

LIGHTING PANEL LV														
VOLTAGE: 120/240V SYSTEM: 1Ø, 3W SOLID NEUTRAL: YES					MAIN: 100A MCB BUS RATING: 100A GROUND BUS: YES					INTEGRAL TVSS: NO MOUNTING: SURFACE FEED: TOP				
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	
1	SCADA PANEL	20/1	#12	#12	#12	1/2"	2	RECEPTACLES	20/1	#12	#12	#12	1/2"	
3	RECEPTACLES	20/1	#12	#12	#12	1/2"	4	RECEPTACLES	20/1	#12	#12	#12	1/2"	
5	RECEPTACLES	20/1	#12	#12	#12	1/2"	6	EXHAUST FANS	20/1	#12	#12	#12	1/2"	
7	LIGHTS	20/1	#12	#12	#12	1/2"	8	SPARE	20/1	-	-	-	-	
9	SPARE	20/1	-	-	-	-	10	UH-1	40/2	#8	-	#10	1/2"	
11	SPACE ONLY	-	-	-	-	-	12	"	-	#8	-	-	-	
13	-	-	-	-	-	-	14	SPARE	20/1	-	-	-	-	
15	UH-2	20/2	#12	-	#12	1/2"	16	SPARE	20/1	-	-	-	-	
17	"	-	#12	-	-	-	18	SPARE	20/1	-	-	-	-	
INTERRUPT RATING: 10,000 AIC														

POWER PANEL MP														
VOLTAGE: 277Y/480V SYSTEM: 3Ø, 4W SOLID NEUTRAL: YES					MAIN: 400A MCB BUS RATING: 400A GROUND BUS: YES					INTEGRAL TVSS: NO MOUNTING: SURFACE FEED: TOP				
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	
1	MUSE WELL PUMP	175/3	#3/0	-	#6	2"	2	PUMP	100/3	#4	-	#8	1"	
3	"	-	#3/0	-	-	-	4	"	-	#4	-	-	-	
5	"	-	#3/0	-	-	-	6	"	-	#4	-	-	-	
7	25KVA TRANSFORMER	70/2	#4	-	#8	3/4"	8	PUMP	100/3	#4	-	#8	1"	
9	"	-	#4	-	-	-	10	"	-	#4	-	-	-	
11	MUSE WELL TRANSFORMER	30/2	#10	-	#10	1/2"	12	"	-	#4	-	-	-	
13	"	-	#10	-	-	-	14	SPACE ONLY	-/3	-	-	-	-	
15	SPACE ONLY	-/2	-	-	-	-	16	"	-	-	-	-	-	
17	"	-	-	-	-	-	18	"	-	-	-	-	-	
INTERRUPT RATING: 10,000 AIC														

LOADS (IN KVA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	0	1.25	0	KITCHEN EQUIP.	0	1.0	0
RECEPTS TO 10 KVA	0	1.0	0	REMAINING CONTINUOUS LOADS	0	1.25	0
RECEPTS REMAINING	0	0.5	0	REMAINING NON-CONTINUOUS LOADS	25	1.0	25
SPACE HEATING	0	0.0	0	DEMAND LOADS	0	1.0	0
AIR CONDITIONING	0	1.0	0	TOTAL CONNECTED LOAD	236	KVA	284 AMPS
NON-SEASONAL MOTORS	210.99	1.0	210.99	MIN. FEEDER/PANEL CAP.	236	KVA	284 AMPS
LARGEST MOTOR	0	0.25	0	OVERALL DEMAND FACTOR	1.00		
WATER HEATING	0	1.0	0				

EQUIPMENT NOTES

FANS: GREENHECK OR EQUAL

MARK	NOM CFM	S.P. IN. H ₂ O	HP/AMPS	VOLTAGE & PHASE	MAX. SONES	TYPE	MODEL
EF-1	2000	0.30	1/4	120V-1PH	12.0	DD,P	S1-20-436-C4*
EF-2	250	0.30	1/20	120V-1PH	8.0	DD,P	S1-10-428-P*

* FAN SHALL BE COMPLETE WITH MOTOR SIDE GUARD, WALL HOUSING, MOTORIZED DAMPER AND WEATHER HOOD.

FAN TYPE: DD DIRECT DRIVE
P PROPELLER

UNIT HEATERS: Q-MARK OR EQUAL

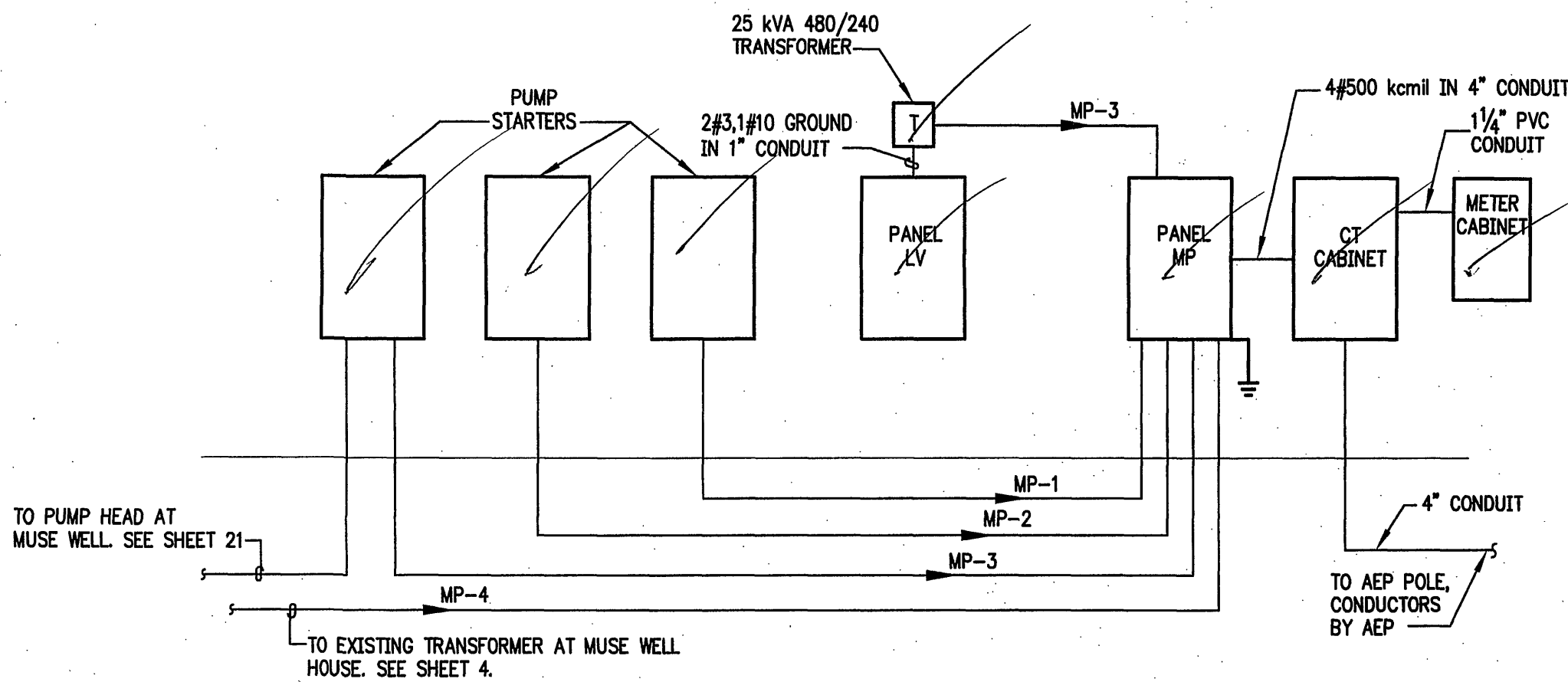
MARK	WATTS	CFM	VOLTAGE & PHASE	MODEL NO.
UH-1	7500	650	240V-1PH	MUH07-2
UH-2	3000	400	240V-1PH	JW30041
(CORROSION RESISTANT)				

NOTE: PROVIDE WALL-MOUNTED THERMOSTATS AND MOUNTING HARDWARE.

SEQUENCE OF CONTROL

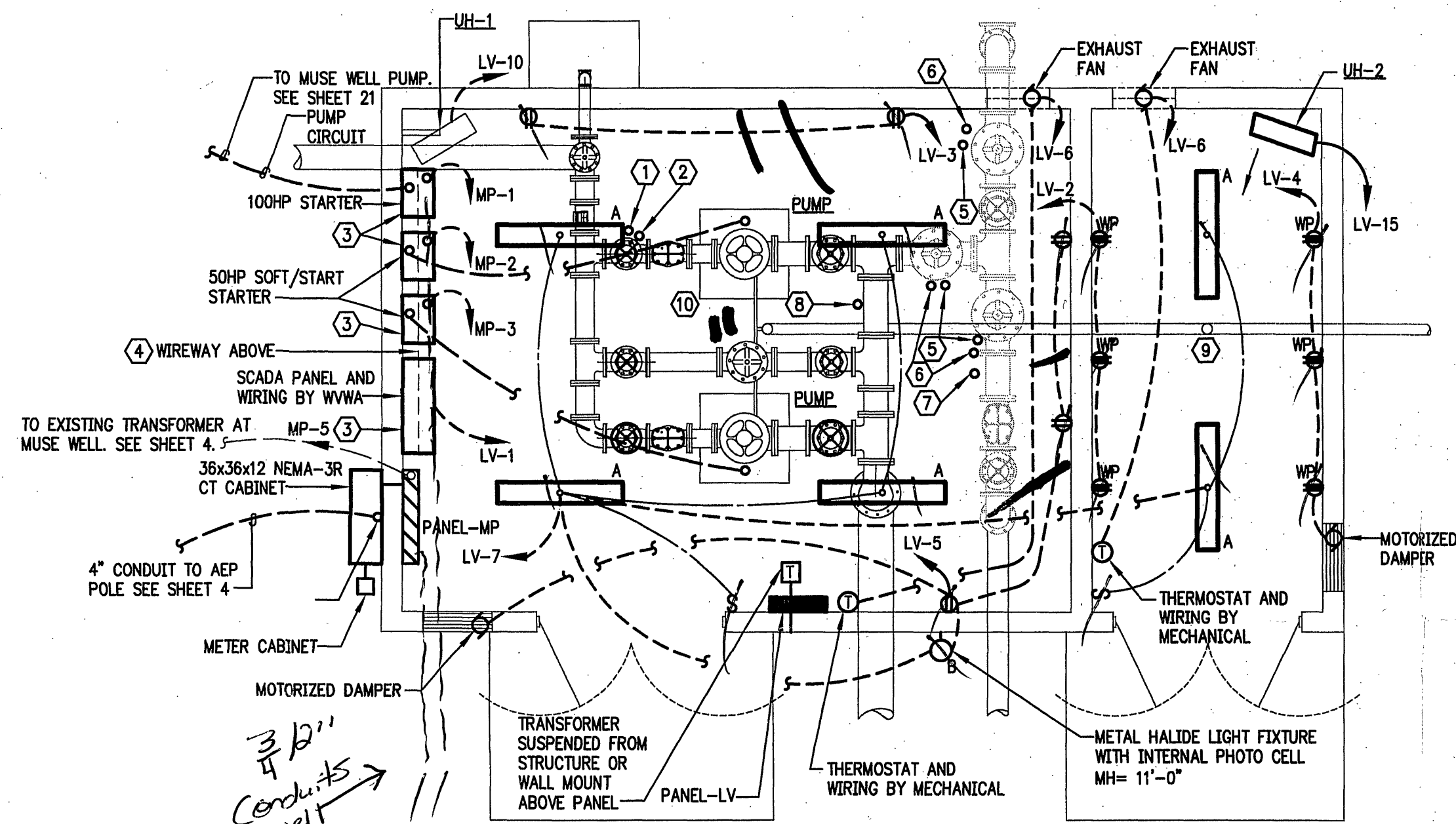
EXHAUST FANS (EF-1 & EF-2): EACH SHALL BE CONTROLLED BY A WALL-MOUNTED THERMOSTAT. WHEN THE FAN IS ENERGIZED, THE MOTORIZED DAMPER(S) SHALL OPEN. WHEN THE FAN IS DE-ENERGIZED, THE DAMPER(S) SHALL BE CLOSED.

UNIT HEATERS: EACH UNIT SHALL BE CONTROLLED BY A WALL-MOUNTED THERMOSTAT.



POWER RISER DIAGRAM

NO SCALE



PUMP BUILDING - ELECTRICAL

SCALE: 1/4" = 1'-0"

PLAN NOTES:

- INSTALL FAN AS HIGH AS POSSIBLE BELOW CEILING.
- INSTALL UH AS HIGH AS POSSIBLE. COORDINATE WITH EQUIPMENT AND LIGHTS. PROVIDE MOUNTING HARDWARE AS REQUIRED.
- COVER OPENING WITH 1/2" WIRE MESH.
- 24 X 24 LOUVER, GREENHECK MODEL ESJ-201 WITH FLANGED FRAME, WITH MOTORIZED DAMPER (EF-1). MOUNT LOUVER AS HIGH AS POSSIBLE BELOW CEILING.
- 18 X 18 LOUVER, GREENHECK MODEL ESJ-201 WITH FLANGED FRAME, WITH MOTORIZED DAMPER (EF-2). MOUNT LOUVER AS HIGH AS POSSIBLE BELOW CEILING.

GENERAL NOTES:

- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.
- CONTRACTOR SHALL SEAL AND FLASH ALL PENETRATIONS IN WALL.
- VERIFY WALL OPENINGS WITH STRUCTURE.
- VERIFY THE LOCATION OF THERMOSTATS WITH THE OWNER PRIOR TO ROUGH-IN.
- REFER TO STRUCTURAL AND ELECTRICAL DRAWINGS TO COORDINATE THE EXACT LOCATIONS OF MECHANICAL EQUIPMENT WITH STRUCTURE AND OTHER BUILDING COMPONENTS.
- CONTRACTOR SHALL PROVIDE ALL SUPPORTS REQUIRED TO MOUNT MECHANICAL EQUIPMENT.

PUMP BUILDING - MECHANICAL

SCALE: 1/4" = 1'-0"

ELECTRICAL LEGEND

MTG. HGT.	SYMBOL	DESCRIPTION
AS INDICATED	○ A	FLUORESCENT LIGHTING FIXTURE, LETTER DENOTES TYPE
18"	⊕	INCANDESCENT, FLUORESCENT, OR HID LIGHTING FIXTURE, WALL MOUNTED
18"	⊗	RECEPTACLE, DUPLEX GROUNDED
48"	S	RECEPTACLE, DUPLEX GROUNDED, GFCI
	⊖	SWITCH, SINGLE POLE
	T	TRANSFORMER
	⊕	THERMOSTAT
	⊙	MOTOR CONNECTION
	— —	GROUND
	•	GROUND ROD
6'-6" TOP	▨	PANELBOARD, 480/277 VOLT
6'-6" TOP	■	PANELBOARD, 120/240 VOLT
	—○—	CONDUIT TURNED UP
	WP	WEATHERPROOF
	---	CONDUIT EXPOSED
	---	CONDUIT UNDER FLOOR, SLAB OR BURIED
	→	HOME RUN TO PANEL
	○	CONDUIT TURNED UP

PLAN NOTES:

- 3/4 INCH CONDUIT IN FLOOR FROM SCADA PANEL TO STATION FLOW METER. TURN CONDUIT UP AT FLOW METER AT LOCATION DIRECTED BY WWVA REPRESENTATIVE. AT 3' ABOVE FINISHED FLOOR CONVERT TO SEALTITE FLEXIBLE CONDUIT AND EXTEND UP TO STATION FLOW METER. ALL WIRING AND CONNECTIONS BY WWVA.
- 3/4 INCH CONDUIT IN FLOOR FROM SCADA PANEL TO PRESSURE TRANSDUCER/TRANSMITTER. TURN CONDUIT UP AT PRESSURE TRANSDUCER/TRANSMITTER AT LOCATION DIRECTED BY WWVA REPRESENTATIVE. AT 3 INCHES ABOVE FINISHED FLOOR CONVERT TO SEALTITE FLEXIBLE CONDUIT AND EXTEND UP TO PRESSURE TRANSDUCER/TRANSMITTER. ALL WIRING AND CONNECTIONS BY WWVA.
- INSTALL STARTERS AND SCADA PANELS WITH TOPS AT THE SAME HEIGHT.
- PROVIDE A 6"x6" WIREWAY WITH SCREW ATTACHED COVER ABOVE STARTERS AND SCADA PANEL AND EXTENDING THE WIDTH IF THE STARTERS AND SCADA PANEL PROVIDE BUSHED KNOCK OUTS AS REQUIRED IN STARTERS, SCADA PANEL AND WIREWAY.
- 3/4 INCH CONDUIT UNDER FLOOR FROM SCADA CABINET TO LOCATION OF FUTURE VALVE. CAP CONDUIT 3 INCHES ABOVE FLOOR. EXACT LOCATION TO BE AS DIRECTED BY WWVA REPRESENTATIVE.
- 3/4 INCH CONDUIT UNDER FLOOR FROM PANEL-LV TO LOCATION OF FUTURE VALVE. CAP CONDUIT 3 INCHES ABOVE FLOOR. EXACT LOCATION TO BE AS DIRECTED BY WWVA REPRESENTATIVE.
- 3/4 INCH CONDUIT UNDER FLOOR FROM SCADA CABINET TO LOCATION OF FUTURE WELL FLOW SWITCH. CAP CONDUIT 3 INCHES ABOVE FLOOR. EXACT LOCATION TO BE AS DIRECTED BY WWVA REPRESENTATIVE.
- 3/4 INCH CONDUIT UNDER FLOOR FROM SCADA CABINET TO LOCATION OF FUTURE SUCTION PRESSURE TRANSDUCER/TRANSMITTER. CAP CONDUIT 3 INCHES ABOVE FLOOR. EXACT LOCATION TO BE AS DIRECTED BY WWVA REPRESENTATIVE.
- TWO RECEPTACLES IN THIS ROOM ARE TO BE CONTROLLED BY PLC'S IN THE SCADA PANEL. ROUTE POWER CIRCUIT FOR RECEPTACLE TO BE CONTROLLED THROUGH SEPARATE PLC'S. RECEPTACLES TO BE CONTROLLED SHALL BE AS DIRECTED BY WWVA REPRESENTATIVE.
- THERE WILL BE A TURBIDIMETER, FLUORIDE ANALYZER AND CL2 RESIDUAL ANALYZER IN THE PUMP ROOM AT LOCATION TO BE DETERMINED BY WWVA REPRESENTATIVE. PROVIDE A 1/2" CONDUIT FROM INSTRUMENT LOCATION TO SCADA PANEL.

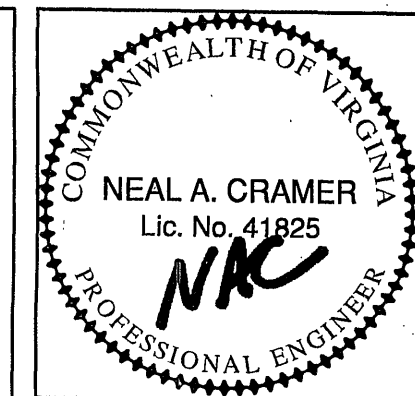
SEE SHEET NO.21 FOR
ADDITIONAL ELECTRICAL WORK

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MOUNT PLEASANT PUMP STATION
**FLOOR PLAN - ELECTRICAL
AND MECHANICAL**
ROANOKE, VIRGINIA

Vertical Scale:

Horizontal Scale:

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2900K

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