

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 GROUNDING 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	UON	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			PW	PULLWIRE	T/S	TWISTED/SHIELDED	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

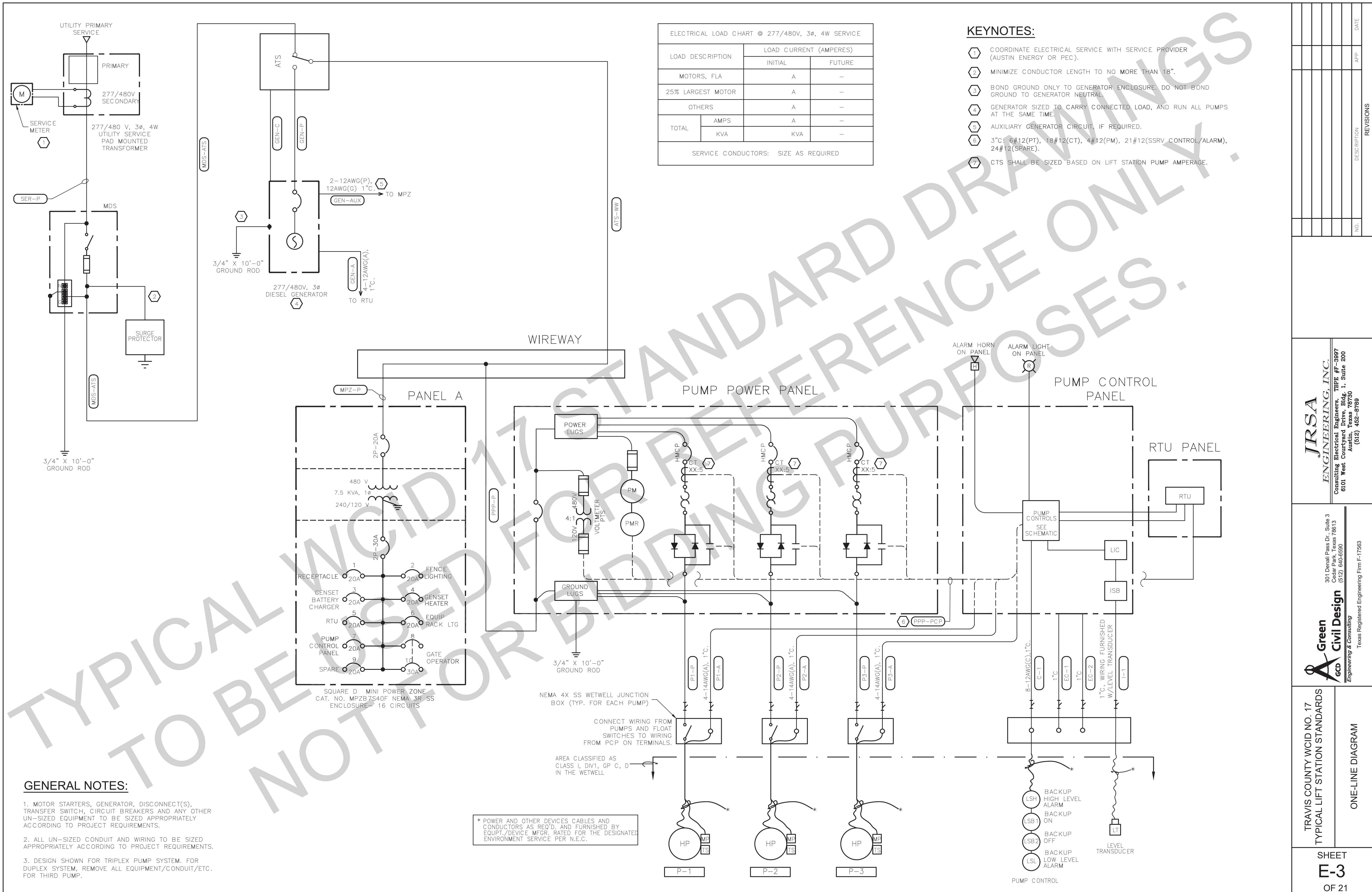
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TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS

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.

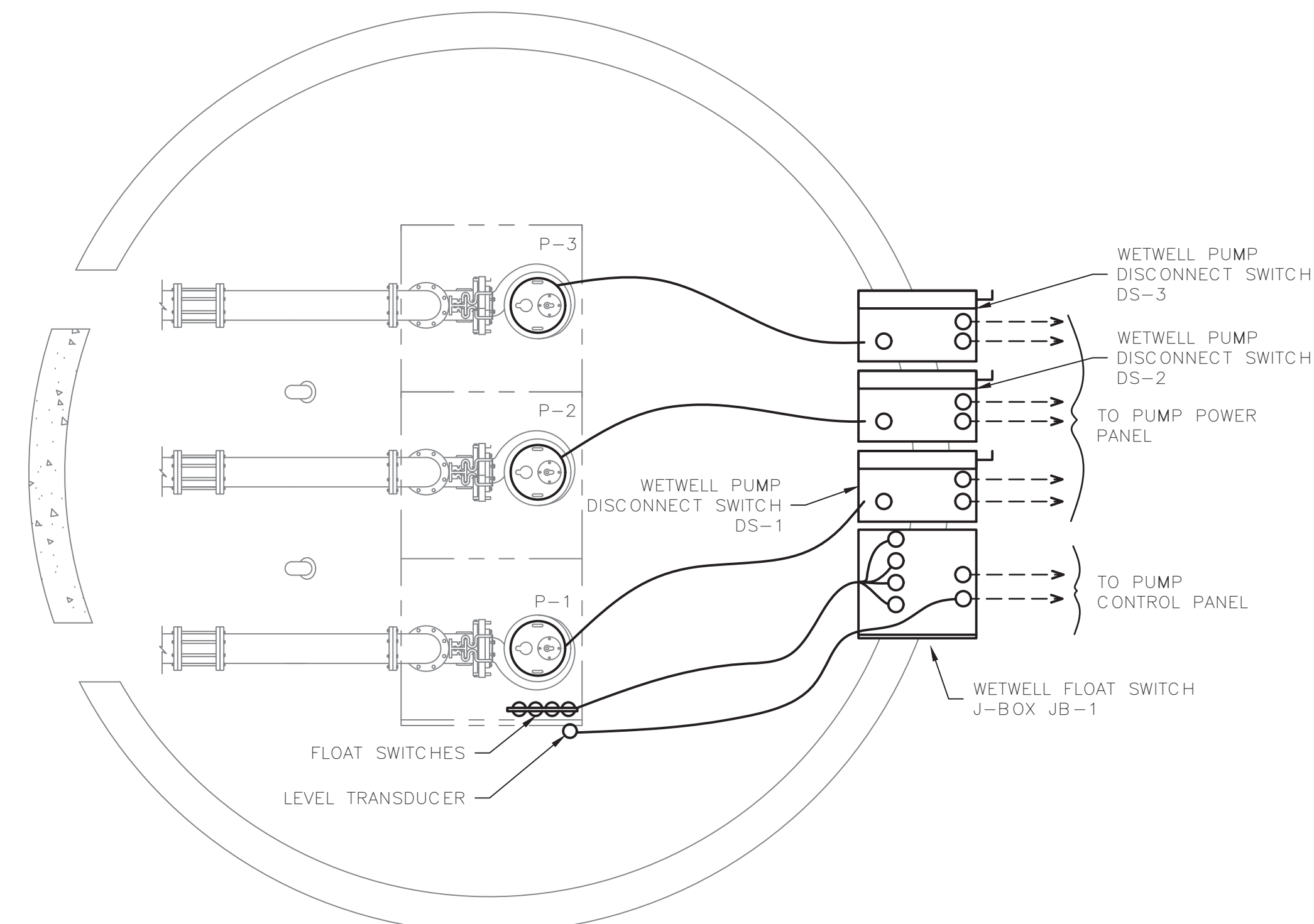
* POWER AND OTHER DEVICES CABLES AND CONDUCTORS AS REQ'D. AND FURNISHED BY EQUIP./DEVICE MFR. RATED FOR THE DESIGNATED ENVIRONMENT SERVICE PER N.E.C.

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SHEET		ONE-LINE DIAGRAM	
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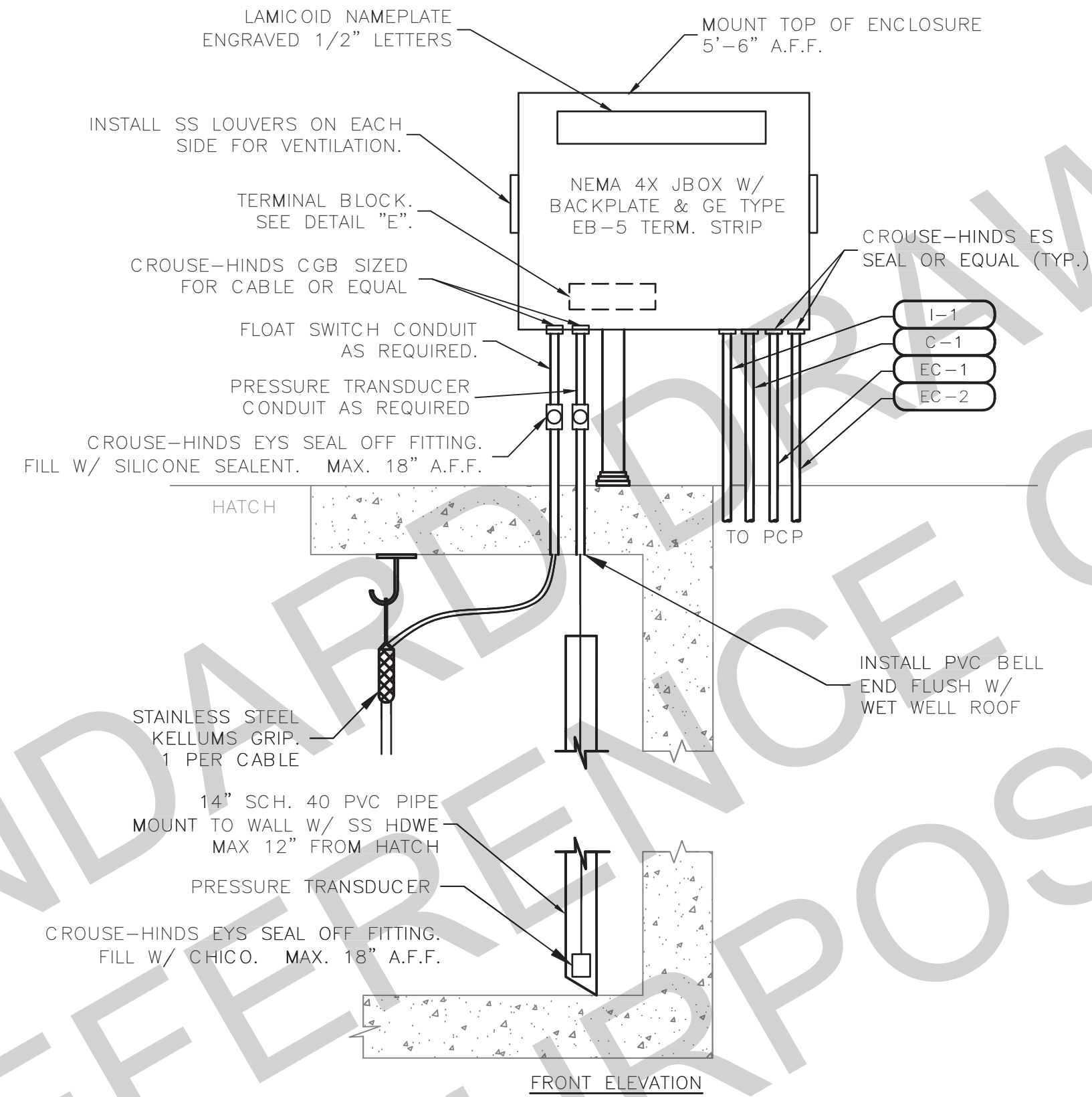
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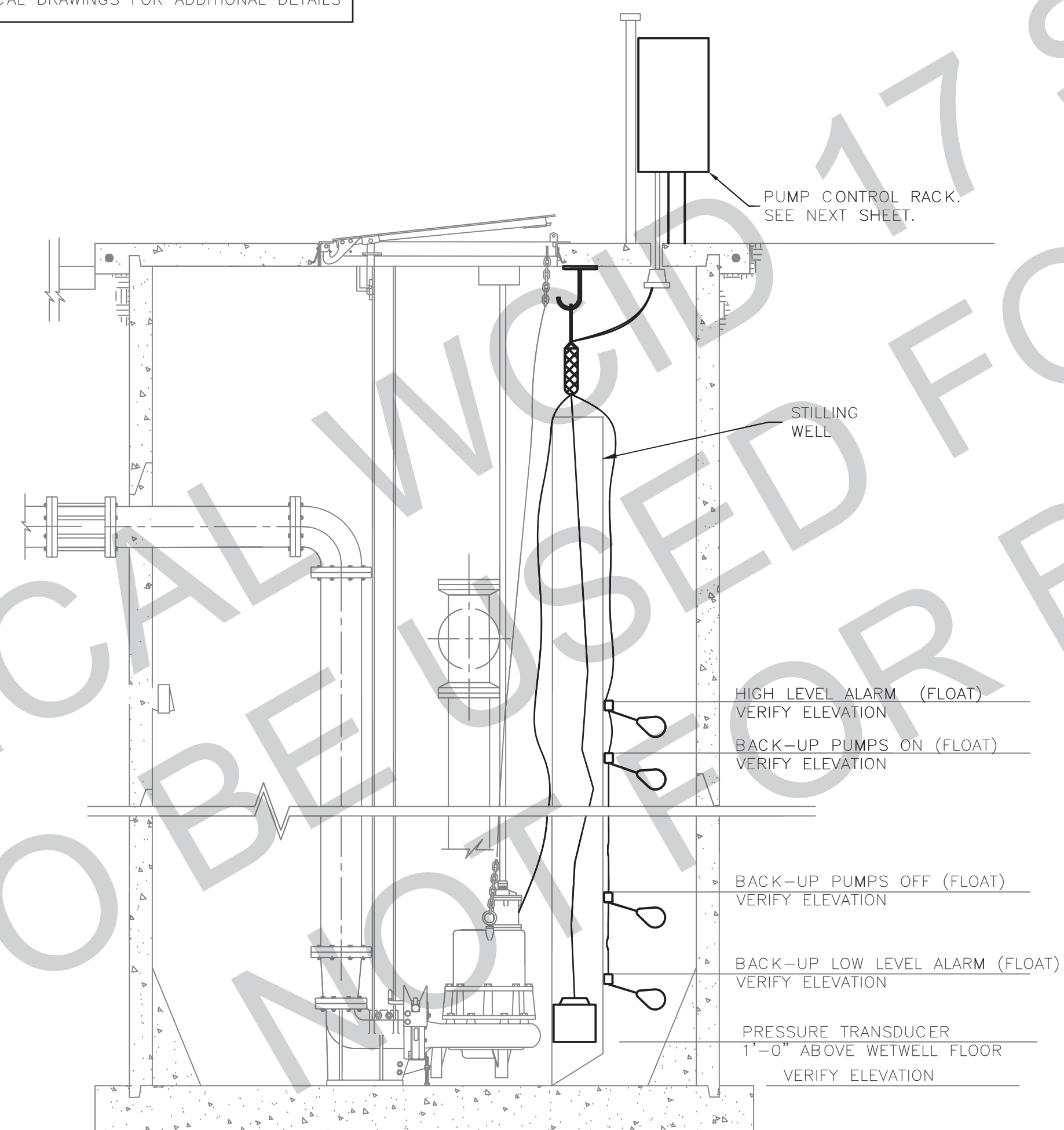


(A) WETWELL PLAN
N.T.S.

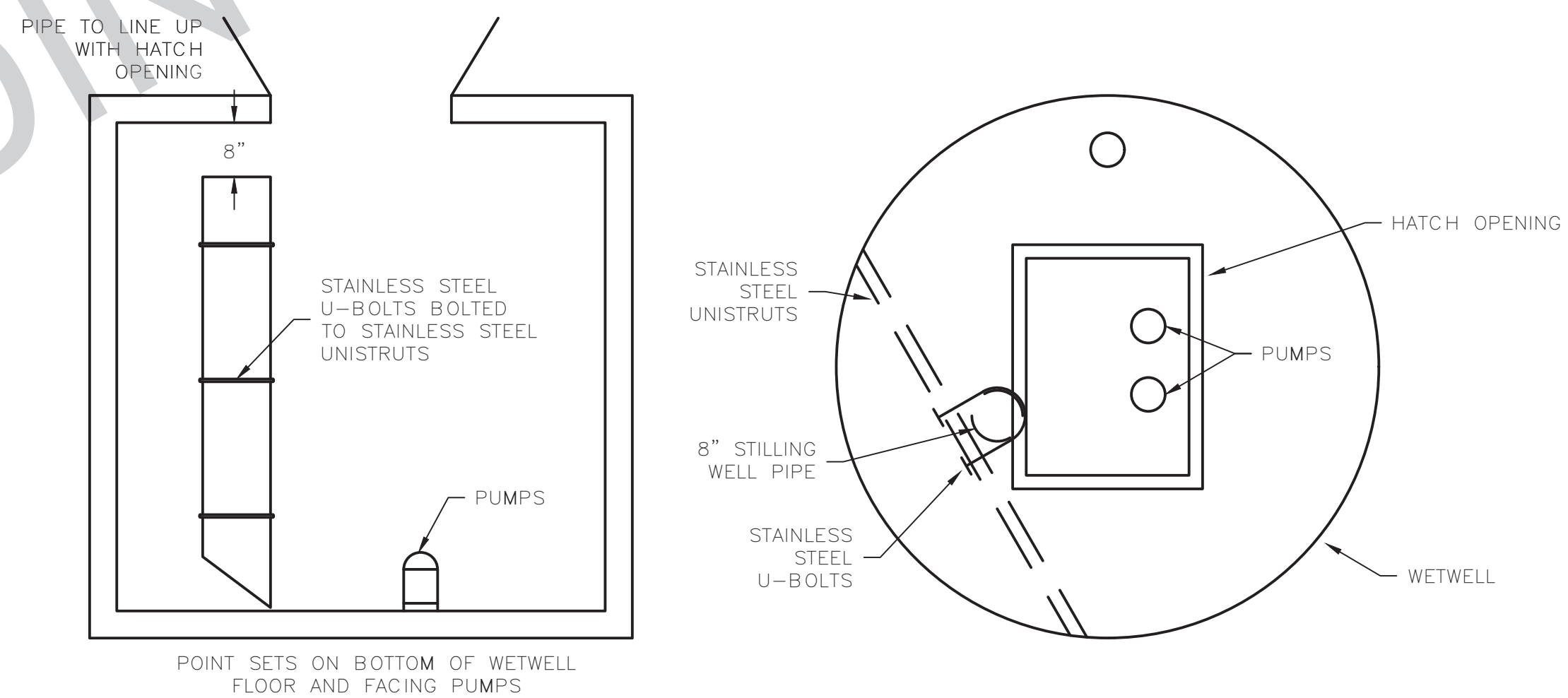
SEE MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS



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



(C) WETWELL ELEVATION
N.T.S.

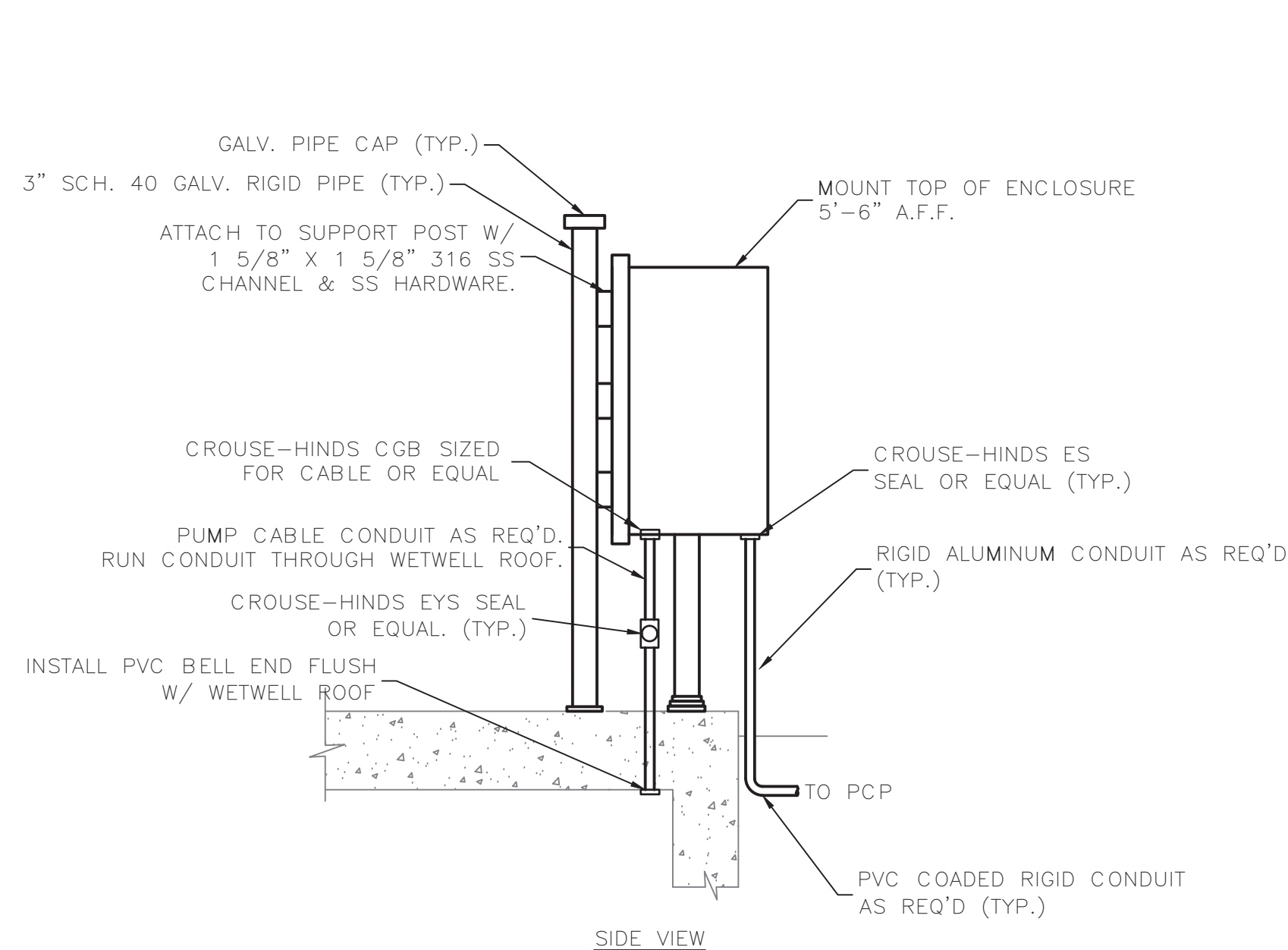


(D) STILLING WELL DETAIL
N.T.S.

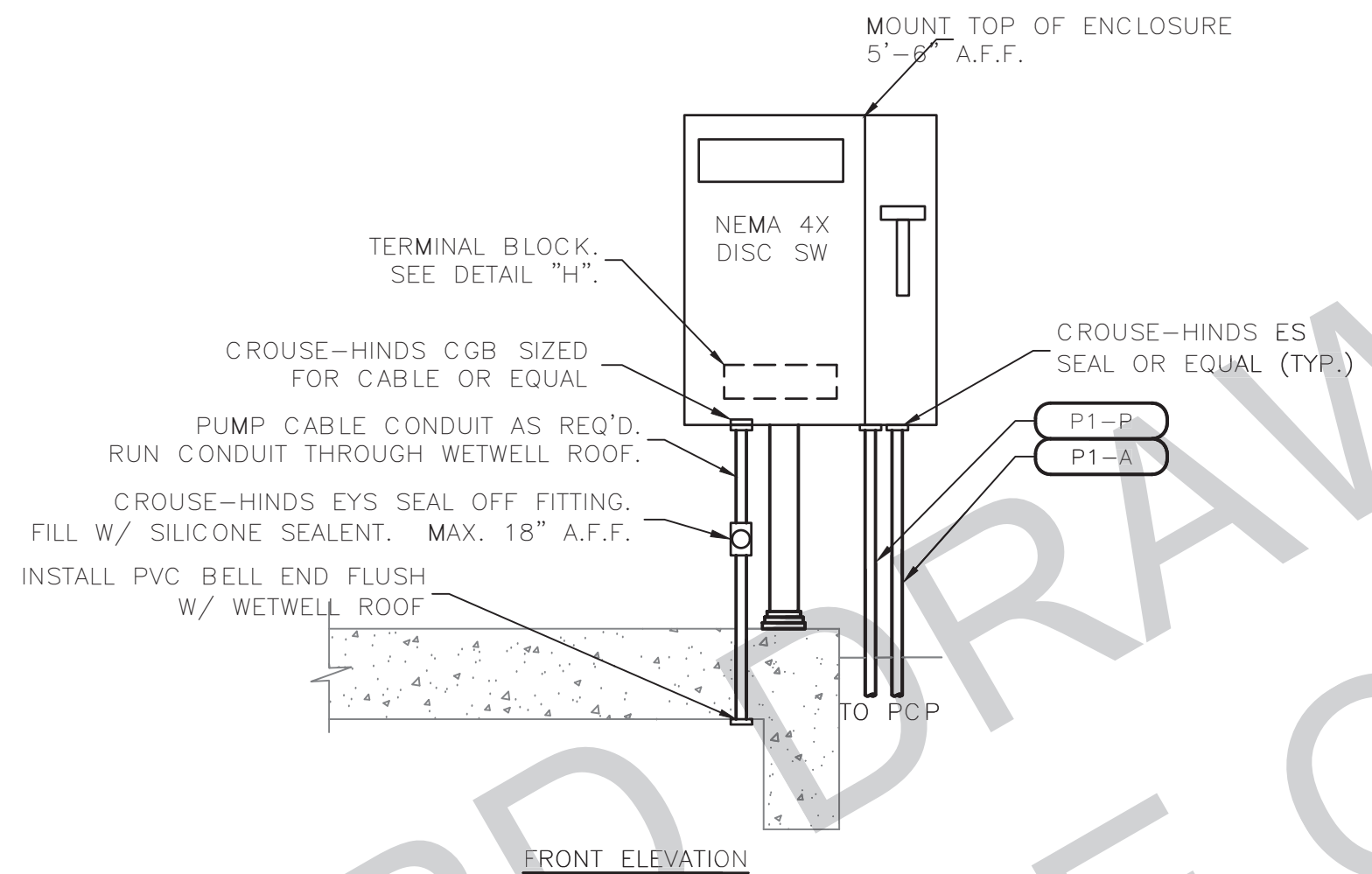
GENERAL NOTES:

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

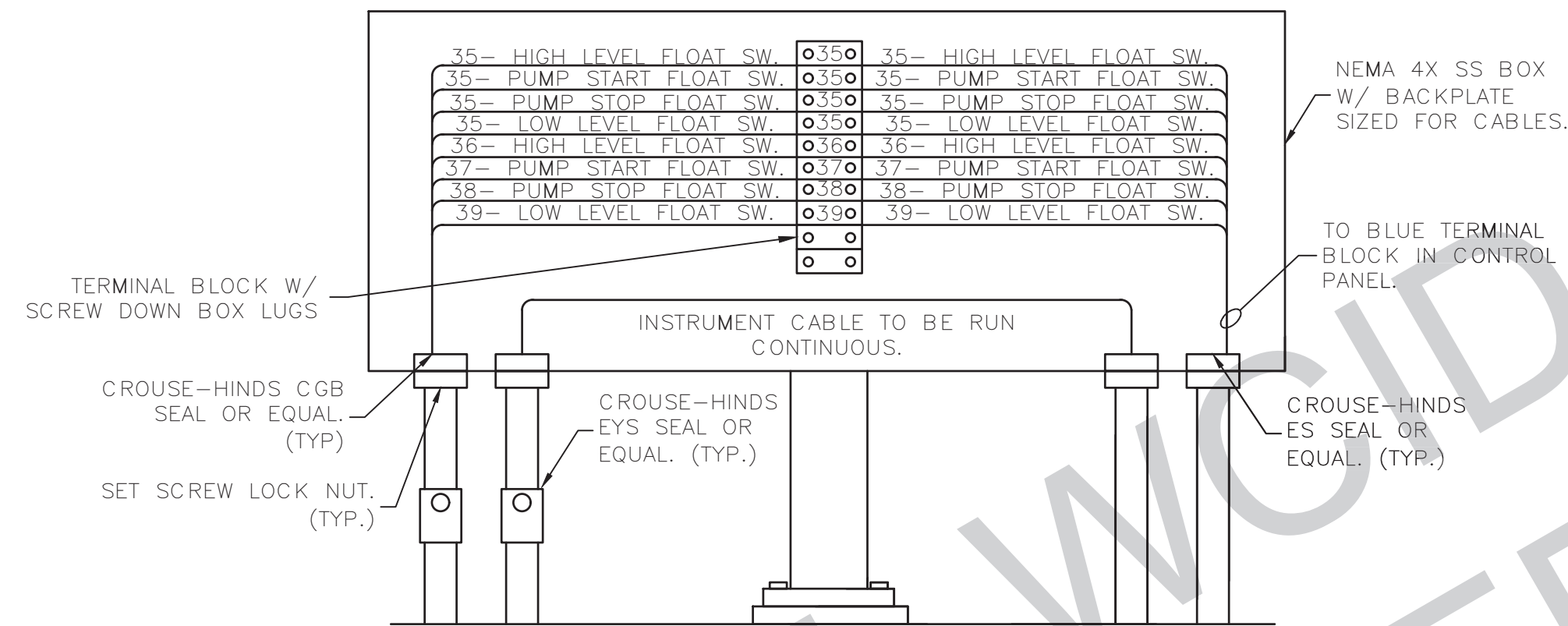
TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS		SHEET E-4 OF 21	
ELECTRICAL DETAILS 1		REVISIONS	
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NO.	DESCRIPTION	APP.	DATE



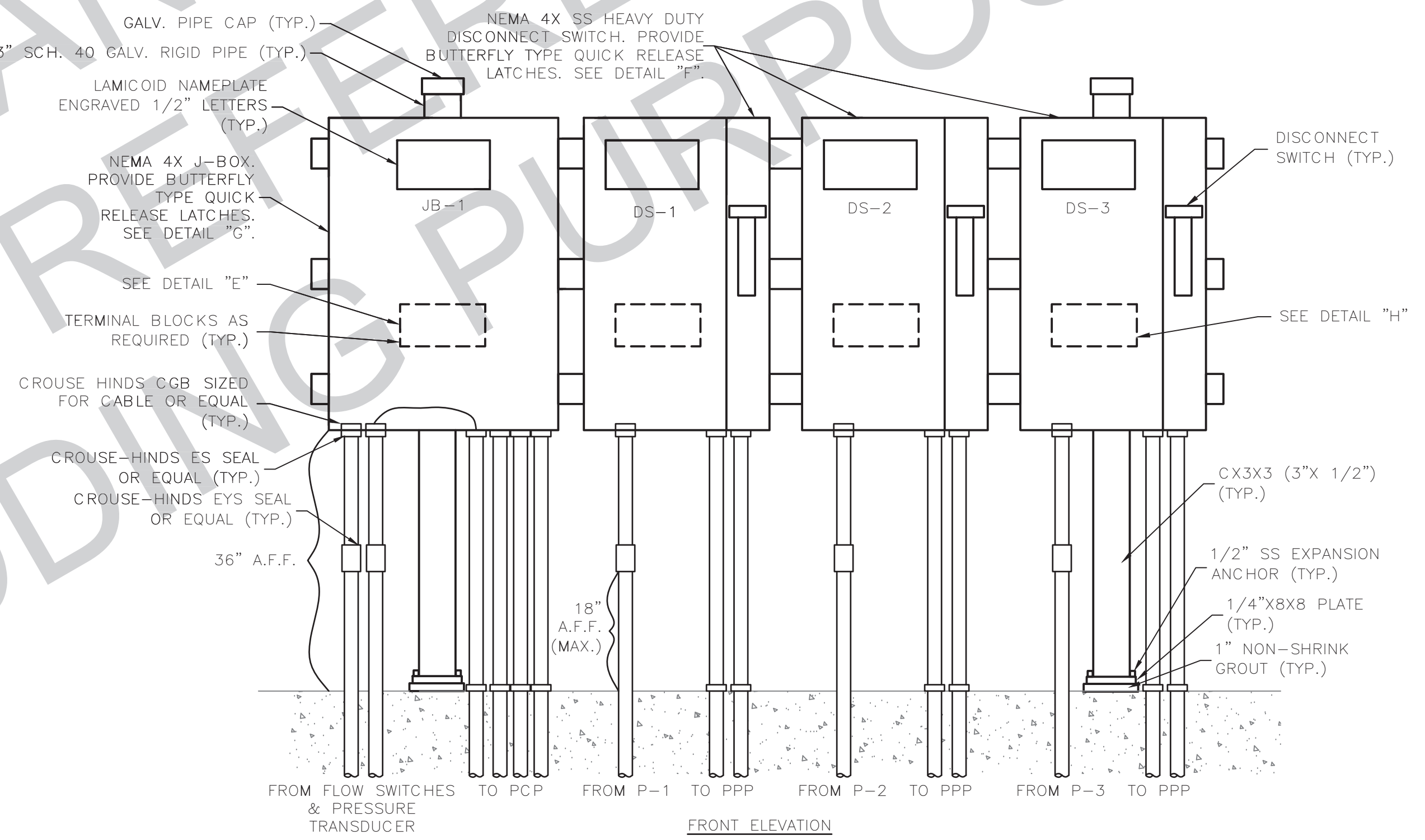
(A) TYPICAL POST MOUNTED EQUIPMENT ELEVATION
N.T.S.



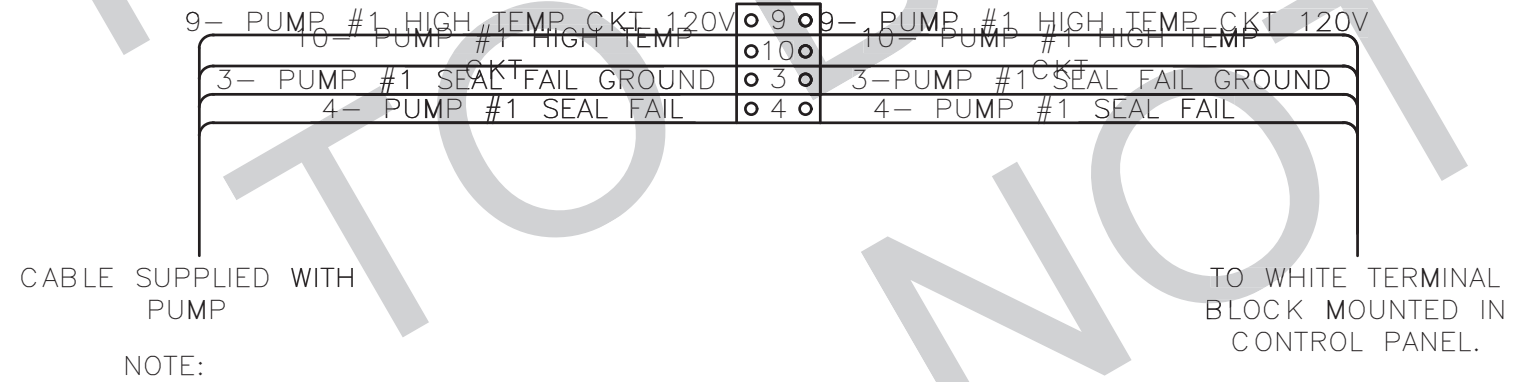
(B) TYPICAL WETWELL DISCONNECT SWITCH DETAIL
N.T.S.



(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.

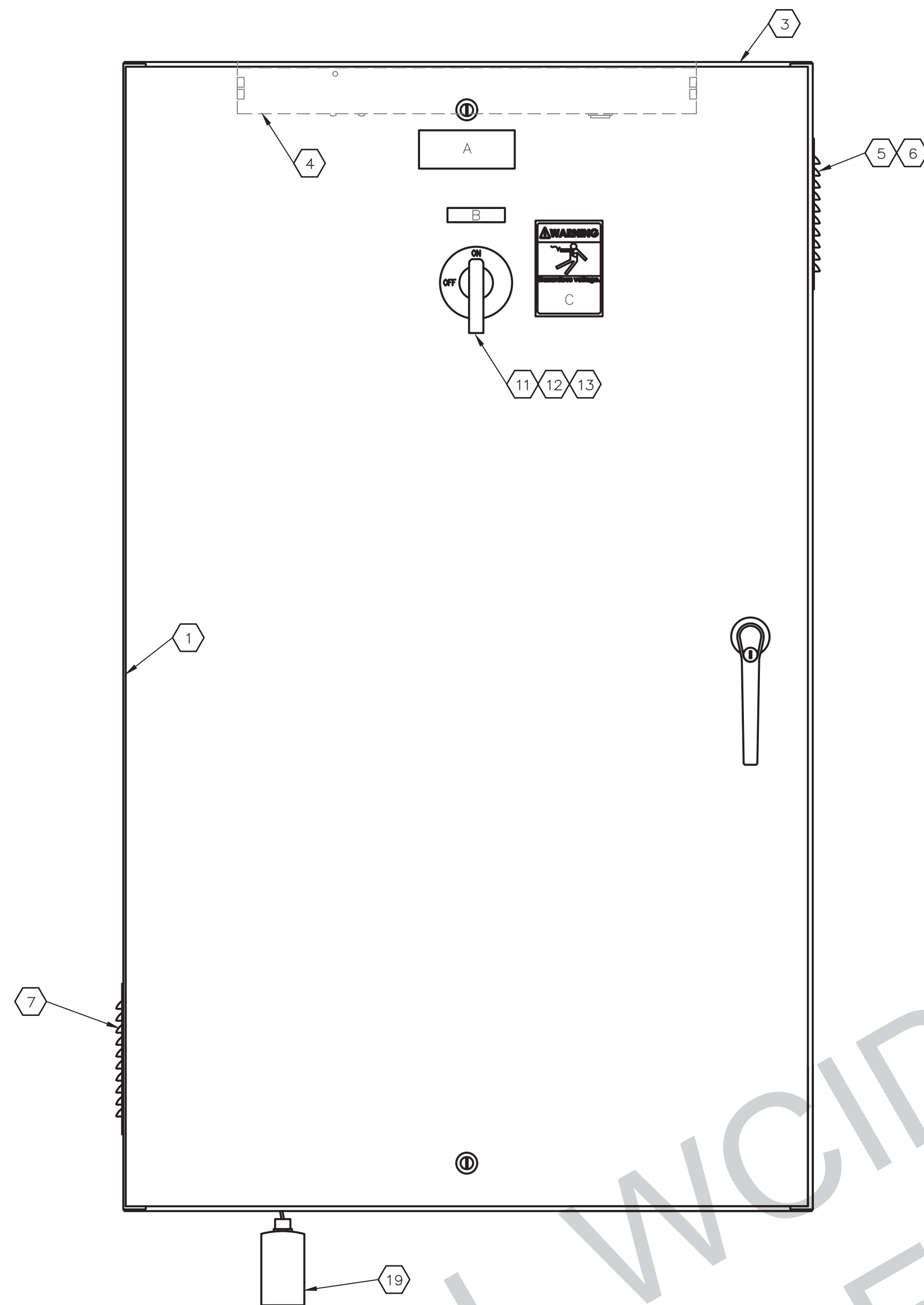
TYPICAL WETWELL DISCONNECT SWITCH DETAIL FOR BIDDING PURPOSES ONLY.

NO.	DESCRIPTION	APP.	DATE

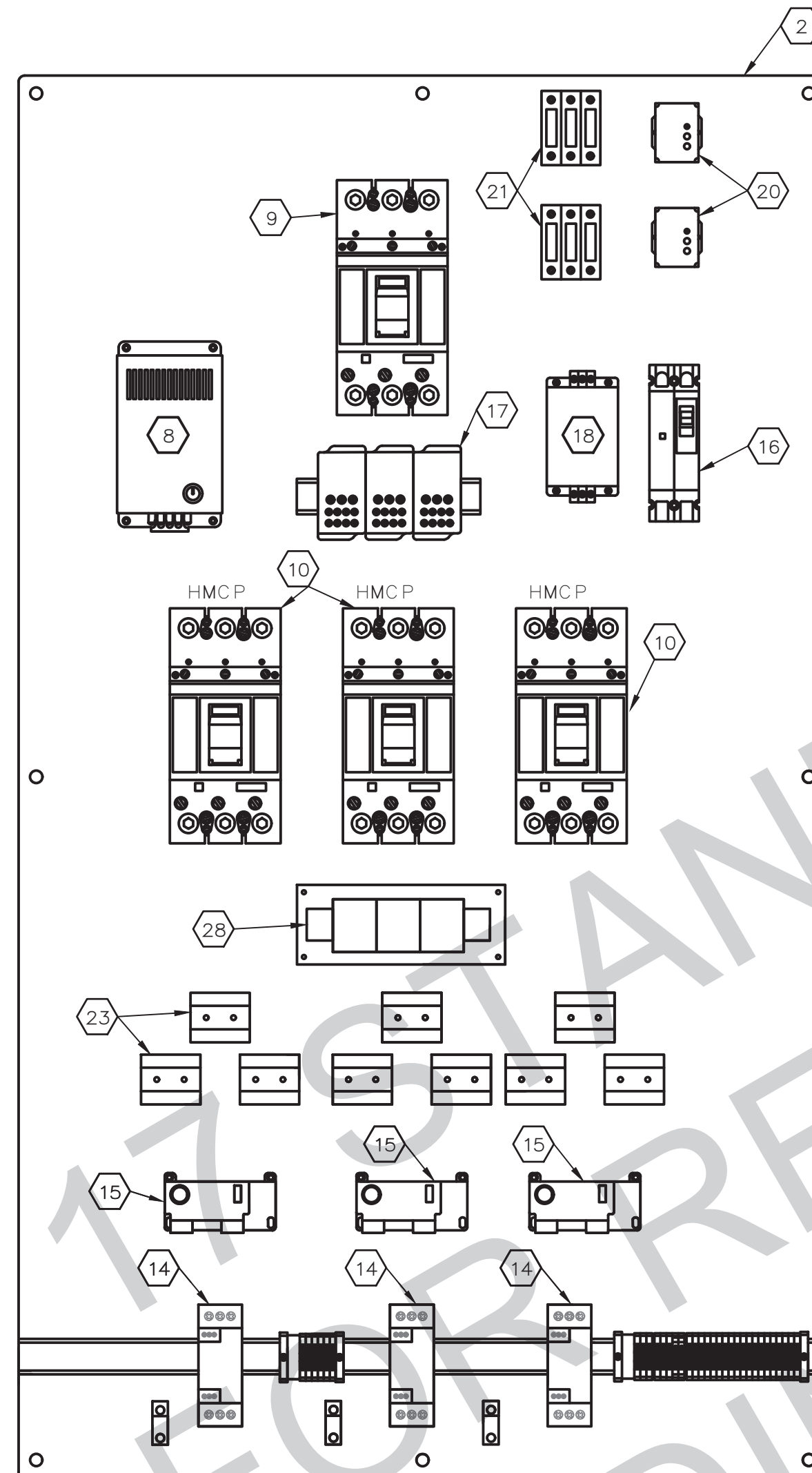
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TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS
ELECTRICAL DETAILS 2



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 1/8"	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

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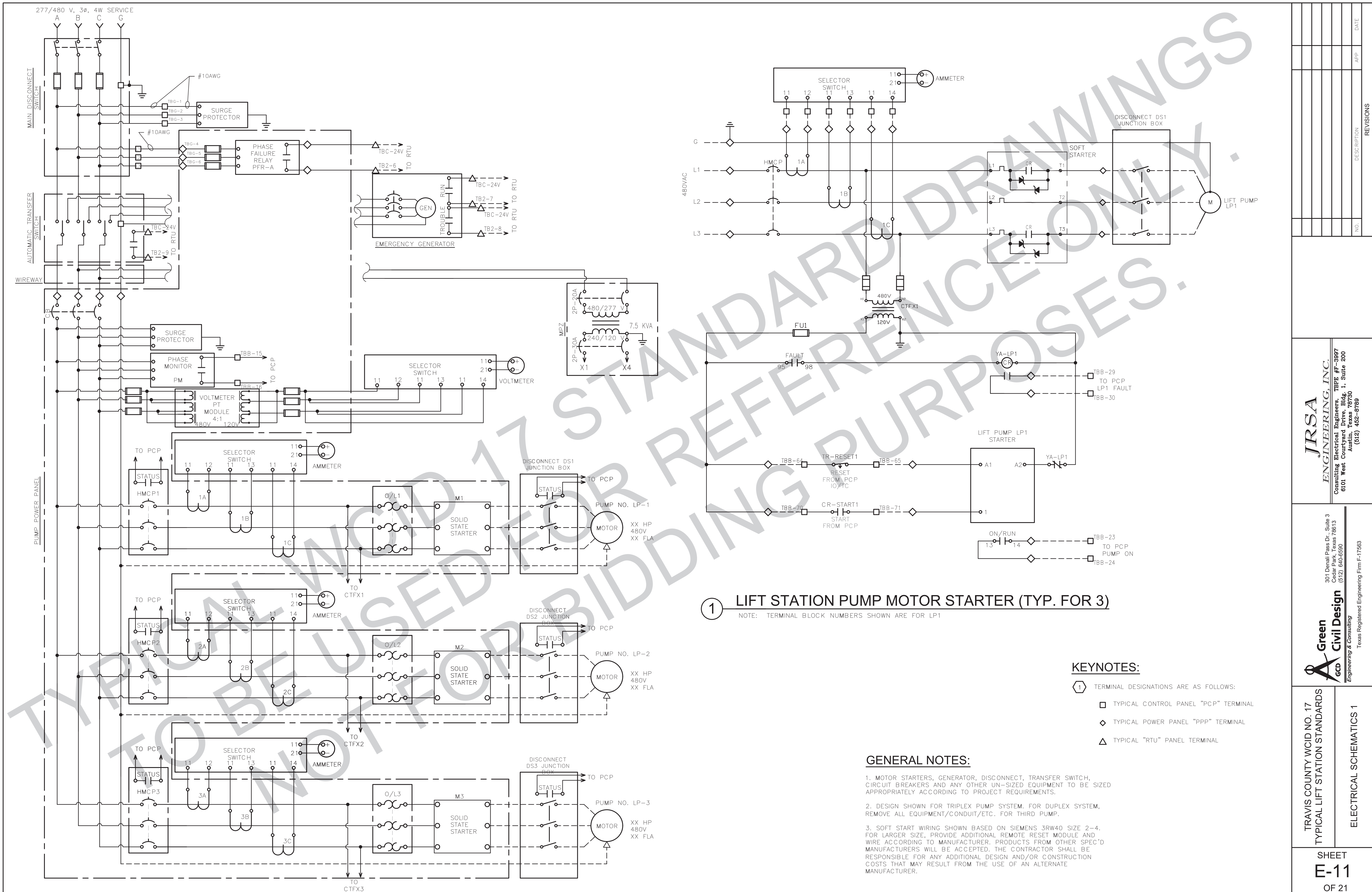
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TRAVIS COUNTY WCID NO. 17
TYPICAL LIFT STATION STANDARDS

PUMP POWER PANEL
ELEVATION

SHEET
F-9
OF 21

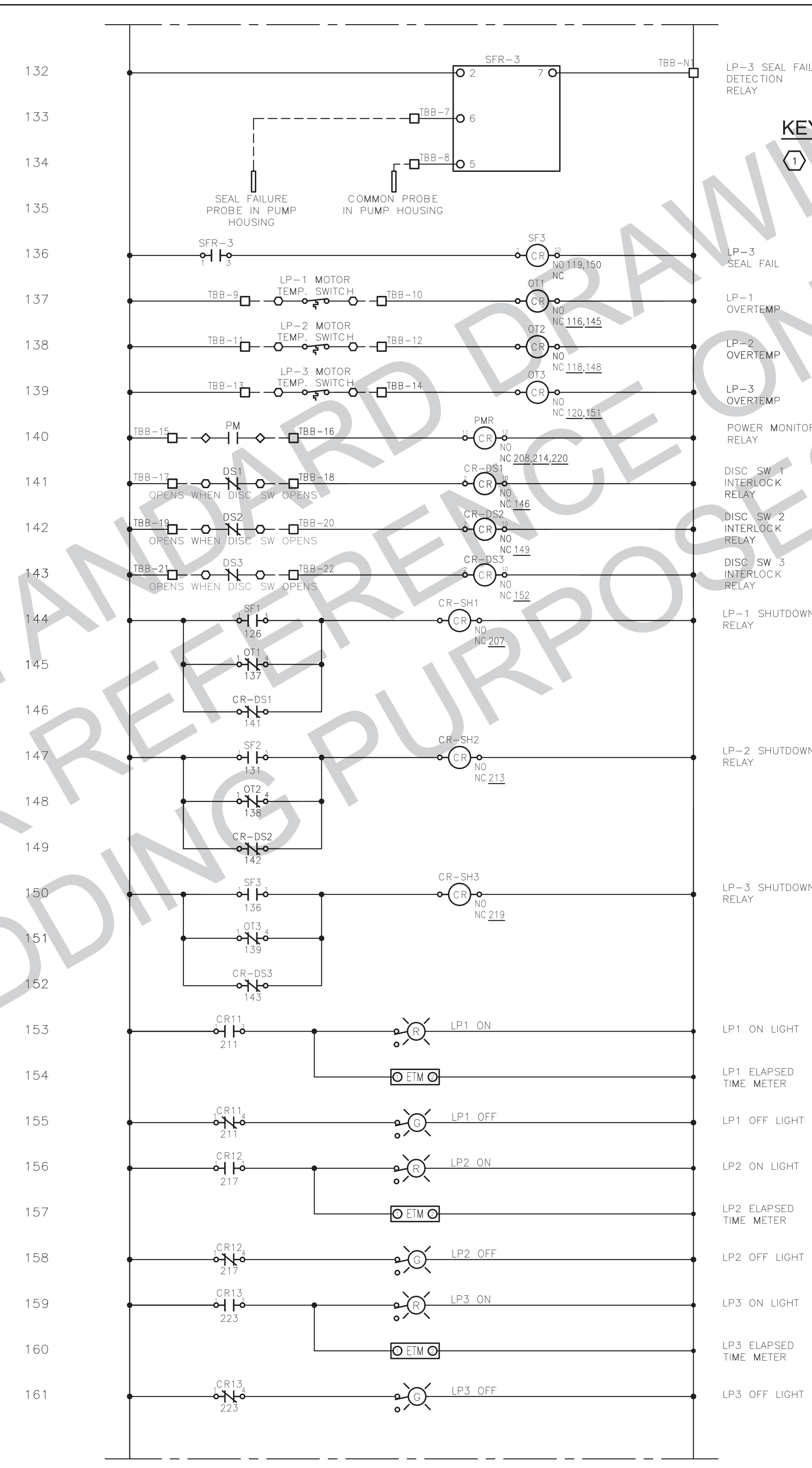
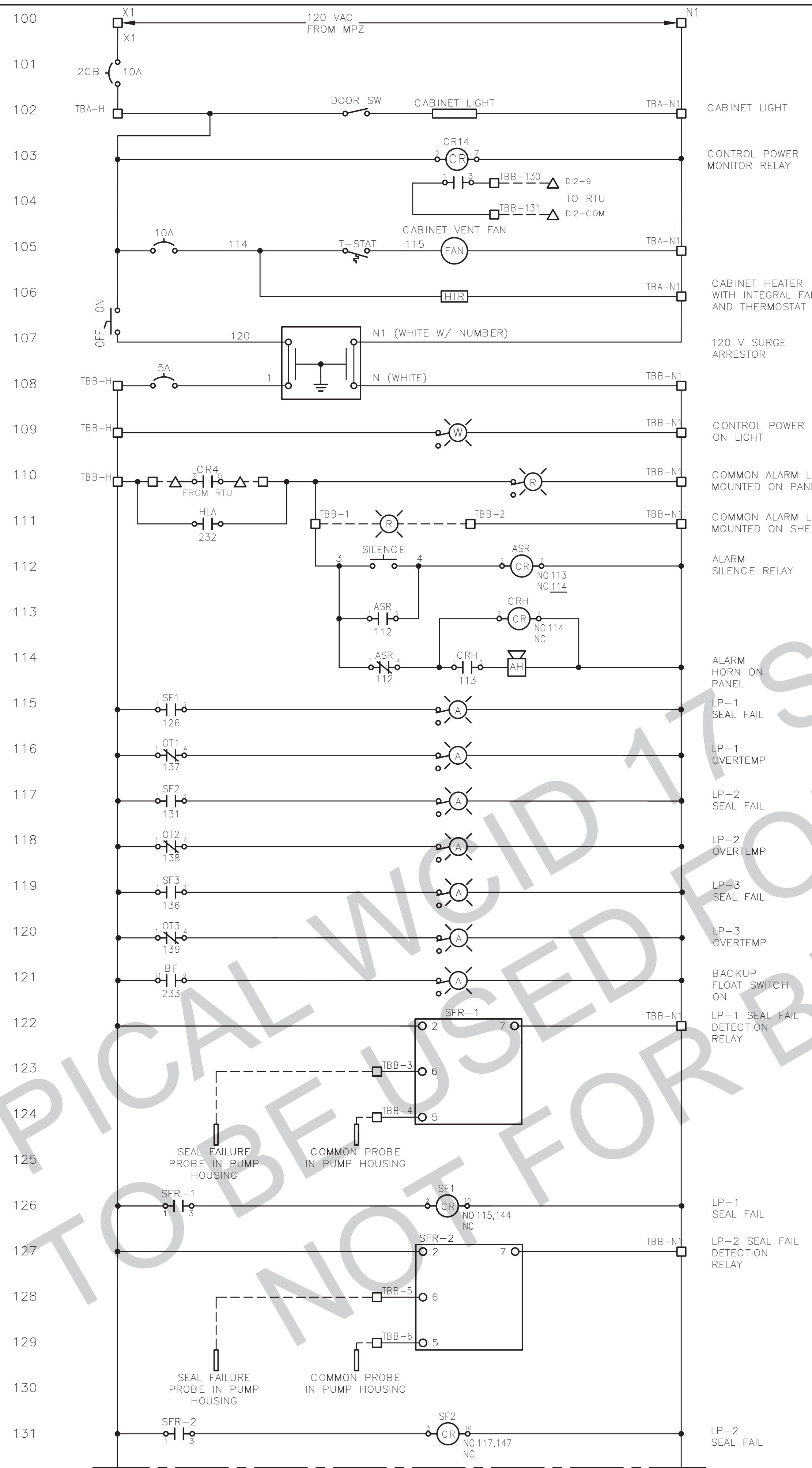


1 LIFT STATION PUMP MOTOR STARTER (TYP. FOR 3)
 NOTE: TERMINAL BLOCK NUMBERS SHOWN ARE FOR LP1

- 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:

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

NO.	DESCRIPTION	APP.	DATE

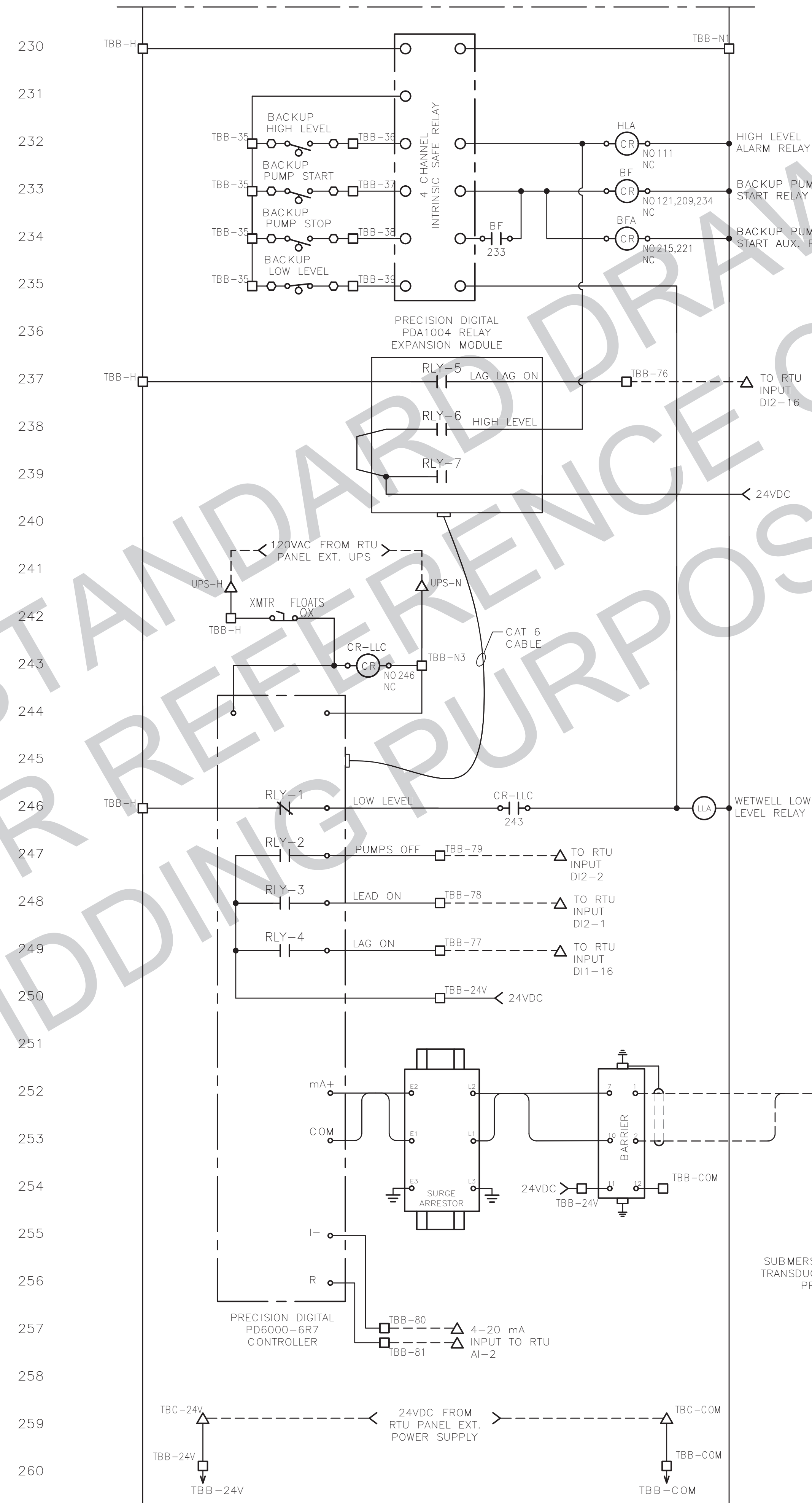
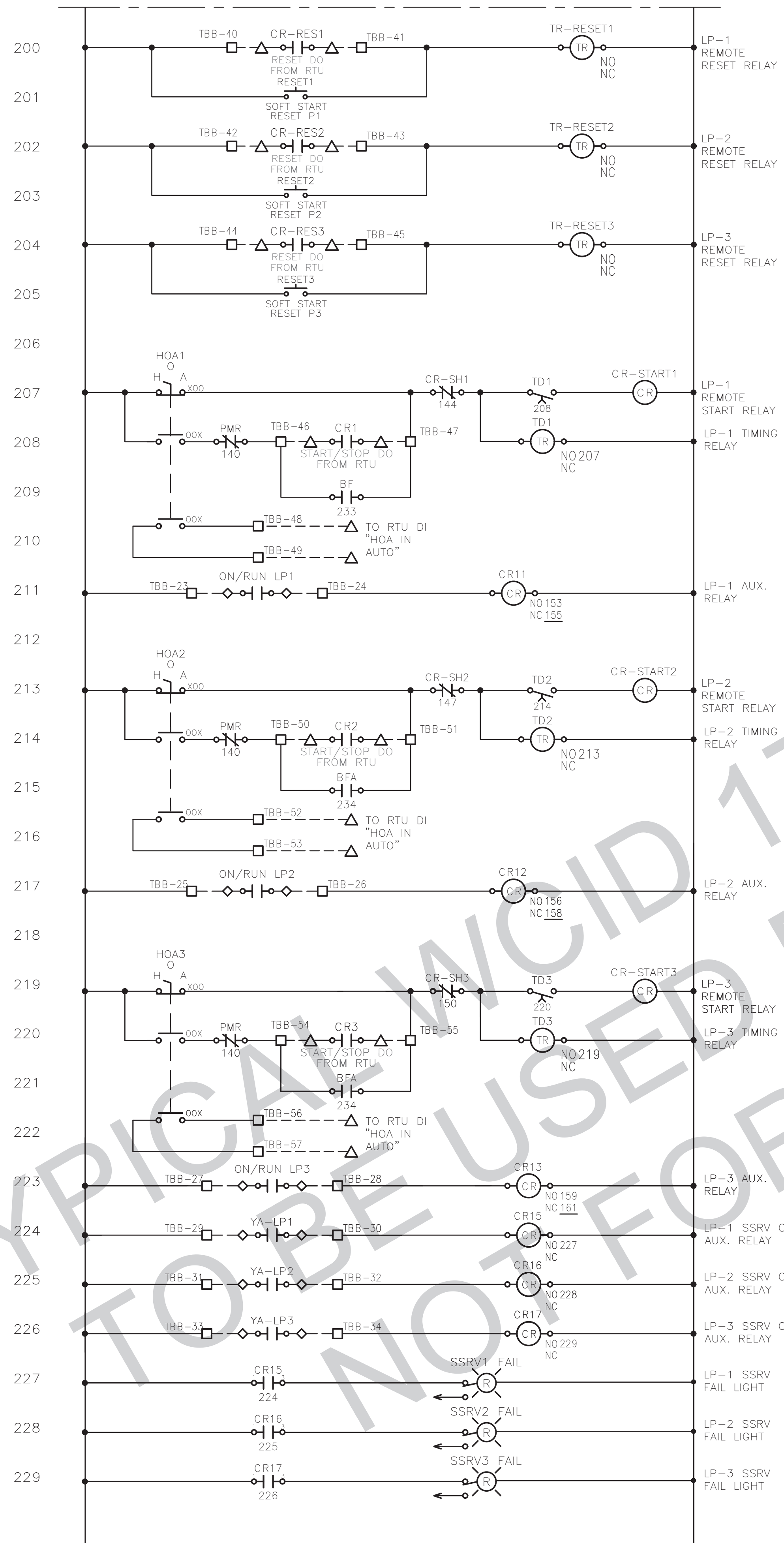
JRSA ENGINEERING, INC.
 Consulting Electrical Engineers, Telp # 5987
 6101 West Courtyard Drive, Bldg. 1, Suite 200
 Austin, Texas 78750
 (512) 452-8788

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

TRAVIS COUNTY WCID NO. 17
 TYPICAL LIFT STATION STANDARDS

ELECTRICAL SCHEMATICS 2

SHEET
E-12
 OF 21



KEYNOTES:

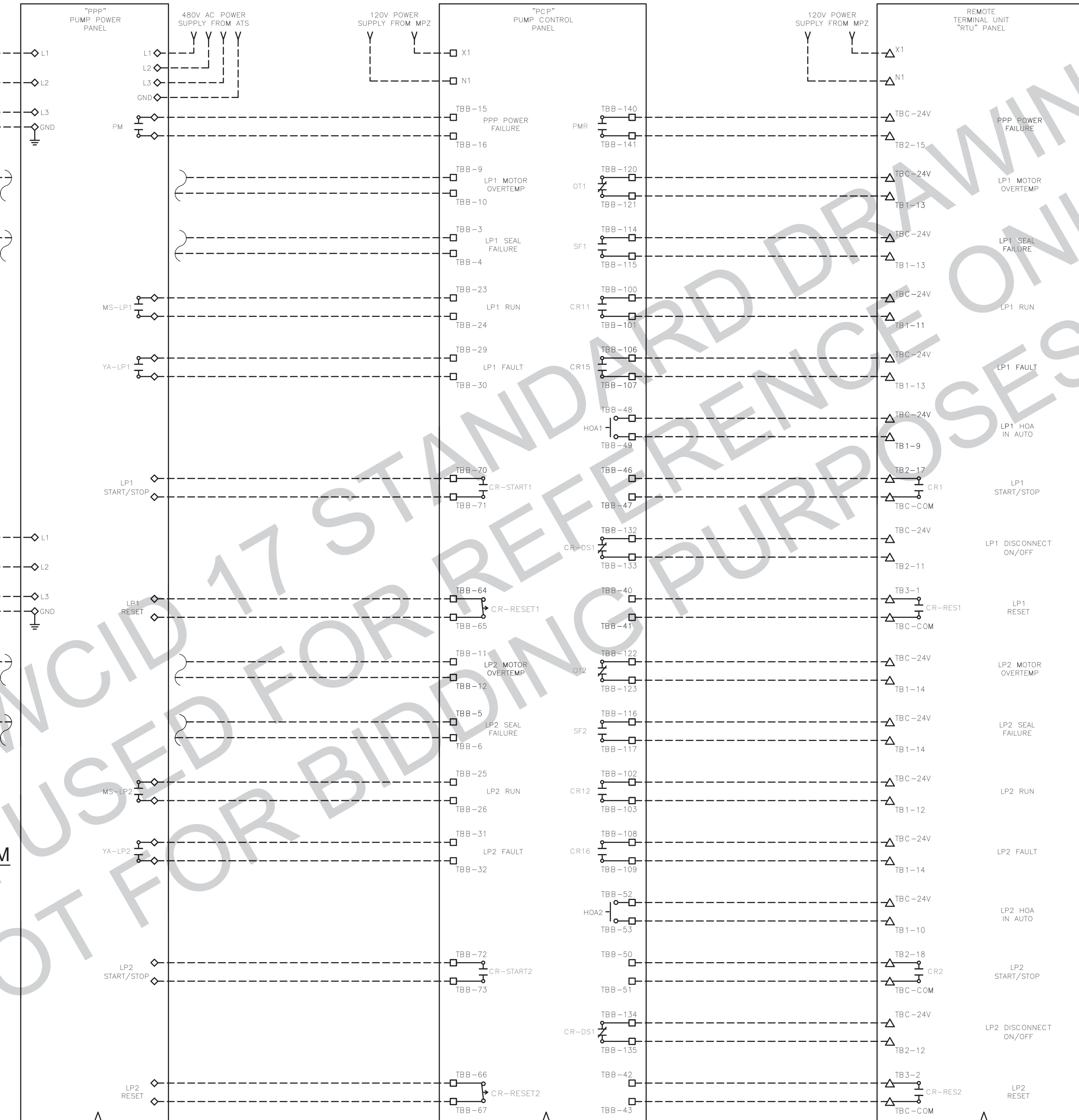
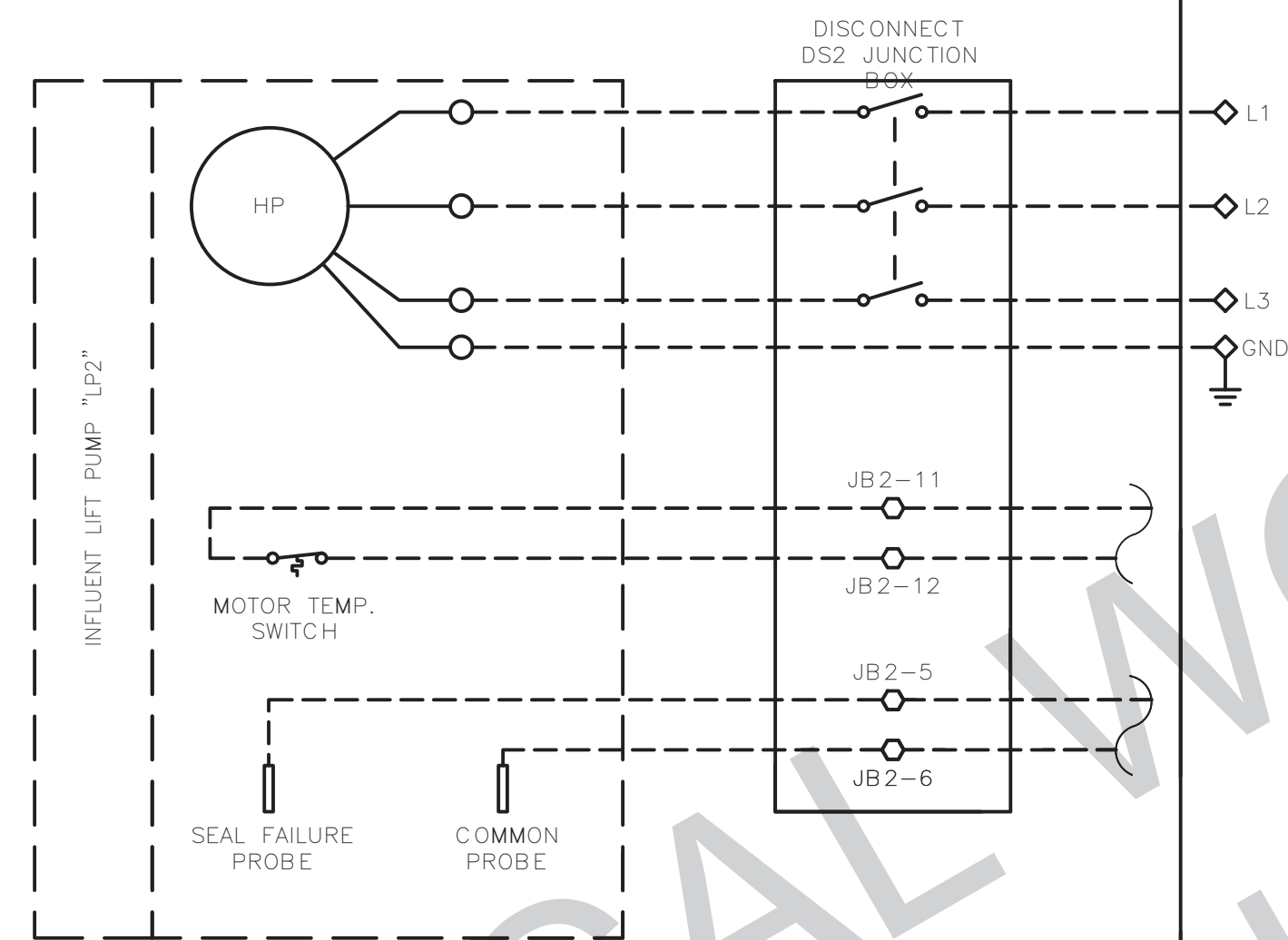
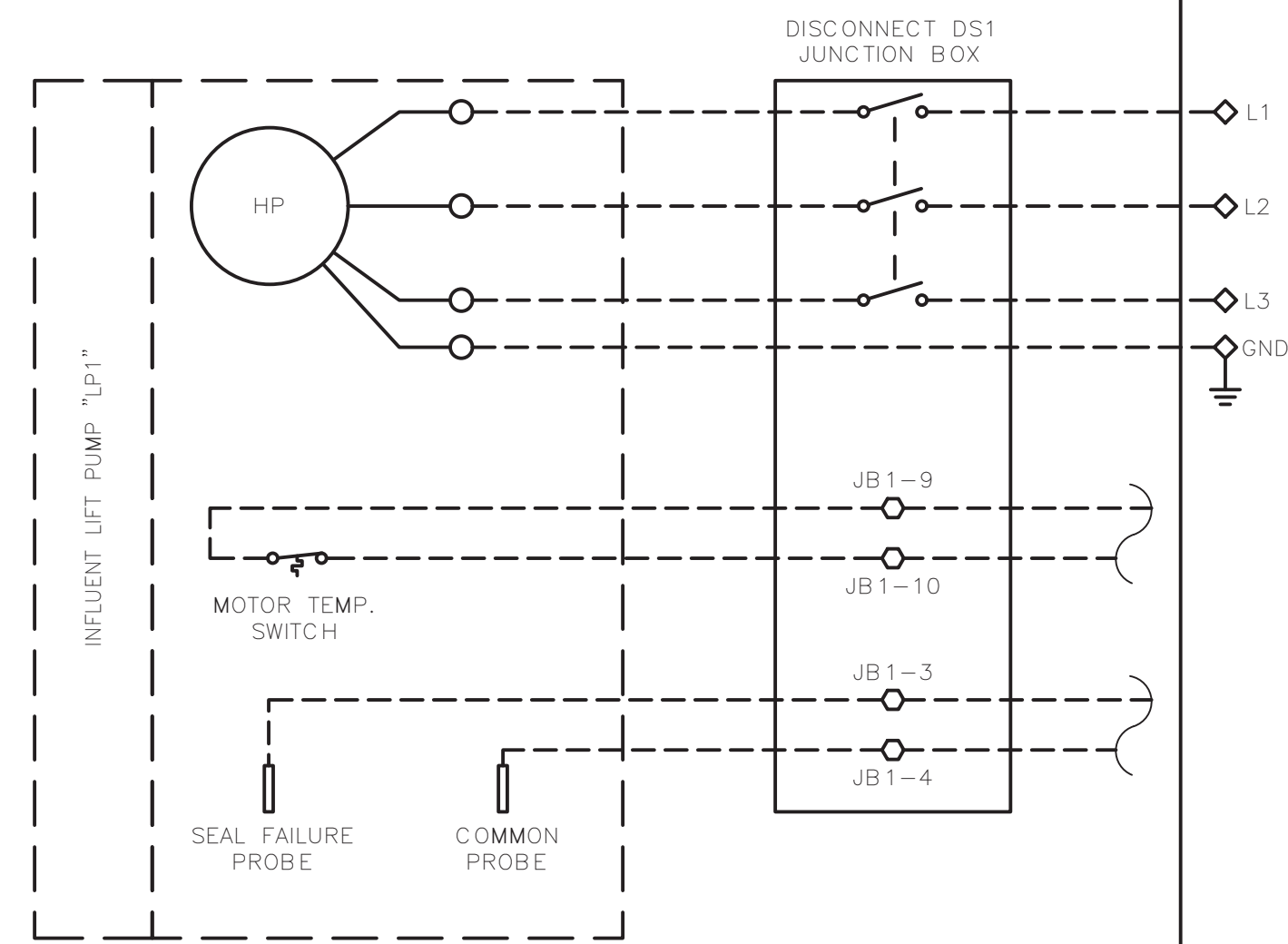
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- TYPICAL CONTROL PANEL "PCP" TERMINAL
- ◇ TYPICAL POWER PANEL "PPP" TERMINAL
- △ TYPICAL "RTU" PANEL TERMINAL

GENERAL NOTES:

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

TRAVIS COUNTY WCID NO. 17 TYPICAL LIFT STATION STANDARDS		ELECTRICAL SCHEMATICS 3									
SHEET F-13 OF 21		<p>JRSA ENGINEERING, INC. Consulting Electrical Engineers, TSPG #F-0997 6101 West Courtyard Drive, Bldg. 1, Suite 200 Austin, Texas 78750 (512) 452-8788</p> <p>Green Civil Design Engineering & Consulting 301 Dorval Pass Dr., Suite 3 Coppell, Texas 76015 (512) 640-6590 Texas Registered Engineering Firm F-17563</p>									
REVISIONS		<table border="1"> <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> </tbody> </table>		NO.	DESCRIPTION	APP.	DATE				
NO.	DESCRIPTION	APP.	DATE								



1 LIFT STATION CONNECTION DIAGRAM

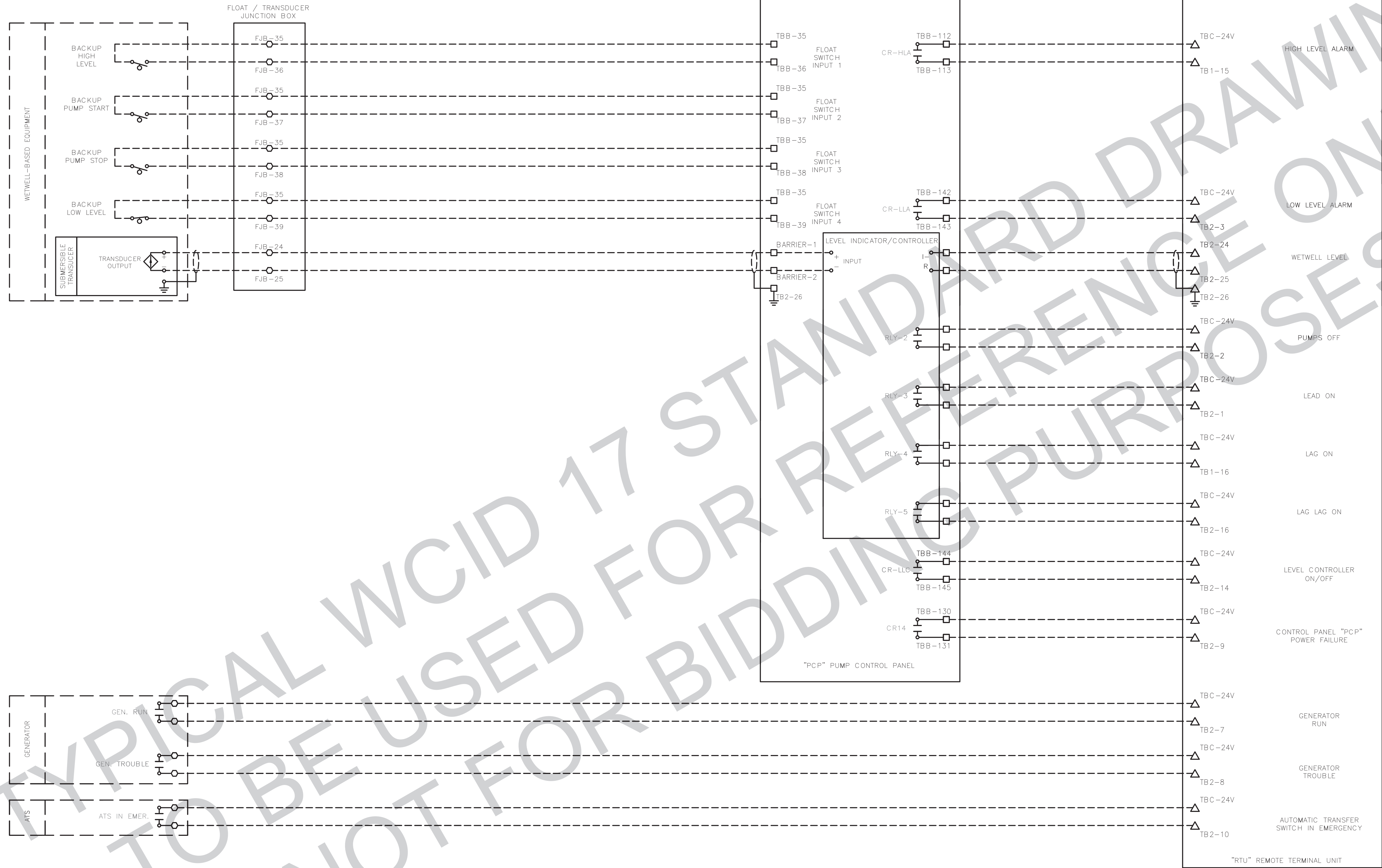
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GENERAL NOTES:

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		SHEET F-18 OF 21	
ELECTRICAL SCHEMATICS 8		REVISIONS	
<p>JRSA ENGINEERING, INC. Consulting Electrical Engineers, TSP# #F-0997 6101 West Courtyard Drive, Bldg. 1, Suite 200 Austin, Texas 78750 (512) 402-8788</p>		<p>Green Civil Design Engineering & Consulting Texas Registered Engineering Firm F-17563 301 Derald Pass Dr., Suite 3 Coppell, Texas 76815 (512) 640-6590</p>	
NO.	DESCRIPTION	APP.	DATE



KEYNOTES:

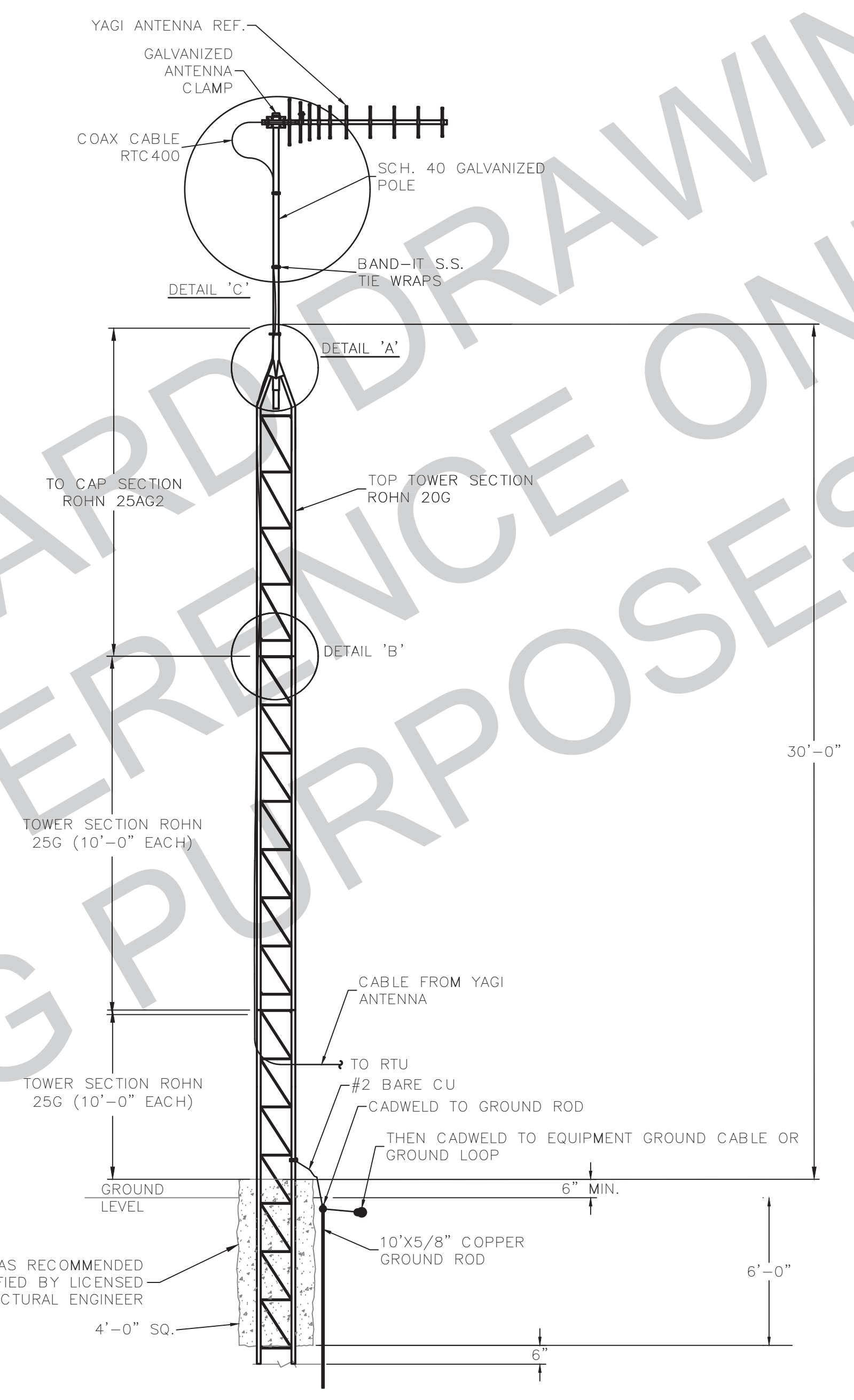
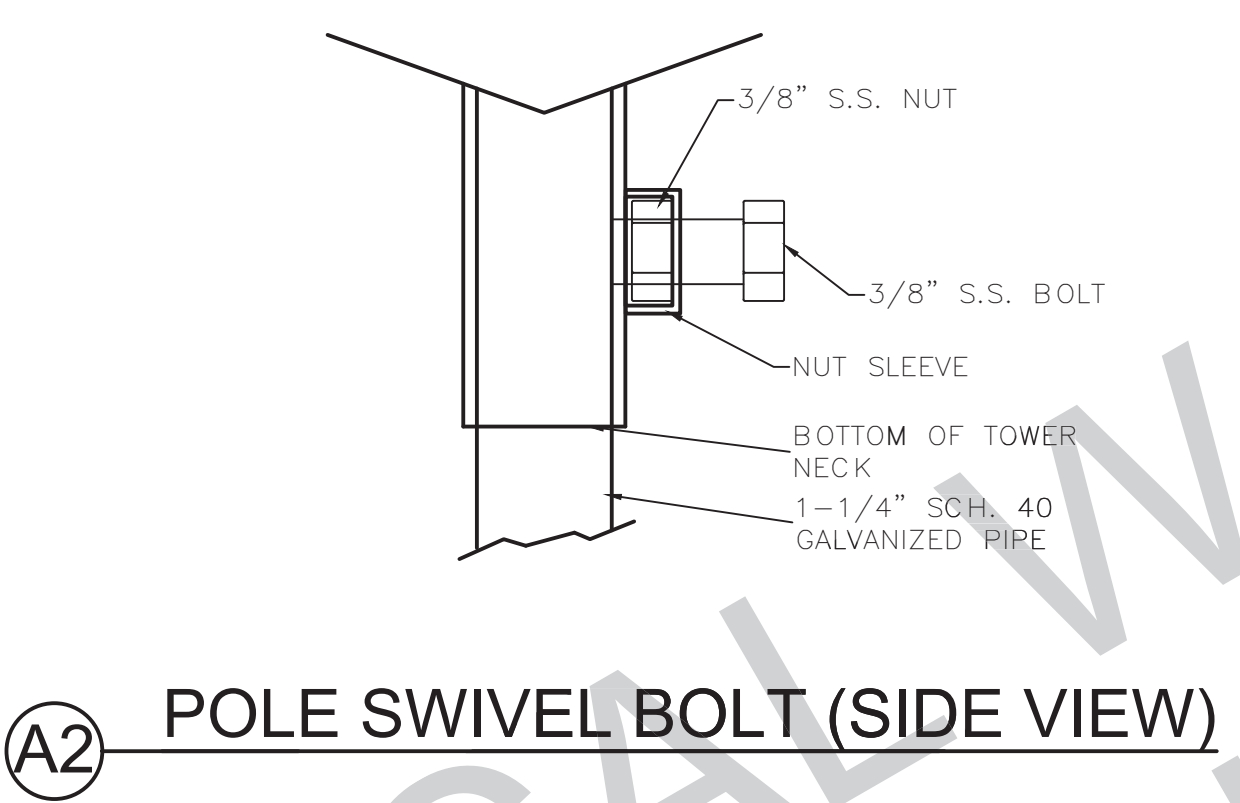
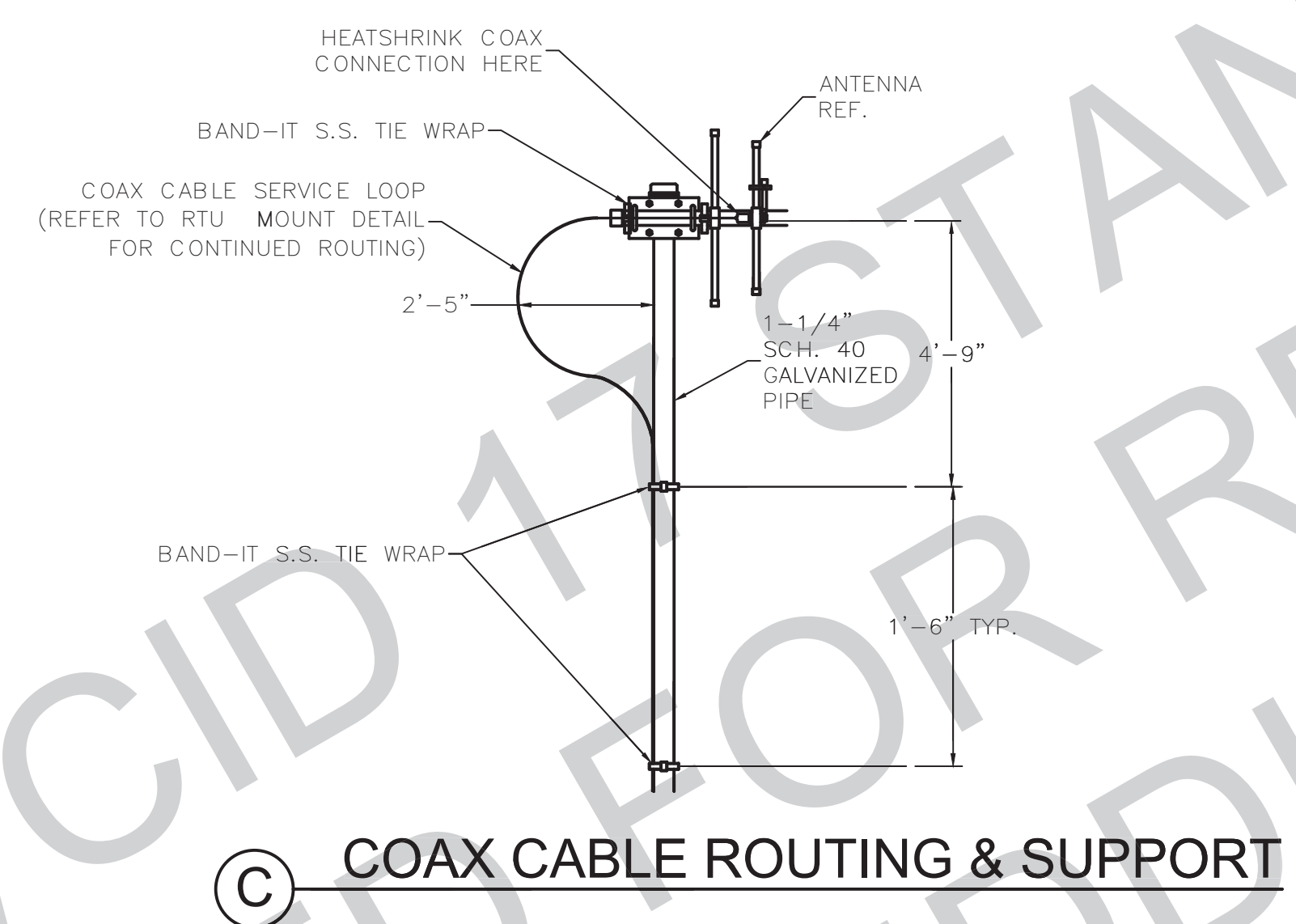
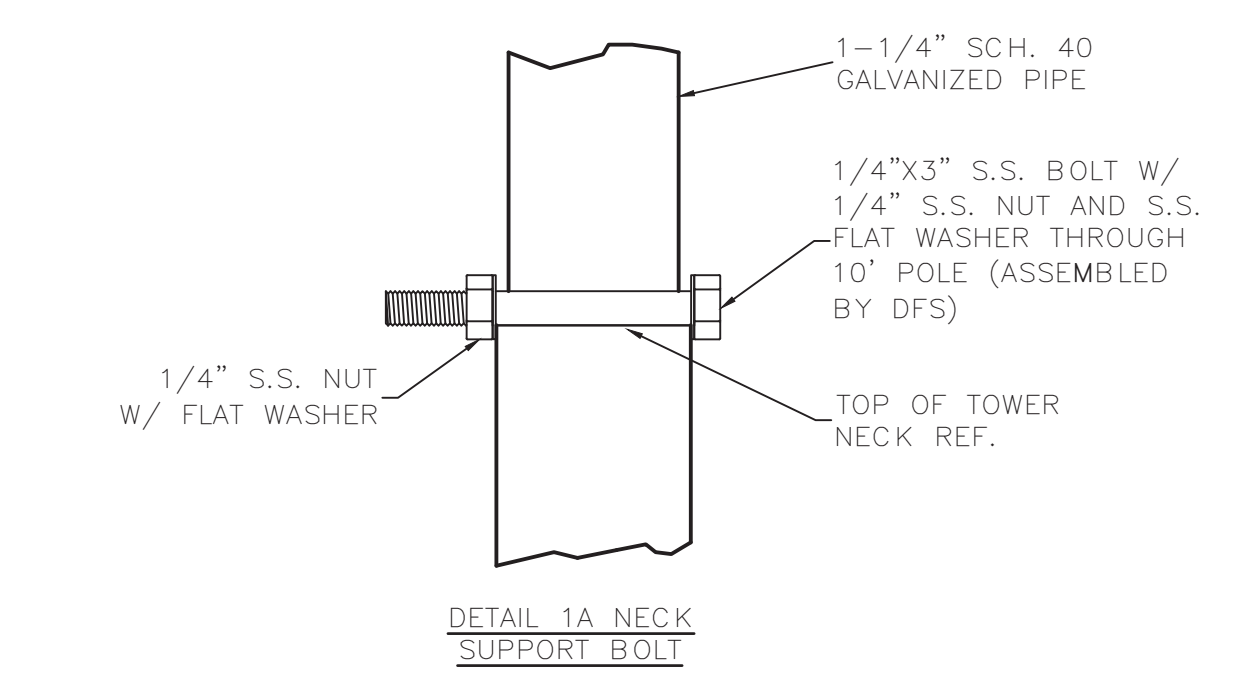
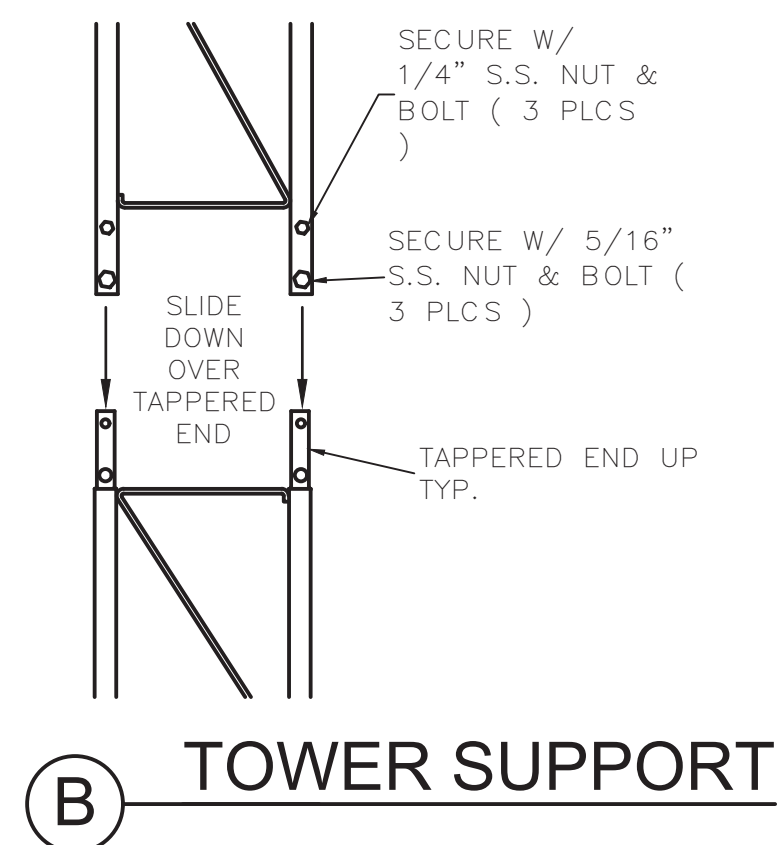
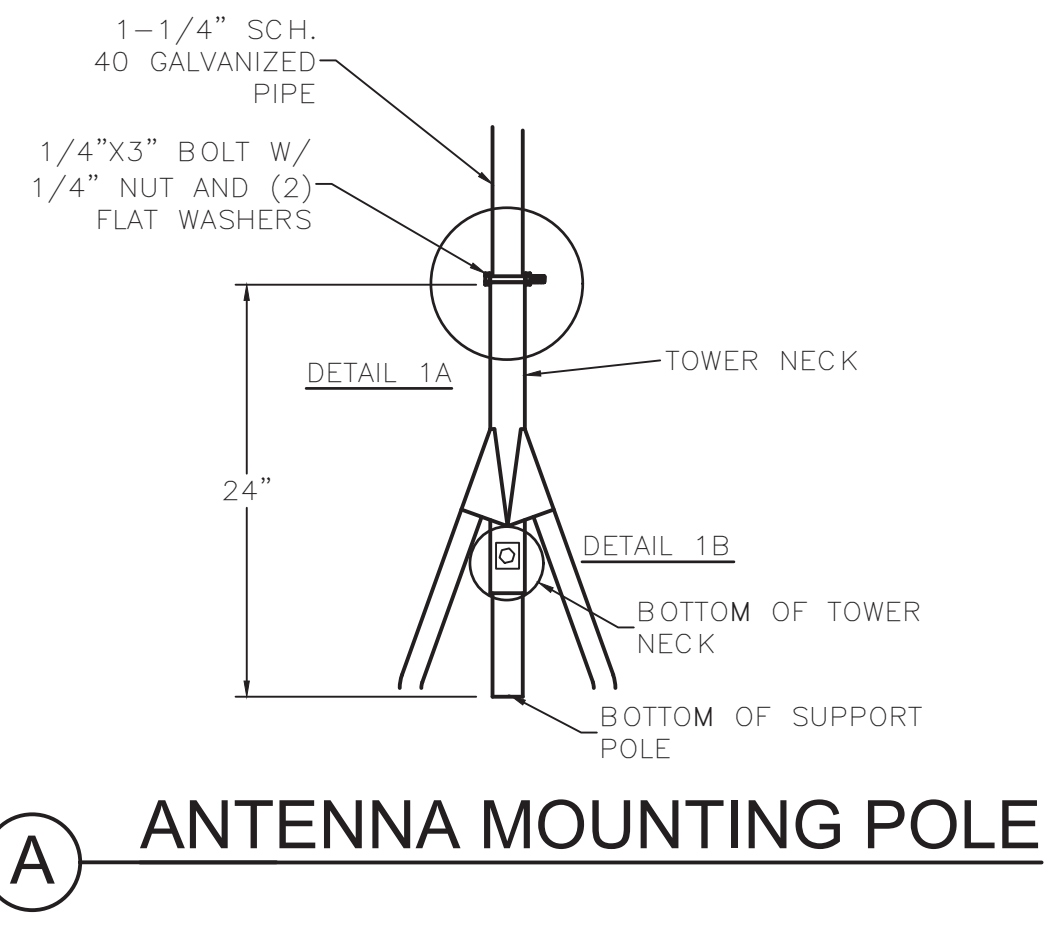
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① LIFT STATION CONNECTION DIAGRAM (CONT'D)

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, TEPG #F-5997 6101 West Courtyard Drive, Bldg. 1, Suite 200 Austin, Texas 78750 (512) 452-8788</p> <p>Green Civil Design Engineering & Consulting Texas Registered Engineering Firm F-17563 301 Drexel Pass Dr., Suite 3 Coppell, Texas 75015 (512) 642-6590</p>	
NO.		REVISIONS	
DESCRIPTION		APP.	
DATE		DATE	



PROVIDE CONCRETE SUPPORT AS RECOMMENDED BY MANUFACTURER AND VERIFIED BY LICENSED STRUCTURAL ENGINEER

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.
 NOT FOR BIDDING PURPOSES.

NO.	DESCRIPTION	APP.	DATE

TRAVIS COUNTY W/CID NO. 17
 TYPICAL LIFT STATION STANDARDS

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ANTENNA DETAILS