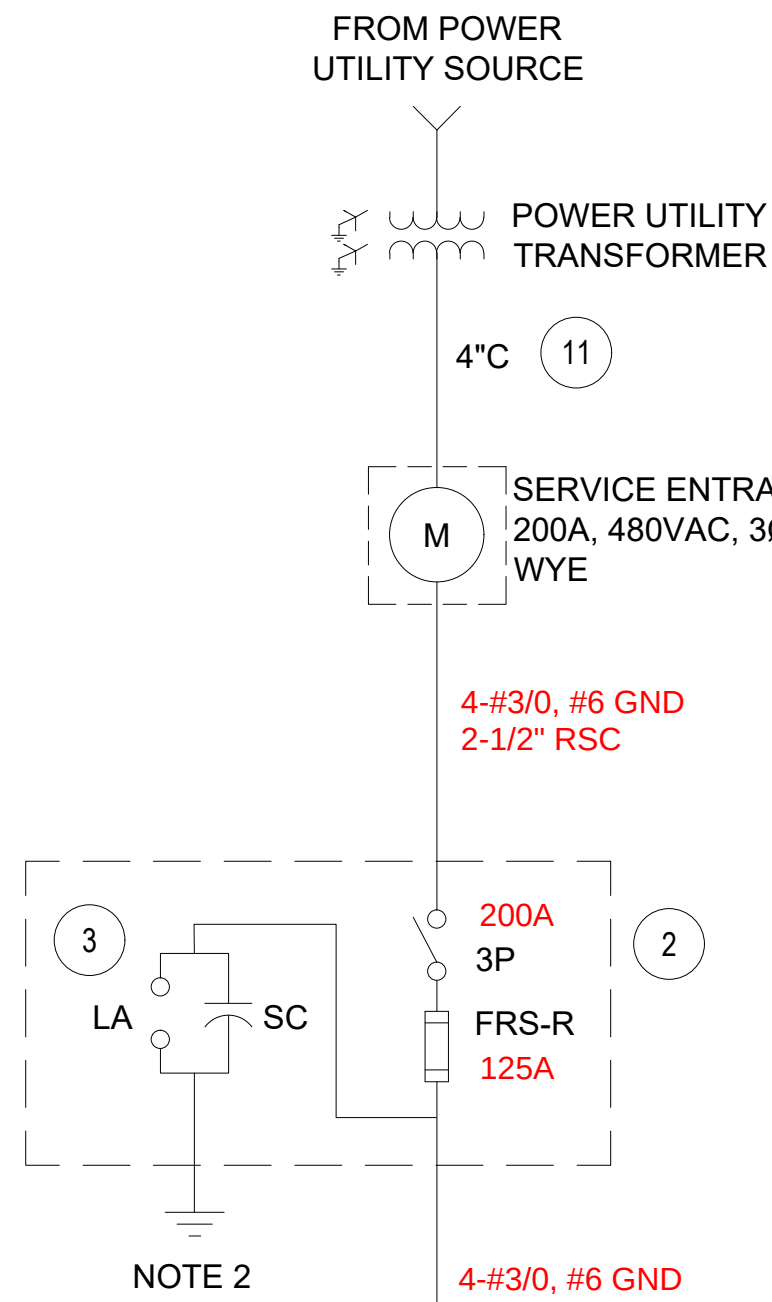
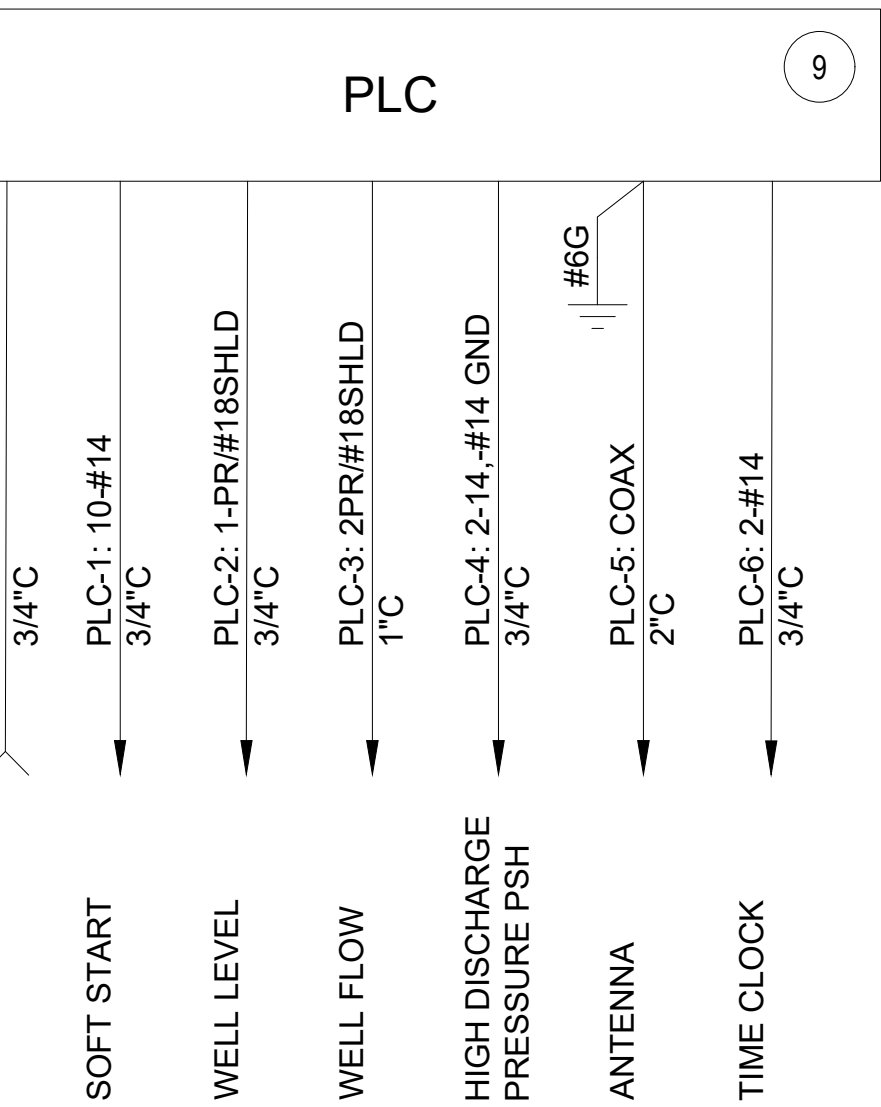




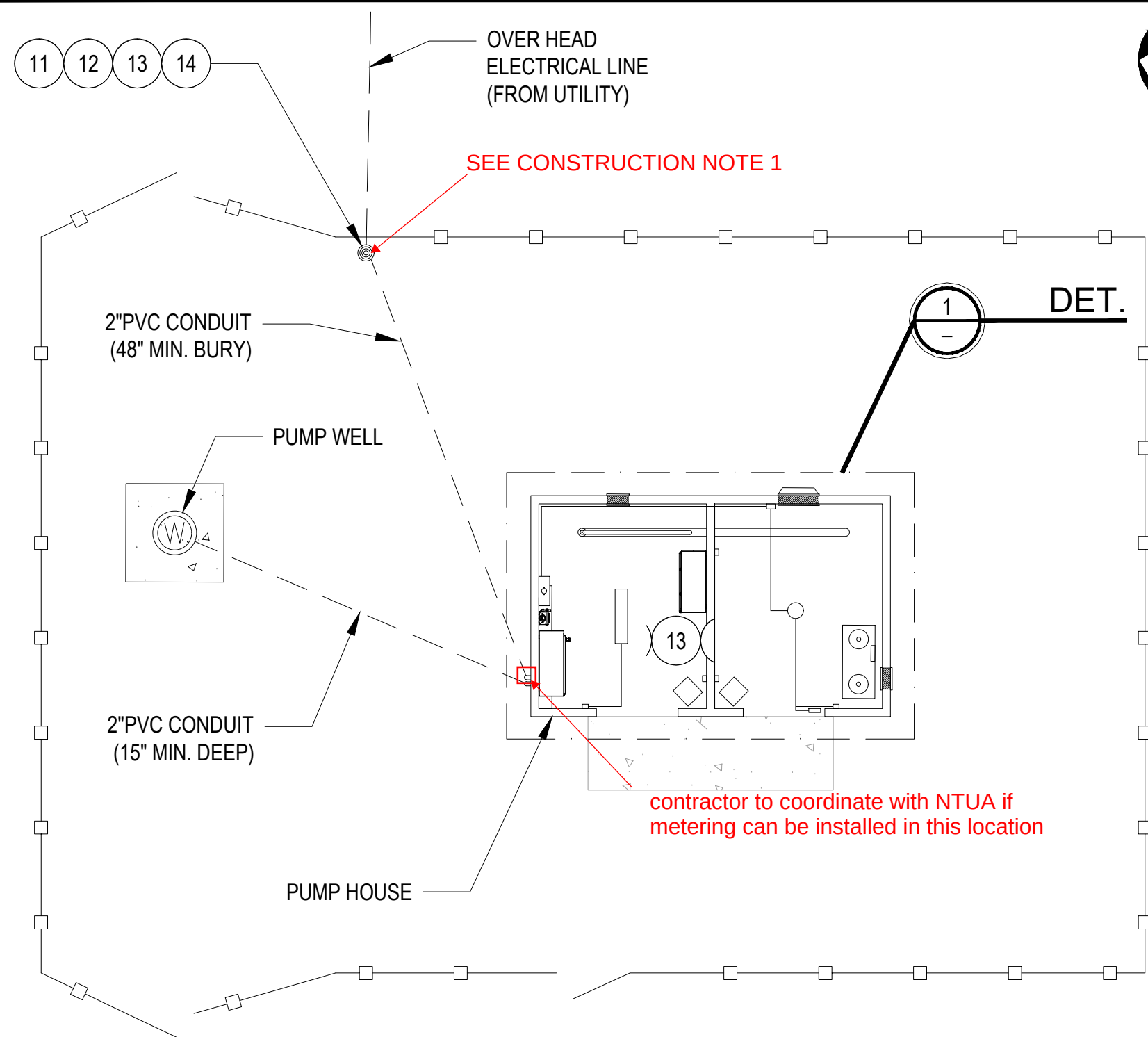
SERVICE ENTRANCE CALCULATION

LOAD DESCRIPTION	NON MOTOR LOAD KVA	NON MOTOR LOAD AMPS	MOTOR HP	MOTOR AMPS	CONNECTED AMPS	UTILIZATION FACTOR	DEMAND AMPS
WELL PUMP MOTOR #1			40	62.00	62.00	100%	62.00
TRANSFORMER 480:120/140	15	31.25			31.25	80%	25.00
TOTAL CONNECTED AND DEMAND AMPS					93.25		87.00
25% OF LARGEST MOTOR AMPS							16
MINIMUM NEC SERVICE ENTRANCE AMPS							103
ACTUAL SERVICE ENTRANCE AMPS SELECTED							200
1. Pump motor FLA rating is based from Grundfos datasheet							

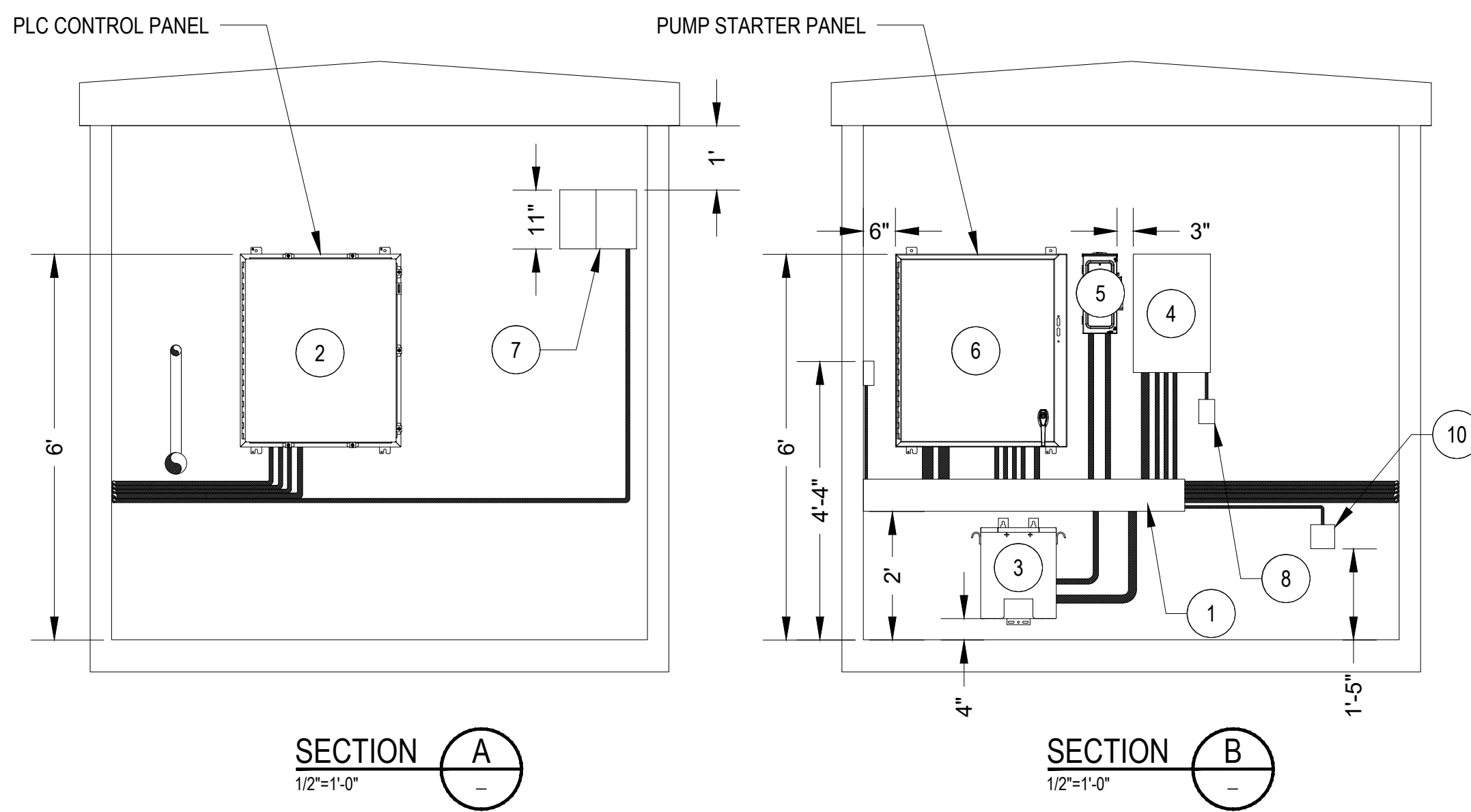


CONTROL ONE-LINE DIAGRAM

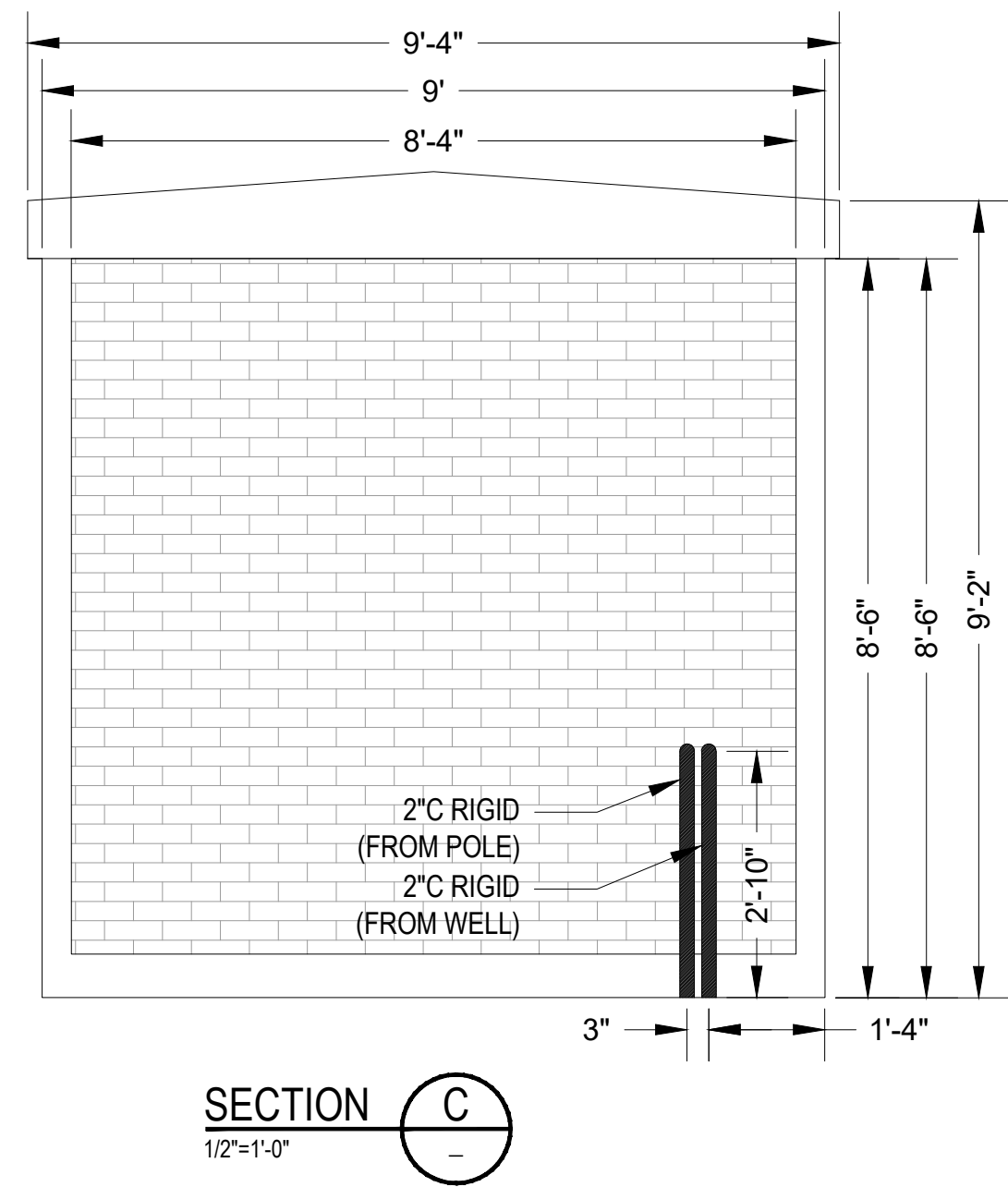
PANEL SCHEDULE															
PANEL		LP	VOLTS		120/240		PHASE		1	WIRE		3	CAT No		
LOCATION		CONTROL ROOM		MOUNTING		FEED		.125 MAIN AMPERE RATING		FEEDER					
				☐ FLUSH ☒ SURFACE		☐ TOP ☒ BOTTOM		☒ LUGS ONLY ☐ NA AMP BRKR		CONDUIT _____ WIRE _____ CIRCUIT No _____					
CKT No	AMPS	POLE	DESCRIPTION		WATTS	LOAD		N	L2	WATTS	DESCRIPTION		POLE	AMPS	CKT No
01	20	1	CONTROL ROOM LIGHTS		200	1.7 2.5				750	CHLORINE BOOSTER PUMP		2	20	02
03	20	1	CHLORINE ROOM LIGHTS		200				1.7 2.5						04
05	25	2	CONTROL ROOM HEATER		4000	16.7A				4000	CHLORINE ROOM HEATER		2	25	06
07						16.7A									08
09	20	1	CHLORINE INJECT. SYSTEM		1500	12.5 2				240	CHLORINE ROOM EXH. FAN		1	20	10
11	20	1	RECEPTACLES		180				1 1.5	120	CHLORINE GAS DETECTOR		1	20	12
13	20	1	SPARE								SPARE		1	20	14
15	20	1	PLC CONTROL PANEL		180				1.5		SPARE		1	20	16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37															38
39															40
41															42
TOTAL AMPS					46.5			36.0	TOTAL WATTS 10050 AVERAGE AMPS 41.25						



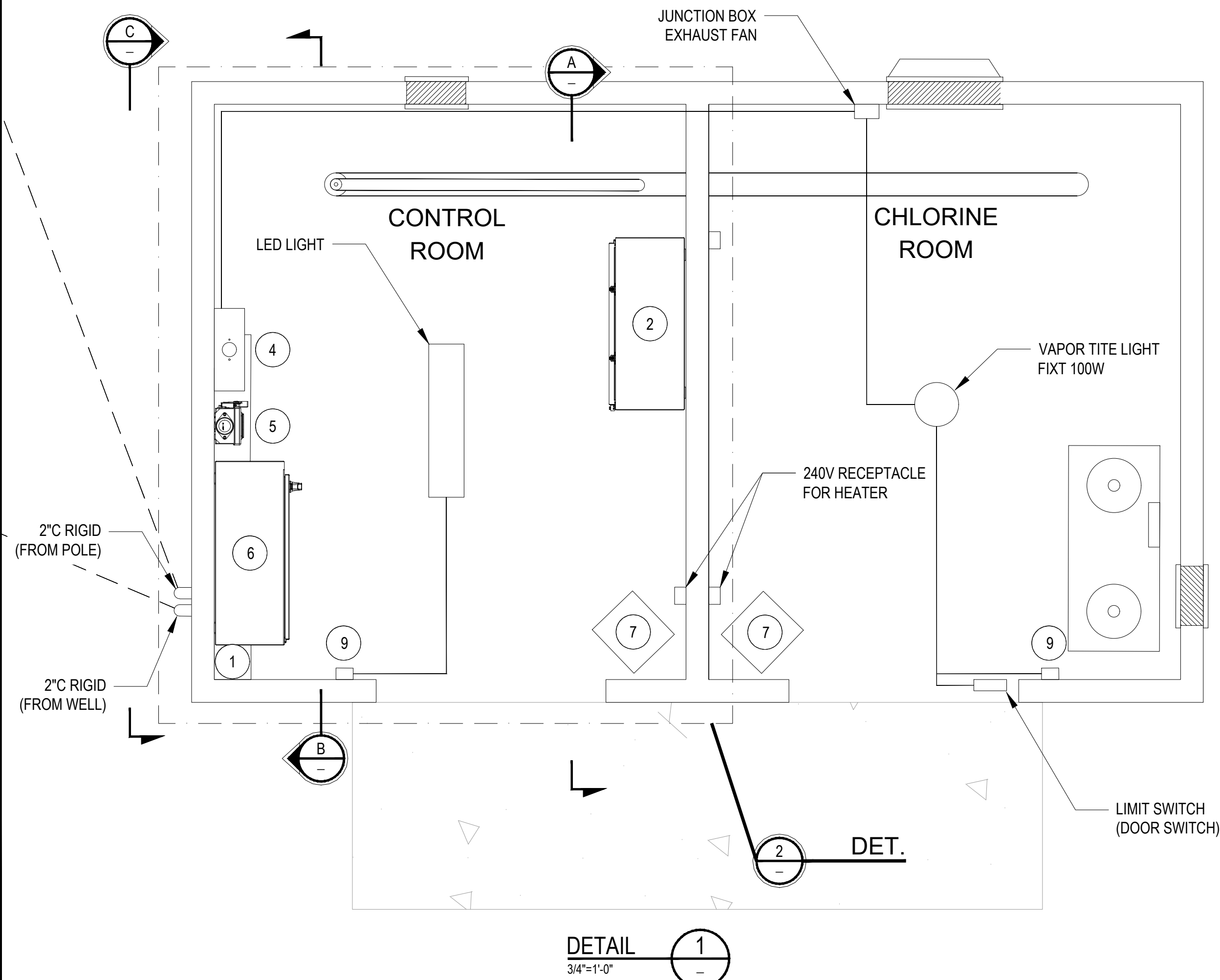
FOREST LAKE WELL - SITE LAYOUT
3/16"=1'-0"



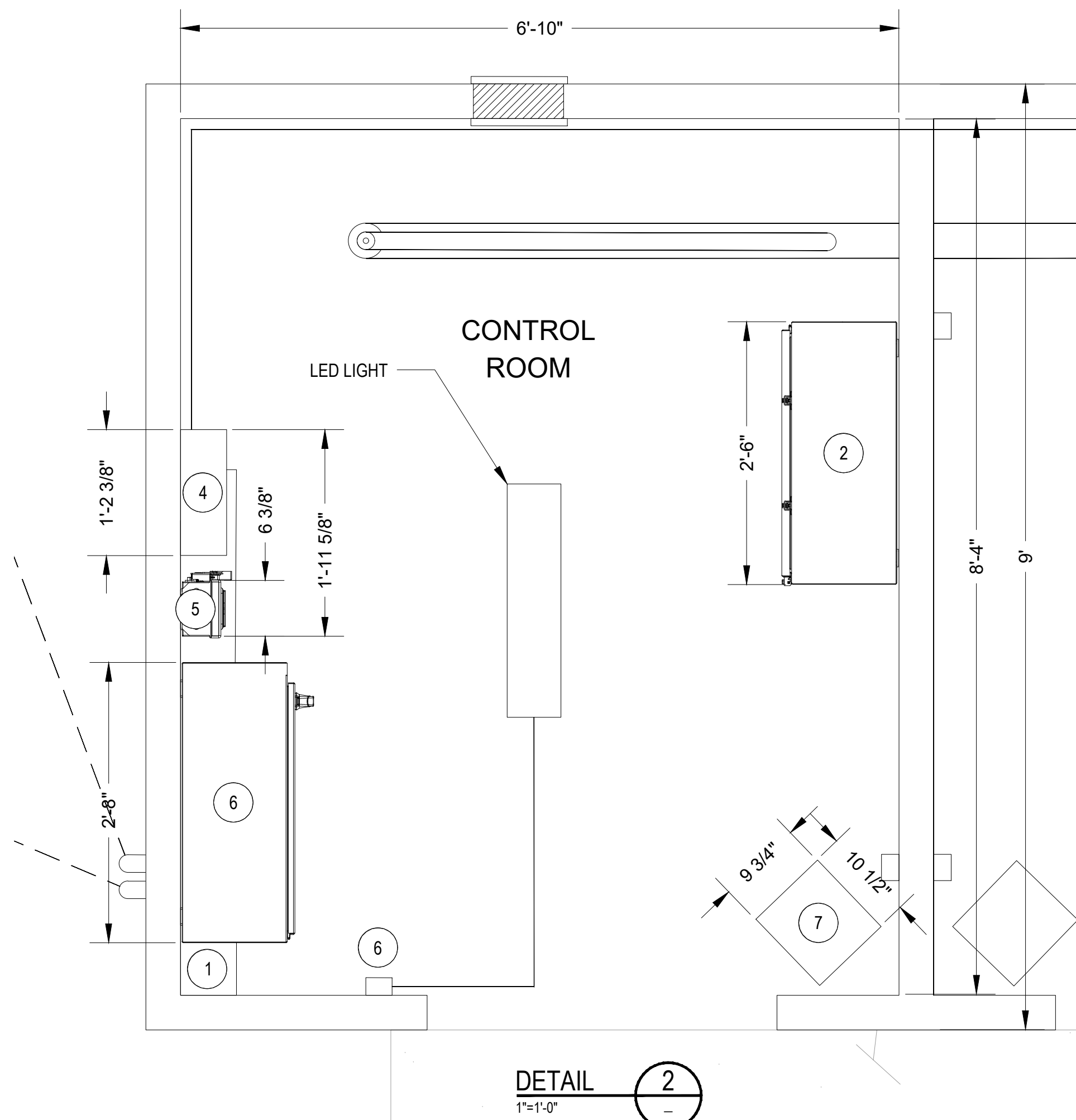
FOREST LAKE WELL - CONTROL ROOM - SECTIONS



CONSTRUCTION NOTES:
1. CONTRACTOR TO VERIFY FINAL LOCATION OF SERVICE ENTRANCE AND COMPLY WITH NEC 240.21 FEEDER TAP RULE. KEEP THE SERVICE ENTRANCE BELOW 25 FEET OR MOVE IT CLOSER TO THE PUMPHOUSE BUILDING OTHERWISE NEED TO PROVIDE SEPARATE LOAD CENTER AFTER THE UTILITY METER.



FOREST LAKE WELL - PUMP HOUSE - DETAIL



FOREST LAKE WELL - CONTROL ROOM - DETAIL

KEY NOTES

- GUTTER: 6" x 60" x 6 3/8"
- PROPOSED PANEL "A": HOFFMANN #A36H30DLP 36" X 30" X 12" (HWD), NEMA 12 (OR EQUIVALENT).
- TRANSFORMER: TOTALLY ENCLOSED/ENCAPSULATED, 115 DEGREE C RISE, 15KVA, 3PH, 460/240-120 VAC ACME #T253517-3S, 15" x 12" x 12" (HWD).
- LOAD CENTER: W/100A MAIN BREAKER, SQUARE D #QO16M100RB, 22 1/8", 14 3/8", 5 1/4" (HWD), NEMA 3R.
- DISCONNECT SW W/HANDLE, W/FRS-~~30R~~^{40A} FUSES (~~30A~~^{60A}) SQUARE D #H361NRB, 15 1/8" x 6 3/8" x 4 1/4" (HWD).
- PROPOSED PANEL "B": HOFFMAN #A36SA3212LPPL 36" X 32" X 12" (HWD), NEMA 12 (OR EQUIVALENT).
- HEATER: 220V, 4000W, DAYTON #3UG52 11" x 10 1/2" x 9 3/4" (HWD).
- ~~GFCI~~ RECEPTACLE: 120V, DUPLEX, 4 1/2" x 3" x 2" (HWD).
- LIGHT SWITCH: 4 1/2" X 3" X 2" (HWD).
- PRESSURE SWITCH: DPDT, HONEYWELL #L404B-1353 4 1/2" x 3" x 2" (HWD).
- POLE: 8" DIA. 25' LONG.
- SERVICE ENTRANCE METER SOCKET, 7 TERM, 3 PH, DURHAM #R6821-7N-N, 22 1/8", 14 3/8", 5 1/4" (HWD).
- MAIN DISCONNECT SWITCH: W/FRS-~~400R~~^{125A} FUSES (~~400A~~^{200A}) SQUARE D #~~H361NRB~~^{H364NRB}, 15 1/8" x 6 3/8" x 4 1/4" (HWD).
~~H364NRB~~^{H364NRB}, 29.25" x 18.63" x 8.5" (HWD)
- LIGHTNING ARRESTOR, DELTA LA603.

REVISION MADE			
NO	DATE	BY	
1			
2			
3			



WSP

WATKINS & PARTNERS, INC.
2020 BALCON PARKWAY, SUITE 100
TULSA, OKLAHOMA 74106
TEL: (918) 481-1801

DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:
SA	SA	JJ	DEC. 2024

NAVAJO TRIBAL UTILITY AUTHORITY
FOREST LAKE WELL
PINON, ARIZONA
ELECTRICAL EQUIPMENT LAYOUT

JOB NO.
36668.2932

E-210
SHEET 2 OF 2