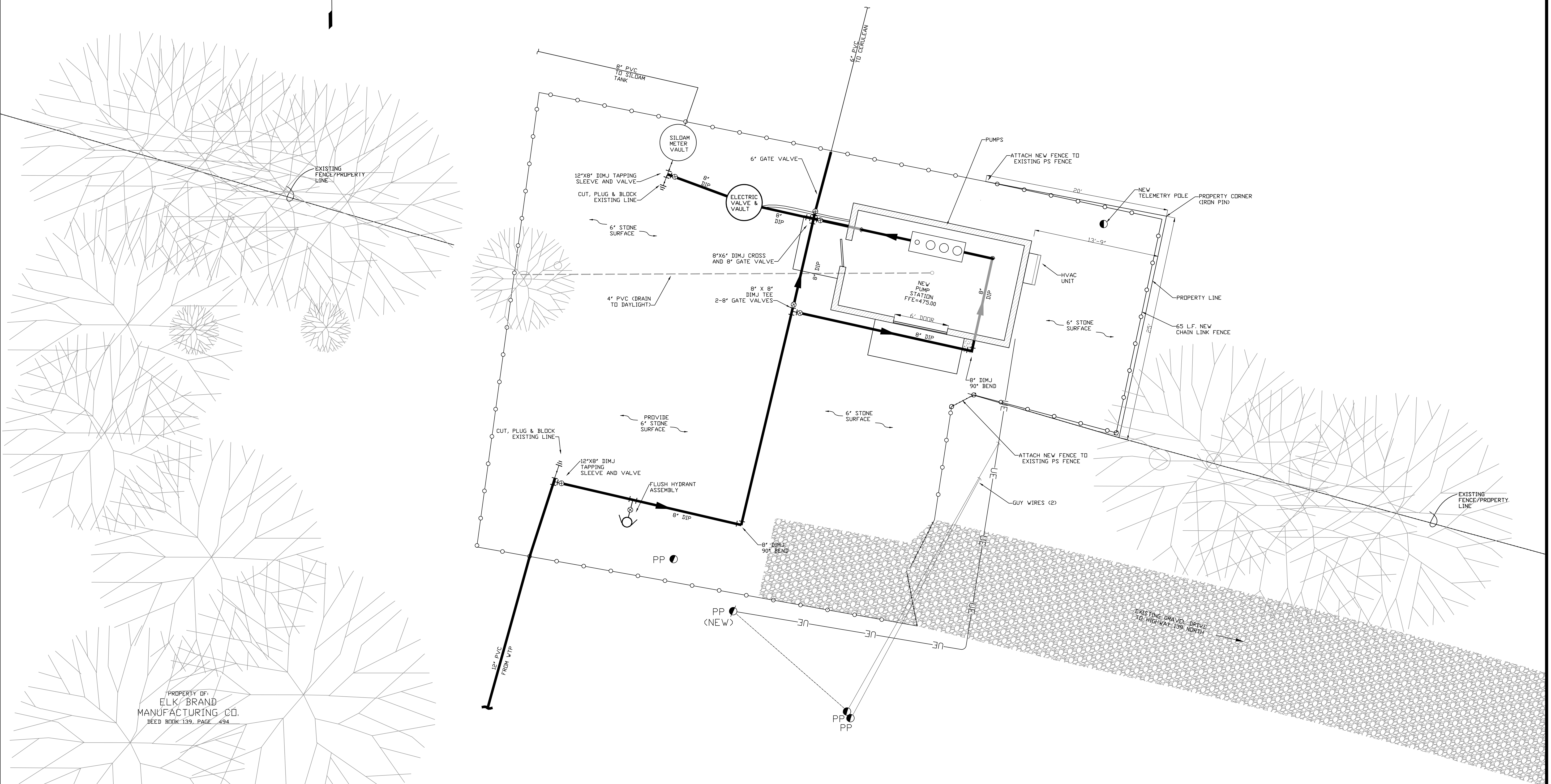


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MCCRAW  
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DEED BOOK 267, PAGE  
419

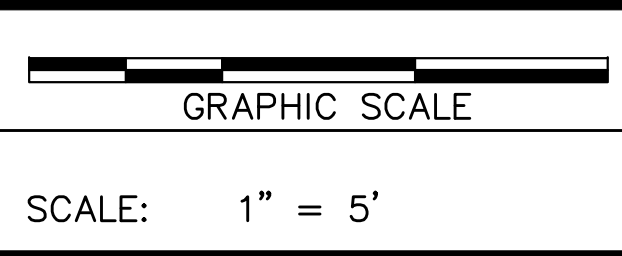
NOTES:  
1. EXISTING STATION AND EQUIPMENT TO REMAIN IN SERVICE UNTIL  
NEW PUMP STATION IS ON-LINE.



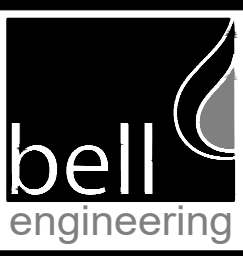
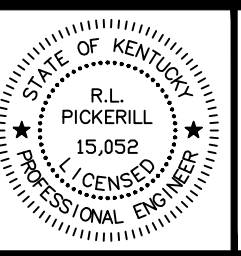
PROPERTY OF:  
ELK BRAND  
MANUFACTURING CO.  
DEED BOOK 139, PAGE 494

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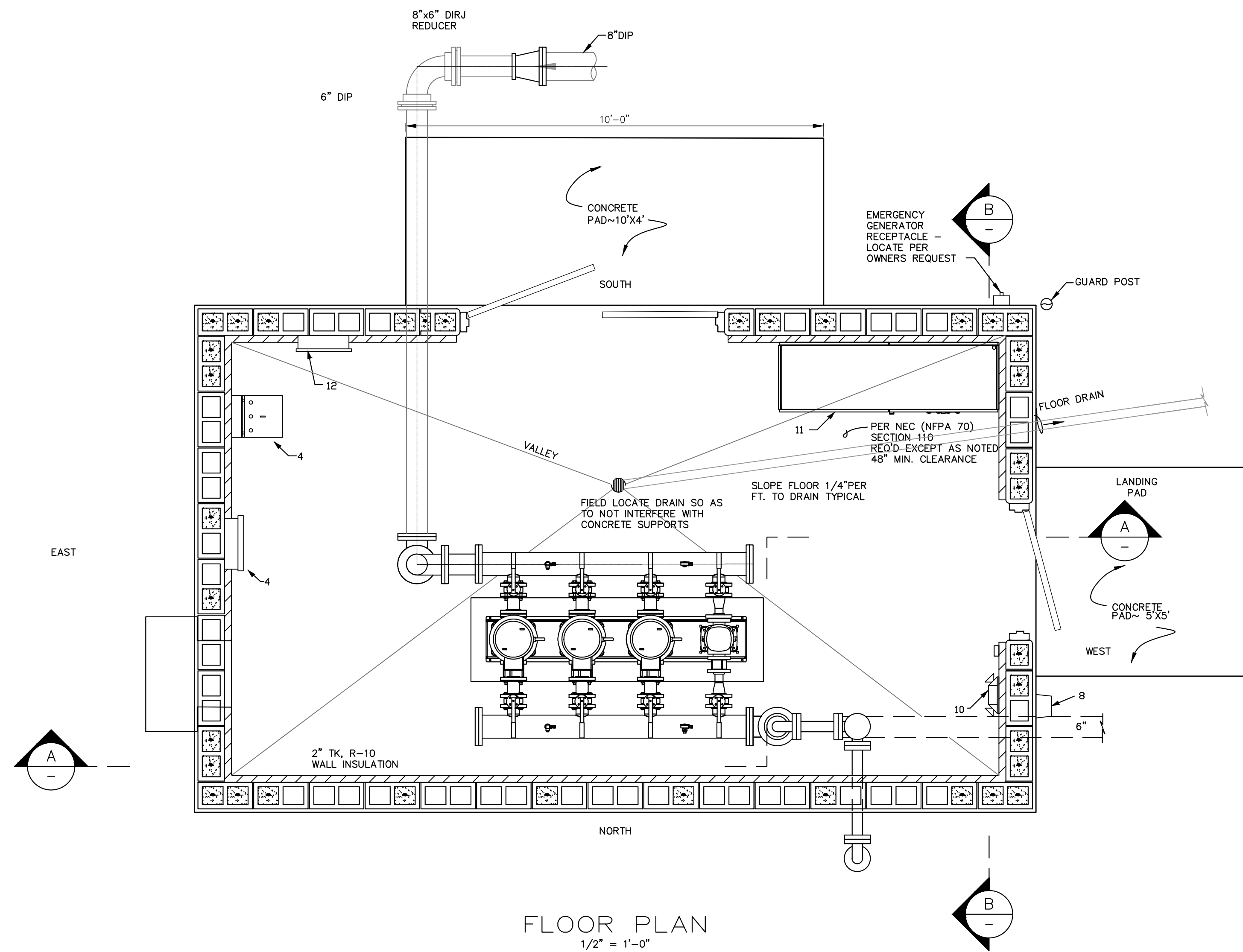


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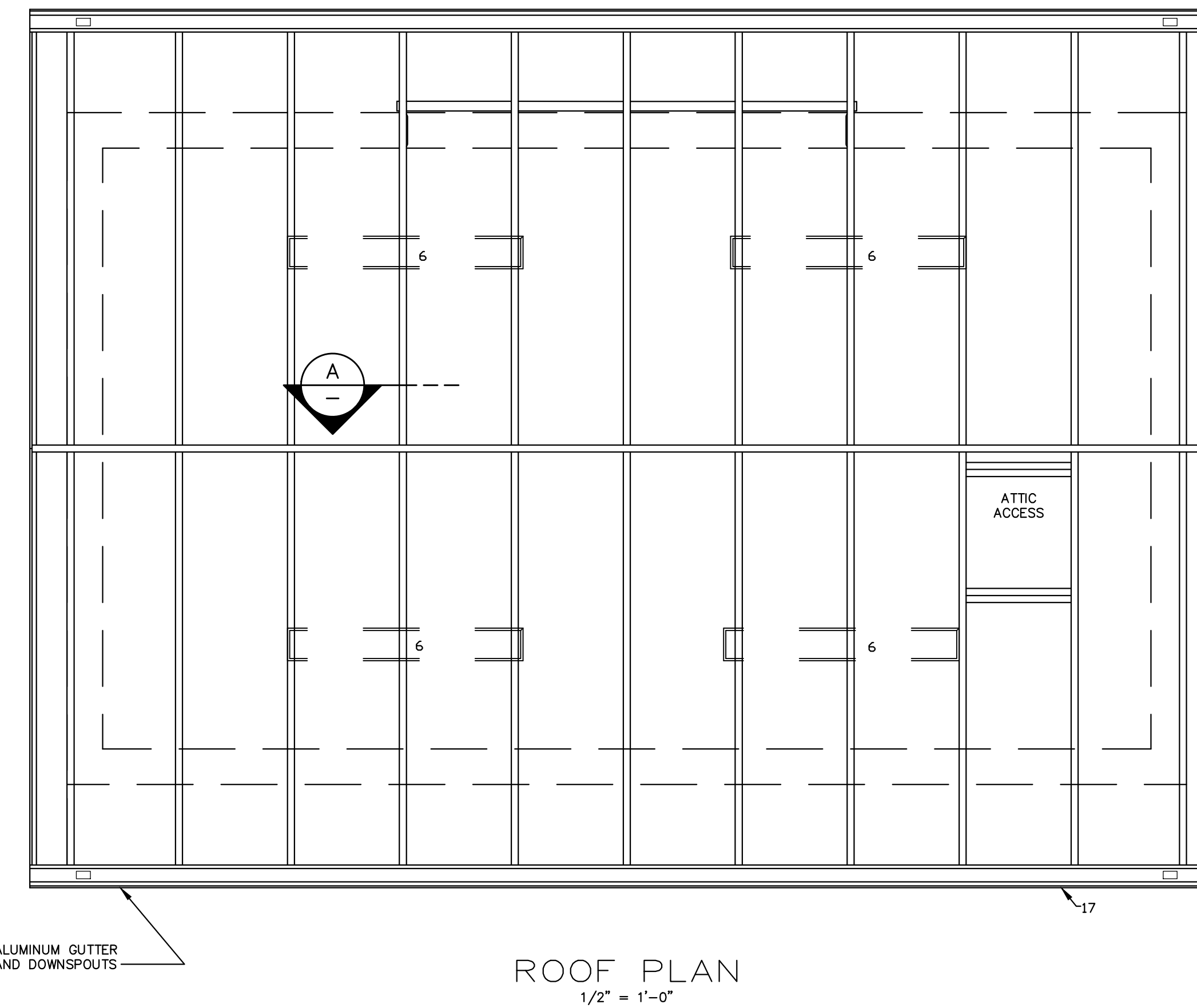
HIGHWAY 139 NORTH WATERLINE UPGRADES AND  
McUPTON PUMP STATION REPLACEMENT  
BARKLEY LAKE WATER DISTRICT  
TRIGG COUNTY, KENTUCKY

DIVISION B  
McUPTON BOOSTER PUMP STATION REPLACEMENT  
SITE PLAN WITH  
PIPING LAYOUT

DIVISION	B
CONTRACT NO.	586-008
DATE	DECEMBER, 2019
SHEET NO.	2-B OF 4



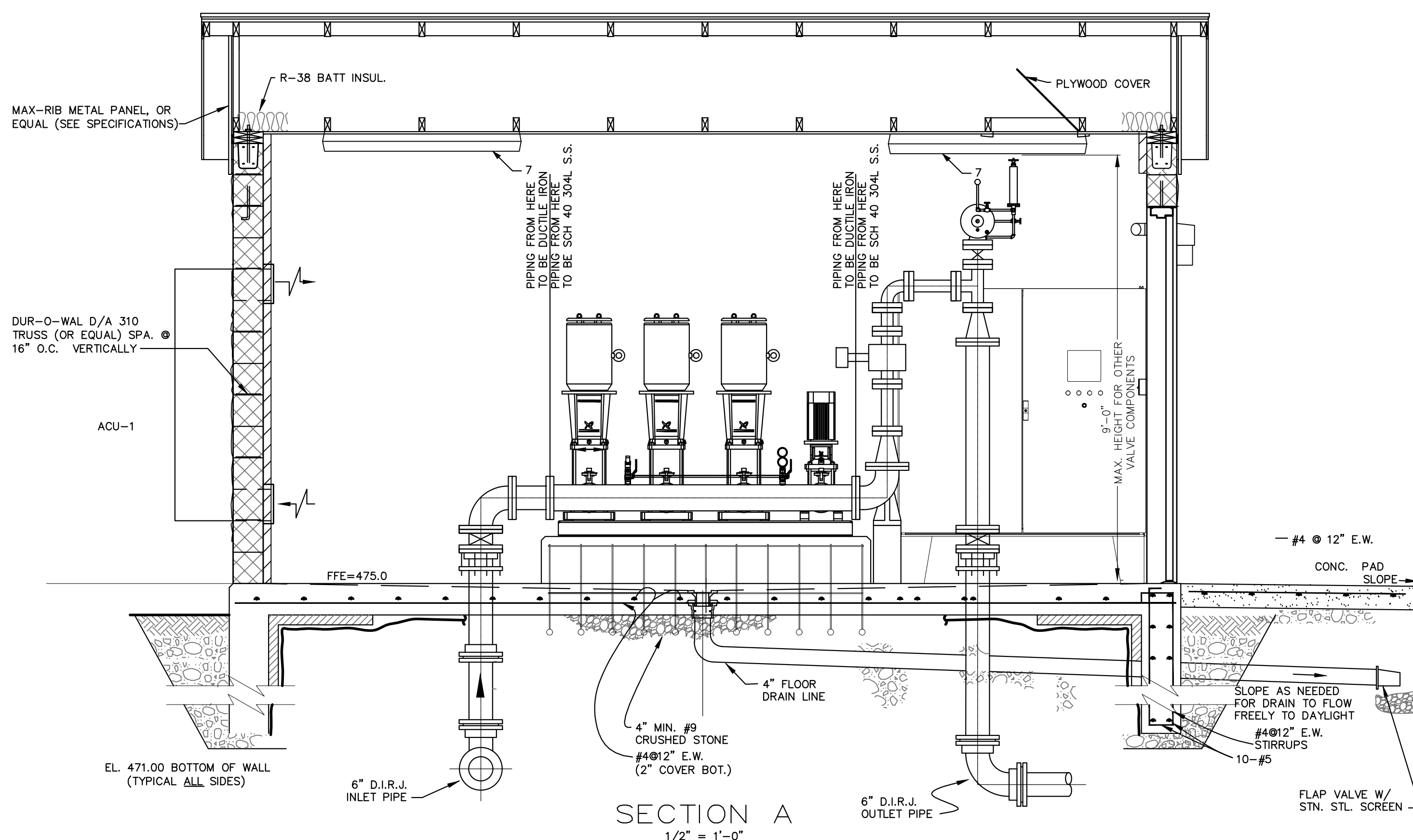
FLOOR PLAN  
1/2" = 1'-0"



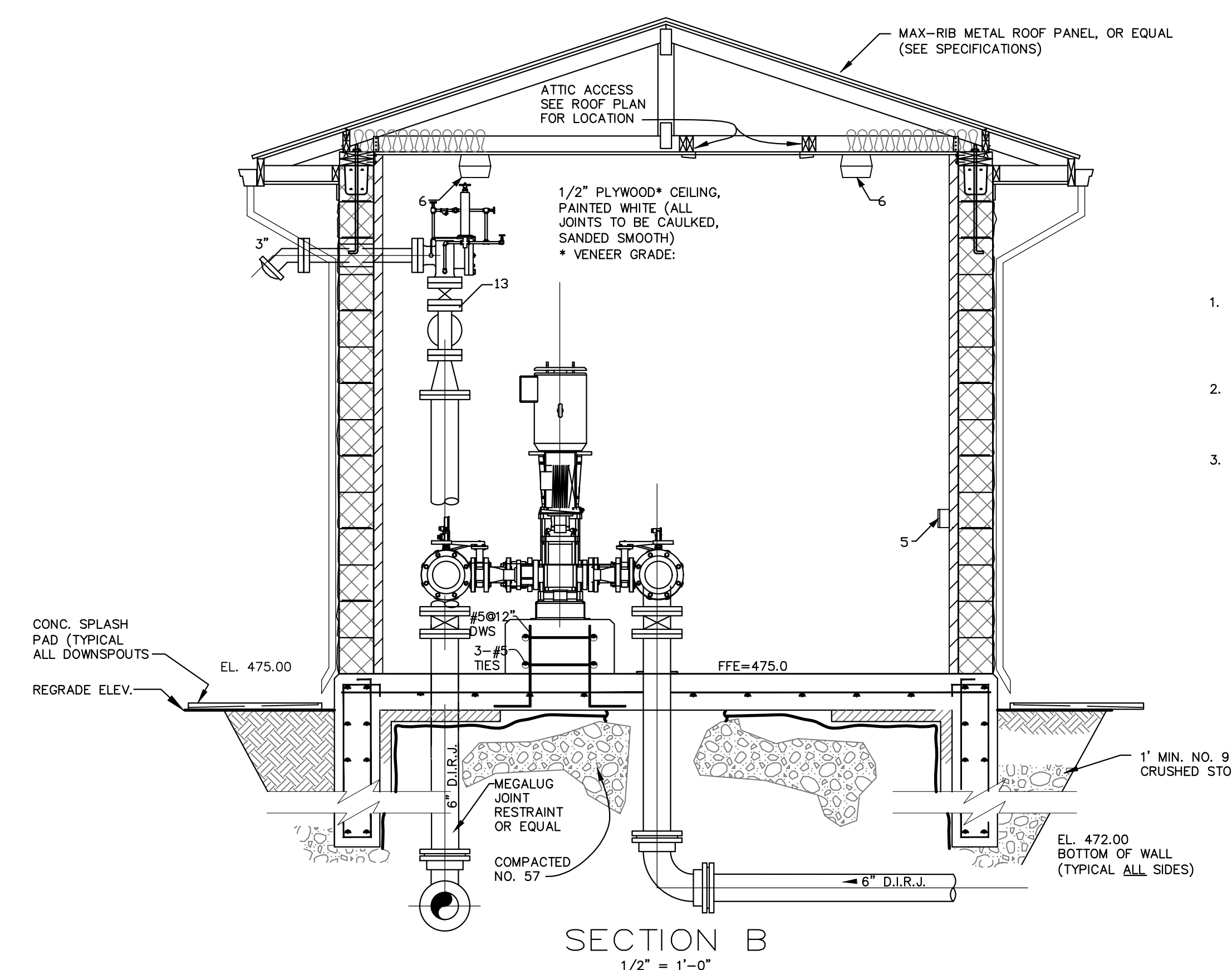
ROOF PLAN  
1/2" = 1'-0"

BILL OF MATERIALS			
ITEM	DESCRIPTION	SIZE	QTY.
1.	ADJ. PIPE SUPPORT, GRINNELL FIG 264	6"	5
2.	IRON FLANGED SUCTION DIFFUSER	6" x 6"	2
3.	FLOOR DRAIN (6" BRASS)	6"	
4.	POWER DISTRIBUTION TRANSFORMER	7.5KVA	
5.	CONVENIENCE OUTLET		
6.	INTERIOR LIGHT	40W(2)	4
7.	INTERIOR LIGHT SWITCH		
8.	EXTERIOR LIGHT	70W	
9.	EXTERIOR LIGHT SWITCH		
10.	EMERGENCY LIGHT		
11.	SYSTEM POWER AND CONTROL PANEL		
12.	TELEMETRY PANEL		
13.	MAG FLOWMETER		
14.	PRESSURE RELIEF & SUSTAINING VALVE		

ADJUSTABLE PIPE SADDLE SUPPORT  
GRINNELL FIG. 264, OR EQUAL (TYP.)



SECTION A  
1/2" = 1'-0"



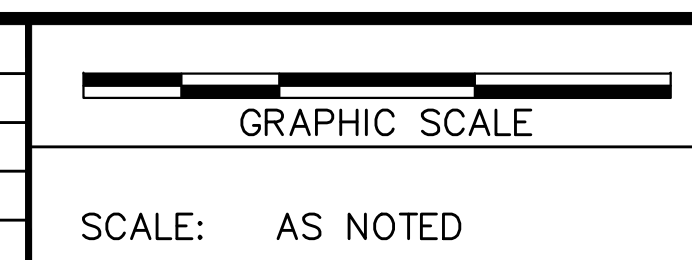
SECTION B  
1/2" = 1'-0"

- PUMP STATION EQUIPMENT LAYOUT IS SCHEMATIC IN NATURE. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT OF EQUIPMENT, PIPE LENGTHS, ETC. BASED ON ACTUAL EQUIPMENT SUPPLIED. FINAL LAYOUT TO BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE START OF CONSTRUCTION.
- COLORS OF BRICK/BLOCK, DOORS, ROOF, GUTTERS, DOWNSPOUTS, INTERIOR CEILING, PIPING AND GABLES TO BE REVIEWED & CHOSEN BY OWNER AND APPROVED BY OWNER PRIOR TO ORDERING ANY MATERIAL.
- WALL INSULATION, MINIMUM R-10, TO BE DUPONT THERMAX HEAVY-DUTY INSULATION, OR EQUAL, WITH A 3.4 MIL. EMBOSSED, WHITE, ACRYLIC COATED ALUMINUM SHEET ON OUTSIDE AND 1.25 MIL EMBOSSED ALUMINUM ON THE OTHER WITH A MINIMUM IMPACT RESISTANCE OF 40 LBS., ABLE TO WITHSTAND PRESSURE WASHING UP TO 2000 PSI WITH ANY TIP GREATER THAN 15" (AT 3" MINIMUM DISTANCE), HAVE A 145 PSI STRENGTH MODULUS OF RUPTURE, AND MEET THE FOLLOWING CODES: 2009 IBC, SECTION 2603, UL R5622, UL 723 (ASTM E84), NFPA 285-2006.

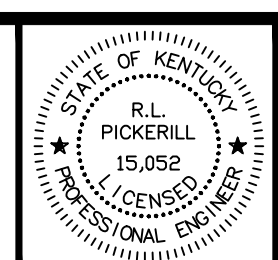
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HIGHWAY 139 NORTH WATERLINE UPGRADES AND  
McUPTON BOOSTER PUMP STATION REPLACEMENT  
BARKLEY LAKE WATER DISTRICT  
TRIGG COUNTY, KENTUCKY

DIVISION B  
BOOSTER PUMPING STATION ELEVATIONS AND  
MISCELLANEOUS DETAILS

DIVISION	B
CONTRACT NO.	586-008
DATE	DECEMBER, 2019
SHEET NO.	3-B OF 04



**ELECTRICAL ABBREVIATIONS**

A	AMPERE
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFD	ADJUSTABLE FREQUENCY DRIVE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
C	CONDUIT (RACEWAY)
⊙	AT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
C/L	CENTERLINE
CLG	CEILING
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER OR CONSTANT TORQUE
CTL	CONTROL
CU	COPPER OR CONDENSING UNIT
Δ/Y	DELTA/WYE
DB	DIRECT BURIAL
DN	DOWN
DPST	DOUBLE POLE-SINGLE THROW
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
EGC	EQUIPMENT GROUND CONDUCTOR
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC
EOL	END-OF-LINE
EMERG	EMERGENCY
EUH	ELECTRIC UNIT HEATER
EWG	ELECTRIC WATER COOLER
EMH	ELECTRIC WALL HEATER/WATER HEATER
EX	EXISTING
FA	FIRE ALARM
FAFP	FIRE ALARM CONTROL PANEL
FO	FIBER OPTIC
FVNR	FULL VOLTAGE, NON-REVERSING
GEC	GROUNDING ELECTRODE CONDUCTOR
GFCI OR GFI	GROUND FAULT CURRENT INTERRUPTING
GND	GROUND
HOA	HAND-OFF-AUTO SELECTOR SWITCH
HP	HORSEPOWER
J OR JB	JUNCTION BOX
KVA	KILOVOLT-AMPERES
KWH	KILOWATT-HOUR
KCMIL	THOUSAND CIRCULAR MILS
LF	LIGHTING FIXTURE (LUMINAIRE)
LTG	LIGHTING
LTS	LIGHTS
LS	LIMIT SWITCH
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MV	MEDIUM VOLTAGE
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NL	NON LINEAR
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOAD
P	POLE
OT	OVER TEMPERATURE
PH OR Ⓢ	PHASE
PNL	PANEL
PVC	POLY-VINYL CHLORIDE
PWR	POWER
RECEPT	RECEPTACLE
SHT	SHEET
S/N	SOLID NEUTRAL
SP	SINGLE POLE
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
STA	STATION
STD	STANDARD
STC	SHIELDED TWISTED INSTRUMENT CABLE
SW	SWITCH
TB	TERMINAL BOX
TEL	TELEPHONE
TM	THERMAL MAGNETIC
TS	TAMPER SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UG	UNDERGROUND
UH	UNIT HEATER
V	VOLTAGE OR VOLTS
W	WIRE
WP	WEATHERPROOF
W/	WITH
XFMR	TRANSFORMER

**ELECTRICAL PLAN SYMBOLS**

	ELECTRICAL CIRCUIT: SHORT=PHASE CONDUCTOR; LONG = NEUTRAL, DASHED = EQUIPMENT GROUND
	EMERGENCY CIRCUIT
	SWITCH: 3=3 WAY; 4=4 WAY; K=KEY; WP=WEATHERPROOF; M=MOTOR STARTER; PL=PILOT LT
	DUPLEX RECEPTACLE: WP = WEATHERPROOF; GFI = GROUND FAULT; NUMBER = MOUNTING HEIGHT
	SINGLE RECEPTACLE
	208 or 240 VOLT RECEPTACLE
	DUPLEX RECEPTACLE, FLUSH FLOORBOX MOUNTED
	SPECIAL PURPOSE RECEPTACLE OUTLET
	THERMOSTAT
	MOTOR
	JUNCTION BOX - SMALL
	JUNCTION BOX - FLUSH-MOUNTED
	SAFETY SWITCH - NONFUSED UNLESS NOTED OTHERWISE
	MAGNETIC COMBINATION STARTER - THREE PHASE
	MAGNETIC COMBINATION STARTER - SINGLE PHASE
	TELECOM OUTLET: D = DATA; T = TELEPHONE; C = CABLE; NUMBER = QTY OF CABLES & JACKS
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	WALL MOUNTED SPEAKER OR ALARM HORN
	PANELBOARD (SURFACE MOUNTED)
	PANELBOARD (FLUSH MOUNTED IN WALL)
	HEATER-WALL MOUNTED
	EXHAUST FAN/VENTILATOR
	SPEAKER GENERAL
	CLOCK
	EXISTING POWER POLE
	NEW POWER POLE
	LIGHTING POLE
	PHOTO CELL
	MANHOLE
	PULLBOX
	MUSHROOM HEAD EMERGENCY SWITCH
	DUCT SMOKE DETECTOR
	HEAT DETECTOR
	SMOKE DETECTOR
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM HORN/STROBE
	FIRE ALARM STROBE
	FIRE ALARM ZONE ADDRESSABLE MODULE
	SPRINKLER SYSTEM FLOW SWITCH
	TAMPER SWITCH
	MAGNETIC DOOR HOLDER
	KEYNOTE
	CALL SWITCH
	PASSIVE INFRARED MOTION DETECTOR
	ALL WORK IN THE ROOM/AREA SHALL CONFORM TO THE NEMA RATING INDICATED
	ELECTRICAL LINE UNDERGROUND
	ELECTRICAL LINE OVERHEAD
	INSTRUMENTATION LINE UNDERGROUND
	INSTRUMENTATION LINE OVERHEAD
	TELEPHONE LINE UNDERGROUND
	TELEPHONE LINE OVERHEAD

**ELECTRICAL DIAGRAM SYMBOLS**

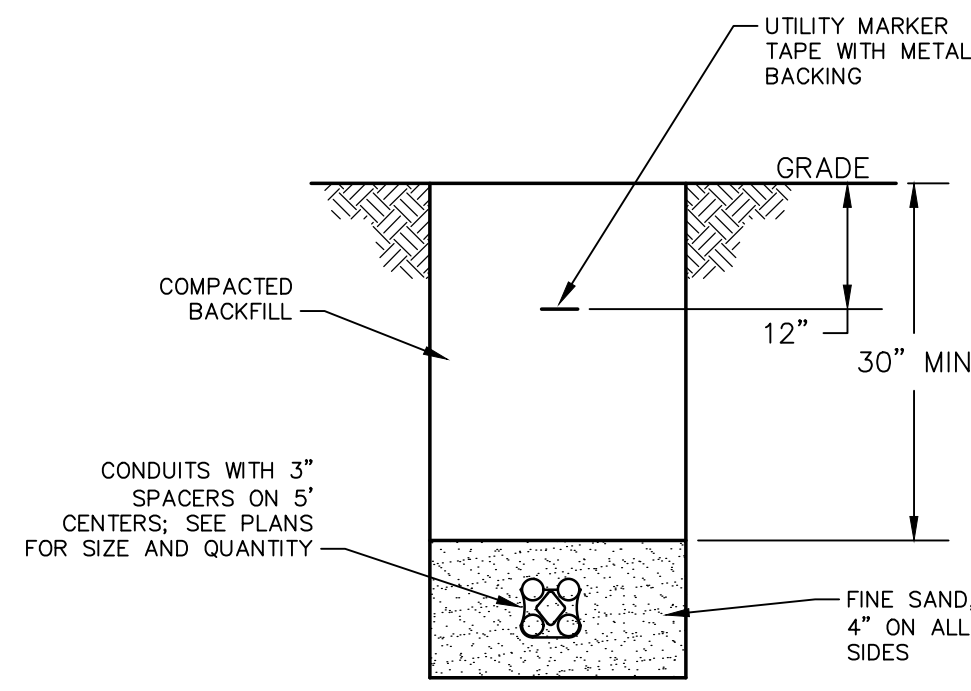
	TRANSFORMER
	CAPACITOR
	GROUND
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	CIRCUIT BREAKER (GENERAL)
	CIRCUIT BREAKER, THERMAL-MAGNETIC
	CIRCUIT BREAKER, MAGNETIC-ONLY
	CIRCUIT BREAKER (DRAWOUT)
	GROUND FAULT PROTECTED CIRCUIT BREAKER
	RELAY CONTACTS (NORMALLY OPENED)
	RELAY CONTACTS (NORMALLY CLOSED)
	THERMAL OVERLOAD PROTECTION
	FUSE
	DOT INDICATES A CONNECTION OF TWO WIRES
	TERMINALS FOR CONNECTION OF REMOTE WIRING
	RELAY/CONTACTOR COIL: C = CONTRACTOR; CR = CONTROL RELAY; TR = TIMING RELAY; M = MOTOR
	HAND-OFF-AUTOMATIC SWITCH
	FULL VOLTAGE NON-REVERSING MOTOR STARTER: X = NEMA SIZE
	PILOT LIGHT: R = RED; G = GREEN; A = AMBER; W = WHITE
	PILOT LIGHT - PUSH-TO-TEST
	MOTOR
	FUSED DISCONNECT SWITCH
	FLOAT SWITCH
	TEMPERATURE SWITCH (THERMOSTAT)
	PRESSURE SWITCH
	LIMIT SWITCH
	FLOW SWITCH
	SOLENOID VALVE COIL
	ELAPSED TIME METER
	KEY INTERLOCK
	BATTERY
	PUSHBUTTONS, N.C. & N.O. RESPECTIVELY
	SELECTOR SWITCH - TWO POSITION
	FUSED CUTOUT
	SECTIONALIZING SWITCH (3 PHASE)
	TIMER RELAY CONTACT: NORMALLY OPEN - TIMED OPEN UPON DEENERGIZATION
	TIMER RELAY CONTACT: NORMALLY CLOSED -TIMED CLOSE UPON DEENERGIZATION
	TIMER RELAY CONTACT: NORMALLY OPEN - TIMED CLOSE UPON ENERGIZATION
	TIMER RELAY CONTACT: NORMALLY CLOSED -TIMED OPEN UPON ENERGIZATION
	TRANSFER SWITCH
	GENERATOR
	EXTERNAL WRING

**ELECTRICAL DEVICE MOUNTING HEIGHT SCHEDULE**

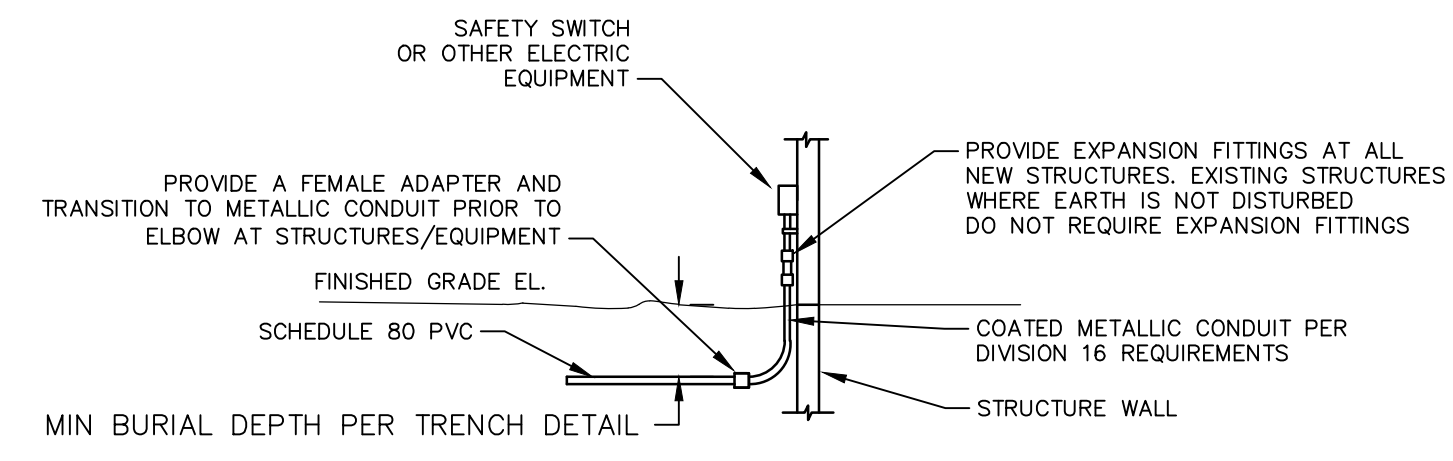
DEVICE	HEIGHT AFF	REMARKS
RECEPTACLE - LOW	1'-4"	TO BOTTOM OF DEVICE BOX
RECEPTACLE - ABOVE COUNTER/MEDIUM	4'-0"	TO TOP OF DEVICE BOX
LIGHT SWITCH	4'-0"	TO BOTTOM OF DEVICE BOX
CONTROL STATIONS & PUSH-BUTTONS	4'-0"	TO BOTTOM OF DEVICE BOX
PANELBOARDS & CONTROL PANELS	6'-6"	TO TOP OF BOX
SAFETY SWITCH	4'-0"	TO TOP OF BOX

**LIGHT FIXTURE SCHEDULE**

TYPE	MANUFACTURER	CATALOG SERIES	LAMPS	VOLTAGE	MOUNTING	DESCRIPTION
LF-1	HOLPHANE	EMS LED	6000 LM	120V	SURFACE	ENCLOSED AND GASKETED LINEAR FIXTURE WITH FIBERGLASS HOUSING, 48" LENGTH, ACRYLIC CLEAR DEEP LENS, MEDIUM DISTRIBUTION, 4K COLOR, 80CRI, 5-YR WARRANTY, 38W
LF-2	HOLOPHANE	CZA11LT	2X2.5W	120V	SURFACE	THERMOPLASTIC EMERGENCY FIXTURE WITH LED LAMPS, DAMP LOCATION LISTING, 90 MIN LITHIUM BATTERY, TEST SWITCH, 5-YR WARRANTY, SIZED FOR REMOTE HEADS
LF-3	HOLOPHANE	ELA	2X1.5W	9.6V	SURFACE	REMOTE HEADS, WEATHERPROOF WET LOCATION, GRAY, WITH MOUNTING BASE, CORROSION RESISTANT
LF-4	HOLOPHANE	HLWPC2	11700 LM	120V	SURFACE	WALL PACK, FULL-CUTOFF, GRAY POWDER-COATED, WET LOCATION, FORWARD THROW, -20° F AMBIENT MIN, SURGE PROTECTION, 4K COLOR, 80CRI, 5-YEAR WARRANTY, 115W, WITH INTEGRAL PHOTOCELL



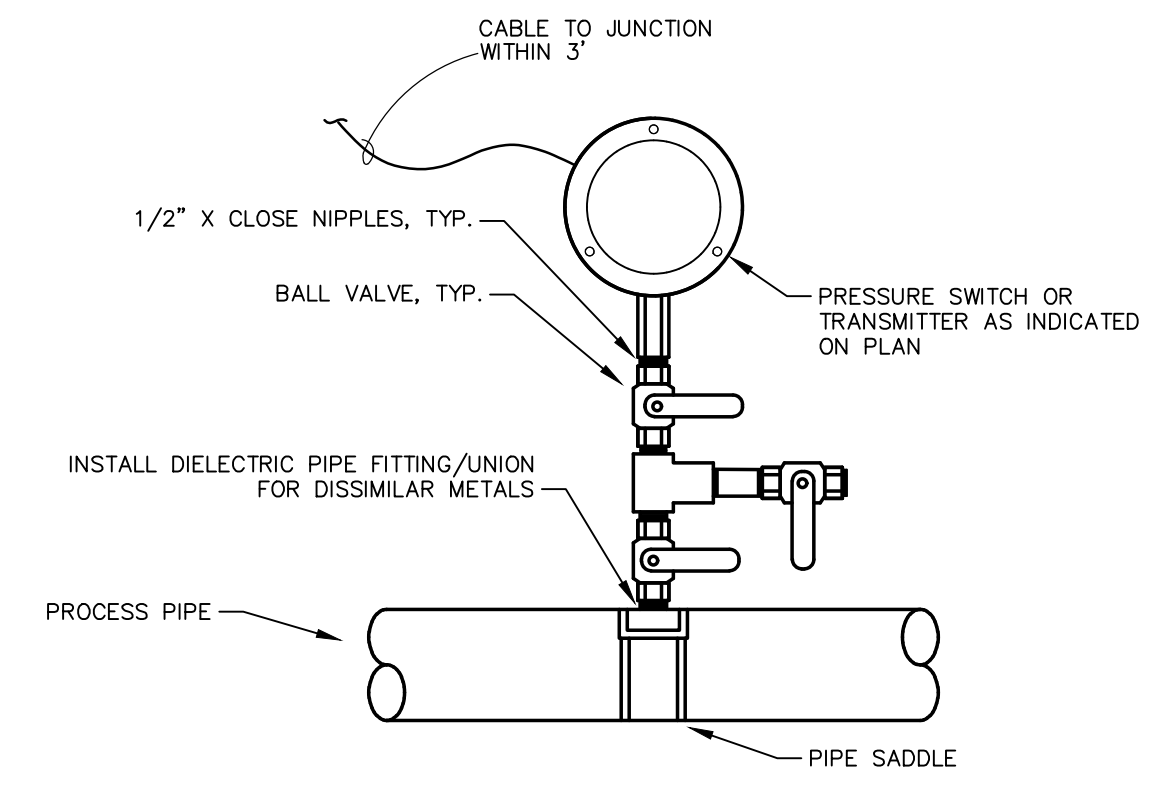
TYPICAL TRENCH DETAIL NOT TO SCALE



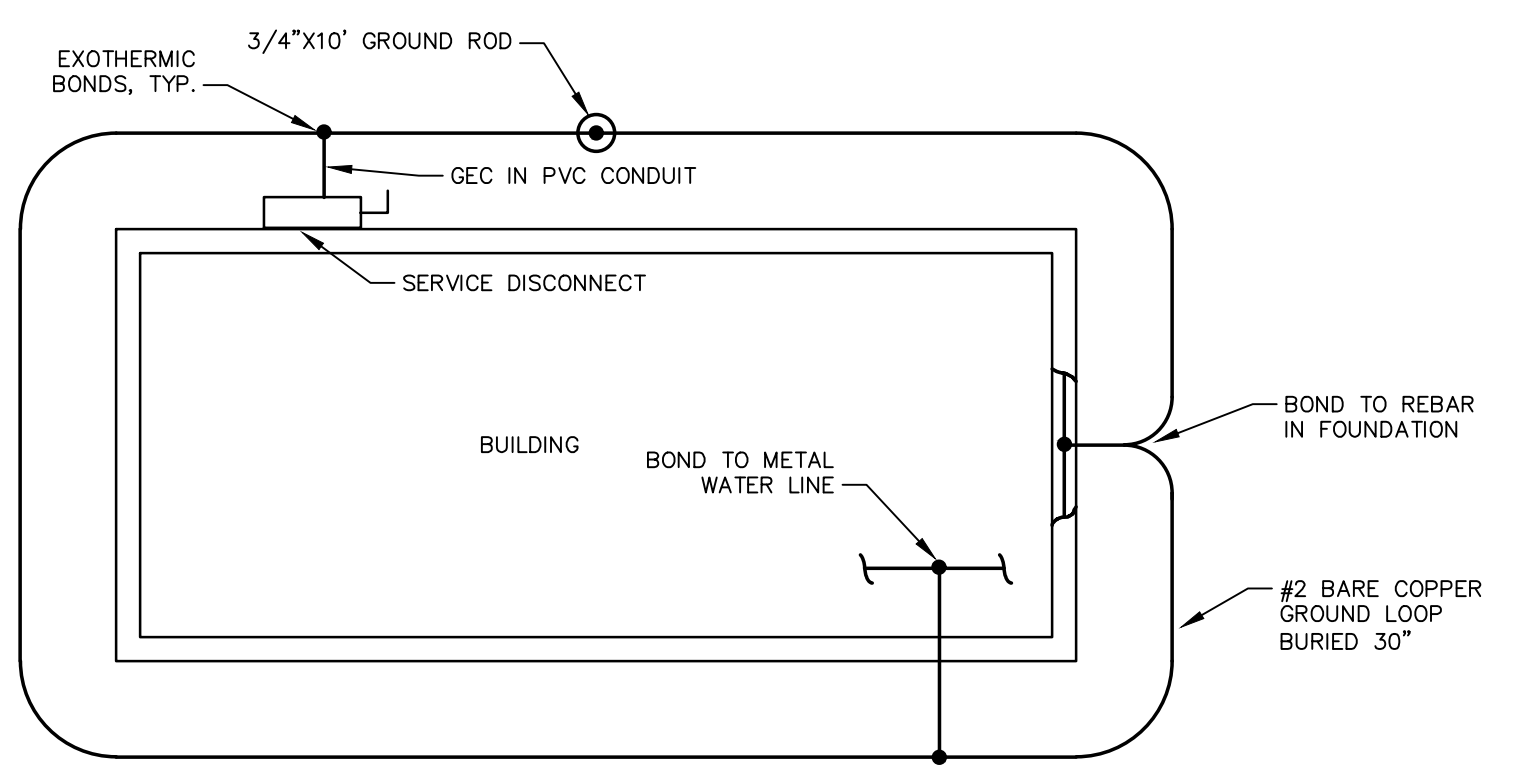
TYPICAL UNDERGROUND PVC CONDUIT TRANSITION TO METALLIC CONDUIT NOT TO SCALE

**TRENCHING NOTES:**

- PROVIDE PULL CORD IN ALL CONDUITS.
- UTILITY MARKER TAPE SHALL RUN THE ENTIRE LENGTH OF DUCT BANK.
- MAINTAIN MINIMUM 12" SPACING BETWEEN INSTRUMENTATION AND POWER.
- MAINTAIN MINIMUM 36" SPACING BETWEEN OTHER SITE PIPING, INCLUDING WATER, AND GAS.

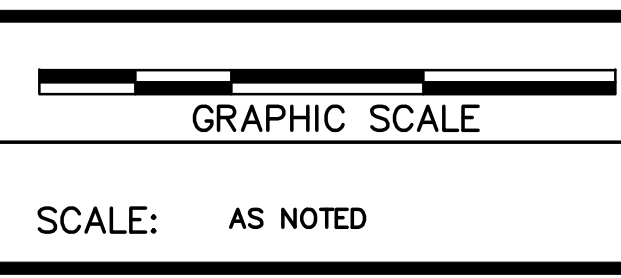


PRESSURE SENSOR PIPING DETAIL NOT TO SCALE



BUILDING GROUND DETAIL NOT TO SCALE

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CHECKED	BLM			
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HIGHWAY 139 NORTH WATERLINE UPGRADES AND McUPTON PUMP STATION REPLACEMENT  
BARKLEY LAKE WATER DISTRICT  
TRIGG COUNTY, KENTUCKY

DIVISION		B
CONTRACT NO.		586-008
DATE		DECEMBER, 2019
SHEET NO.		E-1 OF E-4



SHEET NOTES:

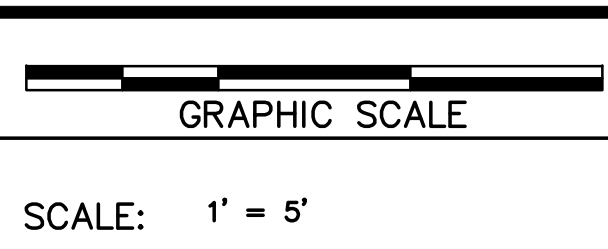
- 1 EX. TELEMETRY POLE SHALL BE DEMOLISHED
- 2 EX. ELECTRICAL SERVICE EQUIPMENT AND POLE SHALL BE DEMOLISHED
- 3 EX. PUMP STATION ELECTRICAL SHALL BE DEMOLISHED
- 4 EX. UTILITY POLE SHALL REMAIN. COORDINATE WITH UTILITY TO INSTALL NEW UNDERGROUND SERVICE ENTRANCE
- 5 PROVIDE UNDERGROUND SERVICE ENTRANCE CONDUIT PER UTILITY REQUIREMENTS. SEE ONE-LINE DIAGRAM
- 6 PROVIDE NEW 35' WOOD POLE WITH AIR TERMINAL, DOWN CONDUCTOR, AND GROUND ROD
- 7 PROVIDE NEW TELEMETRY ANTENNA INSTALLED 12" BELOW BASE OF AIR TERMINAL
- 8 PROVIDE ANTENNA CABLE, 1.25"Ø FROM RTU TO ANTENNA
- 9 COORDINATE WITH UTILITY TO PROVIDE NEW 480/277V ELECTRICAL TRANSFORMER BANK AND SERVICE
- 10 PROVIDE 2#12,1#12G,3/4"Ø TO PANEL LP
- 11 PROVIDE LOCKABLE MOTOR-RATED SWITCH INSTALLED HIGH IN VAULT
- 12 PROVIDE 12#14,1#14G,3/4"Ø FROM VALVE ACTUATOR TO SCADA RTU
- 13 PROVIDE 1"Ø SPARE FROM FLOWMETER VAULT TO WALL ADJACENT TO SCADA RTU. STUB CONDUIT INSIDE VAULT AND CAP FOR FUTURE USE. SEAL PENETRATION WATERTIGHT.



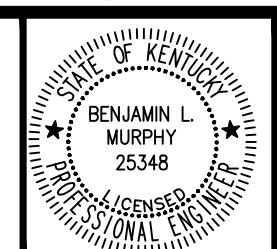
**ELECTRICAL SITE PLAN**  
SCALE: 1" = 5'



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**HIGHWAY 139 NORTH WATERLINE UPGRADES AND McUPTON PUMP STATION REPLACEMENT**  
BARKLEY LAKE WATER DISTRICT  
TRIGG COUNTY, KENTUCKY

ELECTRICAL SITE PLAN

DIVISION	B
CONTRACT NO.	586-008
DATE	DECEMBER, 2019
SHEET NO.	E-2 OF E-4

GENERAL NOTES:

• EXTERIOR ELECTRICAL EQUIPMENT SHALL BE NEMA 4X S.S. 316. INTERIOR EQUIPMENT CAN BE NEMA 1

SHEET NOTES:

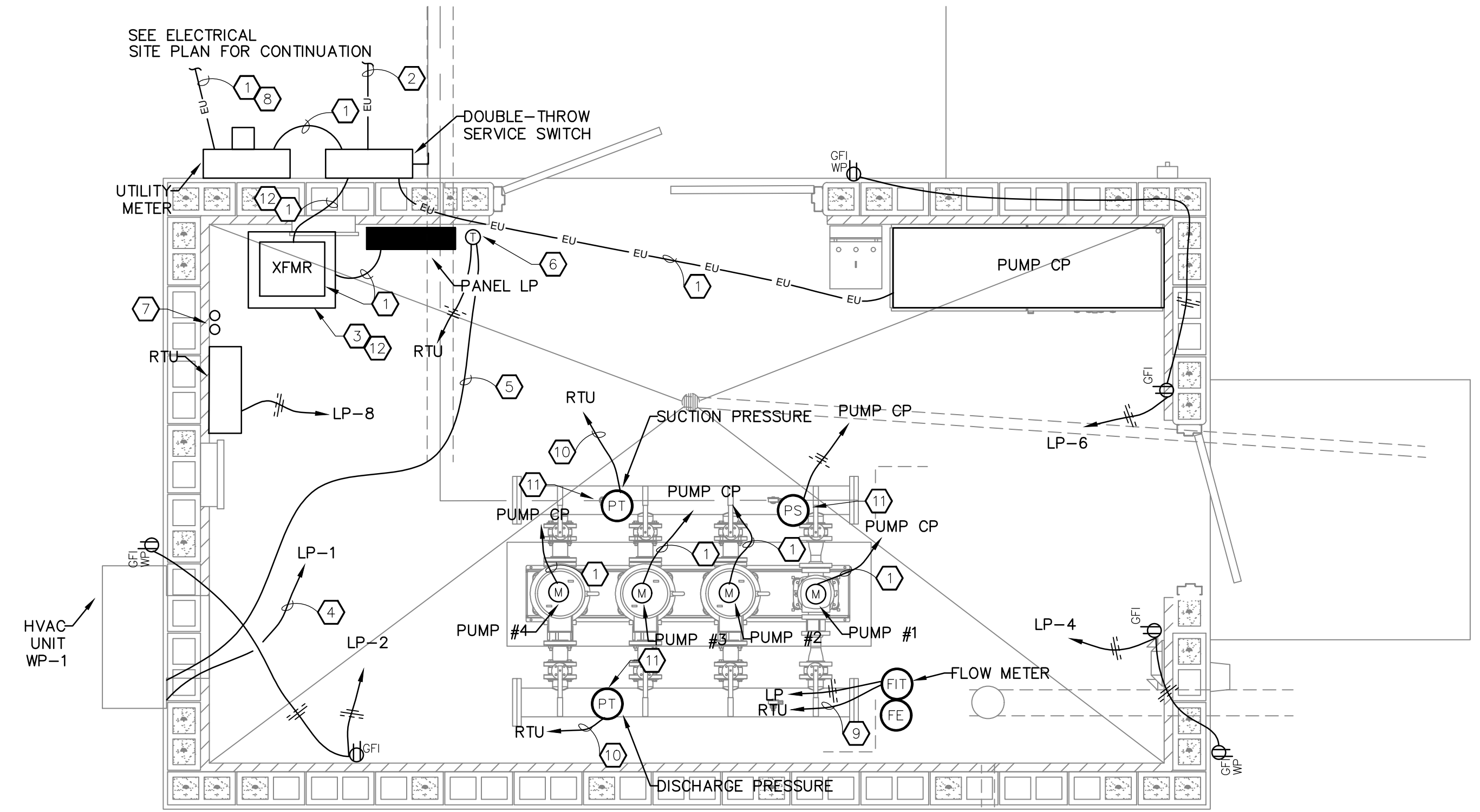
- 1) SEE ONE-LINE DIAGRAM FOR REQUIREMENTS
- 2) PROVIDE #2 GEC AND PROVIDE BUILDING GROUND LOOP DETAIL
- 3) PROVIDE 4" CONCRETE PAD FOR TRANSFORMER
- 4) PROVIDE 2#8, 1#10G, 3/4" C
- 5) PROVIDE THERMOSTAT CABLE, 1#14G, 3/4" C
- 6) CONNECT ALARM SIGNALS IN SERIES TO PROVIDE A SINGLE SUMMARY ALARM TO SCADA
- 7) STUB UP AND CAP SPARE CONDUITS TO YARD FLOWMETERS. SEE ELECTRICAL SITE PLAN
- 8) PROVIDE 4" EXPANSION JOINT ON UTILITY SERVICE CONDUIT WHERE CONDUIT EMERGES FROM GROUND
- 9) PROVIDE 2-2#18 STIC, 1#14G, 3/4" C
- 10) PROVIDE 2#18 STIC, 1#14G, 3/4" C
- 11) PROVIDE PRESSURE INSTRUMENT INSTALLED PER PRESSURE SENSOR DETAIL
- 12) MAXIMUM LENGTH OF TRANSFORMERS PRIMARY AND SECONDARY CONDUCTORS COMBINED SHALL BE LESS THAN 25FT PER NEC TAP RULE

PANEL:	LP	VOLTAGE:	120/240V, 1Ø, 3W
ENCLOSURE:	NEMA 1	MAINS AMPACITY:	100A
MOUNTING:	SURFACE	MAIN C.B. SIZE:	80A
LOCATION:	MCUPTON BPS	TOTAL SPACES:	18 MIN

CIRCUIT DESCRIPTION	VA	POLES	BREAKER	NO	PHASE A		PHASE B		BREAKER	POLES	VA	CIRCUIT DESCRIPTION
					VA	NO.	VA	NO.				
SPD		2	30A	1	400		2	20A	1	400	RECEPTACLES	
				3			4	20A	1	400	RECEPTACLES	
INTERIOR LIGHTING	200	1	20A	5	600		6	20A	1	400	RECEPTACLES	
EXTERIOR LIGHTING	300	1	20A	7			8	20A	1	500	RTU SCADA CABINET	
HVAC UNIT WP-1	5000	2	50A	9	5100		10	15A	1	100	FLOW METER	
				11			12	20A	1	1000	SILOAM CONTROL VALVE	
SPARE		1	20A	13	0		14	20A	1		SPARE	
SPARE		1	20A	15	0		16	15A	1		SPARE	
SPARE		1	20A	17	0		18	15A	1		SPARE	
TOTAL VA PER PHASE:					6100		7200					
TOTAL AMPS PER PHASE:					50.8		60	TOTAL PANEL VA: 13300				

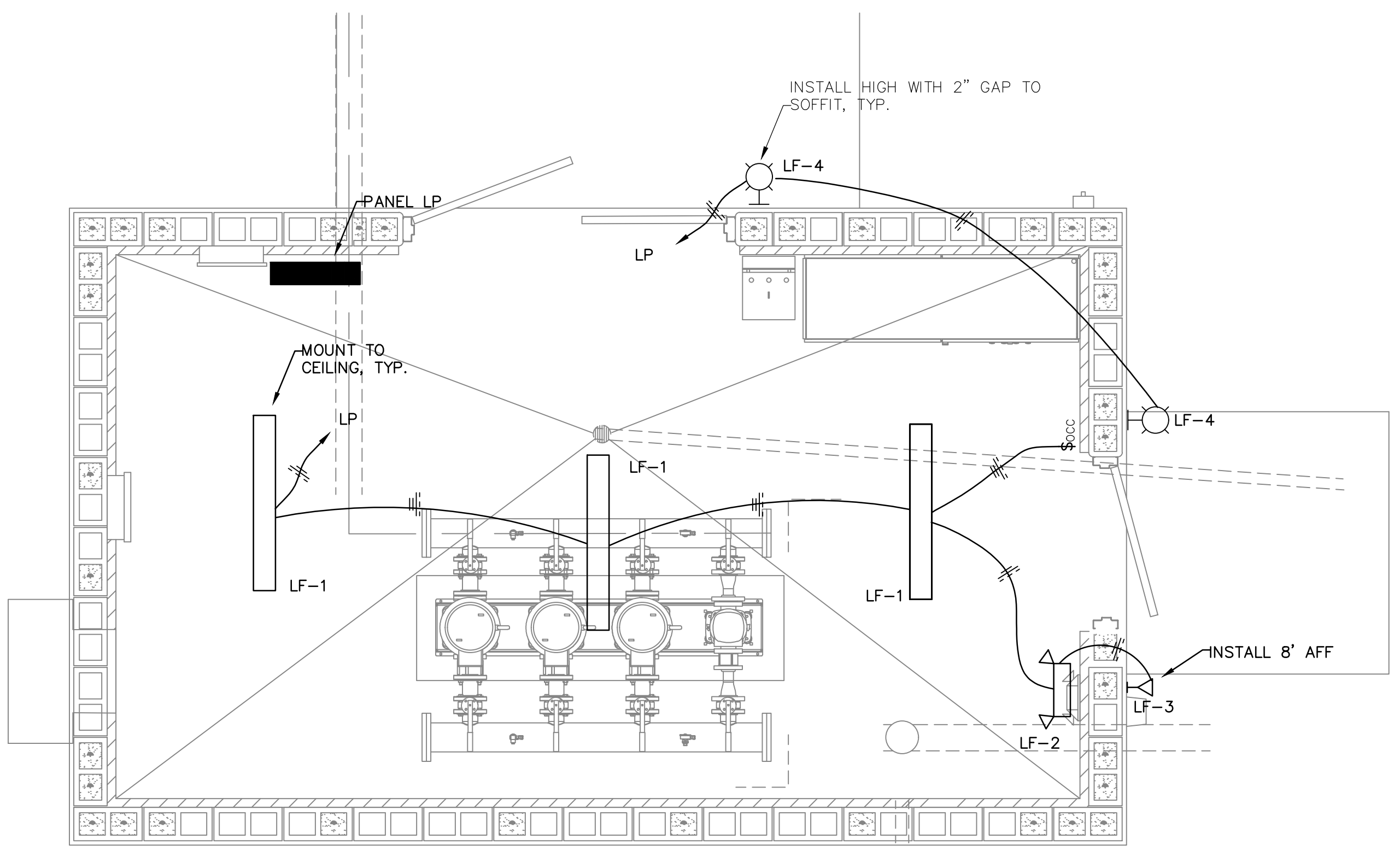
NOTES:  
1. PROVIDE INTEGRAL SPD WITH DISCONNECT



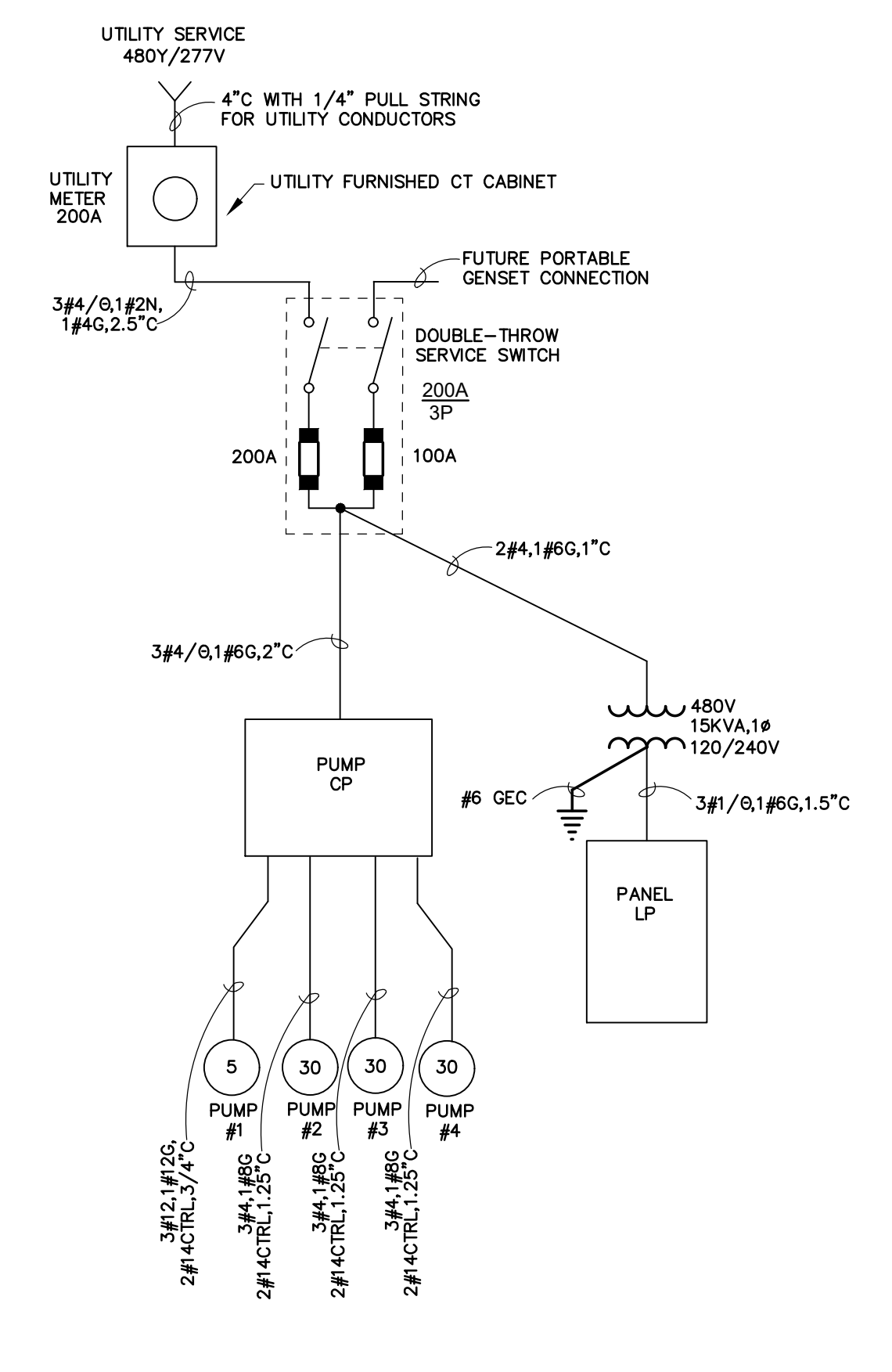
POWER PLAN  
SCALE: 1/2" = 1'

CONDUCTORS	I/O TAG	TYPE	UNIT	CONTROL	MONITOR	TREND	HISTORIZE	TOTALIZE	AVERAGE	ALARM	REPORT	NOTES
RTU	POWER LOSS ALARM	DI								X		
RTU	BATTERY ALARM	DI								X		
RTU	COMM FAIL ALARM	DI								X		
2#14	SILOAM VALVE OPEN CMD	DO		X								
2#14	SILOAM VALVE CLOSE CMD	DO		X								
2#14	SILOAM VALVE STOP CMD	DO		X								
2#14	SILOAM VALVE OPENED STATUS	DI			X							
2#14	SILOAM VALVE CLOSED STATUS	DI			X							
2#14	SILOAM VALVE FAULT	DI								X		
2#18 STIC	FLOWRATE	AI	GPM		X	X	X					
2#18 STIC	FLOW TOTAL PULSE	DI	GAL					X		X		REPORT DAILY & MONTHLY FLOW
2#18 STIC	SUCTION PRESSURE	AI	PSIG		X	X	X			X		ALARM LOW
2#18 STIC	DISCHARGE PRESSURE	AI	PSIG		X	X	X			X		ALARM LOW/HIGH
2#14	HVAC SUMMARY ALARM	DI								X		
2#14	PUMP SUCTION PRESSURE ALARM	DI								X		
2#14	PUMP 1 CALL-TO-RUN	DO		X								
2#14	PUMP 1 RUNNING STATUS	DI			X	X				X		REPORT # STARTS & RUNTIMES
2#14	PUMP 1 DRIVE FAULT	DI								X		
2#14	PUMP 1 OVERTEMP	DI								X		
2#14	PUMP 1 IN-AUTO	DI			X							
2#18 STIC	PUMP 1 SPEED COMMAND	AO	HZ	X								
2#18 STIC	PUMP 1 SPEED FEEDBACK	AI	HZ		X	X	X					
2#14	PUMP 2 CALL-TO-RUN	DO		X								
2#14	PUMP 2 RUNNING STATUS	DI			X	X						REPORT # STARTS & RUNTIMES
2#14	PUMP 2 DRIVE FAULT	DI								X		
2#14	PUMP 2 OVERTEMP	DI								X		
2#14	PUMP 2 IN-AUTO	DI			X							
2#18 STIC	PUMP 2 SPEED COMMAND	AO	HZ	X								
2#18 STIC	PUMP 2 SPEED FEEDBACK	AI	HZ		X	X	X					
2#14	PUMP 3 CALL-TO-RUN	DO		X								
2#14	PUMP 3 RUNNING STATUS	DI			X	X				X		REPORT # STARTS & RUNTIMES
2#14	PUMP 3 DRIVE FAULT	DI								X		
2#14	PUMP 3 OVERTEMP	DI								X		
2#14	PUMP 3 IN-AUTO	DI			X							
2#18 STIC	PUMP 3 SPEED COMMAND	AO	HZ	X								
2#18 STIC	PUMP 3 SPEED FEEDBACK	AI	HZ		X	X	X					
2#14	PUMP 4 CALL-TO-RUN	DO		X								
2#14	PUMP 4 RUNNING STATUS	DI			X	X						REPORT # STARTS & RUNTIMES
2#14	PUMP 4 DRIVE FAULT	DI								X		
2#14	PUMP 4 OVERTEMP	DI								X		
2#14	PUMP 4 IN-AUTO	DI			X							
2#18 STIC	PUMP 4 SPEED COMMAND	AO	HZ	X								
2#18 STIC	PUMP 4 SPEED FEEDBACK	AI	HZ		X	X	X					

SCADA IO TABLE  
NOT TO SCALE



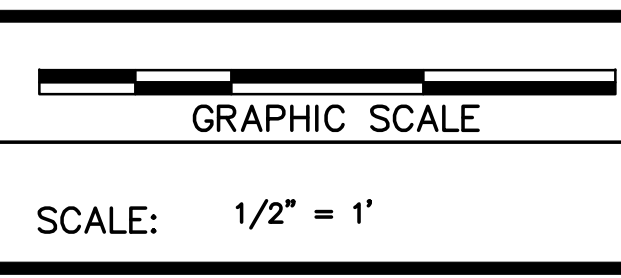
LIGHTING PLAN  
SCALE: 1/2" = 1'



ELECTRICAL ONE-LINE DIAGRAM  
NOT TO SCALE



DESIGNER	BLM	DATE	BY	REVISION
DRAWN	CA			
CHECKED	BLM			
APPROVED	BLM			



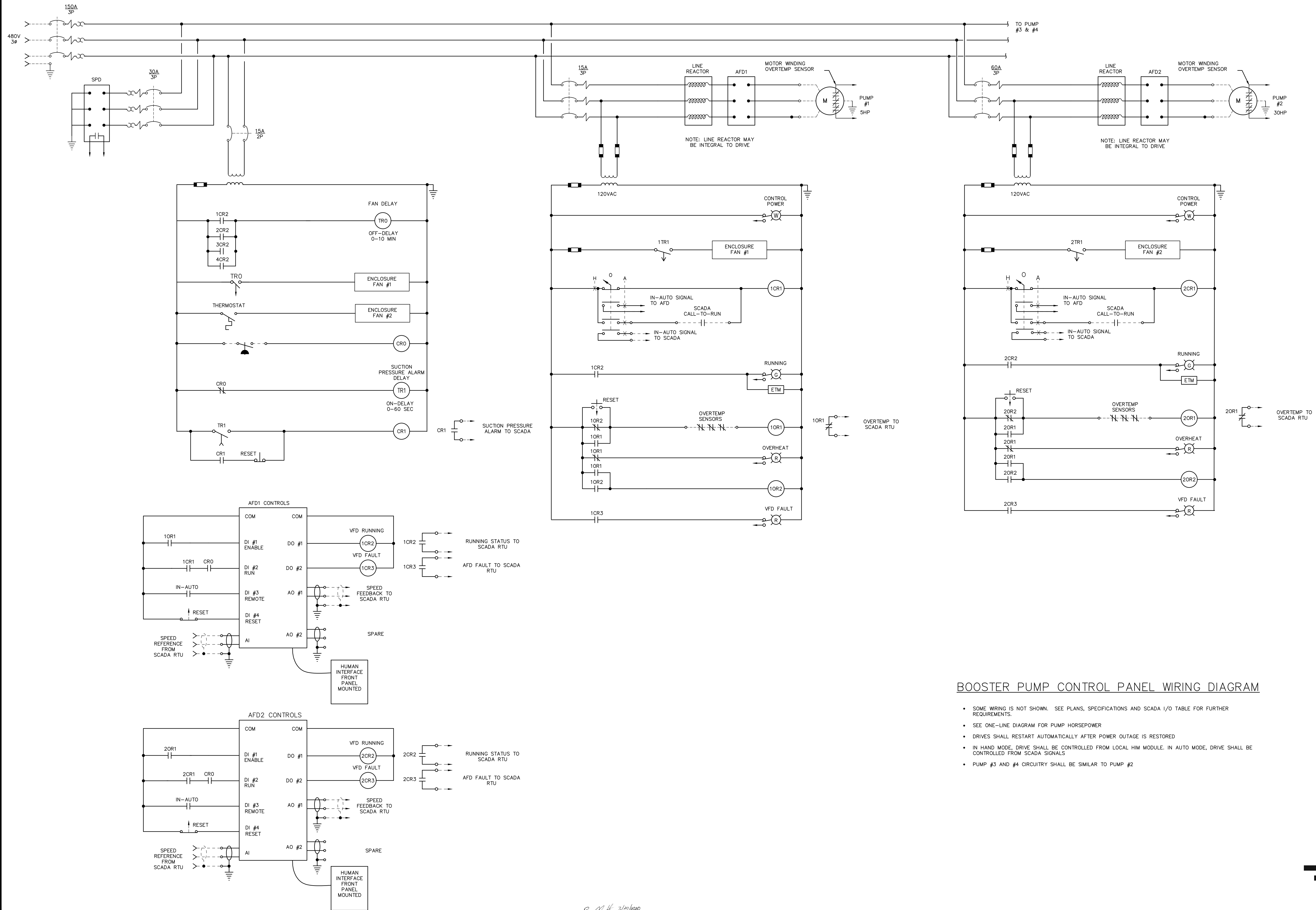
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HIGHWAY 139 NORTH WATERLINE UPGRADES AND  
MCUPTON PUMP STATION REPLACEMENT  
BARKLEY LAKE WATER DISTRICT  
TRIGG COUNTY, KENTUCKY

DIVISION B  
CONTRACT NO. 586-008  
DATE DECEMBER, 2019  
SHEET NO. E-3 OF E-4

DIVISION	B
CONTRACT NO.	586-008
DATE	DECEMBER, 2019
SHEET NO.	E-3 OF E-4



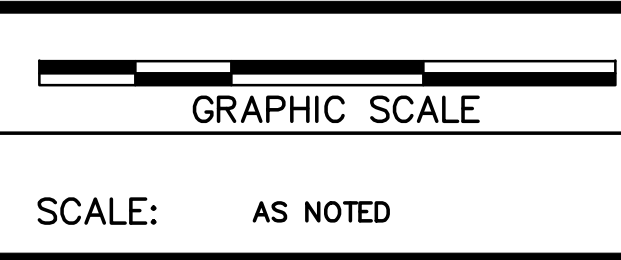
**BOOSTER PUMP CONTROL PANEL WIRING DIAGRAM**

- SOME WIRING IS NOT SHOWN. SEE PLANS, SPECIFICATIONS AND SCADA I/O TABLE FOR FURTHER REQUIREMENTS.
- SEE ONE-LINE DIAGRAM FOR PUMP HORSEPOWER
- DRIVES SHALL RESTART AUTOMATICALLY AFTER POWER OUTAGE IS RESTORED
- IN HAND MODE, DRIVE SHALL BE CONTROLLED FROM LOCAL HIM MODULE. IN AUTO MODE, DRIVE SHALL BE CONTROLLED FROM SCADA SIGNALS
- PUMP #3 AND #4 CIRCUITRY SHALL BE SIMILAR TO PUMP #2

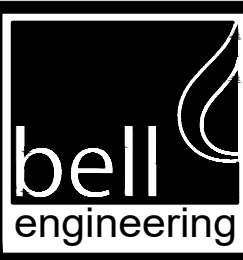
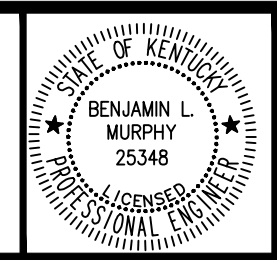


*Ben Murphy 3/10/2020*

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CHECKED	BLM			
APPROVED	BLM			



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 TRIGG COUNTY, KENTUCKY

PUMP CONTROL PANEL

DIVISION	B
CONTRACT NO.	586-008
DATE	DECEMBER, 2019
SHEET NO.	E-4 OF E-4