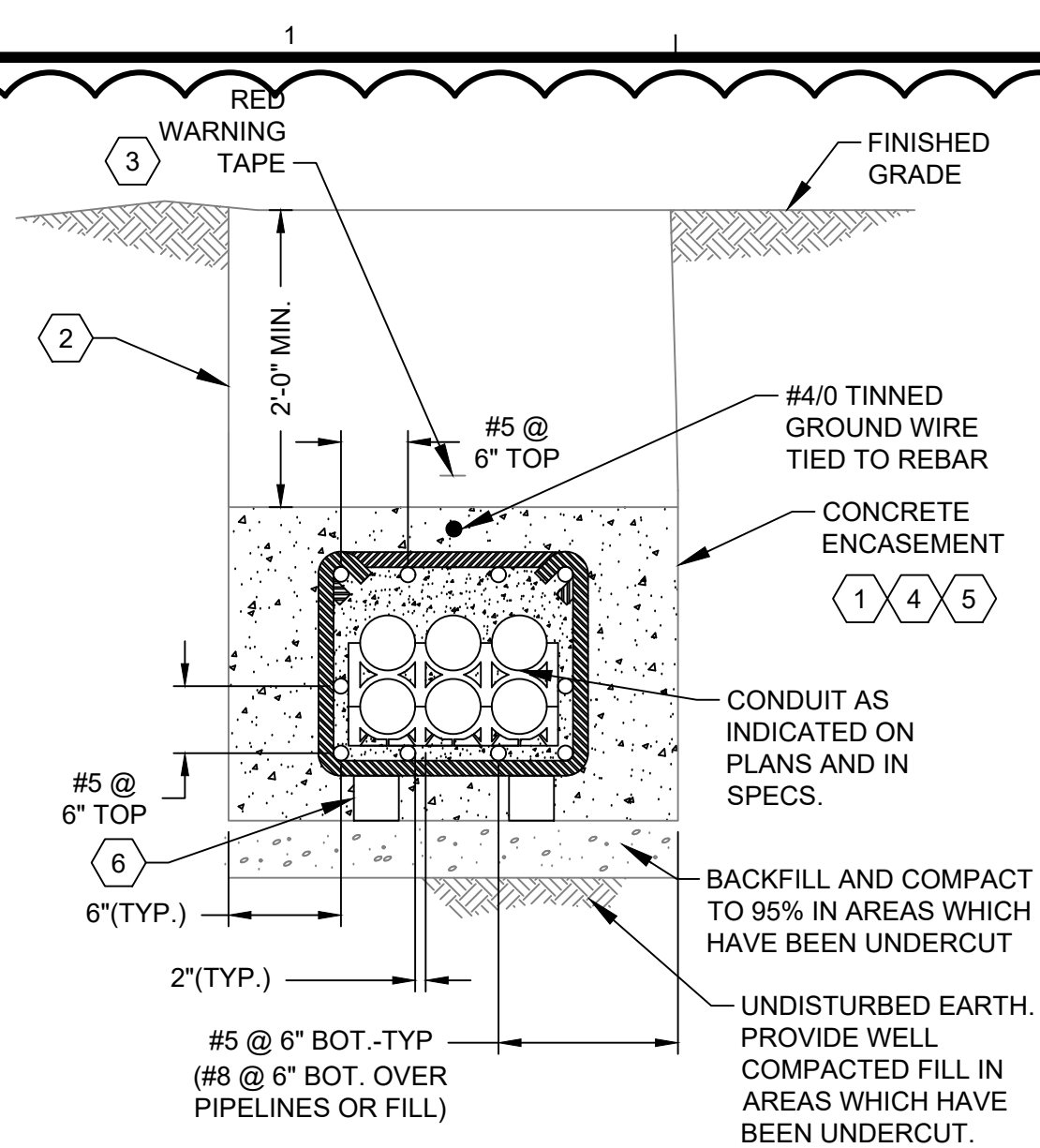
18-8604
DG
JH
VKG

Project No.: 18-8604
Designed By: DG
Drawn By: JH
Checked By: VKG

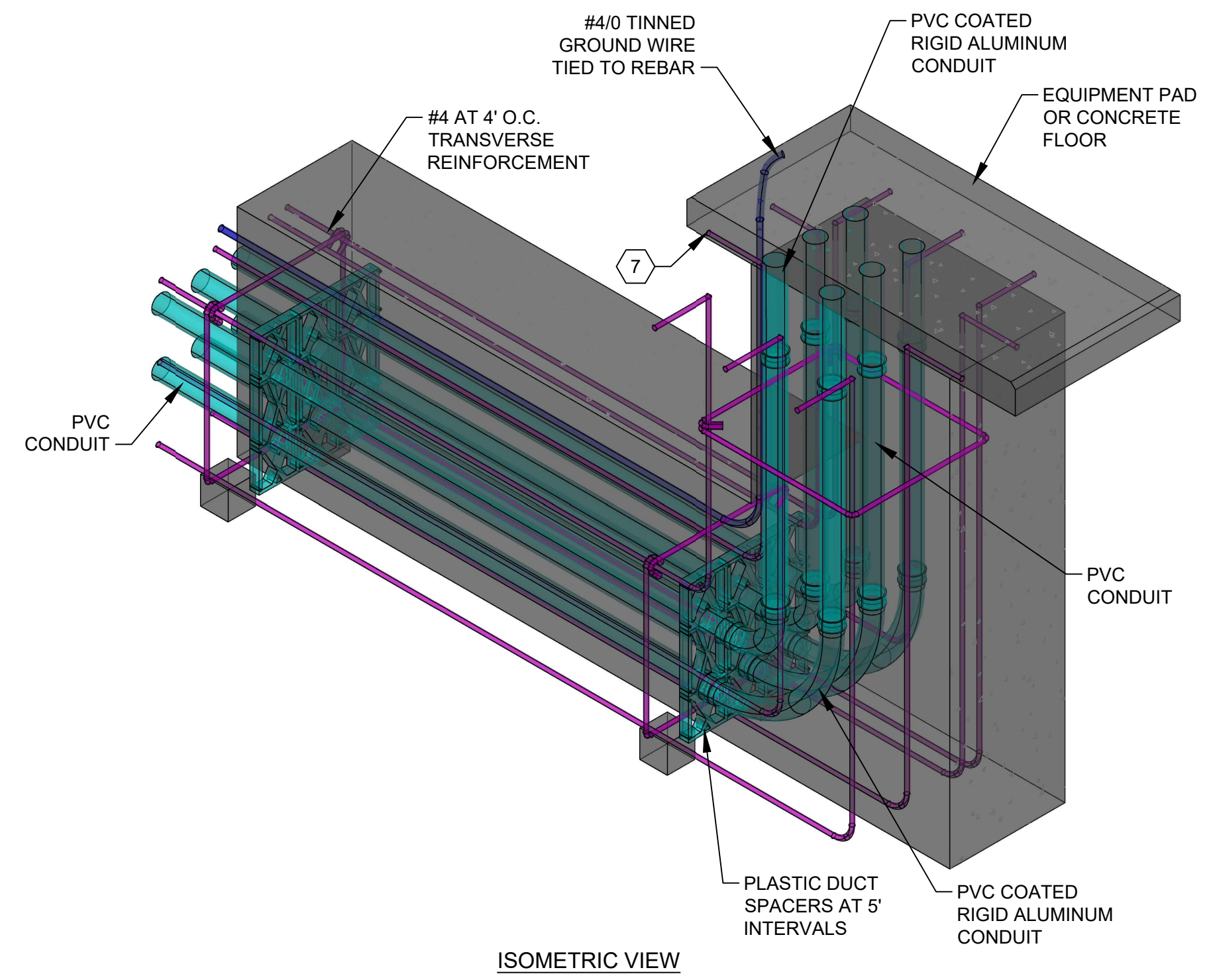
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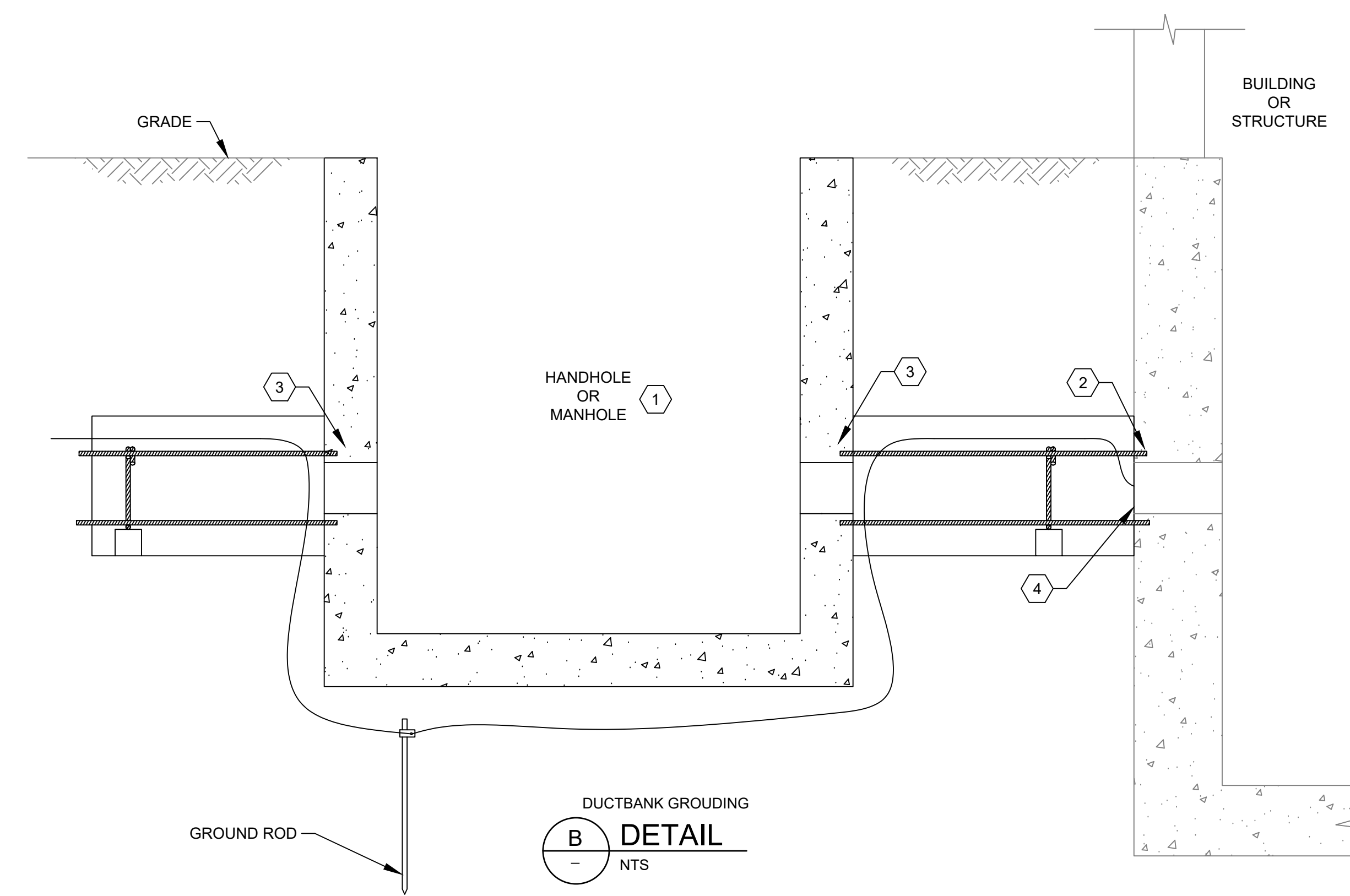
6/29/2020 1:31:36 PM - Z:\1947_SAWS WRIP PUMP STATIONS PHASE IIS DRAWINGS\OLD PEARSALELECTRICAL\WORKING\1947_E-1904.DWG - JUSTIN HO



1 DUCTBANK SECTION



ISOMETRIC VIEW



B DUCTBANK GROUNING DETAIL

NOTES BY SYMBOL "#":

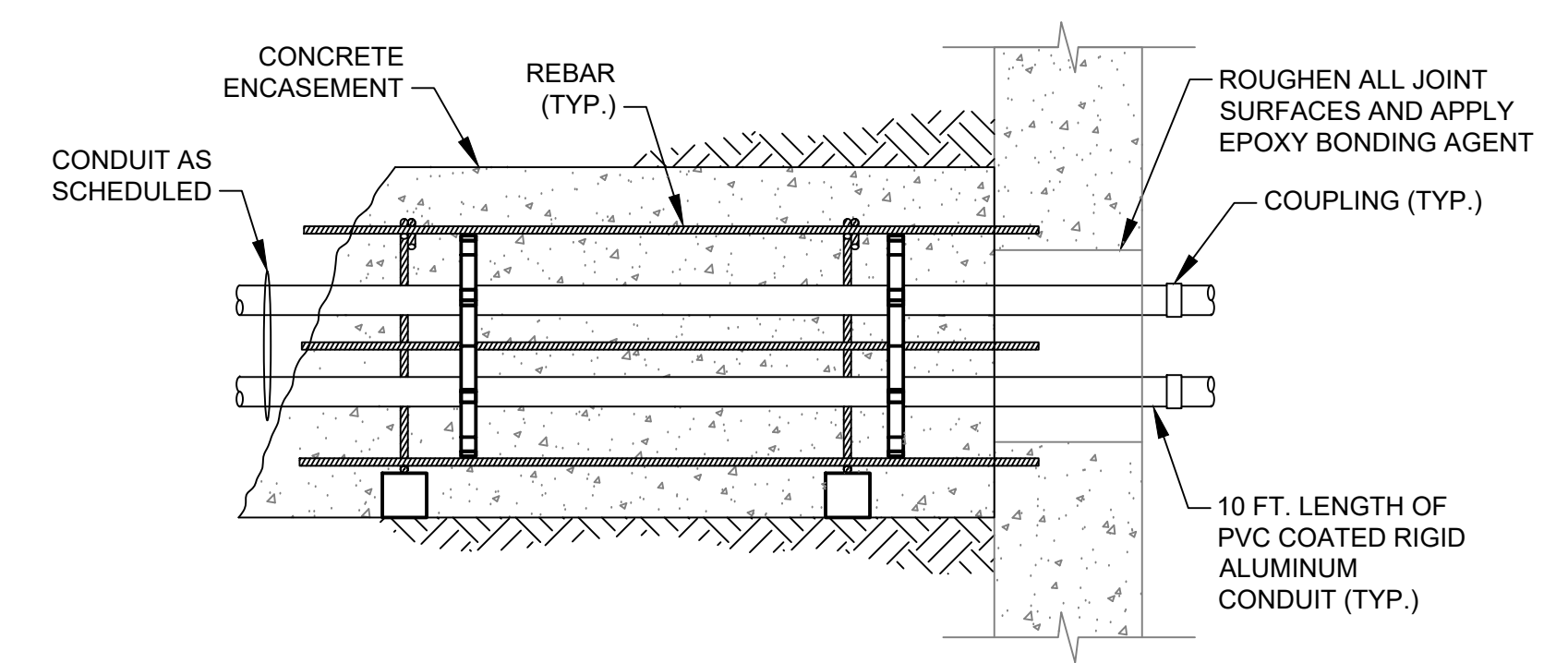
1. PROVIDE MIN. 3 INCHES CONCRETE COVER OVER AND UNDER REINFORCEMENT CAGE AND 6 INCHES ON EACH SIDE.
2. SELECT FILL TO A MINIMUM OF 2 FT. ABOVE DUCTBANK TOP 6" TO BE TOPSOIL. COMPACT ALL BACKFILL IN 8 IN. LIFTS TO 90 PERCENT OF STANDARD PROCTOR (ASTM D 698) DENSITY, UNLESS UNDER EXISTING OR PROPOSED PAVEMENT, OTHER UNDERGROUND UTILITIES, OR STRUCTURES. IF DUCT BANK IS UNDER EXISTING OR PROPOSED PAVEMENT, OTHER UNDERGROUND UTILITIES, OR STRUCTURES, COMPACT ALL BACKFILL IN 8 IN. LIFTS TO 95 PERCENT OF STANDARD PROCTOR DENSITY.
3. REFER TO SPEC SECTION 16600 FOR ADDITIONAL REQUIREMENTS.
4. REFER TO CONCRETE SPECIFICATIONS FOR MIX DESIGN.
5. RED DYE TO BE MIXED IN CONCRETE BEFORE PLACEMENT.
6. 3"x3" CMU BLOCK TWO ON EACH SIDE MINIMUM TO SUPPORT REBAR CASE PLACED 5'-0" ON CENTER.
7. REBAR EMBEDDED IN EQUIPMENT PAD OR CONCRETE FLOOR MINIMUM OF 6".

REINFORCED CONCRETE ENCASED CONDUIT DUCTBANK

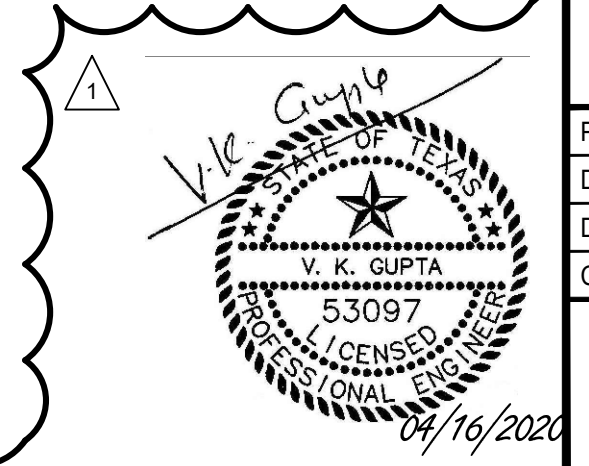
A DUCTBANK SECTION

NOTES BY SYMBOL "#":

1. REFER TO ELECTRICAL MANHOLE DETAILS.
2. DUCTBANK STEEL TO BE EMBEDDED INTO STRUCTURES AND MANHOLES.
3. SEE DETAIL FOR WATERTIGHT DUCT PENETRATIONS BELOW GROUND FOR MANHOLES OR HANDHOLES.
4. SEE DETAIL FOR WATERTIGHT DUCT PENETRATIONS BELOW GRADE FOR STRUCTURES OTHER MANHOLES OR HANDHOLES.



C WATERTIGHT DUCT PENETRATION BELOW GRADE STRUCTURES



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Fax: 972-480-7125
email: kgai@gaiconsulting.com

SAN ANTONIO WATER SYSTEM

MARK	DATE	DESCRIPTION	BY	DG
1	06/30/20	ADDENDUM NO.2		

SAN ANTONIO WATER SYSTEM
WRIP PHASE 2 PS IMPROVEMENTS
PROJECT: OLD PEARSALE ROAD PS
STANDARD DETAILS - IV

Project No.:	18-8604
Designed By:	DG
Drawn By:	JH
Checked By:	VKG

E-1904

