

PLAN SYMBOLS		ONE LINE DIAGRAM SYMBOLS		SCHEMATIC DIAGRAM SYMBOLS	
LEVEL TRANSDUCER; LEVEL TRANSMITTER FLOW TRANSDUCER; FLOW TRANSMITTER PRESSURE TRANSDUCER; PRESSURE TRANSMITTER FLOW INDICATING RECORDER WITH TOTALIZER LIMIT SWITCH FLOW SWITCH TERMINAL BOX WITH DESIGNATION, NEMA 3R PB = ELECTRICAL POWER PULL BOX OR MANHOLE PH = ELECTRICAL POWER HAND HOLE HH = ELECTRICAL POWER HAND HOLE WALL MOUNTED EXTERIOR LIGHTING FIXTURE WITH DESIGNATION IN CENTER SQUARE OR ROUND CEILING MOUNTED INTERIOR OR SOFFIT MOUNTED EXTERIOR LED LIGHTING FIXTURE WITH DESIGNATION LED LIGHTING FIXTURE WITH DESIGNATION LED STANCHION FIXTURE WITH DESIGNATION LED CUTOFF EXTERIOR LIGHTING FIXTURE TIME CLOCK AND ROOF MOUNTED PHOTOCELL REMOTE TERMINAL UNIT ANTENNA REMOTE GENERATOR ANNUNCIATOR PILOT LIGHT. COLOR INDICATED.	CONDUIT ROUTED UNDERGROUND OR IN FLOOR SLAB. EXPOSED OR CONCEALED CONDUIT ABOVE FLOOR CONDUIT & WIRE DESIGNATION, E.G., 3 #10 POWER, 1 #10 (G) IN 2" CONDUIT; (P)=POWER; (C) = CONTROL; (G) = GROUND; (A) = ALARM; (SH) = SPACE HEATER; (I) = INSTRUMENTATION; (SP) = SPARE WIRES (EC) = EMPTY CONDUIT CONDUIT TURNING DOWN CONDUIT TURNING UP CONDUIT WITH TWISTED PR SHIELDED CABLE. SHOWN ABOVE FINISH FLOOR OR GRADE AND SHOWN BELOW. WIRING IN CONDUIT. SHORT LINES INDICATE HOT WIRES; LONG LINE INDICATES NEUTRAL; SEE SYMBOL BELOW FOR GROUND WIRE, #12 AWG TYPE THWN UON GROUND WIRE. IN CONDUIT. HOT, NEUTRAL & GROUND, DENOTES THE LIMITS OF SWITCHING WHEN SHOWN BETWEEN ROOMS ON LIGHTING PLANS GROUND WIRE. BARE COPPER. UNDERGROUND. FLEXIBLE CONDUIT OR PORTABLE CABLE CONDUIT AND WIRE DESIGNATION. KEYNOTE REFERENCE MOTOR CONNECTION. HP INDICATED. AS SHOWN ON PLAN DWG. ENCLOSURE MOTOR CONTROL CENTER. NO. OF SECTIONS INDICATED. DISCONNECT SWITCH. JUNCTION BOX GROUND ROD. 3/4" X 10'-0" 120 VOLT, 20A, 2 POLE, GROUND FAULT INTERRUPTER TYPE DUPLEX RECEPTACLE. PROVIDE WITH SS WEATHERPROOF COVER AND SS BACKBOX WHEN SHOWN AT EXTERIOR LOCATIONS. 120 VOLT, 20A, 2 POLE, GROUNDING DUPLEX CONVENIENCE OUTLET OR RECEPTACLE. (ABBREVIATION=DCO) SPST SWITCH WHEN SHOWN ON LIGHTING PLANS DENOTES SWITCHING FOR THAT SAME ROOM, WHICH IT IS SHOWN; OR SS WEATHERPROOF SWITCH WITH PILOT LT PROVIDE WITH SS (STAINLESS STEEL) BACKBOX AND SS WP COVER LOW VOLTAGE (120/208V) HIGH VOLTAGE (277/480V) TRANSFORMER - SEE ONE LINE FOR SIZE EMERGENCY PUSHBUTTON - SQUARE 'D' #9001KR2B-KA1 RED MOMENTARY PUSHBUTTON WITH EXTENDED GUARD AND PUSH-TO-TEST PILOT LIGHT. SS SELECTOR SWITCH: HOA = HAND-OFF-AUTO OOT = ON-OFF-TEST LOR = LOCAL-OFF-REMOTE SS = START-STOP X = KEY OPERATED MOR = MANUAL-OFF-REMOTE	CIRCUIT BREAKER, THERMAL MAGNETIC, RATING AND NUMBER OF POLES AS SHOWN. MAGNETIC TRIP ONLY MOTOR CIRCUIT PROTECTOR. SURGE PROTECTION/TRANSIENT VOLTAGE SURGE SUPPRESSOR POWER TRANSFORMER. RATING AND PRIMARY AND SECONDARY VOLTAGES AND WINDING CONNECTIONS INDICATED. CURRENT TRANSFORMER. TURNS RATIO AND NUMBER REQ'D. AS INDICATED. MOTOR. HP INDICATED. AS SHOWN ON ONE-LINE DIAGRAM. TIME DELAY RELAY 3-PHASE POWER MONITOR. POWER MONITOR RELAY SOFT START - SOLID STATE NON-REVERSING STARTER WITH MOTOR CIRCUIT PROTECTOR DISCONNECT, MAIN FUSE AND ISOLATING CONTACTOR. (WHEN SHOWN GRAY SCALED WITH DASHED LINES, PROVIDE SPARE SPACE IN MCC FOR FUTURE DEVICE, SIZE AS SHOWN) MOTOR OVERLOAD ALARM HORN FUSED DISCONNECT SWITCH. SWITCH AND FUSE SIZE INDICATED. NON FUSED DISCONNECT SWITCH. SIZE INDICATED. PUSHBUTTON - START/STOP UNLESS OTHERWISE NOTED SELECTOR SWITCH PILOT LIGHT. COLOR INDICATED. ELAPSED TIME METER POWER COMPANY KILOWATT HOUR METER CONDUIT SEAL SPST SWITCH IN A NEMA 4X ENCLOSURE. COMBINATION FUSIBLE DISCONNECT/STARTER. PROVIDE MINIMUM NEMA SIZE 1 STARTER & FUSE PER MOTOR MFR'S RECOMMENDATIONS FLOAT LEVEL SWITCH. LSHH=HIGH LEVEL;LSLL=LOW LEVEL; LSO=PUMPS OFF; LS1=LEAD PUMP START; LS2=LAG PUMP START. AUTOMATIC TRANSFER SWITCH. NUMBER OF POLES AND RATING AS NOTED. GENERATOR PUMP TEMPERATURE SWITCH; SEAL LEAK DETECTOR; LEVEL INDICATOR/CONTROLLER INTRINSICALLY SAFE BARRIER	MOTOR SPACE HEATER, PANEL HEATER. MOTOR STARTER COIL. RELAY COIL. NORMALLY OPEN RELAY CONTACT. RELAY NUMBER INDICATED NORMALLY CLOSED RELAY CONTACT. RELAY NUMBER INDICATED MOTOR STARTER OVERLOAD CONTACT. OPENS ON OVERCURRENT TIME DELAY RELAY. ON OR OFF DELAY AS NOTED. 3 POSITION SELECTOR SWITCH. MAINTAINED CONTACT TYPE. H-O-A = HAND-OFF-AUTO; M-O-R = MANUAL-OFF-REMOTE L-O-R = LOCAL-OFF-REMOTE XOO = CONTACT STATE AT EACH POSITION 2 POSITION, ON-OFF SELECTOR SWITCH. MAINTAINED CONTACT TYPE. XO = CONTACT STATE AT EACH POSITION. 2 POSITION, TRANSMITTER-FLOAT SWITCH CONTROL SELECTOR SWITCH. MAINTAINED CONTACT TYPE. XO = CONTACT STATE AT EACH POSITION. MOMENTARY CONTACT TYPE PUSHBUTTONS. NORMALLY OPEN; AND-NORMALLY CLOSED. SPST TOGGLE SWITCH DPST TOGGLE SWITCH PHASE MONITOR AUXILIARY RELAY CONTACT. OPENS ON PHASE FAILURE. PILOT LIGHT. PUSH-TO-TEST. COLOR INDICATED. ELAPSED TIME METER CONTROL POWER TRANSFORMER - 480 VOLT PRIMARY, 120 VOLT SECONDARY. FUSE GROUND CONNECTION TEMPERATURE SWITCH. OPENS ON RISING TEMPERATURE LEVEL FLOAT LEVEL SWITCH. CLOSING ON RISING LEVEL. FLOAT LEVEL SWITCH. OPENS ON RISING LEVEL.	TERMINAL FOR CONTROL WIRING IN RTU PANEL TERMINAL FOR I/O WIRING IN CONTROL PANEL TERMINAL IN MOTOR CONTROL CENTER OR PUMP POWER PANEL TERMINAL FOR WIRING AT LOCAL PANEL OR JUNCTION BOX WIRING REMOTE FROM CONTROL PANELS WIRING INSIDE OF CONTROL PANELS CONNECTION. NO CONNECTION. SHIELDED TWISTED PR. #18 INSTRUMENTATION WIRE WITH SHIELD COILED AND TAPED SHIELDED TWISTED PR. #18 INSTRUMENTATION WIRE WITH SHIELD CONNECTED TO GROUND TERMINAL RTU I/O MODULE WITH INPUT/OUTPUT TYPE AND QUANTITY AS NOTED: DI = DISCRETE INPUT DO = DISCRETE OUTPUT AI = ANALOG INPUT AO = ANALOG OUTPUT	

ABBREVIATIONS

A	AMPERES	ATS	AUTOMATIC TRANSFER SWITCH	DO	DISCRETE OUTPUT	HPS	HIGH PRESSURE SODIUM LAMP	MC	MAIN CONTACTOR	OT	OVERTORQUE/OVERTEMPERATURE	RGS	RIGID GALVANIZED STEEL	UG	UNDERGROUND
AC	ALTERNATING CURRENT	AWG	AMERICAN WIRE GAUGE	EC	ELECTRICAL CONTRACTOR	HT	HEIGHT - ABOVE FINISH FLOOR OR GRADE	MCC	MOTOR CONTROL CENTER	PB	PULLBOX OR PUSHBUTTON	RTU	REMOTE TERMINAL UNIT	UN	UNLESS OTHERWISE NOTED
AF	AMPS FRAME - CIRCUIT BREAKER FRAME SIZE	BKR	BREAKER	EF	EXHAUST FAN	HMCP	MOTOR CIRCUIT PROTECTOR	MCP	MOTOR CIRCUIT PROTECTOR	PEC	PEDERNALES ELECTRIC COMPANY	SP	SPARE	VM	VOLTMETER
AF	AMPS FUSE - FUSED SWITCH	C	CONDUIT	ETM	ELAPSED TIME METER	HZ	FREQUENCY IN HERTZ - CYCLES PER SEC	MCB	MAIN CIRCUIT BREAKER	PR	PAIR	SS	STAINLESS STEEL	VFC	VARIABLE FREQUENCY CONTROLLER
AFF	MOUNTING HEIGHT ABOVE FINISHED FLOOR	COA	CITY OF AUSTIN	EXIST	EXISTING	INST	INSTRUMENT	MSB	MAIN SWITCHBOARD	PL	PILOT LIGHT	SSMU	SOLID STATE METERING UNIT	VFD	VARIABLE FREQUENCY DRIVE
AFG	MOUNTING HEIGHT ABOVE FINISHED GRADE	CB	CIRCUIT BREAKER	F	FUSE	ISB	INTRINSICALLY SAFE BARRIER	NATS	NON-AUTOMATIC TRANSFER SWITCH	PNL	PANEL	SSRV	REDUCED VOLT. SOFT STARTER	WP	WEATHERPROOF
AG	ABOVE GRADE	CKT	CIRCUIT	FDR	FEEDER	JB	JUNCTION BOX	NC	NORMALLY CLOSED CONTACT	PP	POWER POLE	SST	SOLID STATE TRIP UNIT	WW	WATER AND WASTEWATER UTILITY
AI	ANALOG INPUT	CP	CONTROL PANEL	FIXT	FIXTURE	KWH	KILOWATT HOURS	NF	NON-FUSED	PS	PRESSURE SWITCH	ST	SINGLE THROW	XFER	TRANSFER
AIC	FAULT CURRENT INTERRUPTING CAPACITY	CPT	CONTROL POWER TRANSFORMER	GEN	GENERATOR	LC	LIGHTING CONTACTOR	NO	NORMALLY OPEN CONTACT	PT	POTENTIAL TRANSFORMER	TDR	TIME DELAY RELAY	XFMR	TRANSFORMER
AM	AMMETER	CR	CONTROL RELAY	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	LIC	LEVEL INDICATOR/CONTROLLER	OL	OVERLOAD	TR	TIMING RELAY	PVC	POLYVINYL CHLORIDE CONDUIT OR COATING	XMTR	TRANSMITTER
AO	ANALOG OUTPUT	CT	CURRENT TRANSFORMER	GND	GROUND	LP	LIGHTING PANEL			T/S	TWISTED/SHIELDED	PW	PULLWIRE	3PDT	THREE-POLE DOUBLE-THROW
AT	AMPS TRIP - CIRCUIT BREAKER TRIP SETTING/RATING	DI	DISCRETE INPUT	HP	HORSEPOWER	LV	LOW VOLTAGE			TU	TEXAS ELECTRIC UTILITIES				

REVISIONS

NO.	DESCRIPTION	APP.	DATE

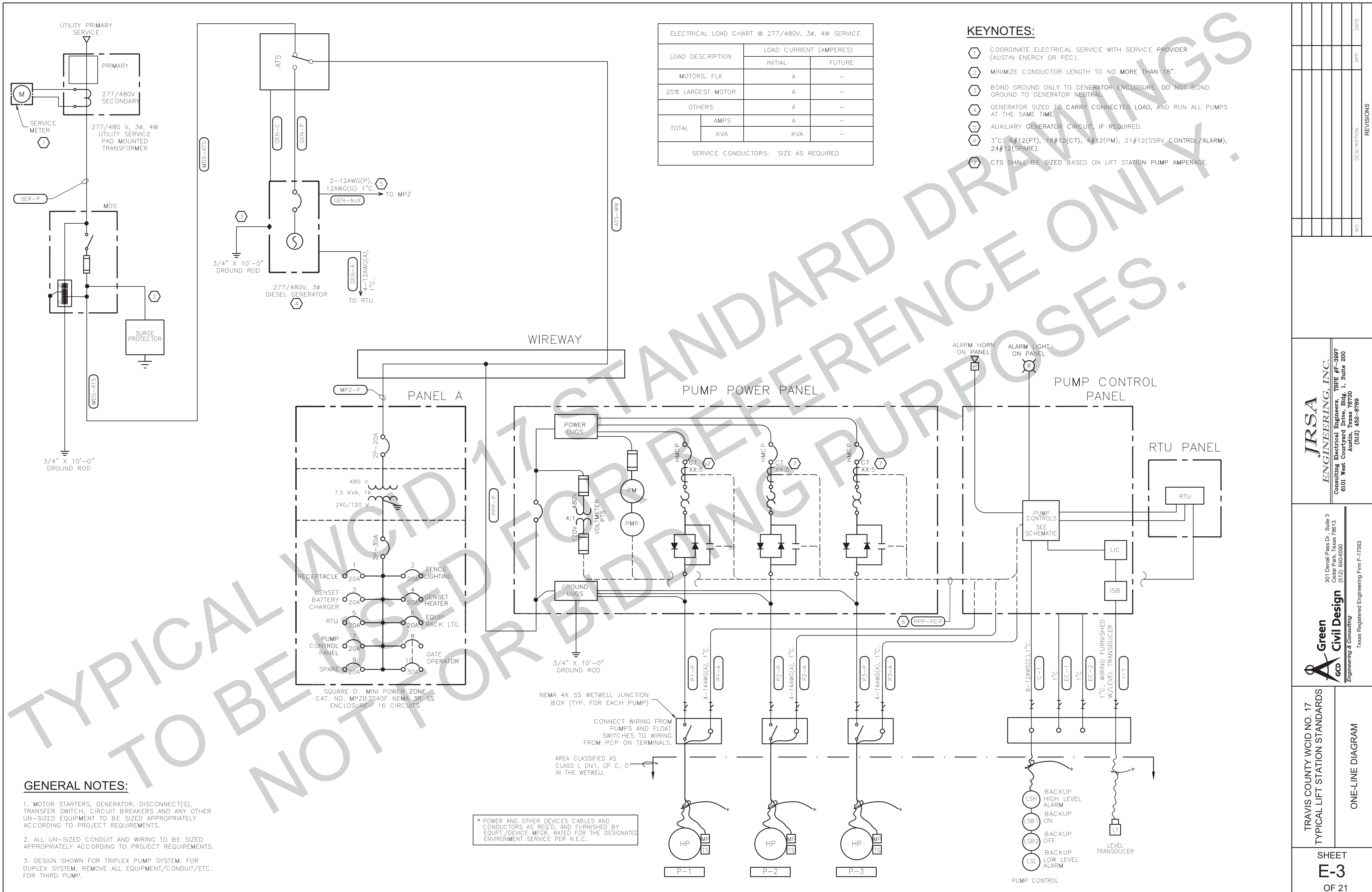
JRSA ENGINEERING, INC.
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TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS

ELECTRICAL LEGEND

SHEET
E-1
OF 21



ELECTRICAL LOAD CHART @ 277/480V, 3Φ, 4W SERVICE

LOAD DESCRIPTION	LOAD CURRENT (AMPERES)	
	INITIAL	FUTURE
MOTORS, FLA	A	-
25% LARGEST MOTOR	A	-
OTHERS	A	-
TOTAL	AMPS	A
	KVA	KVA

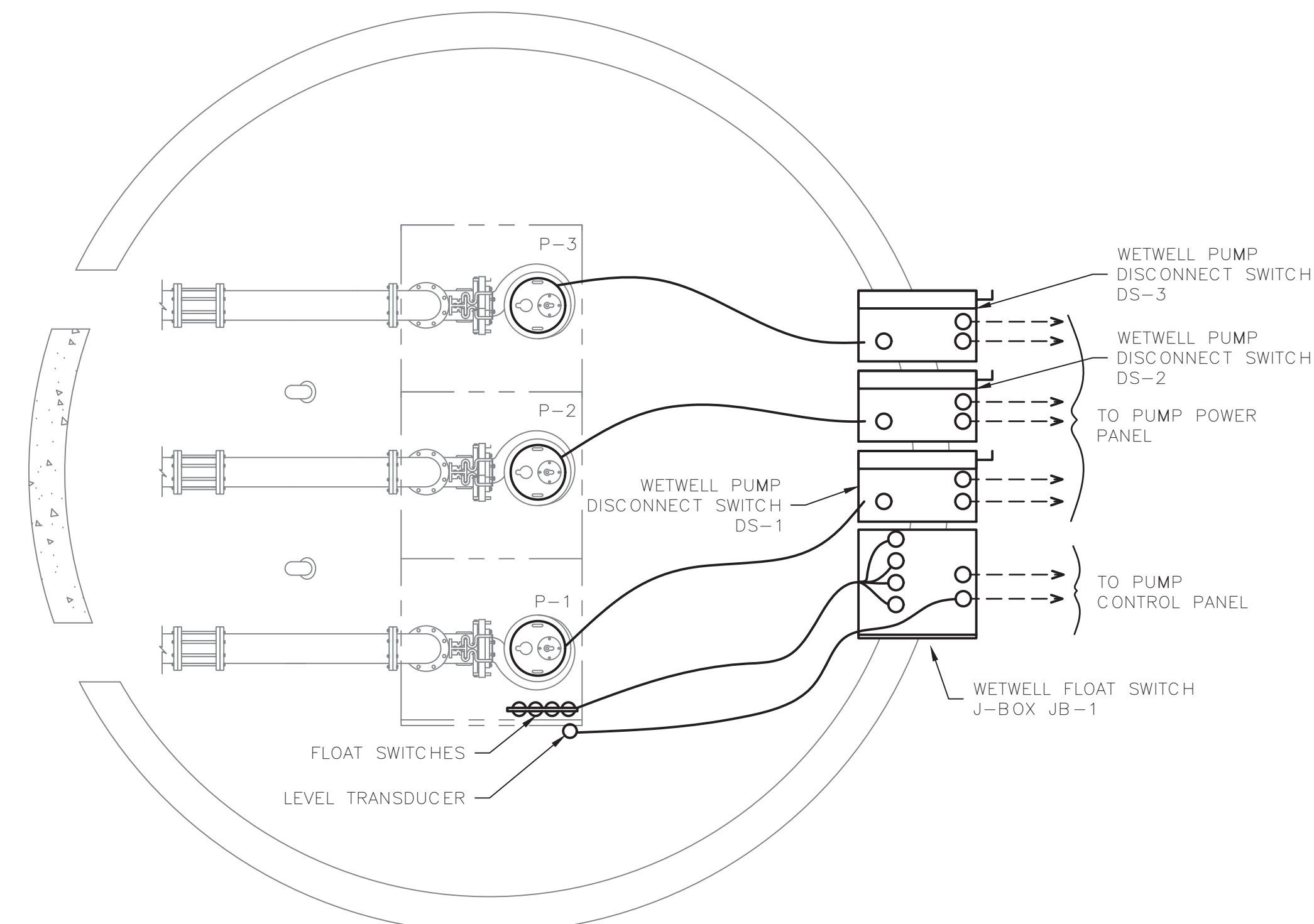
SERVICE CONDUCTORS: SIZE AS REQUIRED

- KEYNOTES:**
- COORDINATE ELECTRICAL SERVICE WITH SERVICE PROVIDER (AUSTIN ENERGY OR PEC).
 - MINIMIZE CONDUCTOR LENGTH TO NO MORE THAN 18".
 - BOND GROUND ONLY TO GENERATOR ENCLOSURE. DO NOT BOND GROUND TO GENERATOR NEUTRAL.
 - GENERATOR SIZED TO CARRY CONNECTED LOAD, AND RUN ALL PUMPS AT THE SAME TIME.
 - AUXILIARY GENERATOR CIRCUIT, IF REQUIRED.
 - 3"CT: 6#12(PT), 18#12(CT), 4#12(PM), 21#12(SSRV CONTROL/ALARM), 24#12(SPARE).
 - CTS SHALL BE SIZED BASED ON LIFT STATION PUMP AMPERAGE.

- GENERAL NOTES:**
- MOTOR STARTERS, GENERATOR, DISCONNECT(S), TRANSFER SWITCH, CIRCUIT BREAKERS AND ANY OTHER UN-SIZED EQUIPMENT TO BE SIZED APPROPRIATELY ACCORDING TO PROJECT REQUIREMENTS.
 - ALL UN-SIZED CONDUIT AND WIRING TO BE SIZED APPROPRIATELY ACCORDING TO PROJECT REQUIREMENTS.
 - DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

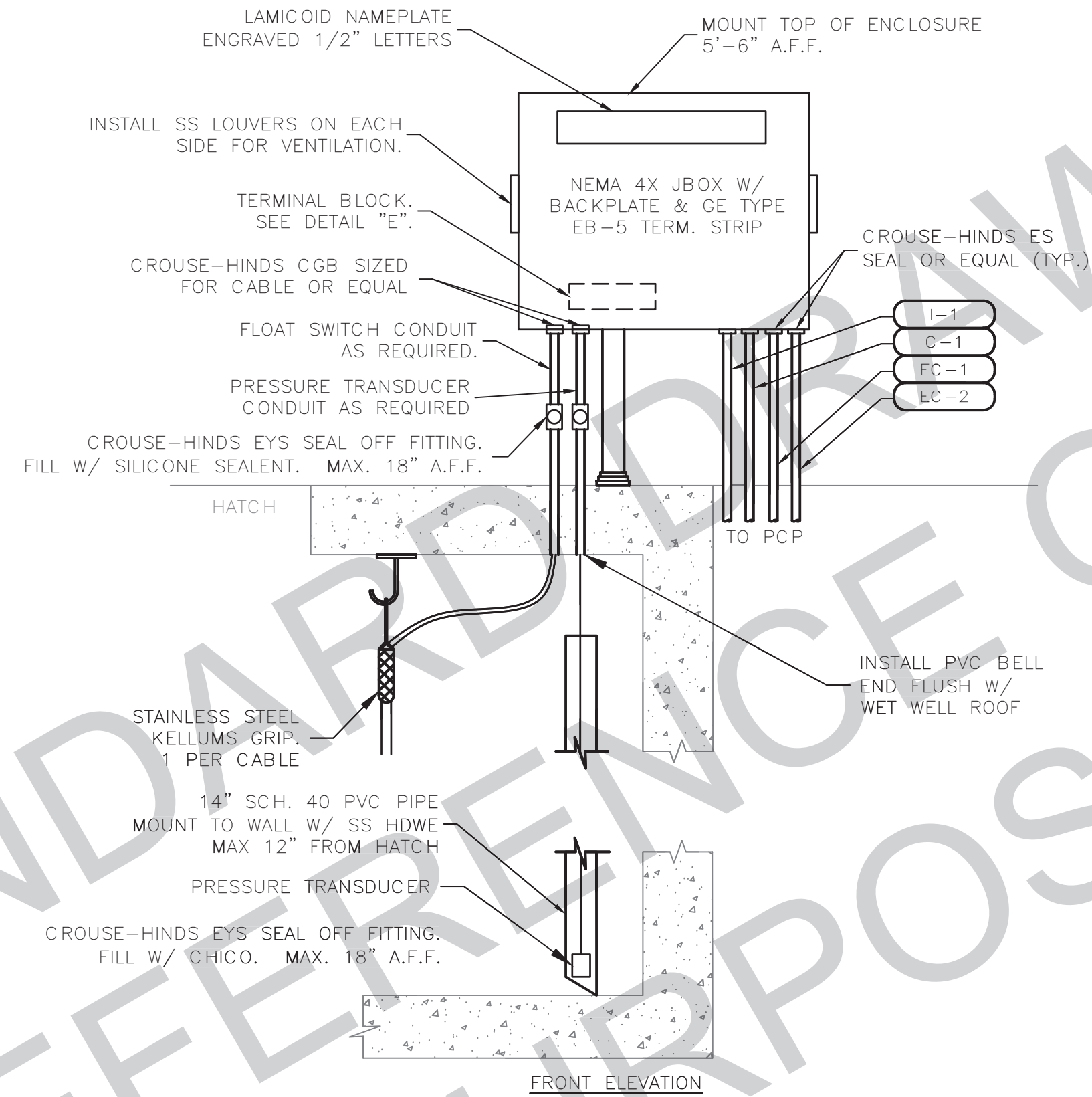
* POWER AND OTHER DEVICES CABLES AND CONDUCTORS AS REQ'D. AND FURNISHED BY EQUIP./DEVICE MFR. RATED FOR THE DESIGNATED ENVIRONMENT SERVICE PER N.E.C.

TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS		SHEET E-3 OF 21	
ONE-LINE DIAGRAM		REVISIONS	
Green Civil Design Engineering & Consulting Texas Registered Engineering Firm F-17563		JRSA ENGINEERING, INC. Consulting Electrical Engineers, TPEP #E-5987 6101 West Courtyard Drive, Bldg. 1, Suite 200 Austin, Texas 78750 (512) 452-8788	
301 Laurel Pass Dr., Suite 3 Coppell, Texas 76015 (512) 646-6590		NO. DESCRIPTION APP. DATE	

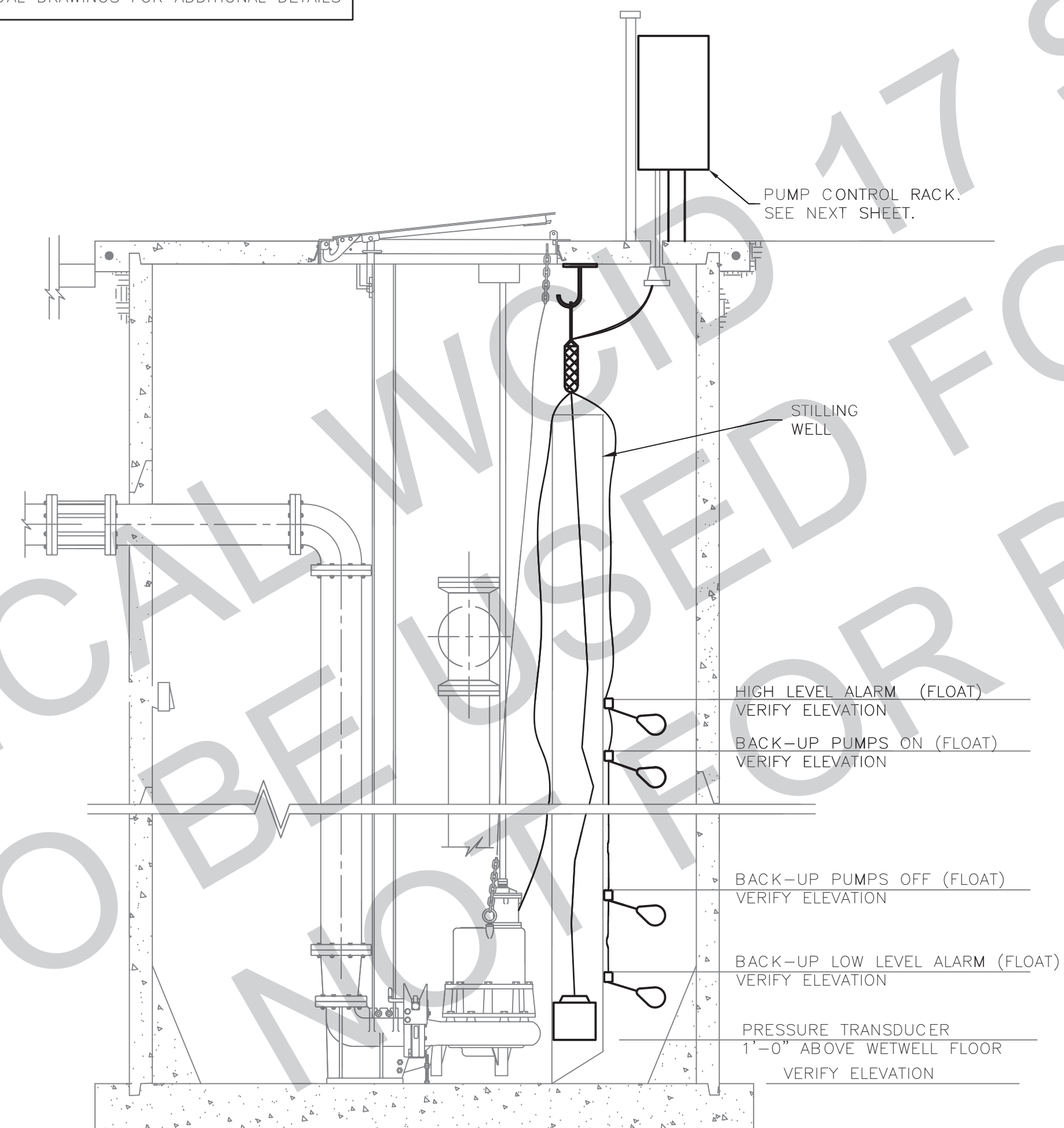


(A) WETWELL PLAN
N.T.S.

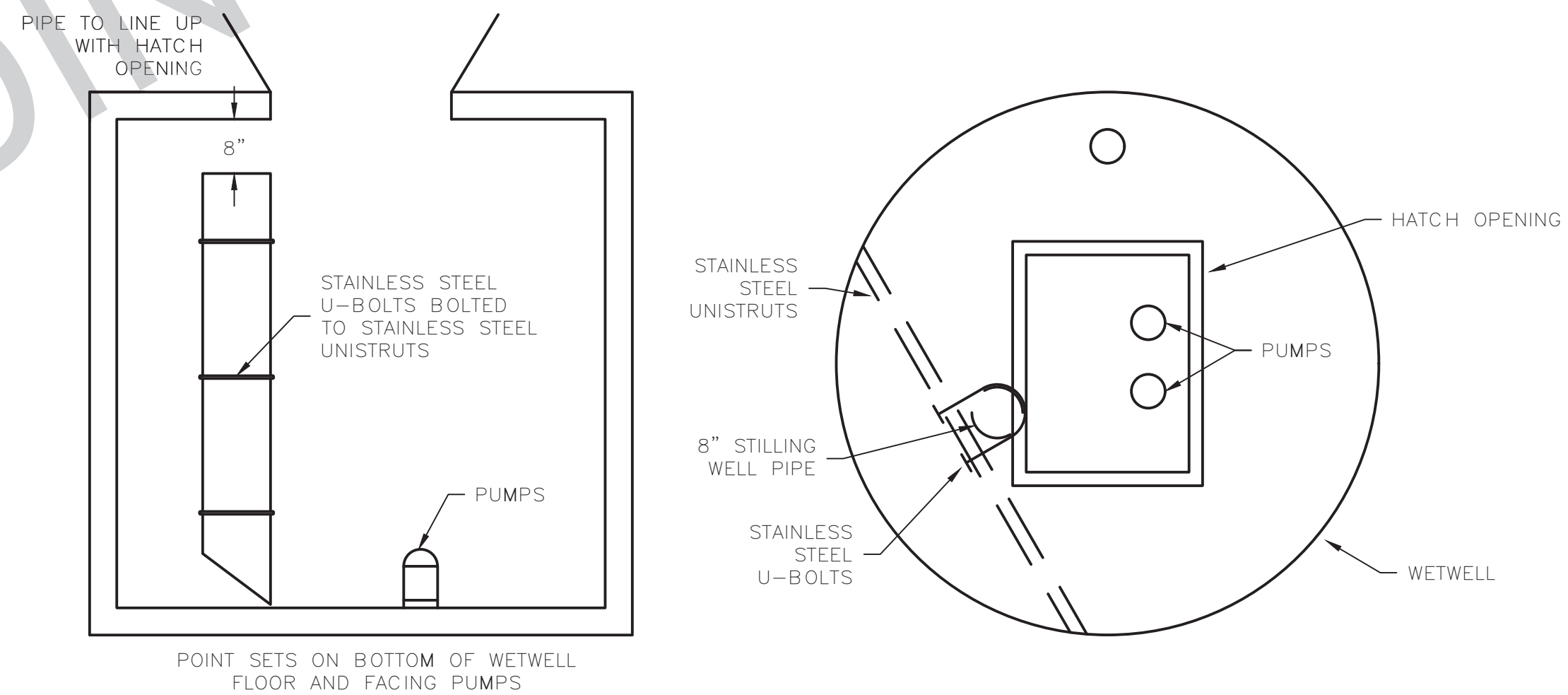
SEE MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS



(B) WETWELL J-BOX DETAIL
N.T.S.



(C) WETWELL ELEVATION
N.T.S.

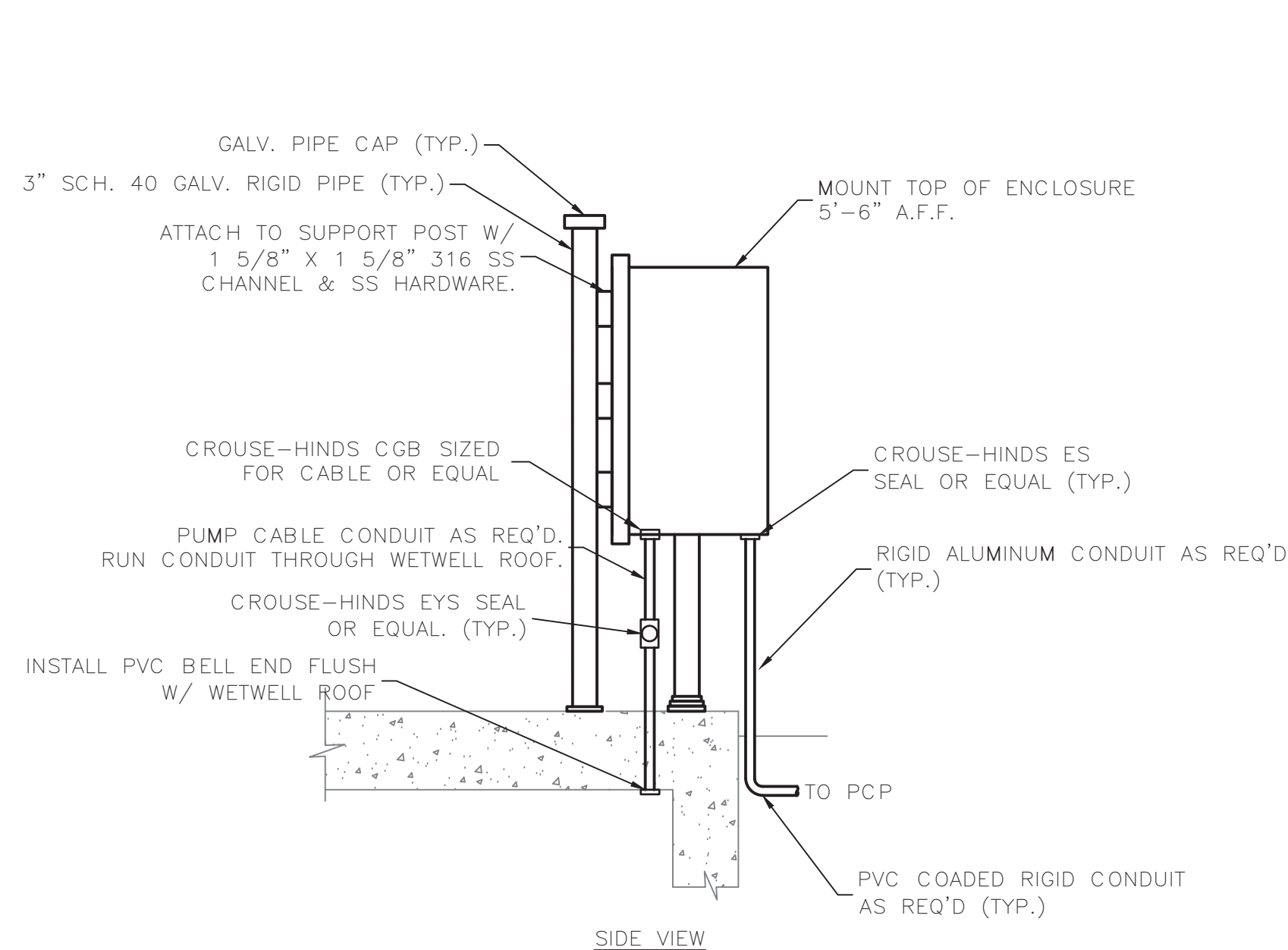


(D) STILLING WELL DETAIL
N.T.S.

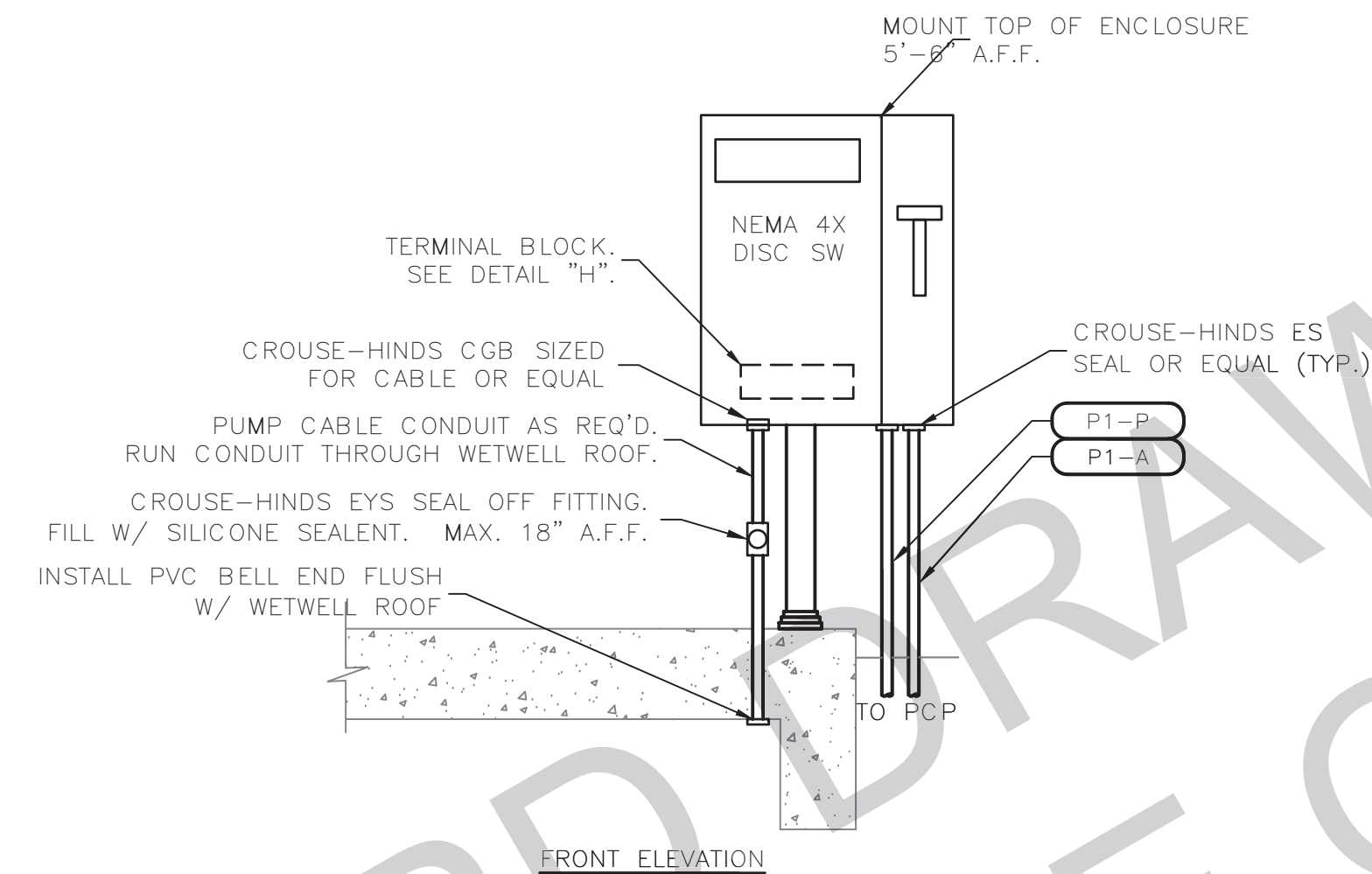
GENERAL NOTES:

- DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

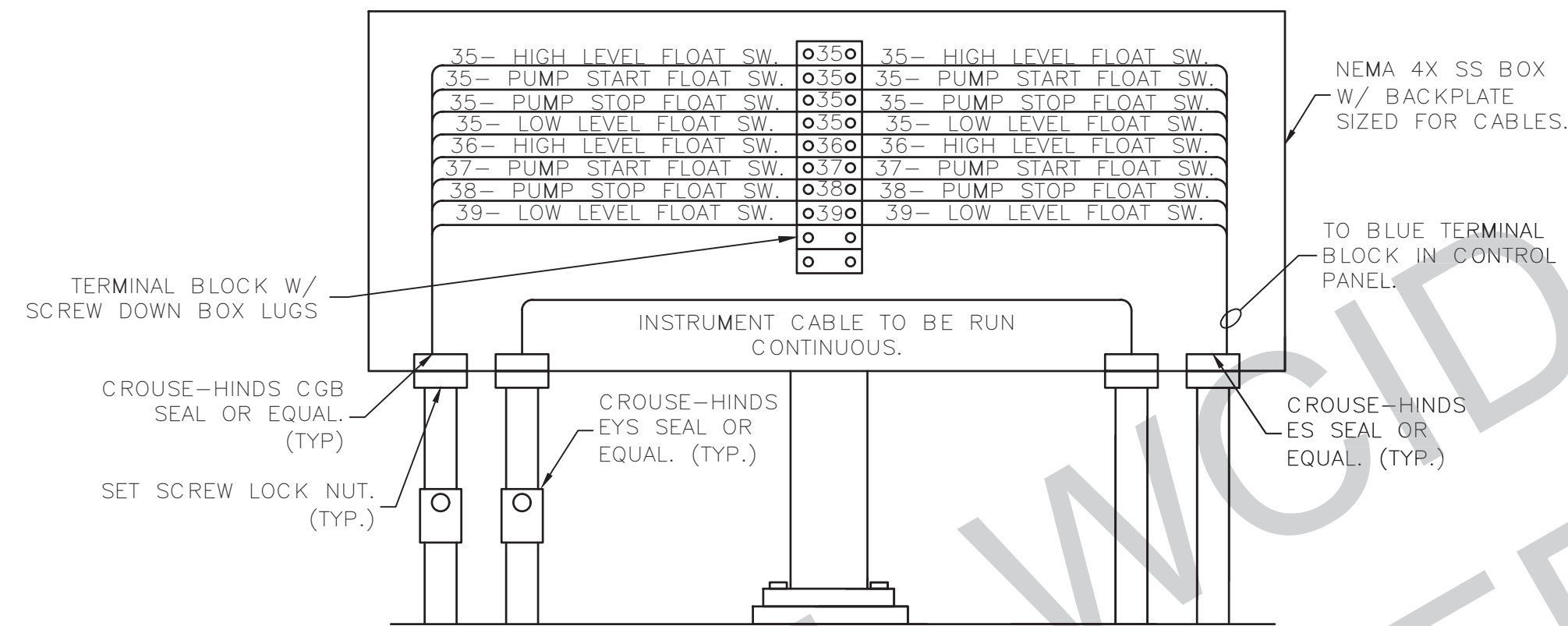
TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS		SHEET E-4 OF 21	
ELECTRICAL DETAILS 1		REVISIONS	
<p>JRSA ENGINEERING, INC. Consulting Electrical Engineers, TSPG #F-0987 6101 West Courtyard Drive, Bldg. 1, Suite 200 Austin, Texas 78730 (512) 402-8788</p>		<p>Green Civil Design Engineering & Consulting Texas Registered Engineering Firm F-17563 301 Drexel Pass Dr., Suite 3 Cedar Park, Texas 78613 (512) 640-6590</p>	



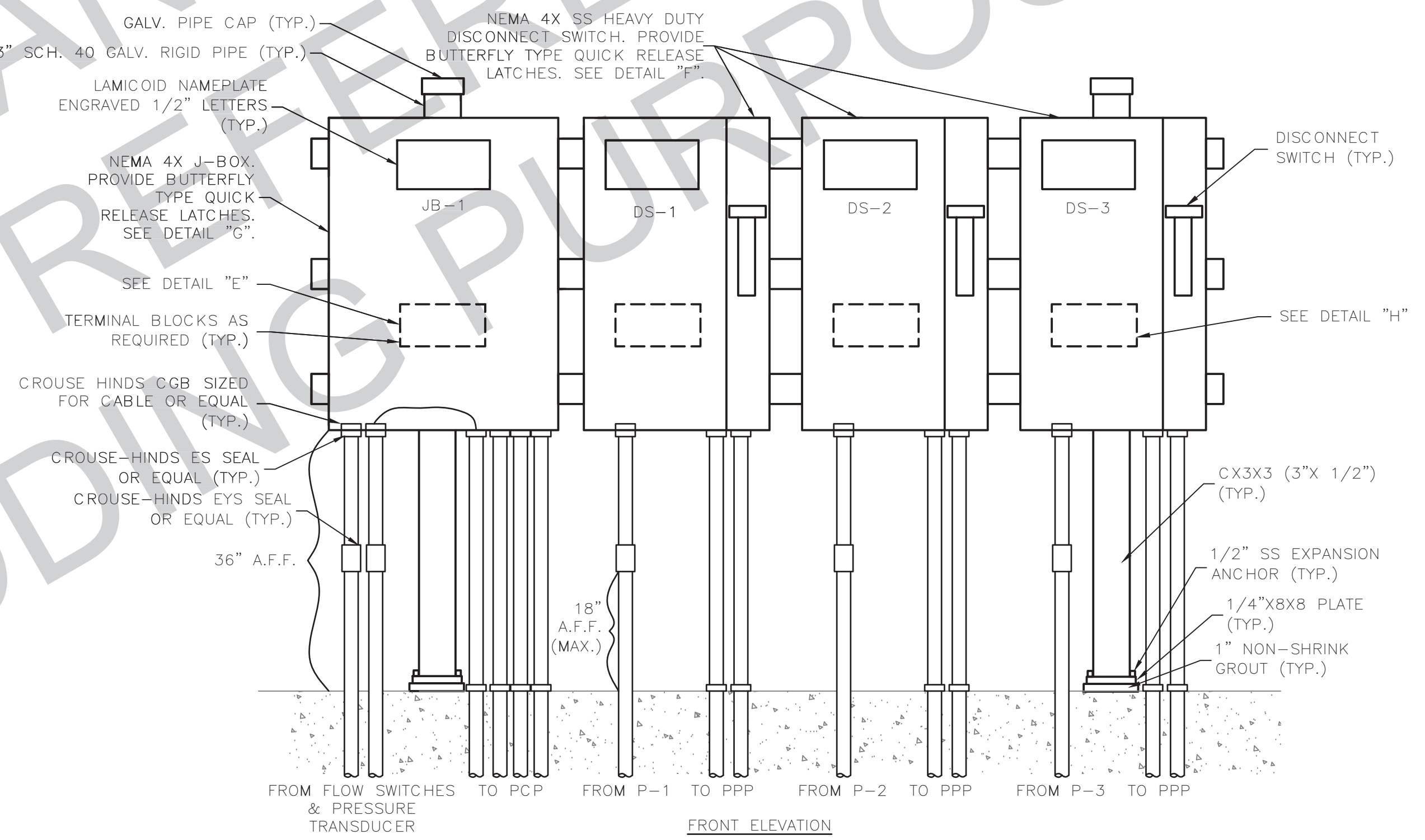
(A) TYPICAL POST MOUNTED EQUIPMENT ELEVATION
N.T.S.



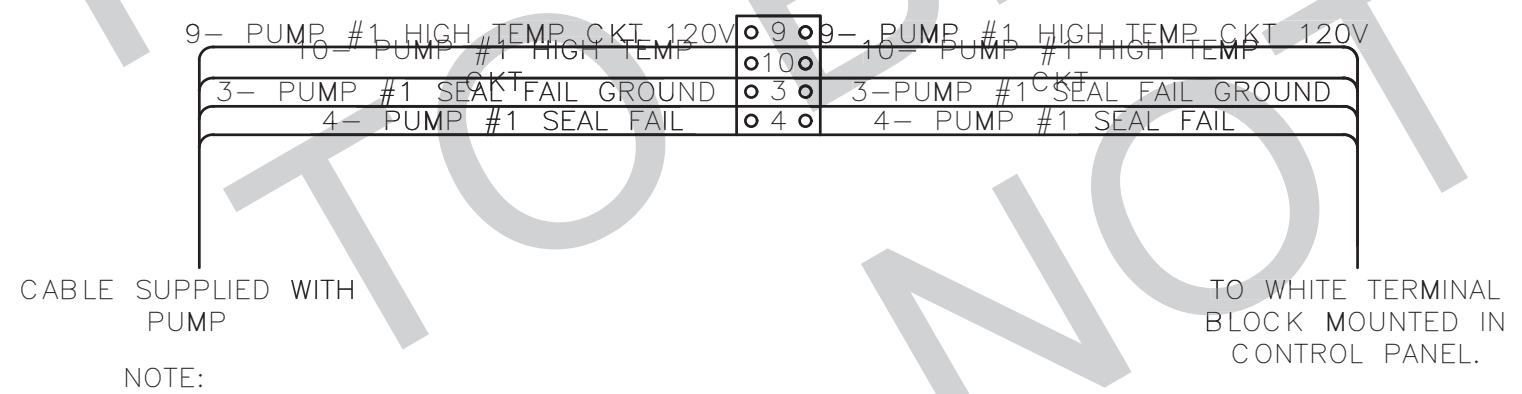
(B) TYPICAL WETWELL DISCONNECT SWITCH DETAIL
N.T.S.



(C) TYPICAL WETWELL J-BOX CABLE INSTALLATION DETAIL
N.T.S.



(D) TYPICAL PUMP CONTROL RACK ELEVATION
N.T.S.



(E) TYP. PUMP SAFETIES TERMINAL BLOCK INSTALLATION
N.T.S.

GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

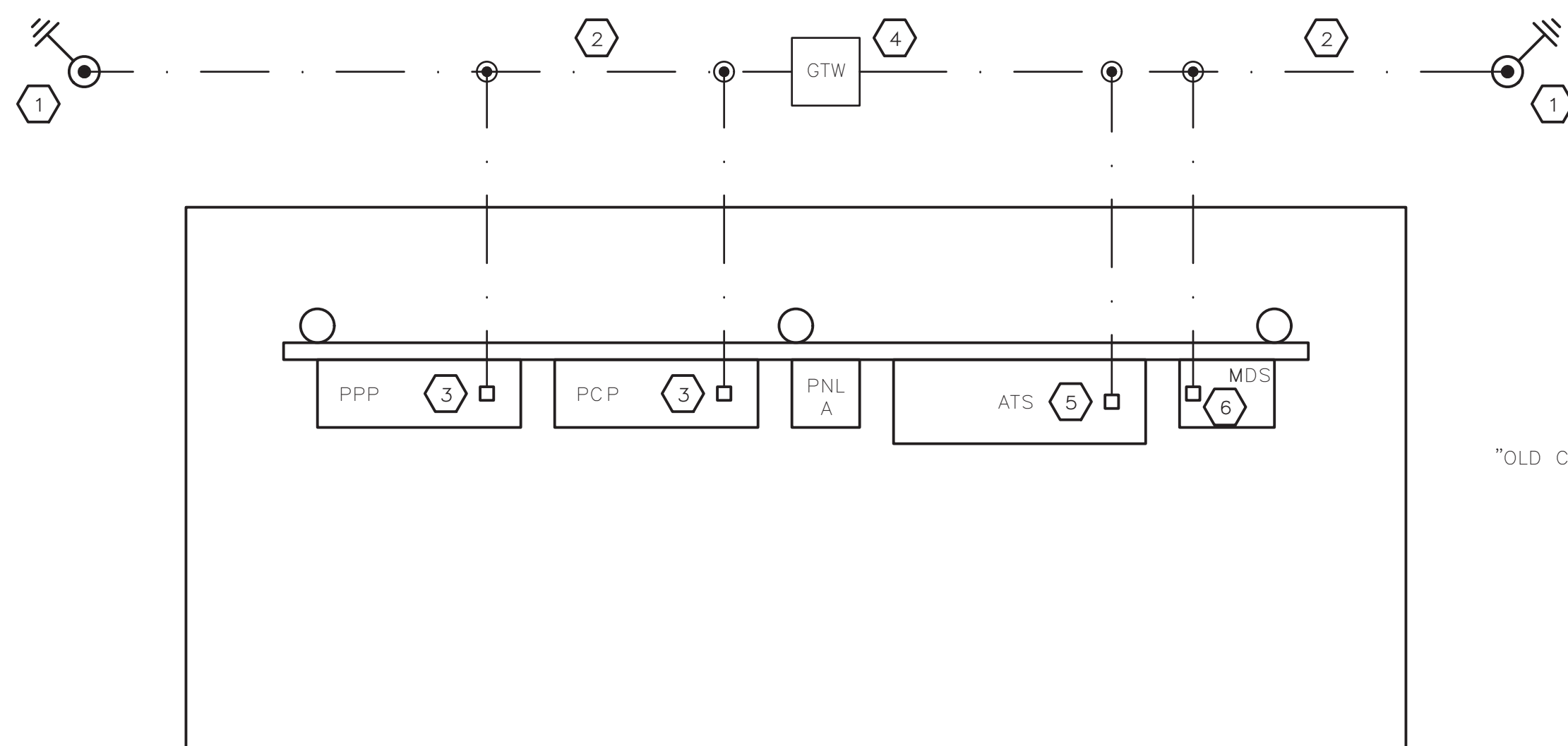
TYPICAL WETWELL DISCONNECT SWITCH DETAIL FOR BIDDING PURPOSES ONLY.

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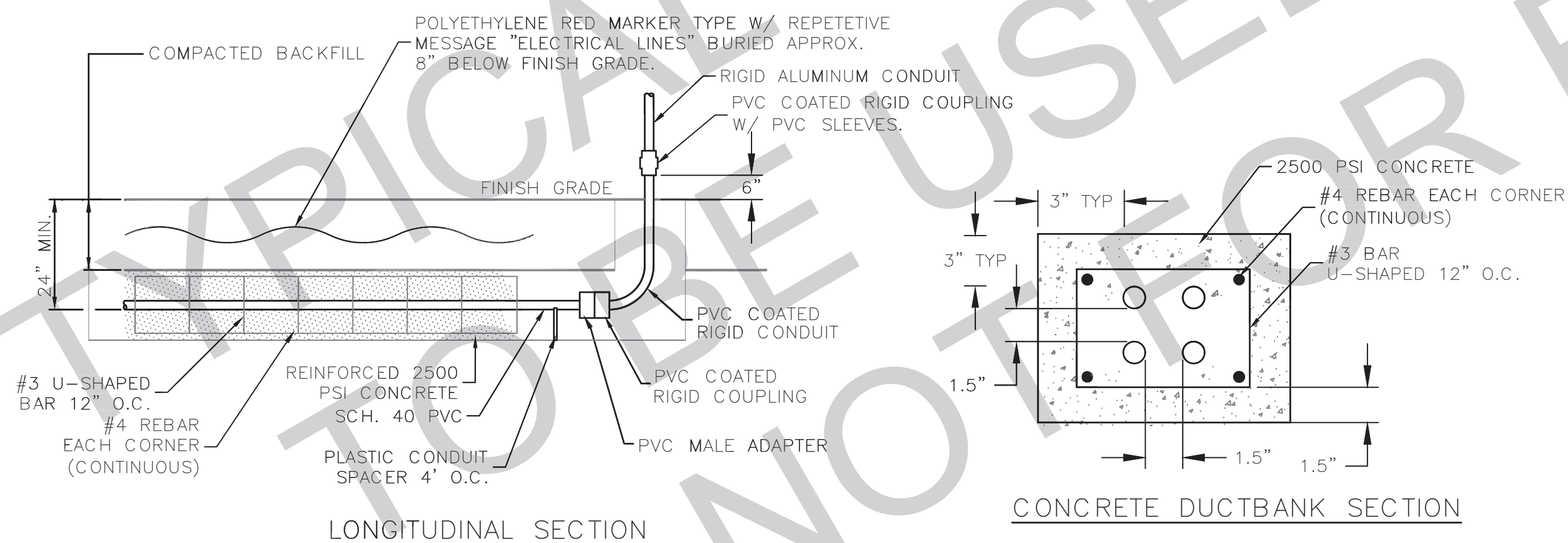
TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS
ELECTRICAL DETAILS 2



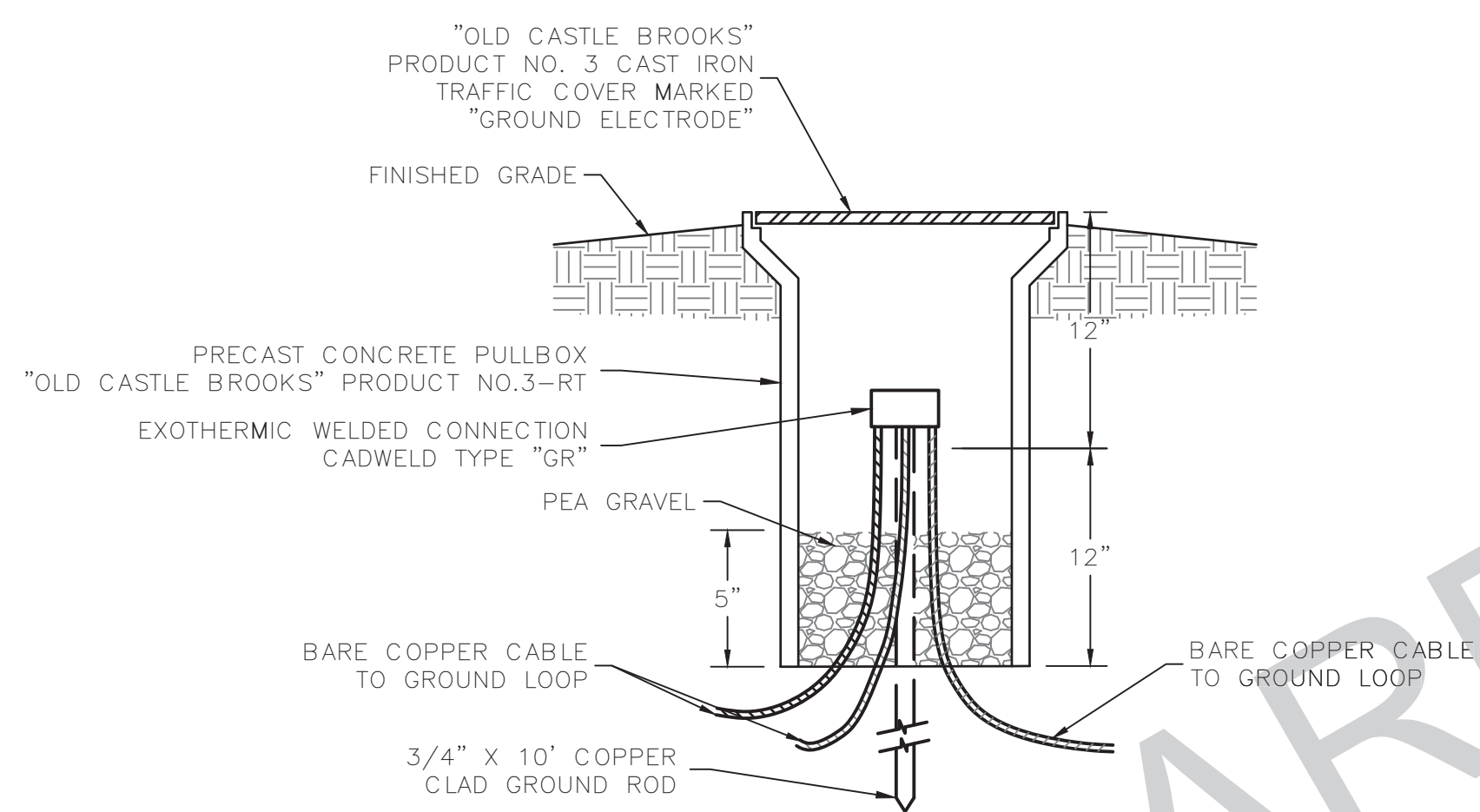
KEYNOTES:

- ① 3/4"x10' COPPER CLAD GROUND ROD, EXOTHERMICALLY WELD TO GROUND CABLE BURIED MIN. 18" BELOW GRADE
- ② #4/0 SOFT DRAWN BARE COPPER CABLE BURIED MIN. 18" BELOW GRADE (TYP. ALL BELOW GRADE CABLE). EXOTHERMICALLY WELD ALL BELOW GRADE CONNECTIONS.
- ③ EXTEND UP INTO CONTROL PANEL AND GROUND TO GROUND BUS. REFER TO EQUIPMENT CONNECTION TO GROUND MAT DETAIL.
- ④ REFER TO GROUNDING SYSTEM TEST WELL INSTALLATION DETAIL.
- ⑤ EXTEND UP INTO ATS AND GROUND TO GROUND BUS. REFER TO EQUIPMENT CONNECTION TO GROUND MAT DETAIL.
- ⑥ EXTEND UP INTO MSD AND GROUND TO GROUND BUS. REFER TO EQUIPMENT CONNECTION TO GROUND MAT DETAIL.

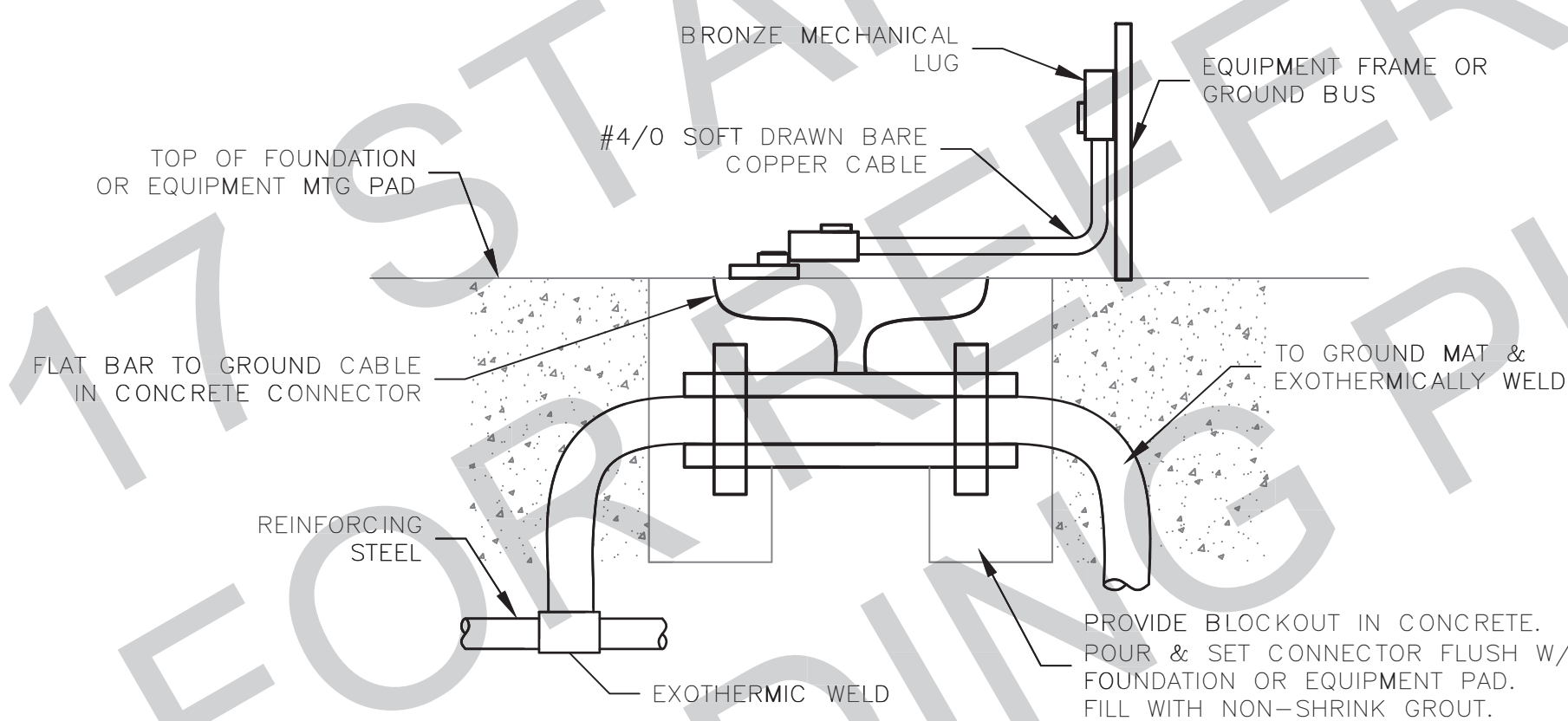
(A) TYPICAL ELECTRICAL GROUNDING PLAN
N.T.S.



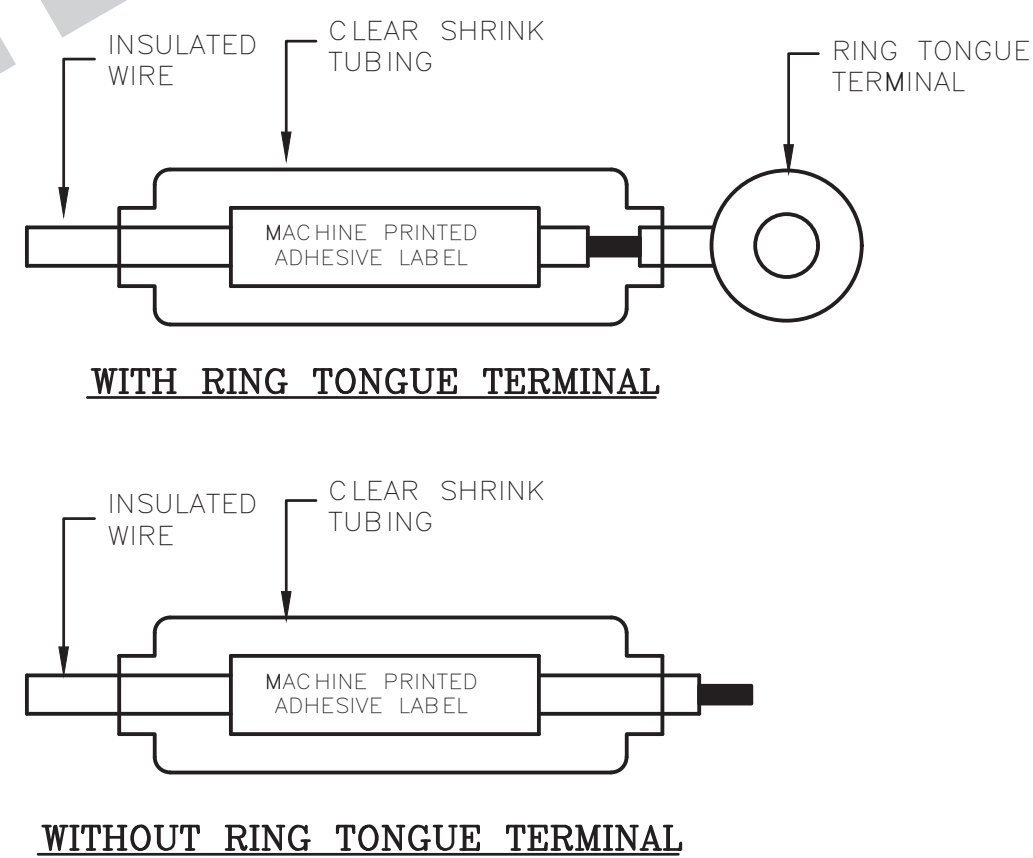
(E) TYPICAL UNDERGROUND CONDUIT INSTALLATION
N.T.S.



(B) GROUNDWELL
N.T.S.

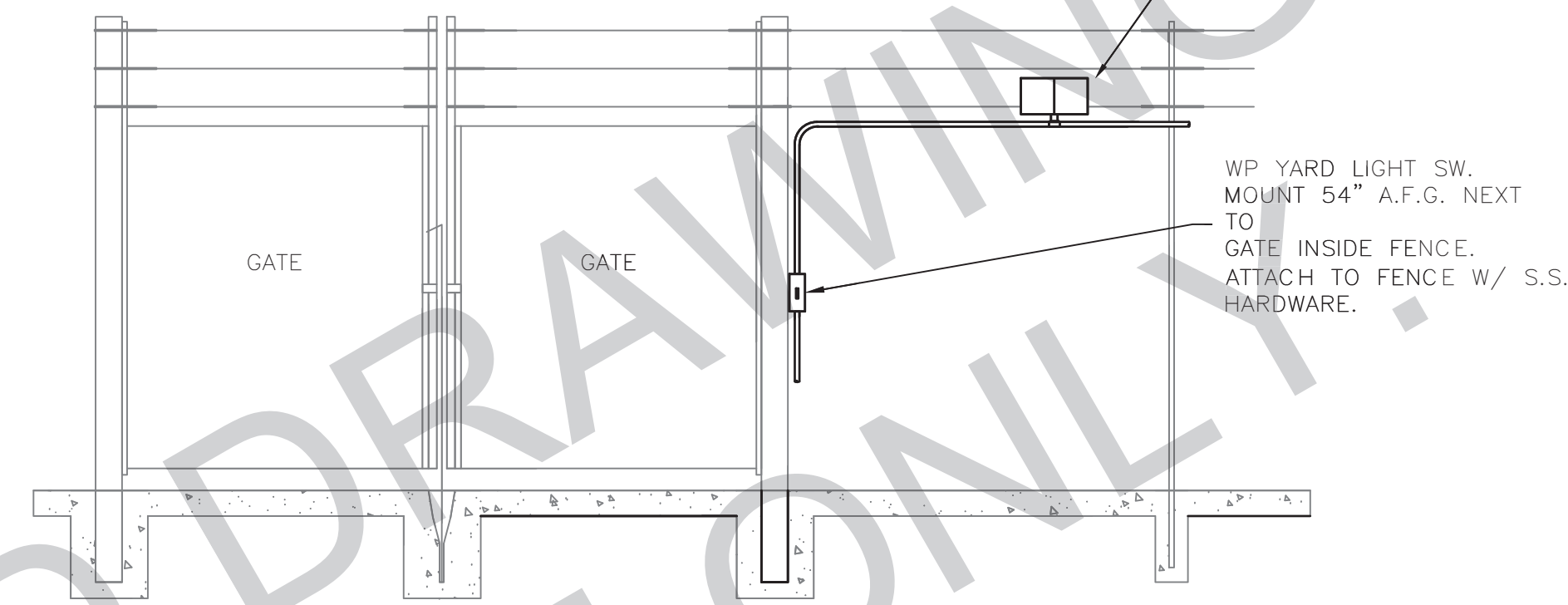


(D) EQUIPMENT CONNECTION TO GROUND MAT
N.T.S.



NOTE: WHERE POSSIBLE, RING TERMINALS SHALL BE USED. ONE OF THE ABOVE METHODS SHALL BE USED ON ALL WIRE #8 AWG AND SMALLER. THE SAME MUST ALSO BE USED ON LARGER WIRE UNLESS AN ALTERNATE METHOD IS SUBMITTED AND APPROVED.

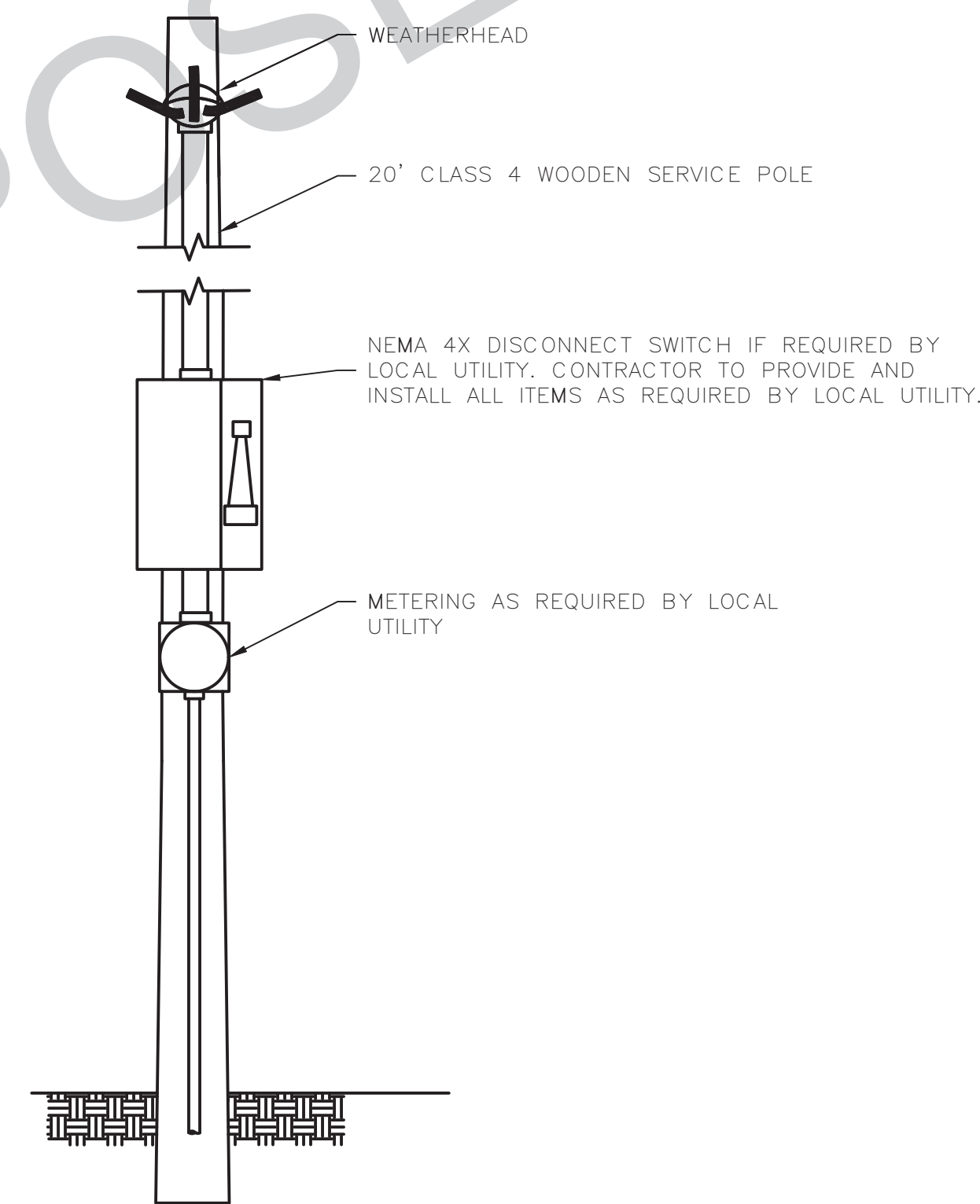
(F) WIRE TERMINATION & MARKINGS
N.T.S.



NOTE:

- 1. ATTACH CONDUIT TO FENCE WITH S.S. HARDWARE AS REQUIRED.
- 2. CONTRACTOR TO COORDINATE LOCATION AND NUMBER OF FIXTURES AS REQUIRED BY WCID #17.

(C) TYPICAL FENCE YARD LIGHTING DETAIL
N.T.S.



NOTE:

- 1. GROUND PER LOCAL UTILITY REQUIREMENTS.
- 2. ALL ELECTRIC SERVICE EQUIPMENT TO BE LOCATED OUTSIDE LIFT STATION EXTERIOR FENCE. THIS INCLUDES MAIN DISCONNECT SWITCHES, UTILITY COMPANY METERING EQUIPMENT, TRANSFORMER PADS, TRANSFORMERS, AND SERVICE POLES.
- 3. CONTRACTOR TO COORDINATE THE INSTALLATION OF OVERHEAD OR UNDERGROUND ELECTRICAL SERVICE WITH WCID #17 AND LOCAL UTILITY. POLE TO BE LOCATED OUTSIDE FENCE.
- 4. FOR UNDERGROUND ELECTRIC SERVICE COORDINATE EXACT REQUIREMENTS WITH WCID #17 AND LOCAL UTILITY. CONTRACTOR TO PAY FOR AND INSTALL ALL ITEMS AS REQUIRED BY LOCAL UTILITY.

(G) TYP. ELECTRICAL SERVICE INSTALLATION
N.T.S.

HUBBELL SERIES 103 DUAL FLOOD LIGHT. TWO (2) LAMPHOLDER MODEL #103-S W/LED PAR38 LAMPS AND 203-BC3 JUNCTION BOX OR APPROVED EQUAL.

WP YARD LIGHT SW. MOUNT 54" A.F.G. NEXT TO GATE INSIDE FENCE. ATTACH TO FENCE W/ S.S. HARDWARE.

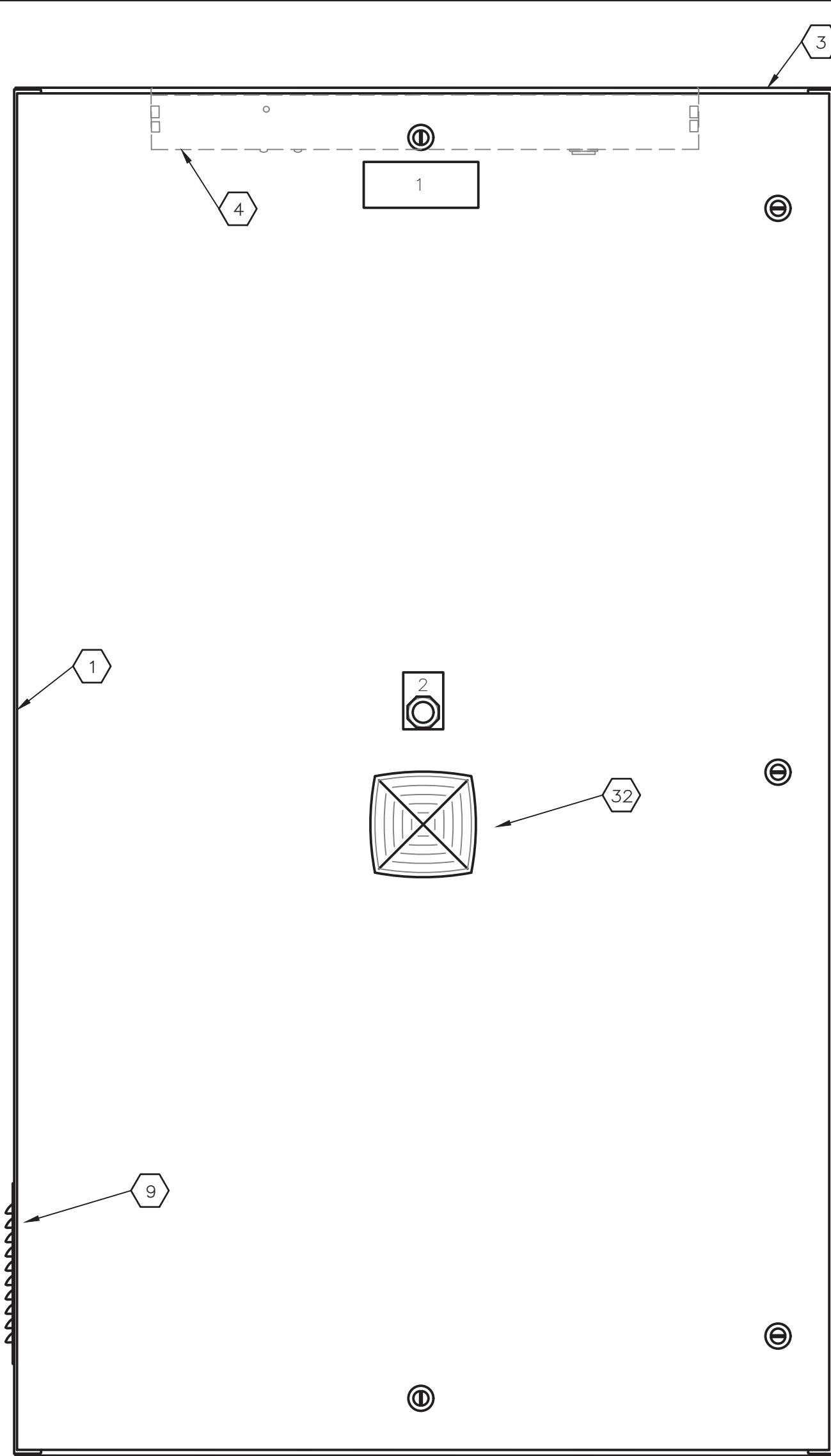
NO.	DESCRIPTION	DATE

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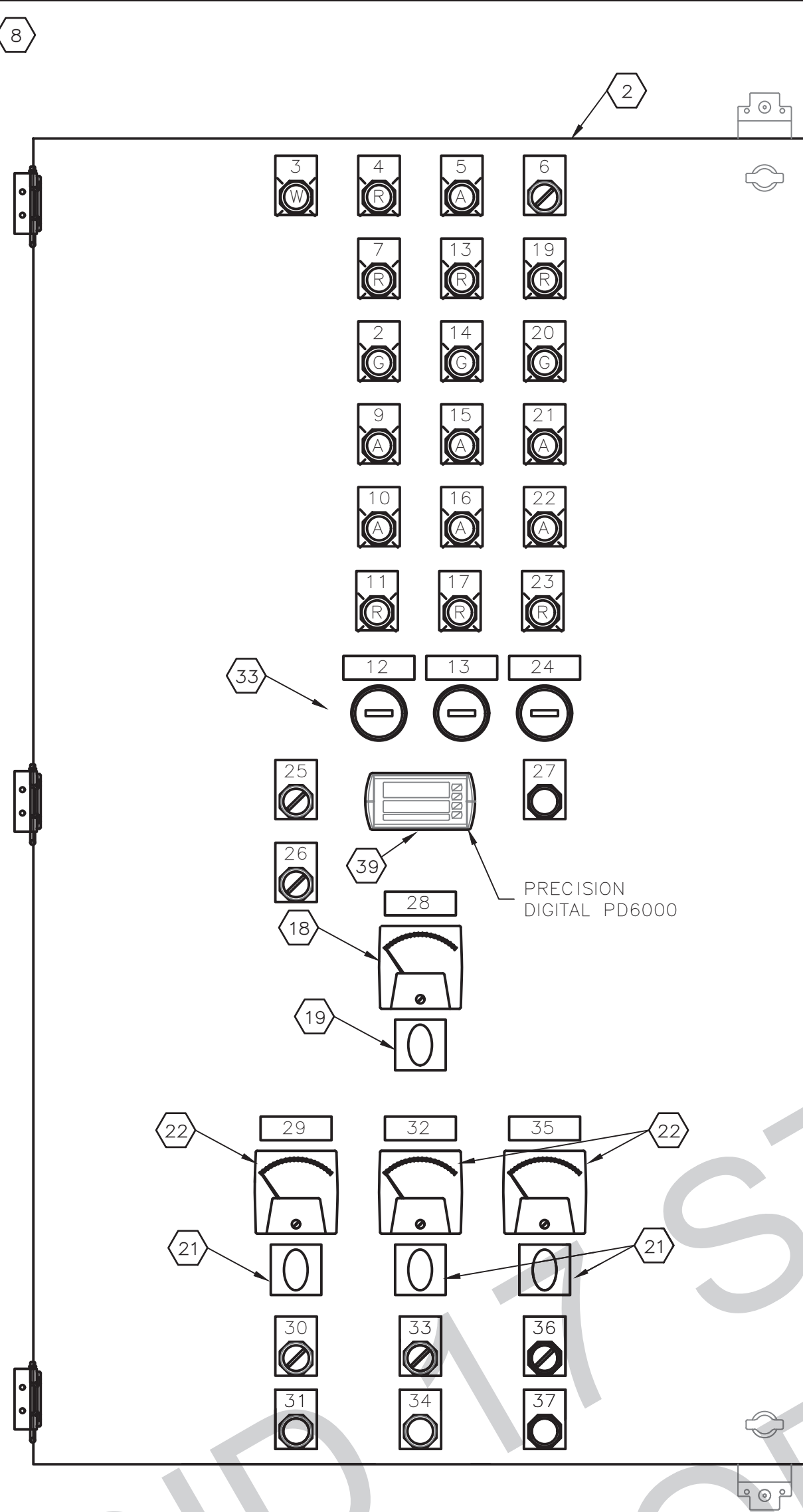
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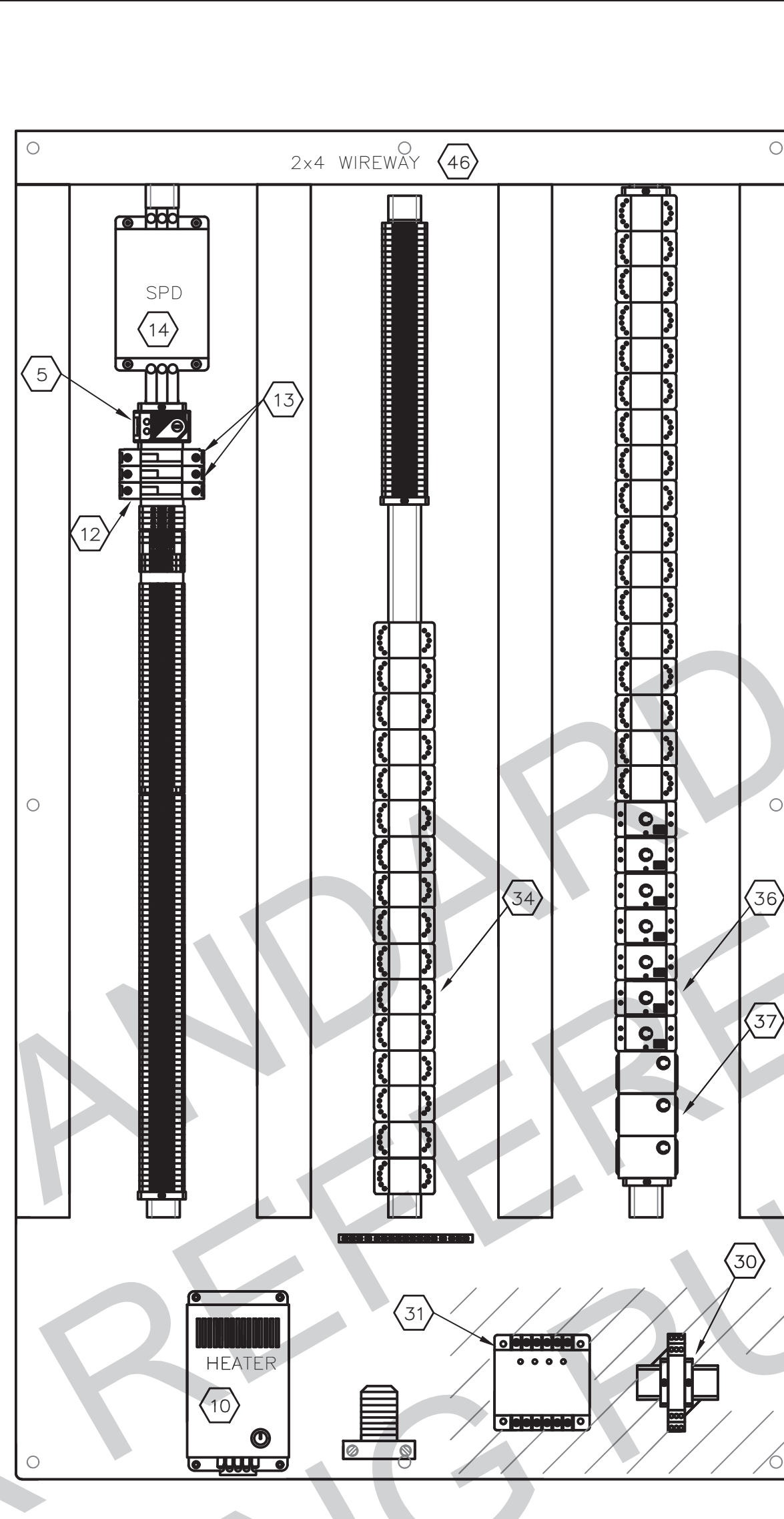
TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS
ELECTRICAL DETAILS 3



1 EXTERIOR DOOR
SCALE: N.T.S.



2 SWINGOUT PANEL
SCALE: N.T.S.



3 BACK PANEL
SCALE: N.T.S.

MARK	INSCRIPTION	REMARKS
1	PUMP CONTROL PANEL	1/2"
2	HORN SILENCE	PUSHBUTTON
3	CONTROL POWER ON	WHITE LED
4	GENERAL ALARM	RED LED
5	BACKUP FLOAT ON	AMBER LED
6	CONTROL POWER ON	SWITCH
7	PUMP #1 ON	RED LED
8	PUMP #1 OFF	GREEN LED
9	PUMP #1 OVERTEMP	AMBER LED
10	PUMP #1 SEAL FAIL	AMBER LED
11	PUMP #1 SSRV FAIL	AMBER LED
12	PUMP #1 ELAPSED TIME	RED LED
13	PUMP #2 ON	RED LED
14	PUMP #2 OFF	GREEN LED
15	PUMP #2 OVERTEMP	AMBER LED
16	PUMP #2 SEAL FAIL	AMBER LED
17	PUMP #2 SSRV FAIL	AMBER LED
18	PUMP #2 ELAPSED TIME	RED LED
19	PUMP #3 ON	RED LED
20	PUMP #3 OFF	GREEN LED
21	PUMP #3 OVERTEMP	AMBER LED
22	PUMP #3 SEAL FAIL	AMBER LED
23	PUMP #3 SSRV FAIL	AMBER LED
24	PUMP #3 ELAPSED TIME	RED LED
25	LEAD PUMP P1	SWITCH
26	TRANSMITTER - FLOATS	SWITCH
27	ALARM RESET	PUSHBUTTON
28	MAIN POWER VOLTAGE	
29	PUMP #1 AMPS	
30	PUMP #1 HAND-OFF-AUTO	SWITCH
31	PUMP #1 RESET	PUSHBUTTON
32	PUMP #2 AMPS	
33	PUMP #2 HAND-OFF-AUTO	SWITCH
34	PUMP #2 RESET	PUSHBUTTON
35	PUMP #3 AMPS	
36	PUMP #3 HAND-OFF-AUTO	SWITCH
37	PUMP #3 RESET	PUSHBUTTON

KEYED NOTES

- THE PUMP CONTROL PANEL SHALL BE ASSEMBLED AND TESTED BY A SHOP MEETING U.L. STANDARD 508 FOR INDUSTRIAL CONTROLS. THE MOTOR AND CONTROL PANEL SHALL BE ASSEMBLED AND TESTED BY THE SAME MANUFACTURER SUPPLYING THE PUMP SO AS TO ENSURE SUITABILITY AND ASSURANCE OF EXPERIENCE IN MATCHING CONTROLS TO MOTORS AND TO ENSURE SINGLE SOURCE RESPONSIBILITY FOR THE EQUIPMENT.
- THE CONTROL PANEL SHALL COMPLY WITH NEC REGULATIONS AND HAVE A U.L. LABEL.
- PUMP CONTROLS SHALL BE PROVIDED BY THE SUPPLIER AND BE CONTAINED IN A STAINLESS STEEL ENCLOSURE MEETING NEMA 3R REQUIREMENTS WITH A HINGED DOOR AND NEOPRENE GASKET. THE ENCLOSURE SHALL HAVE PROVISIONS FOR PADLOCKING. A NAMEPLATE SHALL BE PERMANENTLY AFFIXED TO THE PANEL AND INCLUDE THE MODEL NUMBER, VOLTAGE, PHASE, HERTZ, AMPERE RATING, AND HORSEPOWER RATING. A WARNING LABEL AGAINST ELECTRIC SHOCK SHALL BE PERMANENTLY AFFIXED TO THE OUTER DOOR.
- THE PUMP CONTROL PANEL SHALL BE MANUFACTURED BY ALTERMAN, PRIME CONTROLS OR CONTROL PANELS USA.
- THE PUMP CONTROLLER SHALL INDICATE PUMP CONTROL OPERATIONS UTILIZING RED AND AMBER LED INDICATOR LIGHTS. LED INDICATOR LIGHTS SHALL PROVIDE ADEQUATE INFORMATION SO THAT THEY CAN BE USED FOR DIAGNOSIS IN TROUBLESHOOTING. EACH LED SHALL BE PERMANENTLY LABELED ON THE PUMP CONTROLLER AS TO FUNCTION.
- * ITEM #42 IS NOT SHOWN ON THIS DRAWING. IT IS A SUBMERSIBLE PRESSURE TRANSMITTER 4-20 mA OUTPUT TO THE PCP. PRESSURE TRANSMITTER IS TO BE SUPPLIED WITH A MINIMUM 40 FT. CABLE.
- CONTRACTOR TO PROVIDE AN INTERIOR CONTROL PANEL LIGHT ACTIVATED BY OPENING THE INTERNAL SWING PANEL. PROVIDE ONE LIGHT AND SWITCH FOR EACH SIDE.

GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

LIST OF MATERIALS

ITEM	QTY	VENDOR	DESCRIPTION	REFERENCE
1	1	SAGINAW	ENCLOSURE 60"H x 36"W x 16"D, 304SS, NEMA 3R, THREE POINT LATCHING DOOR W/PADLOCKING HANDLE, #4 BRUSHED FINISHED	SCE-60EL3616SSLPL
2	1	SAGINAW	BACK PANEL	SCE-60P36
3	1	SAGINAW	DRIP SHIELD, 304SS	SCE-DS36SS
4	1	SAGINAW	PANEL LIGHT	SCE-LF24
5	1	SAGINAW	THERMOSTAT, 1A INDUCTIVE RATING, CONTACTS OPEN ON TEMPERATURE DROP	SCE-TEMNO
6	1	SAGINAW	FILTER KIT	SCE-FLT66
7	2	SAGINAW	WING KNOB DOOR LATCH	SCE-DLWKE
8	2	SAGINAW	LOUVER KIT	SCE-AVK66SS
9	1	SAGINAW	COOLING FAN	SCE-CF6
10	1	HOFFMAN	HEATER, 400WATT	DAH4001B
11	1	SIEMENS	BREAKER, THERMAL MAGNETIC, 600VAC WITH LUGS	FD63B250L
12	1	SIEMENS	CIRCUIT BREAKER, UL489, 1-POLE, 5AMP	5SJ411-7HG40
13	2	SIEMENS	CIRCUIT BREAKER, UL489, 1-POLE, 10AMP	5SJ411-7HG40
14	1	CONTROL CONCEPT	SURGE SUPPRESSOR, 120VAC, 5AMP, FILTERING, 45KA, 10YR WARRANTY	IC+105
15	A/R	PHOENIX CONTACT	TERMINAL BLOCK, FEED THROUGH, FINGER SAFE, 26-10AWG, 41AMP, 800VOLT, TYPE UT4	3044102
16	A/R	PHOENIX CONTACT	FUSEABLE TERMINAL BLOCK, FINGER SAFE, TYPE UT4-TG	3044142
17	A/R	PRECISION DIGITAL	FUSE PLUG FOR DISCONNECT TERMINAL BLOCK	3036806

18	1	YOKAGAWA	VOLTMETER, 600-150, TRANSFORMER RATED	250-344-PZSJ
19	1	ELECTROSWITCH	VOLTMETER SWITCH	3104C
20	A/R	PRECISION DIGITAL	GROUND TERMINAL BLOCK, FINGER SAFE, 26-10AWG, 41AMP, 800VOLT, TYPE UT4-PE	3044128
21	3	ELECTROSWITCH	AMMETER SWITCH	3110C
22	3	YOKAGAWA	AMMETER, TRANSFORMER RATED, 0-5AMP INPUT, 25-500HZ, PIVOT & JEWEL DISPLAY RANGE MAY VARY BY LIFT STATION	240-340-XXXX XXXX DENOTES AMP SCALE. MAY VARY BY LIFT STATION
23	7	ALLEN-BRADLEY	PUSH-TO-TEST PILOT LIGHT, LED, FULL VOLTAGE, 30.5MM, NEMA 4/4X/13, 12-130V AC/DC, RED	800H-QRTH2R
24	3	ALLEN-BRADLEY	PUSH-TO-TEST PILOT LIGHT, LED, FULL VOLTAGE, 30.5MM, NEMA 4/4X/13, 12-130V AC/DC, GREEN	800H-QRTH2G
25	7	ALLEN-BRADLEY	PUSH-TO-TEST PILOT LIGHT, LED, FULL VOLTAGE, 30.5MM, NEMA 4/4X/13, 12-130V AC/DC, AMBER	800H-QRTH2A
26	1	ALLEN-BRADLEY	PUSH-TO-TEST PILOT LIGHT, LED, FULL VOLTAGE, 30.5MM, NEMA 4/4X/13, 12-130V AC/DC, WHITE	800H-QRTH2W
27	2	ALLEN-BRADLEY	TWO POSITION SELECTOR SWITCH, 30.5MM, NEMA 4/4X/13, MAINTAINED	800H-HR2
28	4	ALLEN-BRADLEY	THREE POSITION SELECTOR SWITCH, 30.5MM, NEMA 4/4X/13, MAINTAINED	800H-JR2
29	5	ALLEN-BRADLEY	PUSHBUTTON, 30.5MM, NEMA 4/4X/13, FLUSH BLACK	800H-AR2
30	1	TURCK	INTRINSICALLY SAFE BARRIER, 2WIRE, 4-20mA	IM33-11EX-HI/24VDC
31	1	DIVERSIFIED	INTRINSICALLY SAFE RELAY, 120VAC, 4 CHANNELS	ISO-120-ACE

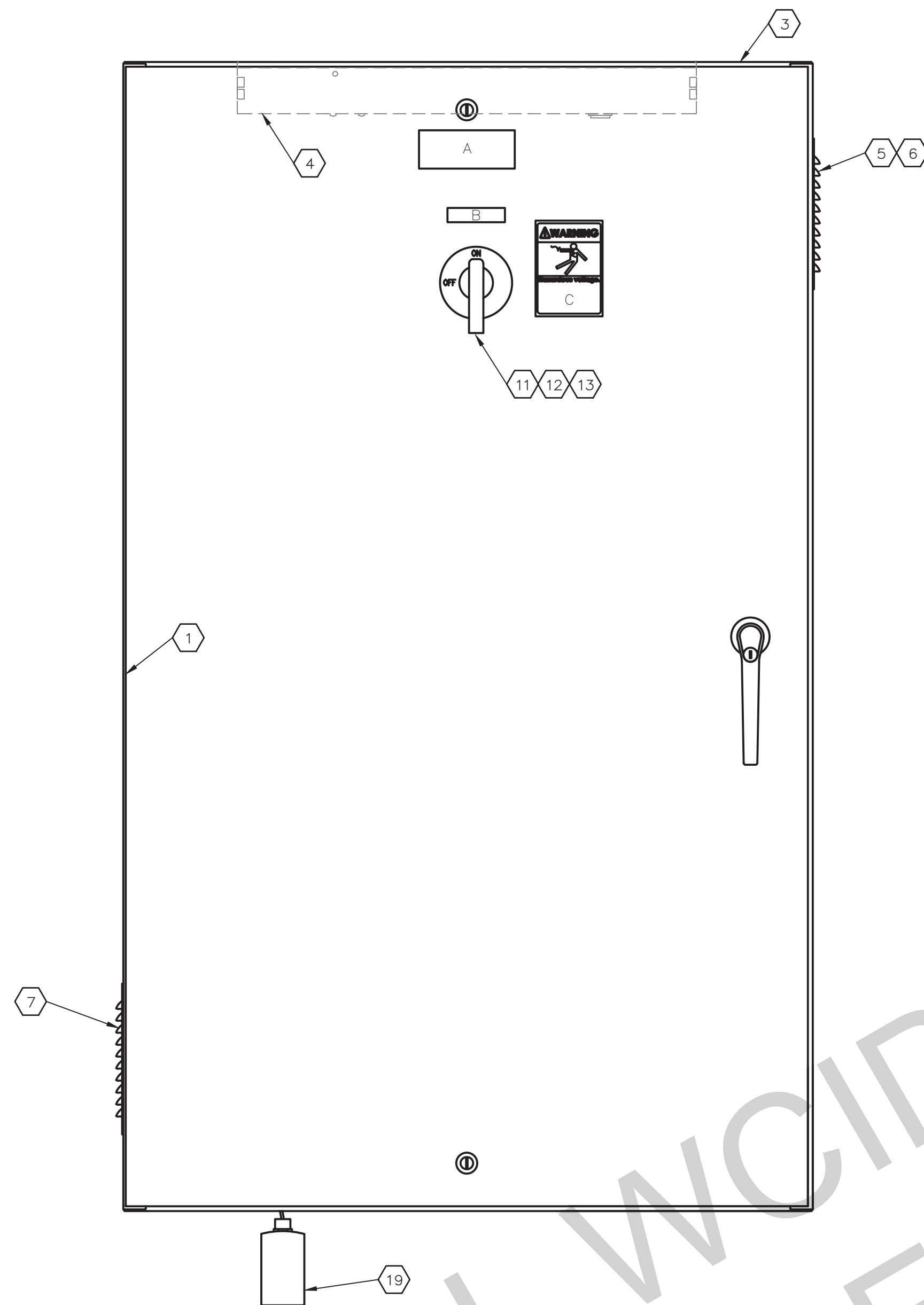
32	1	EDWARDS	ALARM HORN, 120VAC, 78-103 dB	870P-N5
33	3	ENM COMPANY / ALLIED ELECTRONICS	OUR METER, 120VAC, PANEL MOUNT, 5 DIGITS, NON-RESETTING, NEMA 4X	T50AS/207-0039
34	32	ALLEN-BRADLEY	RELAY, TUBE BASE, 10AMP CONTACT, 3PDT, 120VAC, LED LIGHT	700-HA33A1-4
35	32	ALLEN-BRADLEY	11-PIN RELAY BASE	700-HN101
36	7	MAGNACRAFT	TIME DELAY RELAY-ON DELAY, 0.1SEC TO 10HRS, 120VAC COIL, 12AMP CONTACTS, 8	TDRSOPX-120V
37	3	SSAC	SEAL FAILURE DETECTION RELAY	LLC54AA
38	10	ALLEN-BRADLEY	8 PIN RELAY BASE	700-HN100
39	1	PRECISION DIGITAL	LIQUID LEVEL CONTROLLER, DUAL DISPLAY METER, 120 VAC, 4-20mA INPUT & OUTPUT, 4 RELAY OUTPUTS	PD6000-6R7
40	1	PRECISION DIGITAL	EXPANSION MODULE WITH 4 RELAY	PDA-1004
41	1	PRECISION DIGITAL	8 PIN RELAY BASE	PDA-1002
42	1	MISSION CONTROLS	SUBM. TRANSDUCER, 4-20mA OUTPUT, CABLE LENGTH AS REQ'D, TERMINATE IN ENCL W/DESICCANT, PROTECT REFERENCE TUBE IN CABLE DURING AND AFTER INSTALLATION.	WWLP-015-50 24111
43	1	ANCHOR SCIENTIFIC	FLOAT SWITCH, INTERNAL WEIGHT, CABLE LENGTH AS REQ'D, NORMALLY CLOSED CONTACT, MERCURY-FREE	GS130NC
44	3	ANCHOR SCIENTIFIC	FLOAT SWITCH, INTERNAL WEIGHT, CABLE LENGTH AS REQ'D, NORMALLY OPEN CONTACT, MERCURY-FREE	GS130NO
45	A/R	SQUARE D	GROUND BUS BAR	PK7GTG
46	A/R	THOMAS & BETTS	WIREWAY	TY SERIES

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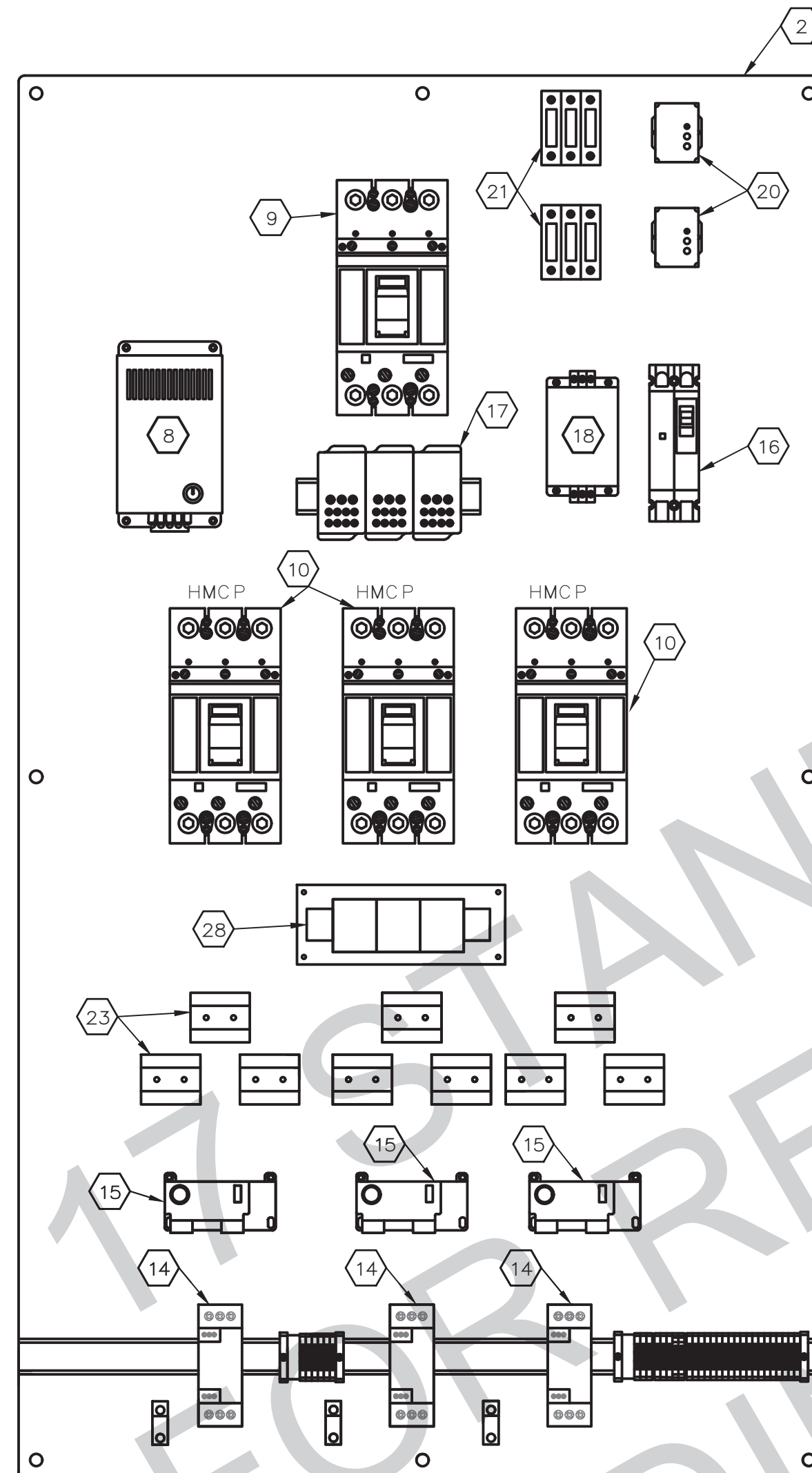
Green Civil Design
Engineering & Consulting
Texas Registered Engineering Firm F-17563

TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS
PUMP CONTROL PANEL
ELEVATION

SHEET
8
OF 21



EXTERIOR PANEL LAYOUT



INTERIOR SWING DOOR LAYOUT
TYPICAL THREE PUMP POWER PANEL FRONT VIEW
OUTER DOORS NOT SHOWN

1 PUMP POWER PANEL ELEVATION
SCALE: N.T.S.

GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

A-B/W



B-B/W



DOOR TAG LAYOUT

LIST OF MATERIALS

ITEM	QTY	VENDOR	DESCRIPTION	REFERENCE
1	1	SAGINAW	ENCLOSURE 60"H x 36"W x 16"D, 304SS, NEMA 3R, THREE POINT LATCHING DOOR W/PADLOCKING HANDLE, #4 BRUSHED FINISHED	SCE-60EL3616SSLPL
2	1	SAGINAW	BACK PANEL	SCE-60P36
3	1	SAGINAW	DRIP SHIELD, 304SS	SCE-DS36SS
4	2	SAGINAW	PANEL LIGHT	SCE-LF24
5	1	SAGINAW	FILTER KIT	SCE-FLT66
6	12	SAGINAW	LOUVER KIT	SCE-AVK66SS
7	1	SAGINAW	COOLING FAN	SCE-CF6
8	1	HOFFMAN	HEATER, 400WATT	DAH4001B
9	1	SIEMENS	BREAKER, THERMAL MAGNETIC, 600VAC WITH LUGS	52P6G6 (1)
10	3	SIEMENS	BREAKER, MOTOR CONTROL PROTECTOR, 600VAC, ADJUSTABLE TRIP, WITH LUGS	FXD63AXL (1)
11	1	SIEMENS	BREAKER HANDLE, ROTARY	CRHOH
12	1	SIEMENS	BREAKER OPERATOR	RHOFB0
13	1	SIEMENS	BREAKER SHAFT 16"	RHOSXD
14	3	SIEMENS	SOLID STATE STARTER, 460 VOLT	3RW40
15	3	SIEMENS	SOLID STATE OVERLOAD RELAY, ESP200, MANUAL RESET, 50-200A	48BTH3500 (1)
16	1	SIEMENS	CIRCUIT BREAKER, UL489, 1-POLE, 10AMP	5SJ411-7HG40
17	3	ERICO	DISTRIBUTION BLOCK	569040
18	1	CONTROL CONCEPT	SURGE SUPPRESSOR, 120VAC, 5AMP, FILTERING, 45KA, 10YR WARRANTY	IC+105
19	1	DELTA	SURGE ARRESTOR, 480VAC	LA603
20	2	DIVERSIFIED ELECTRONICS	POWER MONITOR RELAY	SLA-440-ASA
21	6	BUSSMANN	FUSE, CLASS CC	FNQ-R-1
22	2	BUSSMAN	FUSE BLOCK, 3 PHASE, CLASS CC	BC6033P
23	9	FLEXCORE	CURRENT TRANSFORMER, XX:5	2SFT-600 (8)
24	3	ALLEN-BRADLEY	RELAY, TUBE BASE, 10AMP CONTACT, 3PDT, 120VAC, LED LIGHT	700-HA33AT-4
25	3	ALLEN-BRADLEY	11-PIN RELAY BASE	700-HN101
26	A/R	PHOENIX CONTACT	FUSEABLE TERMINAL BLOCK, FINGER SAFE, TYPE UT4-TG	3044142
27	A/R	PRECISION DIGITAL	FUSE PLUG FOR DISCONNECT TERMINAL BLOCK	3036806
28	1	FLEXCORE	POTENTIAL TRANSFORMER 4:1, THREE TRANSFORMERS, ONE CASE	3VTL-460-480

(1) SEE ONE LINE DIAGRAM FOR SIZE

NAMEPLATE SCHEDULE

MARK	INSCRIPTION	LETTER SIZE
A	MOTOR STARTER PANEL	1/2"
B	PANEL MAIN DISCONNECT	3/8"
C	DANGER 480 VOLTS	3/8"

KEYED NOTES

- THE PUMP POWER PANEL SHALL BE ASSEMBLED AND TESTED BY A SHOP MEETING U.L. STANDARD 508 FOR INDUSTRIAL CONTROLS. THE MOTOR AND CONTROL PANEL SHALL BE ASSEMBLED AND TESTED BY THE SAME MANUFACTURER SUPPLYING THE PUMP SO AS TO ENSURE SUITABILITY AND ASSURANCE OF EXPERIENCE IN MATCHING CONTROLS TO MOTORS AND TO ENSURE SINGLE SOURCE RESPONSIBILITY FOR THE EQUIPMENT.
- THE POWER PANEL SHALL COMPLY WITH NEC REGULATIONS AND HAVE A U.L. LABEL.
- PUMP POWER EQUIPMENT SHALL BE PROVIDED BY THE SUPPLIER AND BE CONTAINED IN A STAINLESS STEEL ENCLOSURE MEETING NEMA 3R REQUIREMENTS WITH A HINGED DOOR AND NEOPRENE GASKET. THE ENCLOSURE SHALL HAVE PROVISIONS FOR PADLOCKING. A NAMEPLATE SHALL BE PERMANENTLY AFFIXED TO THE PANEL AND INCLUDE THE MODEL NUMBER, VOLTAGE, PHASE, HERTZ, AMPERE RATING, AND HORSEPOWER RATING. A WARNING LABEL AGAINST ELECTRIC SHOCK SHALL BE PERMANENTLY AFFIXED TO THE OUTER DOOR.
- THE PUMP POWER PANEL SHALL BE MANUFACTURED BY SQUARE D OR CUTLER-HAMMER (OR APPROVED EQUAL).
- THE PUMP CONTROLLER SHALL INDICATE PUMP CONTROL OPERATIONS UTILIZING RED AND AMBER LED INDICATOR LIGHTS. LED INDICATOR LIGHTS SHALL PROVIDE ADEQUATE INFORMATION SO THAT THEY CAN BE USED FOR DIAGNOSIS IN TROUBLESHOOTING. EACH LED SHALL BE PERMANENTLY LABELED ON THE PUMP CONTROLLER AS TO FUNCTION.
- CIRCUIT BREAKERS, MOTOR CIRCUIT PROTECTORS AND MOTOR STARTERS ARE TO BE SIZED AS REQUIRED. SEE ONE LINE DIAGRAM.
- SURGE ARRESTOR IS TO BE LOCATED OUTSIDE OF THE PANEL ENCLOSURE.
- CT RATIO MAY VARY BASED ON LIFT STATION PUMP REQUIREMENTS.

REVISIONS

NO.	DESCRIPTION	APP.	DATE

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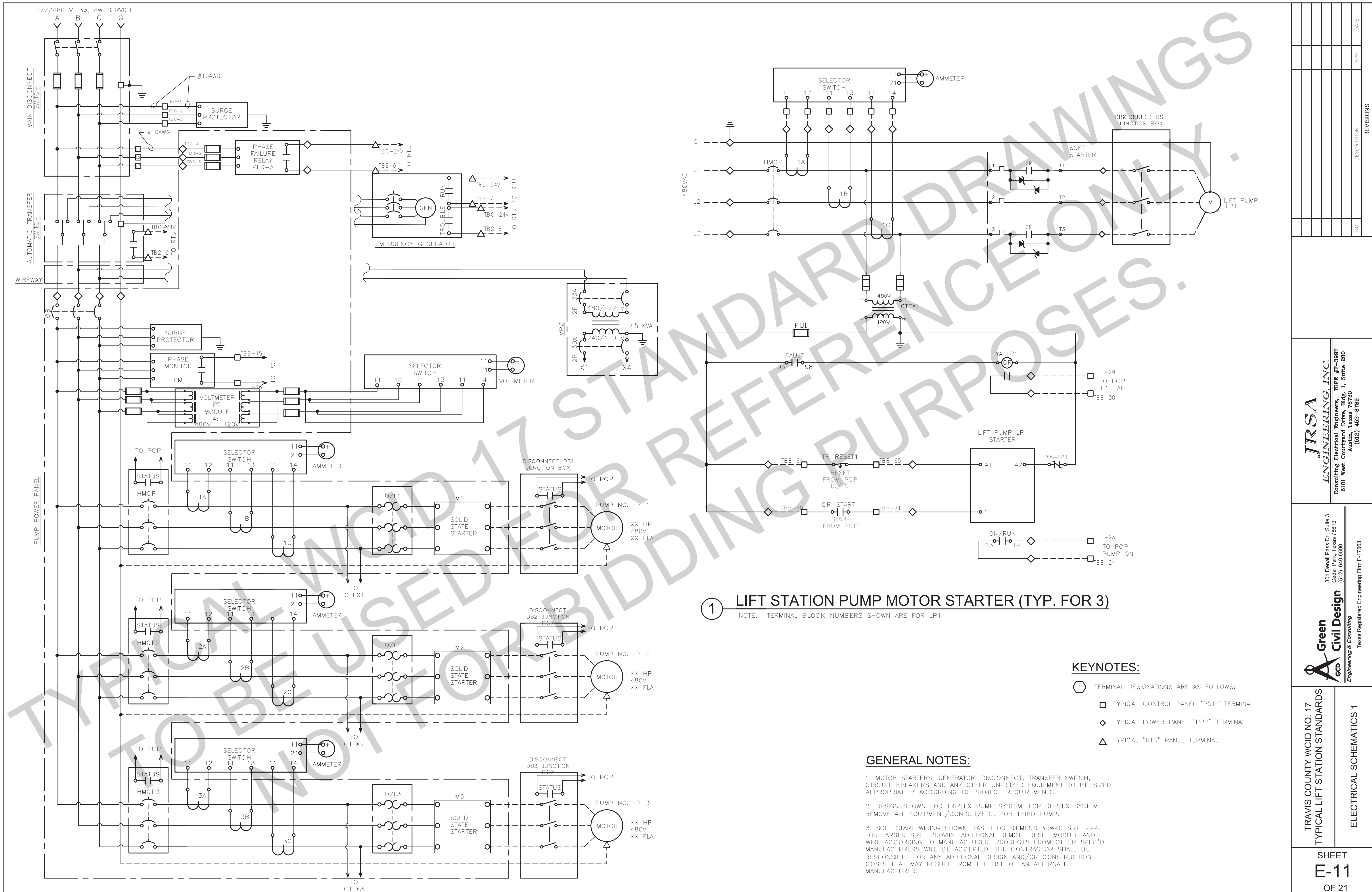
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Cedar Park, Texas 78613
(512) 646-6590

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PUMP POWER PANEL ELEVATION

SHEET
F-9
OF 21

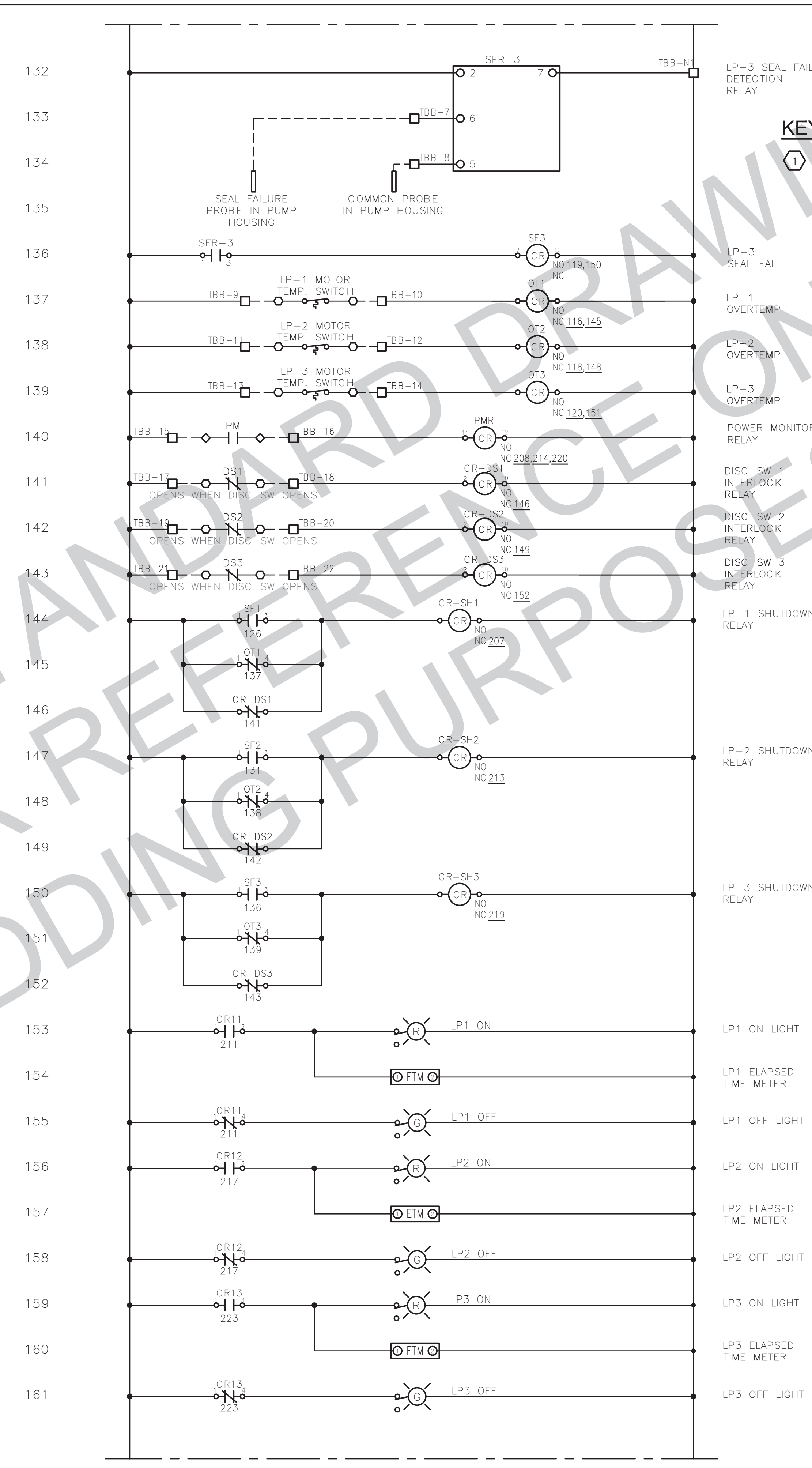
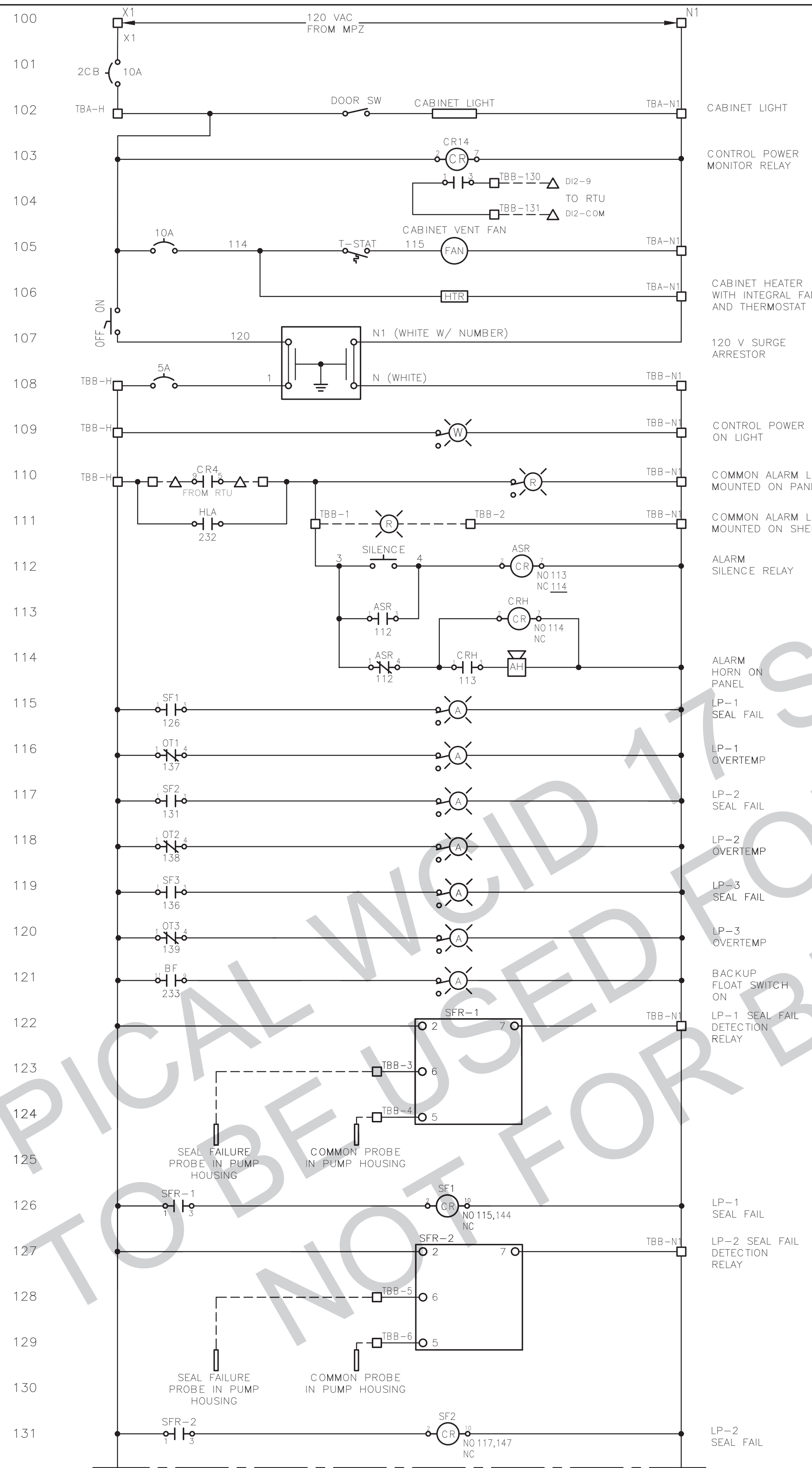


1 LIFT STATION PUMP MOTOR STARTER (TYP. FOR 3)
 NOTE: TERMINAL BLOCK NUMBERS SHOWN ARE FOR LP1

- KEYNOTES:**
- 1 TERMINAL DESIGNATIONS ARE AS FOLLOWS:
 - TYPICAL CONTROL PANEL "PCP" TERMINAL
 - ◇ TYPICAL POWER PANEL "PPP" TERMINAL
 - △ TYPICAL "RTU" PANEL TERMINAL

- GENERAL NOTES:**
1. MOTOR STARTERS, GENERATOR, DISCONNECT, TRANSFER SWITCH, CIRCUIT BREAKERS AND ANY OTHER UN-SIZED EQUIPMENT TO BE SIZED APPROPRIATELY ACCORDING TO PROJECT REQUIREMENTS.
 2. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.
 3. SOFT START WIRING SHOWN BASED ON SIEMENS 3RW40 SIZE 2-4. FOR LARGER SIZE, PROVIDE ADDITIONAL REMOTE RESET MODULE AND WIRE ACCORDING TO MANUFACTURER. PRODUCTS FROM OTHER SPEC'D MANUFACTURERS WILL BE ACCEPTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL DESIGN AND/OR CONSTRUCTION COSTS THAT MAY RESULT FROM THE USE OF AN ALTERNATE MANUFACTURER.

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<p>TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS</p>	<p>ELECTRICAL SCHEMATICS 1</p>
<p>SHEET E-11 OF 21</p>	



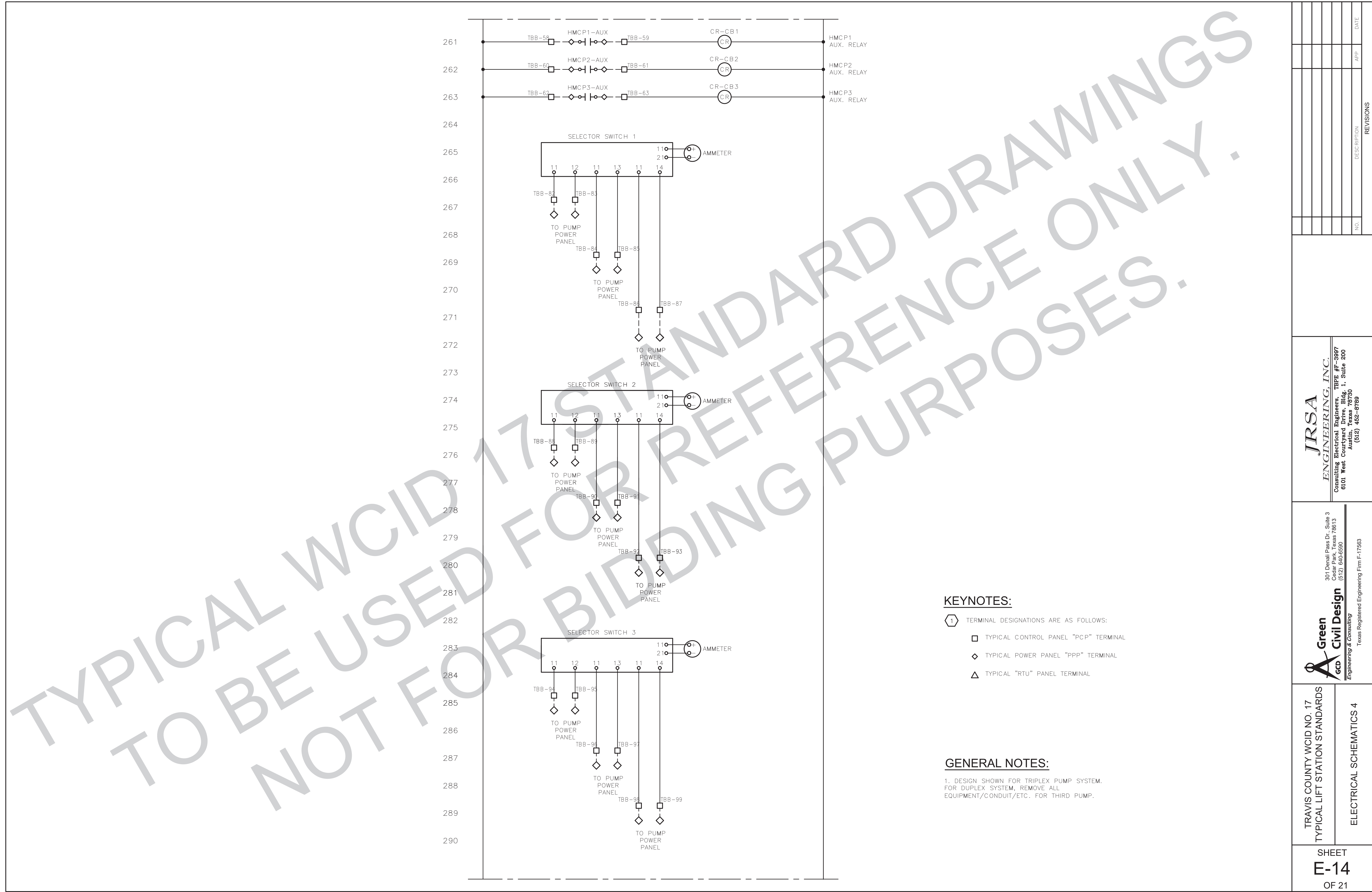
KEYNOTES:

1 TERMINAL DESIGNATIONS ARE AS FOLLOWS:

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- ◇ TYPICAL POWER PANEL "PPP" TERMINAL
- △ TYPICAL "RTU" PANEL TERMINAL

TYPICAL W/ CID 17 STANDARD FOR BIDDING PURPOSES ONLY.

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<p>TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS</p>	<p>ELECTRICAL SCHEMATICS 2</p>
<p>SHEET E-12 OF 21</p>	



KEYNOTES:

- ① TERMINAL DESIGNATIONS ARE AS FOLLOWS:
 - TYPICAL CONTROL PANEL "PCP" TERMINAL
 - ◇ TYPICAL POWER PANEL "PPP" TERMINAL
 - △ TYPICAL "RTU" PANEL TERMINAL

GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

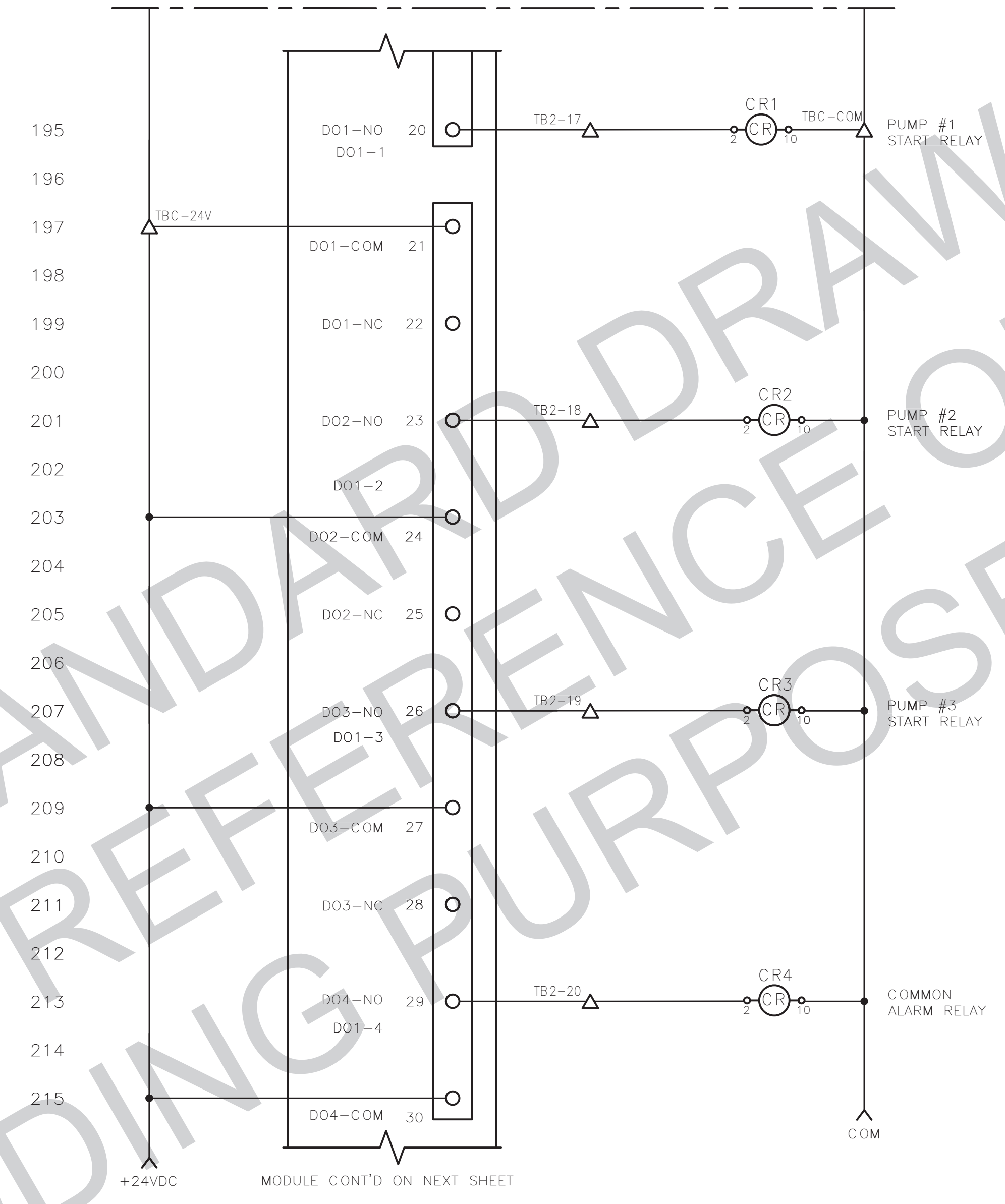
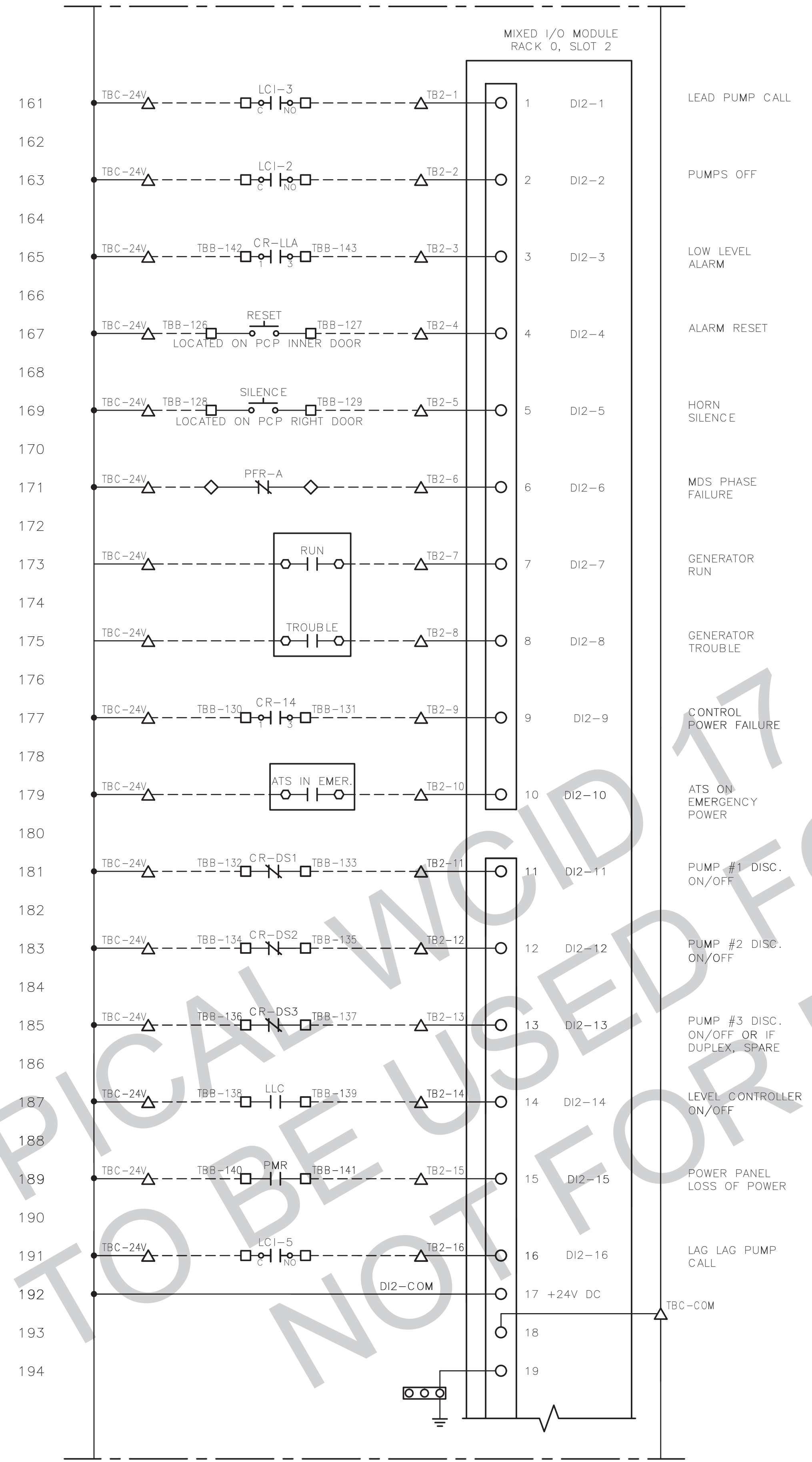
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TRAVIS COUNTY WCID NO. 17
 TYPICAL LIFT STATION STANDARDS
 ELECTRICAL SCHEMATICS 4



① RTU SCHEMATICS (CONT'D)

GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

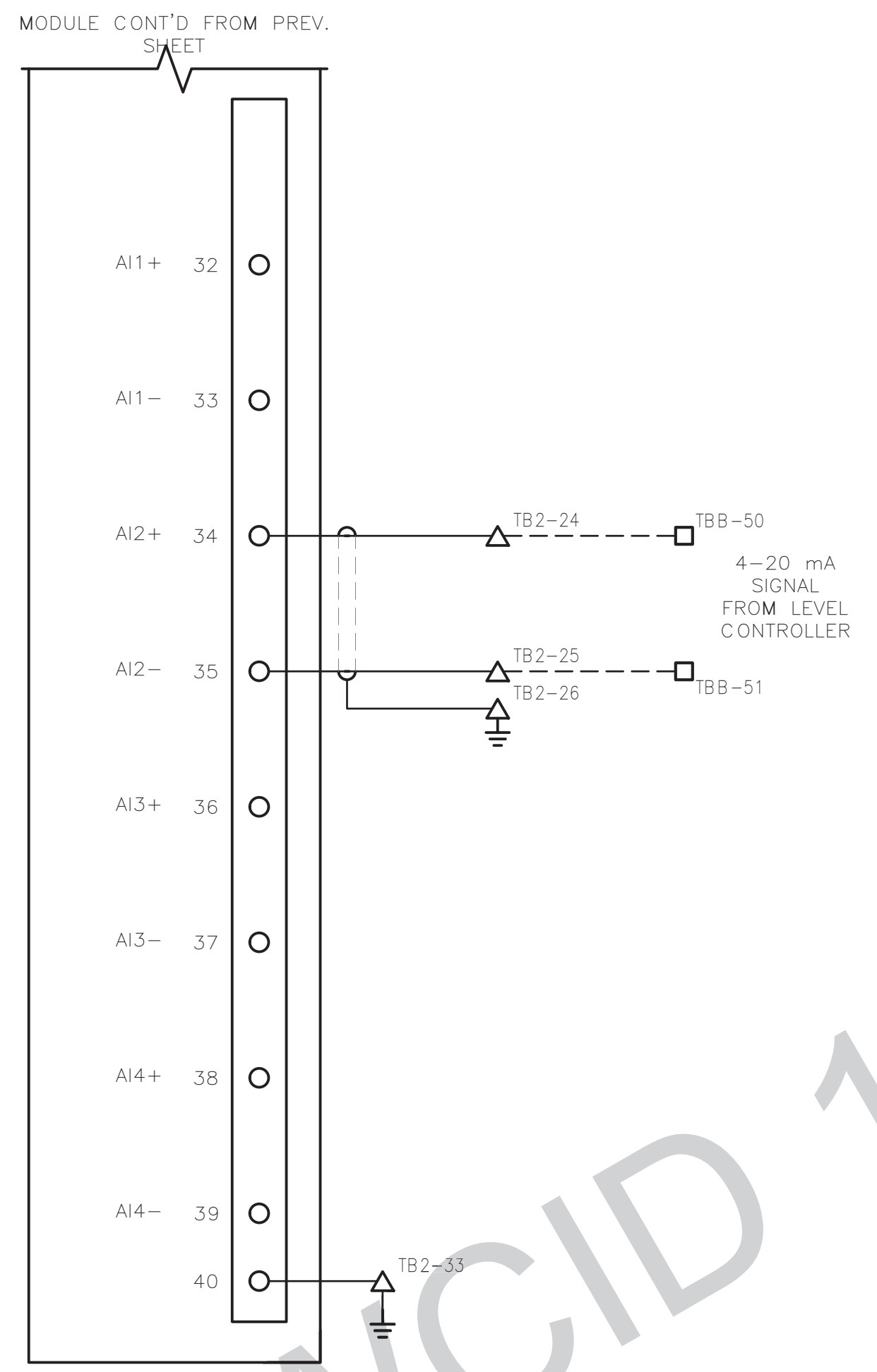
KEYNOTES:

- ① TERMINAL DESIGNATIONS ARE AS FOLLOWS:
- TYPICAL CONTROL PANEL "PCP" TERMINAL
- ◇ TYPICAL POWER PANEL "PPP" TERMINAL
- △ TYPICAL "RTU" PANEL TERMINAL

TYPICAL W/ICID 17 NOT TO BE USED FOR BIDDING PURPOSES ONLY. STANDARD DRAWINGS FOR REFERENCE PURPOSES.

<p>JRSA ENGINEERING, INC. Consulting Electrical Engineers, Tppg #F-0997 6101 West Courtyard Drive, Bldg. 1, Suite 200 Austin, Texas 78730 (512) 452-8788</p>	<p>TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS</p> <p style="text-align: center;">E-16</p> <p style="text-align: center;">SHEET E-16 OF 21</p>																
<p>301 Drexel Pass Dr., Suite 3 Coppell, Texas 76615 (512) 640-6590</p> <p>Green Civil Design Engineering & Consulting Texas Registered Engineering Firm F-17563</p>	<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>APP.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DESCRIPTION	APP.	DATE												
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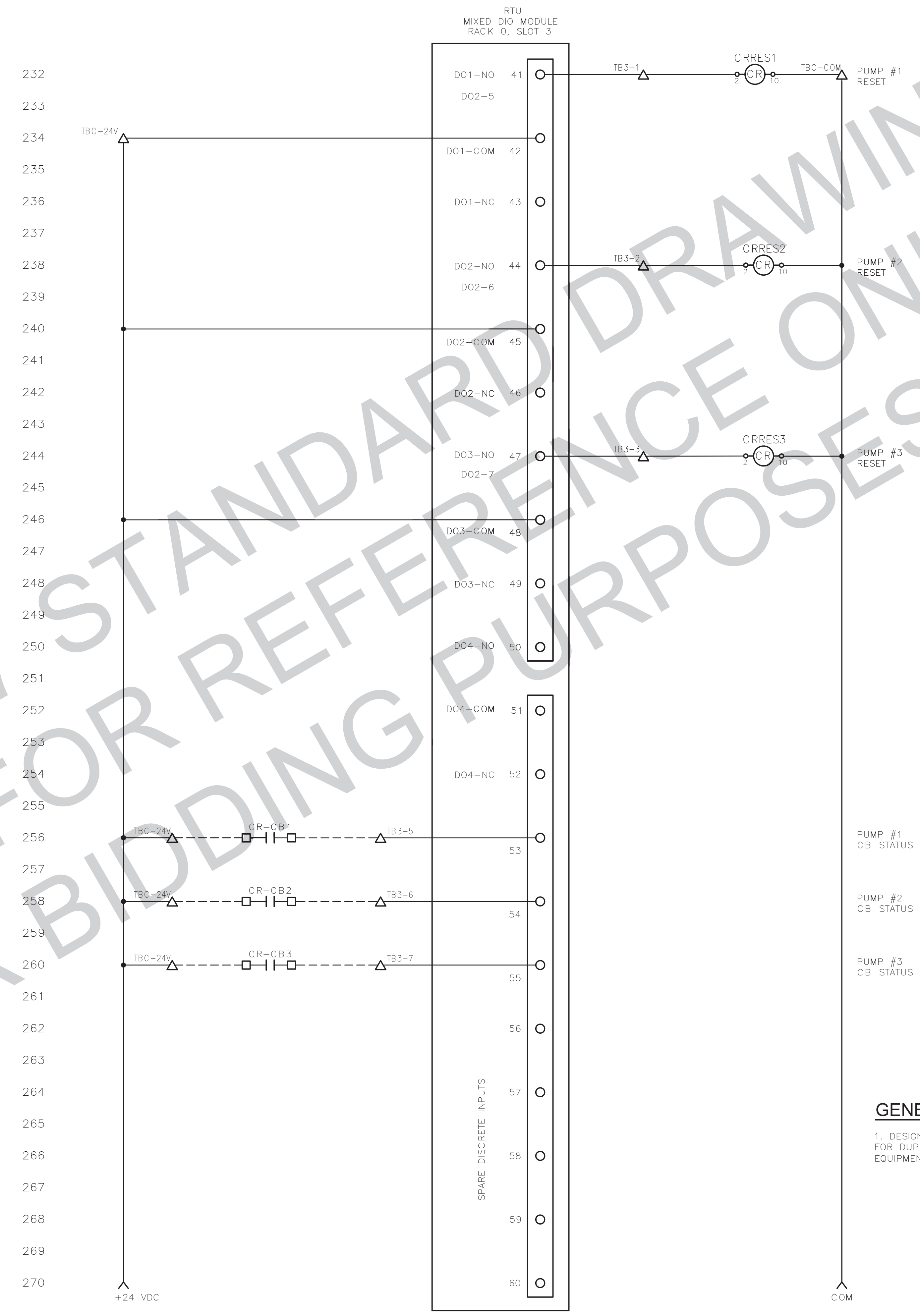
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1 RTU SCHEMATICS (CONT'D)

KEYNOTES:

- 1 TERMINAL DESIGNATIONS ARE AS FOLLOWS:
- TYPICAL CONTROL PANEL "PCP" TERMINAL
 - ◇ TYPICAL POWER PANEL "PPP" TERMINAL
 - △ TYPICAL "RTU" PANEL TERMINAL



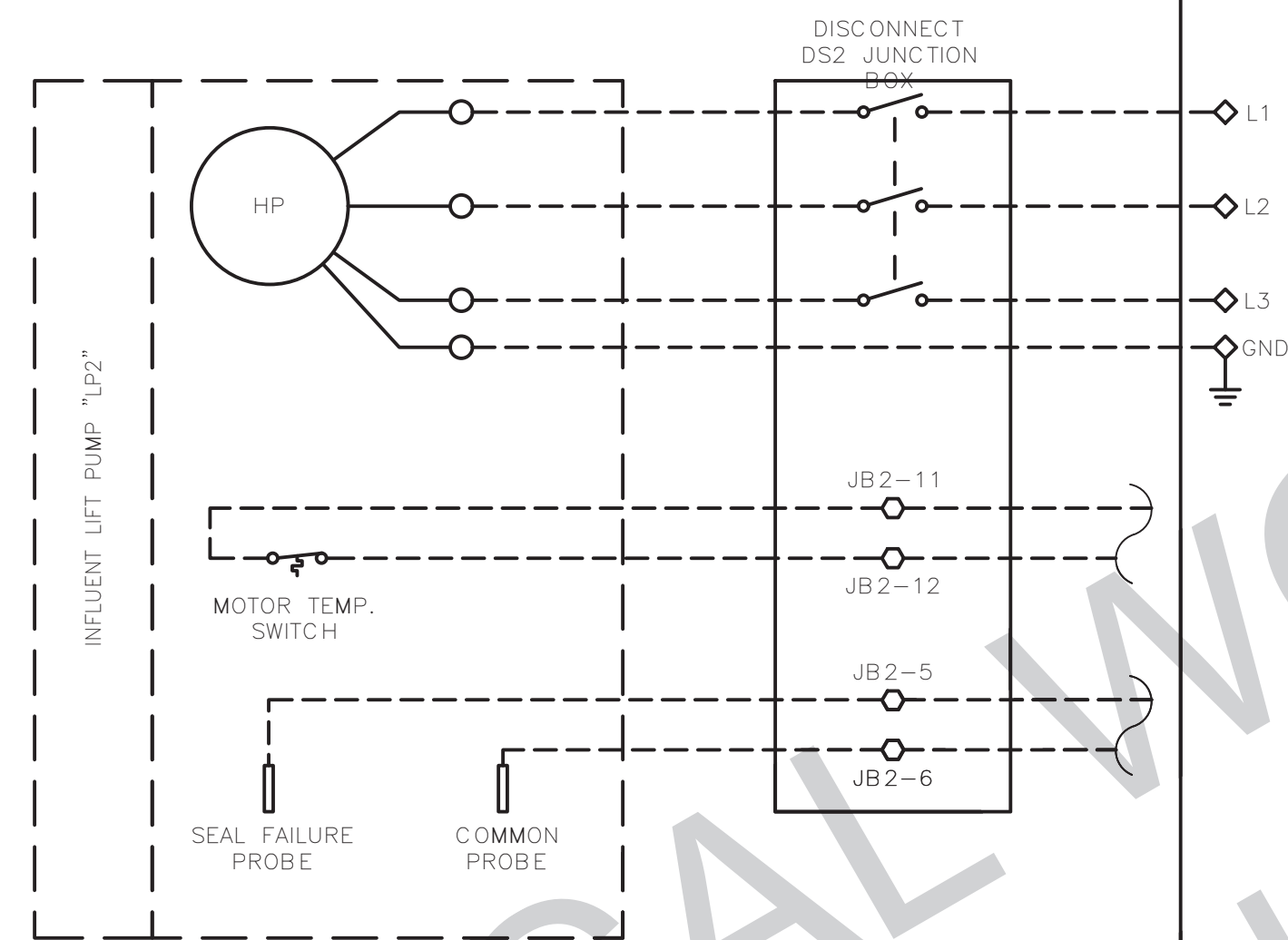
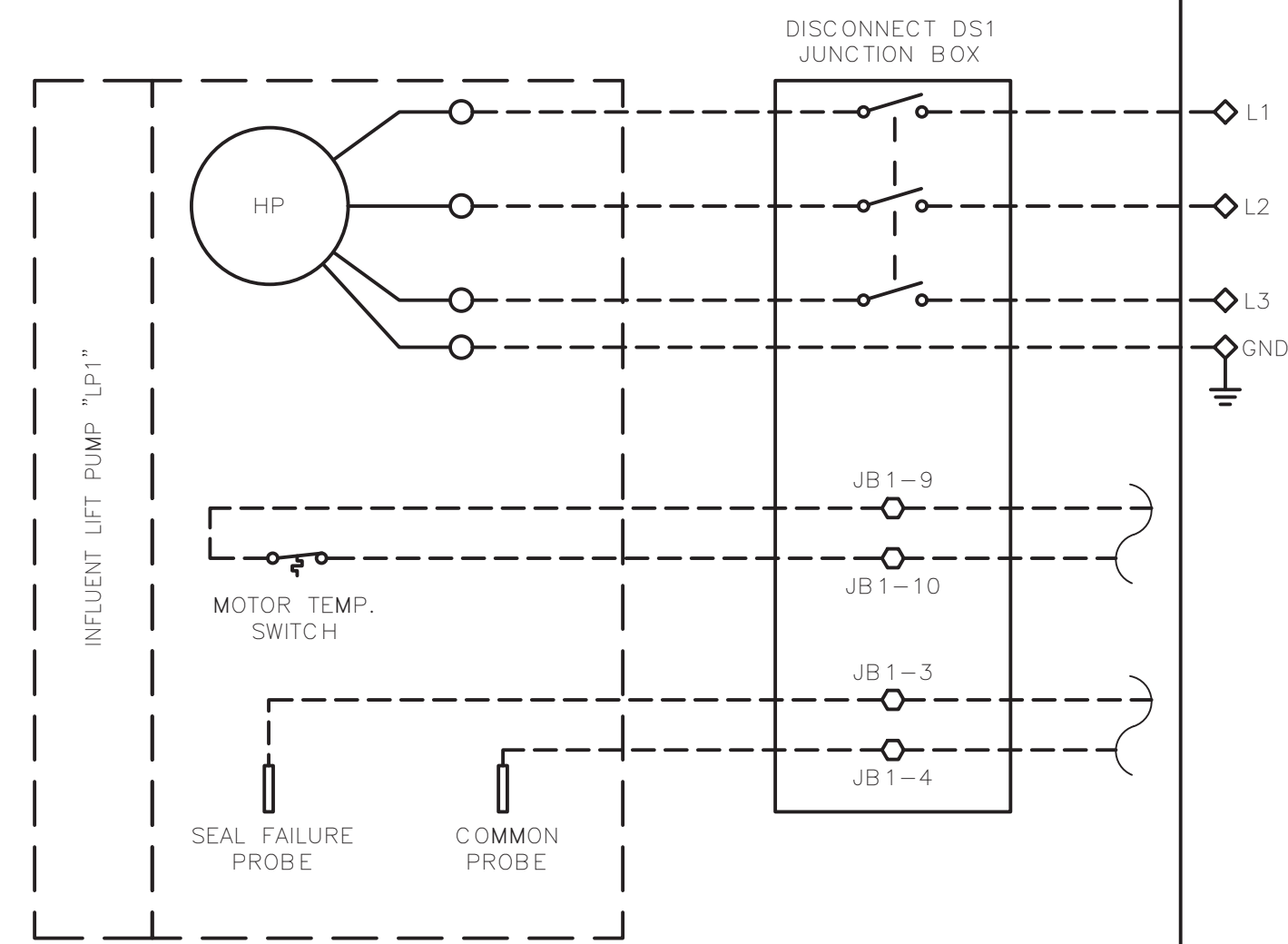
GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

<p>RTU MIXED DIO MODULE RACK 0, SLOT 3</p>	<p>CRRES1 2 CR 10</p> <p>CRRES2 2 CR 10</p> <p>CRRES3 2 CR 10</p>
<p>TB3-1</p> <p>TB3-2</p> <p>TB3-3</p> <p>TB3-5</p> <p>TB3-6</p> <p>TB3-7</p>	<p>TBC-COM</p> <p>TBC-24V</p> <p>TBC-24V</p> <p>TBC-24V</p> <p>TBC-24V</p> <p>TBC-24V</p>
<p>DO1-NO 41</p> <p>DO2-5</p> <p>DO1-COM 42</p> <p>DO1-NC 43</p> <p>DO2-NO 44</p> <p>DO2-6</p> <p>DO2-COM 45</p> <p>DO2-NC 46</p> <p>DO3-NO 47</p> <p>DO2-7</p> <p>DO3-COM 48</p> <p>DO3-NC 49</p> <p>DO4-NO 50</p> <p>DO4-COM 51</p> <p>DO4-NC 52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p>	<p>PUMP #1 RESET</p> <p>PUMP #2 RESET</p> <p>PUMP #3 RESET</p> <p>PUMP #1 CB STATUS</p> <p>PUMP #2 CB STATUS</p> <p>PUMP #3 CB STATUS</p> <p>SPARE DISCRETE INPUTS</p>
<p>+24 VDC</p>	<p>COM</p>
<p>TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS</p>	
<p>ELECTRICAL SCHEMATICS 7</p>	
<p>SHEET E-17 OF 21</p>	

TYPICAL WCID 17 STANDARD DRAWINGS
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<p>NO.</p>	<p>REVISIONS</p>



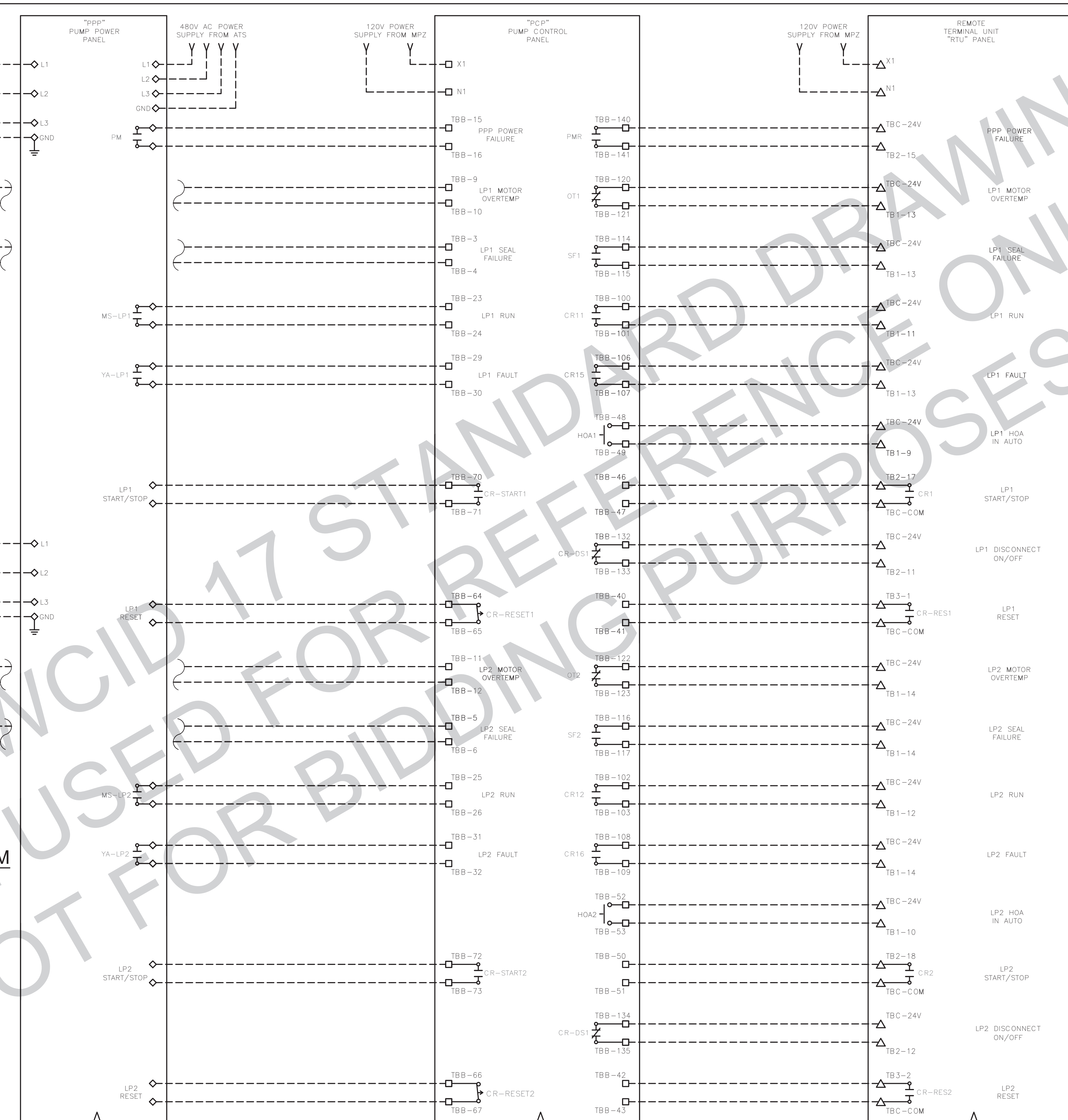
1 LIFT STATION CONNECTION DIAGRAM

KEYNOTES:

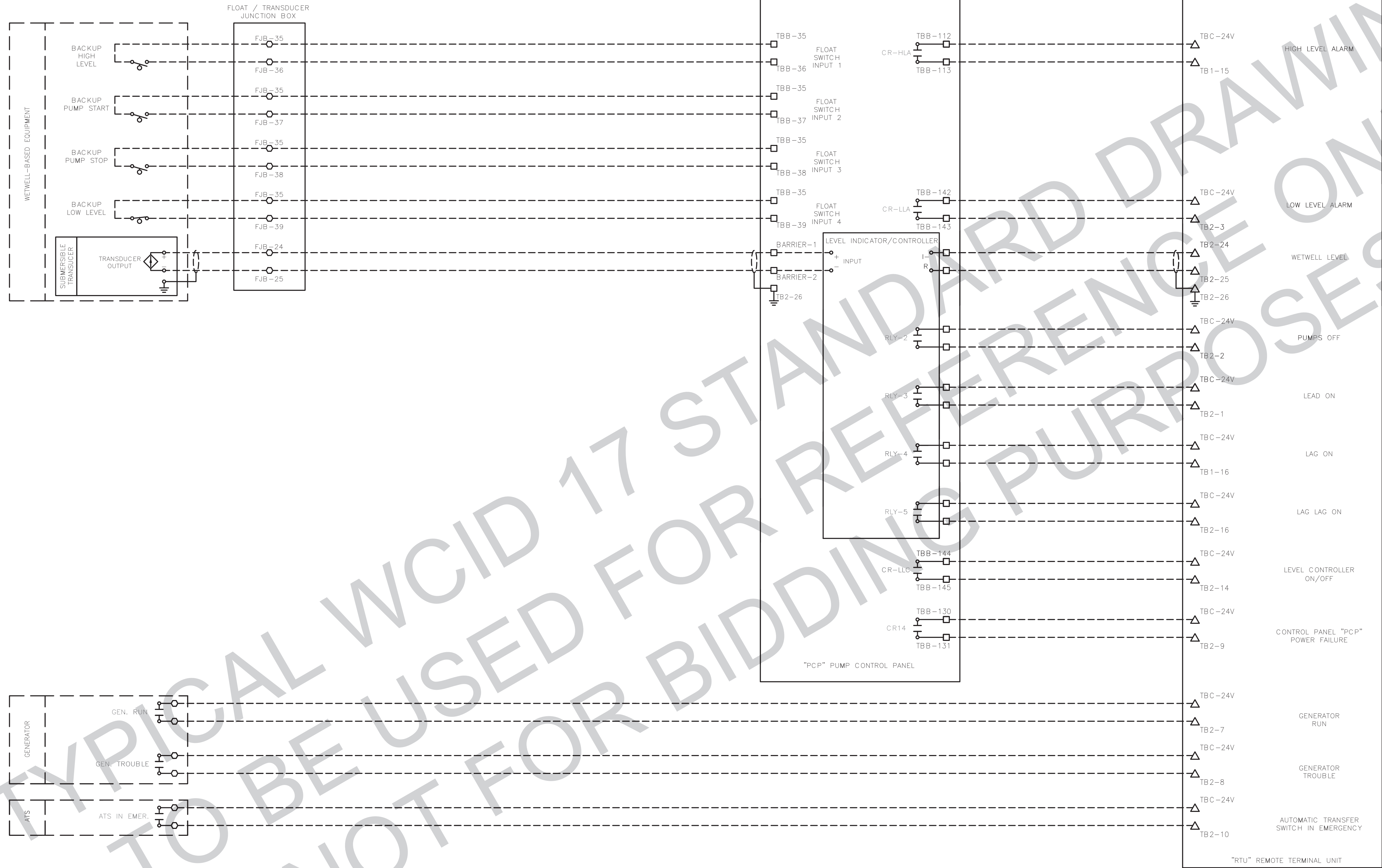
- 1 TERMINAL DESIGNATIONS ARE AS FOLLOWS:
 - TYPICAL CONTROL PANEL "PCP" TERMINAL
 - ◇ TYPICAL POWER PANEL "PPP" TERMINAL
 - △ TYPICAL "RTU" PANEL TERMINAL

GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.



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<p>TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS</p>	<p>ELECTRICAL SCHEMATICS 8</p>
<p>SHEET F-18 OF 21</p>	



KEYNOTES:

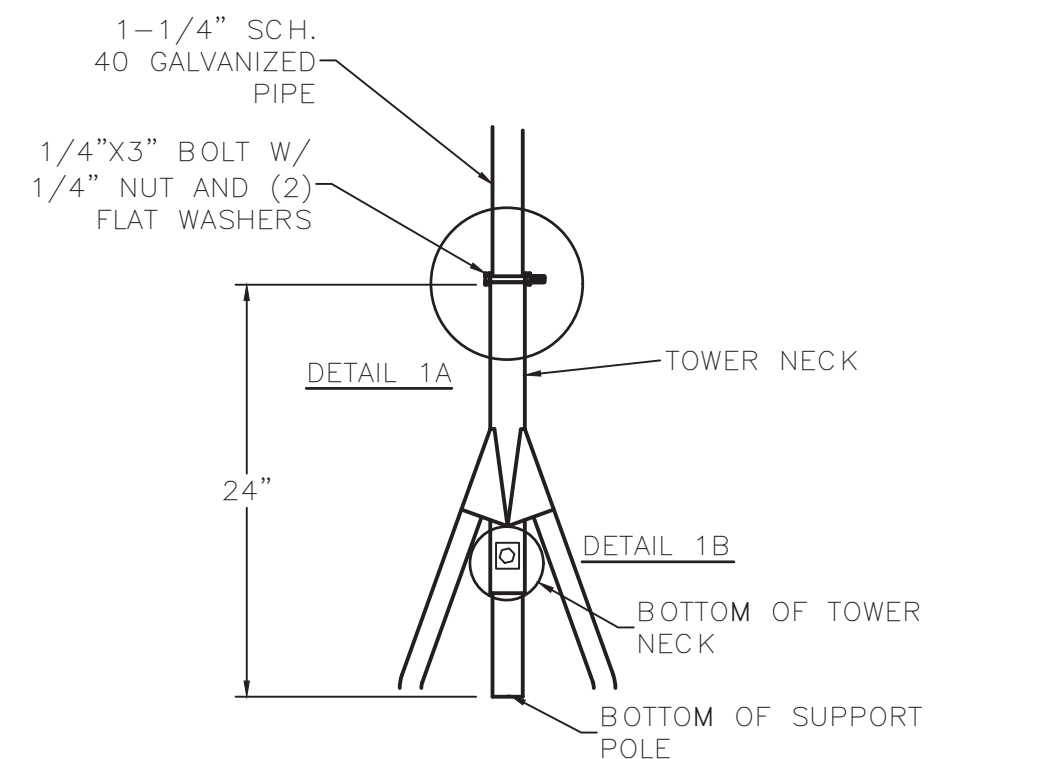
- ① TERMINAL DESIGNATIONS ARE AS FOLLOWS:
- TYPICAL CONTROL PANEL "PCP" TERMINAL
- ◇ TYPICAL POWER PANEL "PPP" TERMINAL
- △ TYPICAL "RTU" PANEL TERMINAL

① LIFT STATION CONNECTION DIAGRAM (CONT'D)

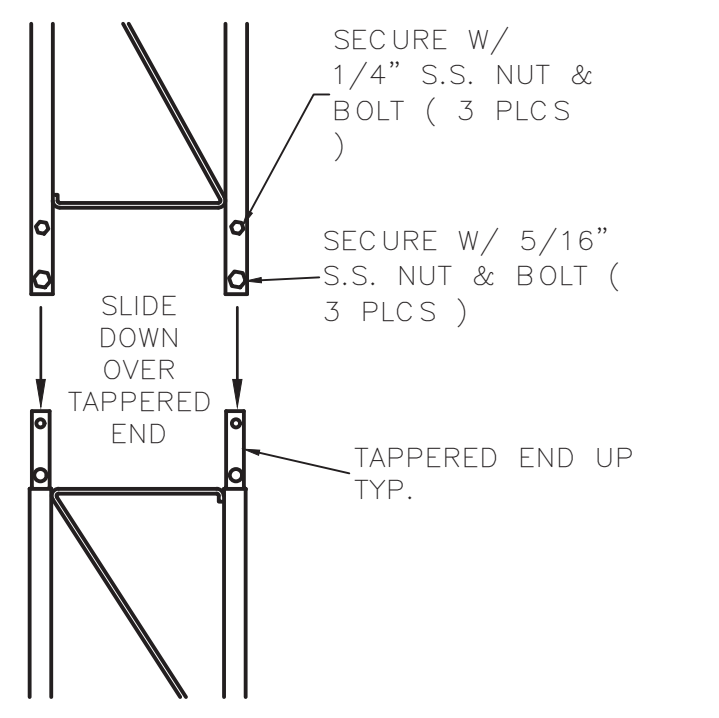
GENERAL NOTES:

1. DESIGN SHOWN FOR TRIPLEX PUMP SYSTEM. FOR DUPLEX SYSTEM, REMOVE ALL EQUIPMENT/CONDUIT/ETC. FOR THIRD PUMP.

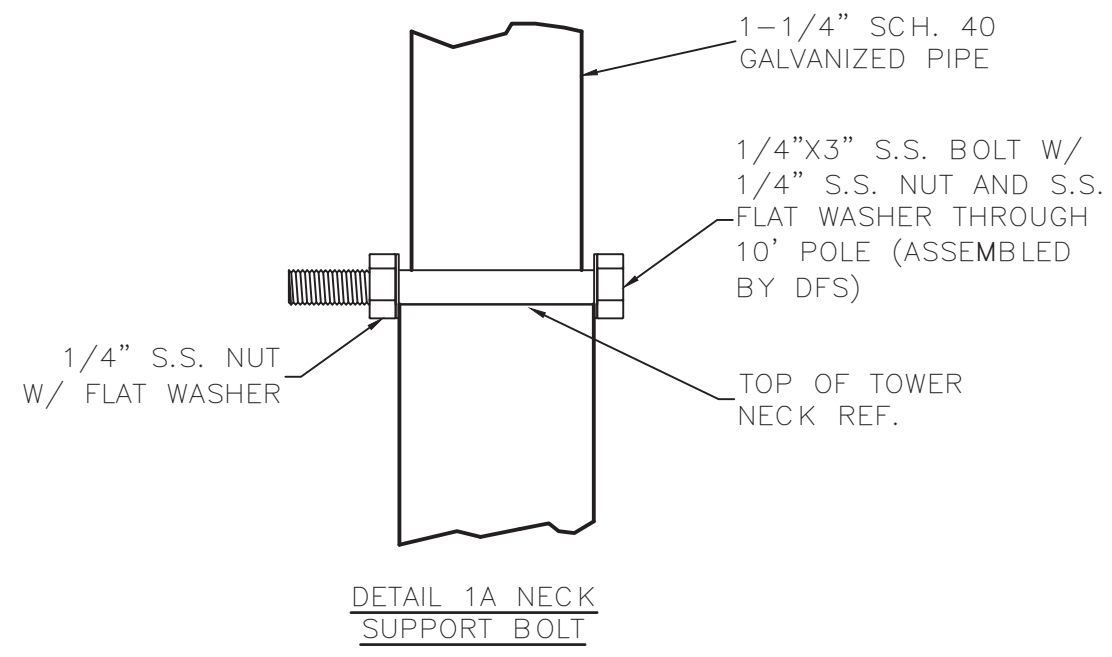
TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS		ELECTRICAL SCHEMATICS 10	
SHEET E-20 OF 21		<p>JRSA ENGINEERING, INC. Consulting Electrical Engineers, Tzppg #F-5997 6101 West Courtyard Drive, Bldg. 1, Suite 200 Austin, Texas 78750 (512) 452-8788</p> <p>Green Civil Design Engineering & Consulting 301 Drexel Pass Dr., Suite 3 Coppell, Texas 75019 (512) 642-6590 Texas Registered Engineering Firm F-17563</p>	
NO.		REVISIONS	
DESCRIPTION		APP.	
DATE		DATE	



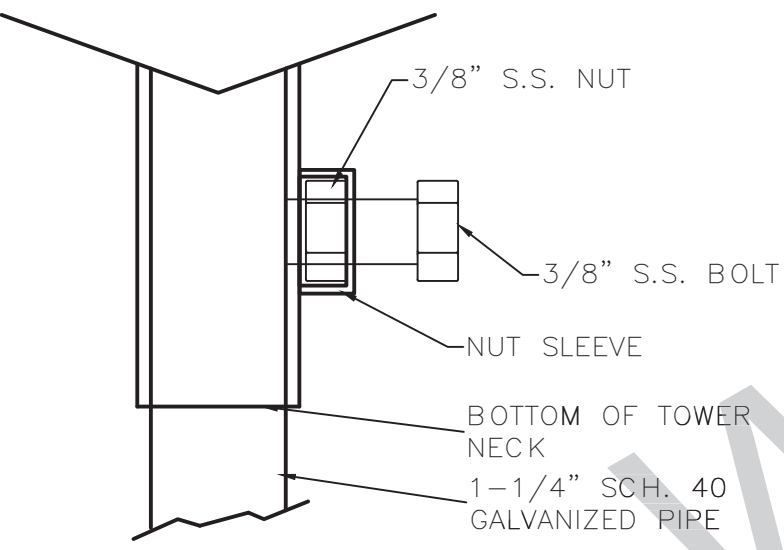
A ANTENNA MOUNTING POLE



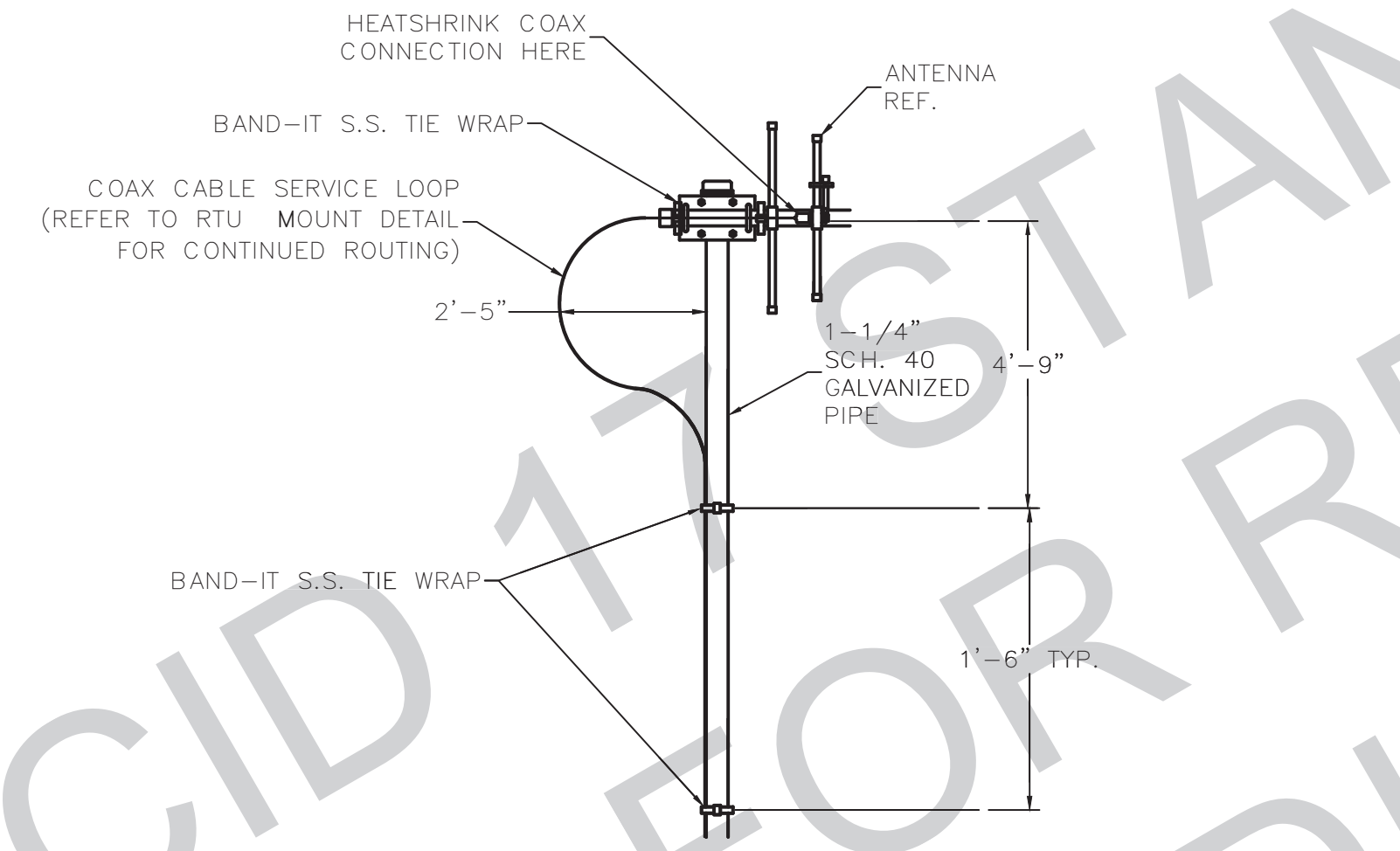
B TOWER SUPPORT



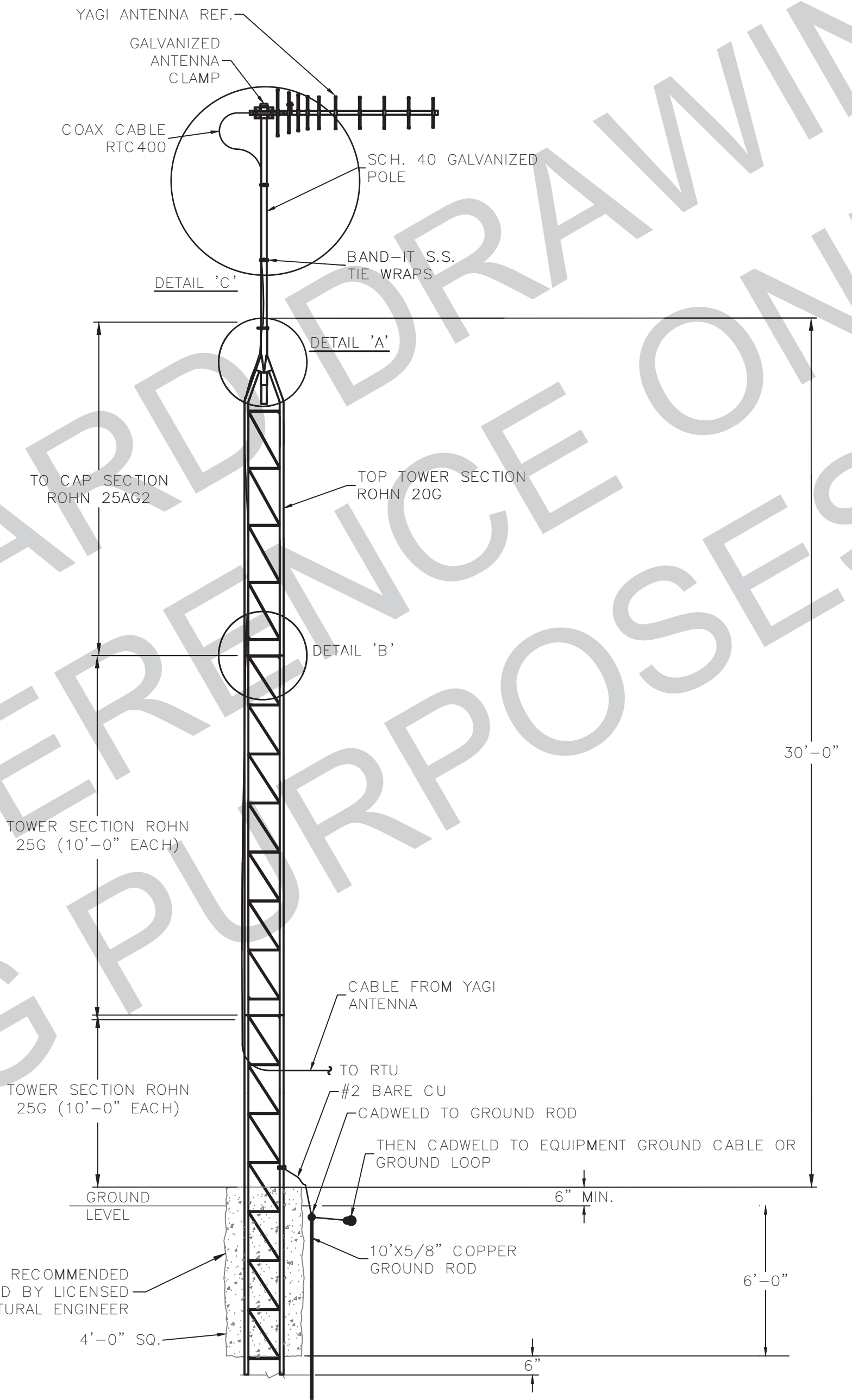
A1 NECK SUPPORT BOLT



A2 POLE SWIVEL BOLT (SIDE VIEW)



C COAX CABLE ROUTING & SUPPORT



1 ANTENNA MAST DETAIL

- NOTES:
1. PROVIDE SELF SUPPORTING ANTENNA TOWER FOR ALL ANTENNAS.
 2. ANTENNA TOWER SHALL BE A MINIMUM OF ROHN 25G, OR EQUAL, HEIGHT SHALL BE 30'-0". VERIFY ANTENNA INSTALLATION REQUIREMENTS WITH MANUFACTURER.
 3. ANTENNA CONCRETE BASE SUPPORT SHALL BE AS REQUIRED BY MANUFACTURER AND VERIFIED BY A LICENSED, STRUCTURAL ENGINEER.

TYPICAL W/CID 17
TO BE USED FOR BIDDING PURPOSES ONLY.

NO.	DESCRIPTION	APP.	DATE

TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS

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ANTENNA DETAILS