

# CHARLOTTE COUNTY UTILITIES

## DESIGN STANDARDS FOR REMOTE STATIONS

### LIFT STATION CONTROL PANEL

### PUMP CONTROLS AND RTU COMBINATION - 1PH



LIFT STATION PCP & RTU COMBO (SINGLE PHASE)	
Sheet Number	Sheet Title
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**SHEET INDEX**

REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023
REVISIONS		

CHARLOTTE COUNTY UTILITIES DEPARTMENT

NOTE: PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL. FOR EACH INSTALLATION A SPECIFIC SET OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS (IF DEEMED NECESSARY BY THE DESIGN ENGINEER) MUST BE PREPARED.



**CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS**

LIFT STATION PCP & RTU COMBO (SINGLE PHASE)  
COVER SHEET AND DRAWING INDEX

DATE: OCTOBER 2023
MCE PROJ. # 07169-0012
DRAWN: CJA
DESIGNED: CJA
CHECKED: EEB
PROJ. MGR.: EEB




SCALE	<b>E7.0</b>
HORIZONTAL:	
VERTICAL:	1
	REVISION

STATUS:



# ELECTRICAL SYMBOLS

## ISA-5.3 LOOP SYMBOLS





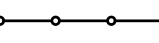
### DISTRIBUTED CONTROL/SHARED DISPLAY SYMBOLS

-  NORMALLY ACCESSIBLE TO OPERATOR
-  AUXILLIARY OPERATOR'S INTERFACE DEVICE
-  NOT NORMALLY ACCESSIBLE TO OPERATOR



















### COMPUTER SYMBOLS

-  NORMALLY ACCESSIBLE TO OPERATOR
-  NOT NORMALLY ACCESSIBLE TO OPERATOR



















### LOGIC AND SEQUENTIAL CONTROL SYMBOLS

-  GENERAL LOGIC
-  DISTRIBUTED INTERCONNECTING CONTROLLER, NOT NORMALLY ACCESSIBLE TO OPERATOR
-  DISTRIBUTED INTERCONNECTING CONTROLLER, NORMALLY ACCESSIBLE TO OPERATOR
-  COMPUTATION/SIGNAL CONDITIONING
-  SYSTEM/SOFTWARE/NETWORK LINK


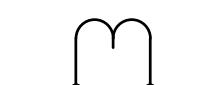
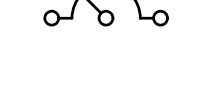

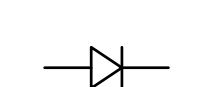
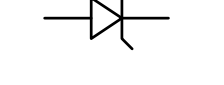


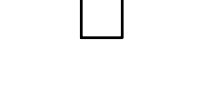





## DEVICE SYMBOLS

-  RELAY COIL
-  CONTACT, N.O.
-  CONTACT, N.C.
-  TIMER RELAY COIL
-  TIME-ON DELAY, N.O. CONTACT
-  TIME-ON DELAY, N.C. CONTACT
-  TIME-OFF DELAY, N.O. CONTACT
-  TIME-OFF DELAY, N.C. CONTACT
-  PUSH BUTTON, N.O. CONTACT
-  PUSH BUTTON, N.C. CONTACT
-  MUSHROOM HEAD PUSH BUTTON, N.O. CONTACT
-  MUSHROOM HEAD PUSH BUTTON, N.C. CONTACT
-  SELECTOR SWITCH, N.O. CONTACT
-  SELECTOR SWITCH, N.C. CONTACT
-  LIMIT SWITCH, N.O. CONTACT
-  LIMIT SWITCH, N.C. CONTACT
-  PRESSURE SWITCH, N.O. CONTACT
-  PRESSURE SWITCH, N.C. CONTACT


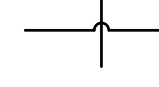

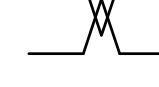
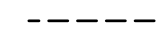
## DEVICE SYMBOLS

-  TEMPERATURE SWITCH, N.O. CONTACT
-  TEMPERATURE SWITCH, N.C. CONTACT
-  FLOW SWITCH, N.O. CONTACT
-  FLOW SWITCH, N.C. CONTACT
-  FLOAT SWITCH, N.O. CONTACT
-  FLOAT SWITCH, N.C. CONTACT
-  FOOT SWITCH, N.O. CONTACT
-  FOOT SWITCH, N.C. CONTACT
-  TOGGLE SWITCH, N.O. CONTACT
-  TOGGLE SWITCH, N.C. CONTACT
-  THERMAL OVERLOAD
-  SOLENOID
-  HORN
-  PILOT LIGHT  
W - WHITE G - GREEN  
A - AMBER R - RED  
B - BLUE
-  PILOT LIGHT, PUSH TO TEST
-  FUSE
-  CIRCUIT BREAKER
-  GROUND

## DEVICE SYMBOLS

-  CONTROL POWER TRANSFORMER
-  CURRENT TRANSFORMER
-  POTENTIOMETER
-  RESISTOR
-  CAPACITOR, ELECTROLYTIC
-  DIODE
-  ZENER DIODE
-  BATTERY
-  TERMINAL BLOCK, "PTB 120VAC"
-  TERMINAL BLOCK, "DIGITAL INPUT"
-  TERMINAL BLOCK, "DRY CONTACT"
-  TERMINAL BLOCK, "ANALOG SIGNAL"
-  TERMINAL BLOCK, OTHER (SPECIFY)
-  ELAPSED TIME METER

## WIRE SYMBOLS

-  CONDUCTORS, WITH JUNCTION
-  CONDUCTORS, NOT CONNECTED
-  SHIELDED CABLE
-  TWISTED-PAIR CABLE
-  FIELD WIRING

## ABBREVIATIONS

- AIT ANALYSIS INDICATING TRANSMITTER
- AFD ADJUST FREQUENCY DRIVE
- BC BYPASS CONTACTOR
- BFI BLOWN FUSE INDICATOR
- C CONTACTOR
- CB CIRCUIT BREAKER
- CPT CONTROL POWER TRANSFORMER
- CR CONTROL RELAY
- CRI CONTROL RELAY, INTRINSIC
- CRL CONTROL RELAY, LATCH
- DFR DRIVE FAIL RELAY
- DI DIGITAL INDICATOR
- DUP DUPLEXOR
- DRR DRIVE RUN RELAY
- DSC DISCONNECT SWITCH
- ETM ELAPSED TIME METER
- FIT FLOW INDICATING TRANSMITTER
- FS FLOAT SWITCH
- FSR FLOAT SWITCH RELAY
- FU FUSE
- GRD GROUND
- HS HAND SWITCH
- IC ISOLATION CONTACTOR
- ISO SIGNAL ISOLATOR/BOOSTER
- LT PILOT LIGHT
- LIT LEVEL INDICATING TRANSMITTER
- LS LIMIT SWITCH
- M MOTOR STARTER
- MCC MOTOR CONTROL CENTER
- MCP MOTOR CIRCUIT PROTECTOR
- MSP MAIN SURGE PROTECTOR
- OL OVERLOAD
- PB PUSH BUTTON
- PDB POWER DISTRIBUTION BLOCK
- PIT PRESSURE INDICATING TRANSMITTER
- RIO REMOTE I/O PANEL
- POT POTENTIOMETER
- PM PHASE MONITOR
- PS POWER SUPPLY
- RCR RUN COMMAND RELAY
- RES RESISTOR
- S SWITCH
- SP SURGE PROTECTOR
- SS SELECTOR SWITCH
- SSRV SOLID STATE REDUCED VOLTAGE STARTER
- TB TERMINAL BOARD, TERMINAL BLOCK
- TC TIME CLOCK
- TR TIME DELAY RELAY
- TS TEMPERATURE SWITCH
- VFD VARIABLE FREQUENCY DRIVE
- XFMR TRANSFORMER
- ZS LIMIT SWITCH

NOTES:  
ALL SYMBOLS MAY NOT BE UTILIZED FOR THIS PROJECT.  
ADDITIONAL SYMBOLS NOT SHOWN ON THIS DRAWING MAY BE SHOWN ELSEWHERE ON THE ELECTRICAL DRAWINGS.

REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023
REVISIONS		

### CHARLOTTE COUNTY UTILITIES DEPARTMENT

NOTE: PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL. FOR EACH INSTALLATION A SPECIFIC SET OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS (IF DEEMED NECESSARY BY THE DESIGN ENGINEER) MUST BE PREPARED.



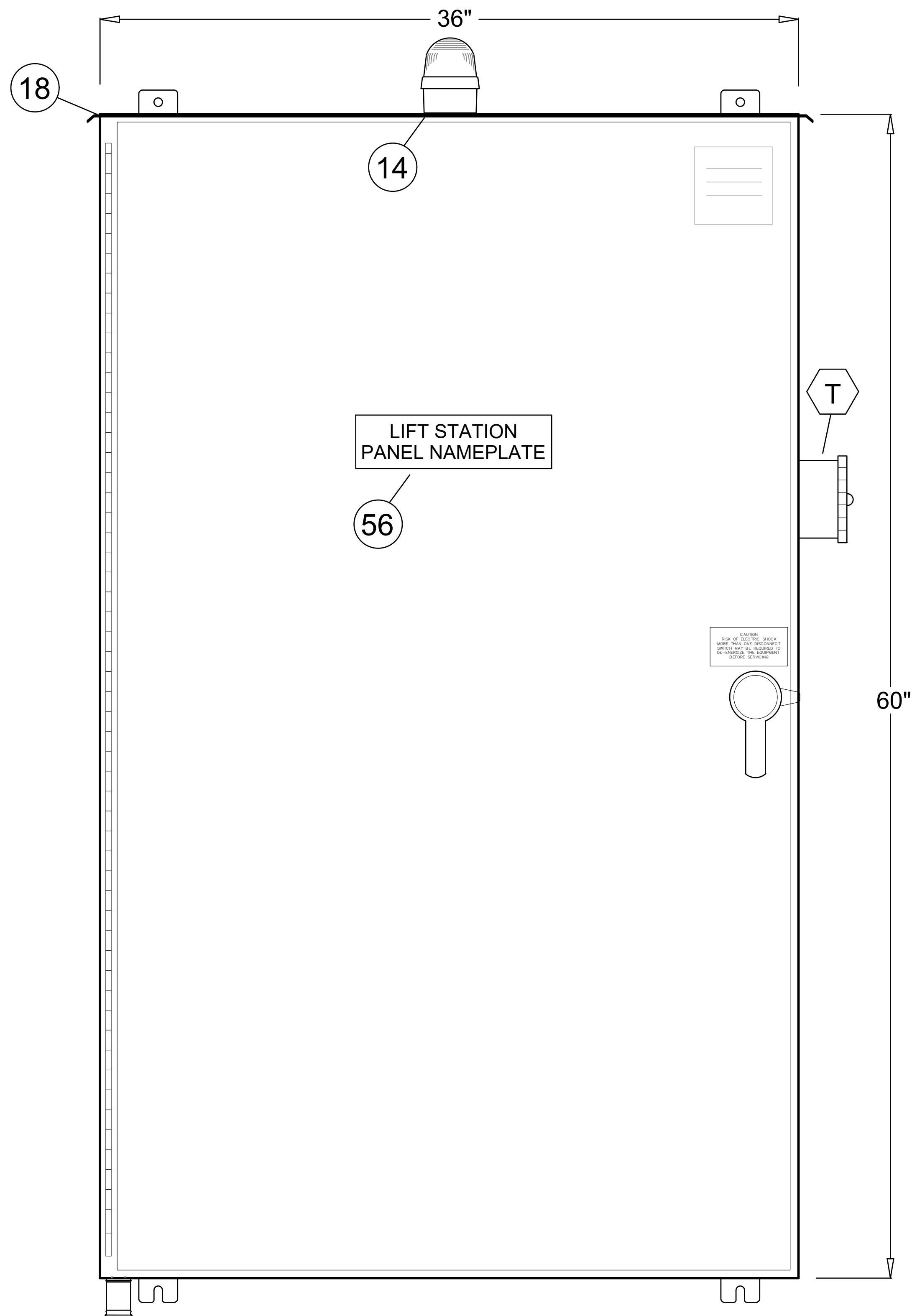
### CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS

#### LIFT STATION PCP & RTU COMBO (SINGLE PHASE) ELECTRICAL SYMBOLS

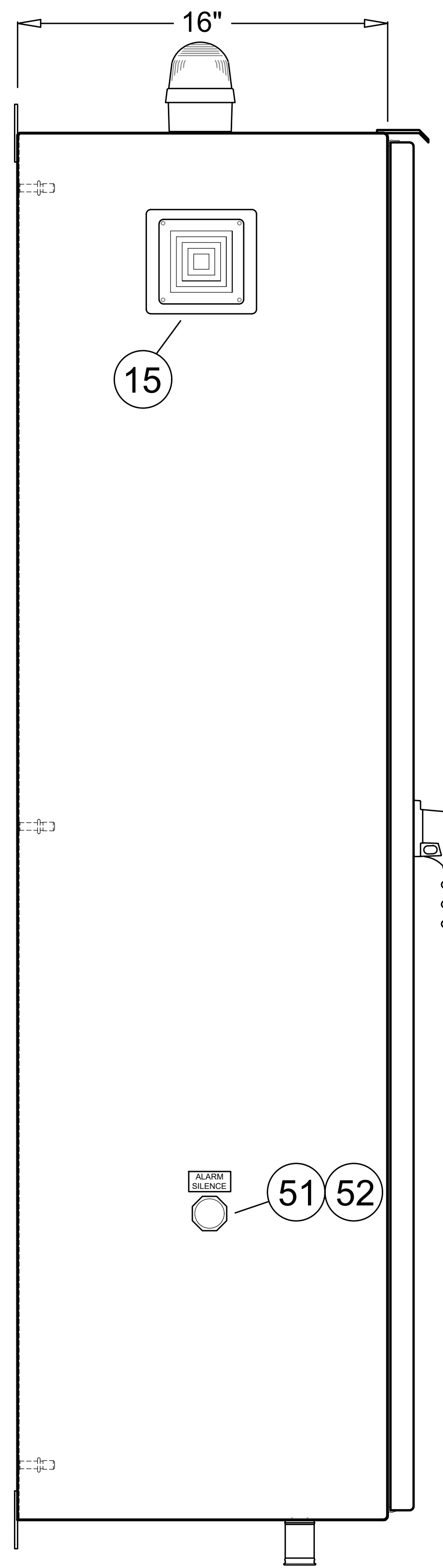
DATE: OCTOBER 2023	SCALE
MCE PROJ. # 07169-0012	HORIZONTAL:
DRAWN: CJA	VERTICAL:
DESIGNED: CJA	
CHECKED: EEB	
PROJ. MGR.: EEB	

<b>E7.1</b>
1
REVISION

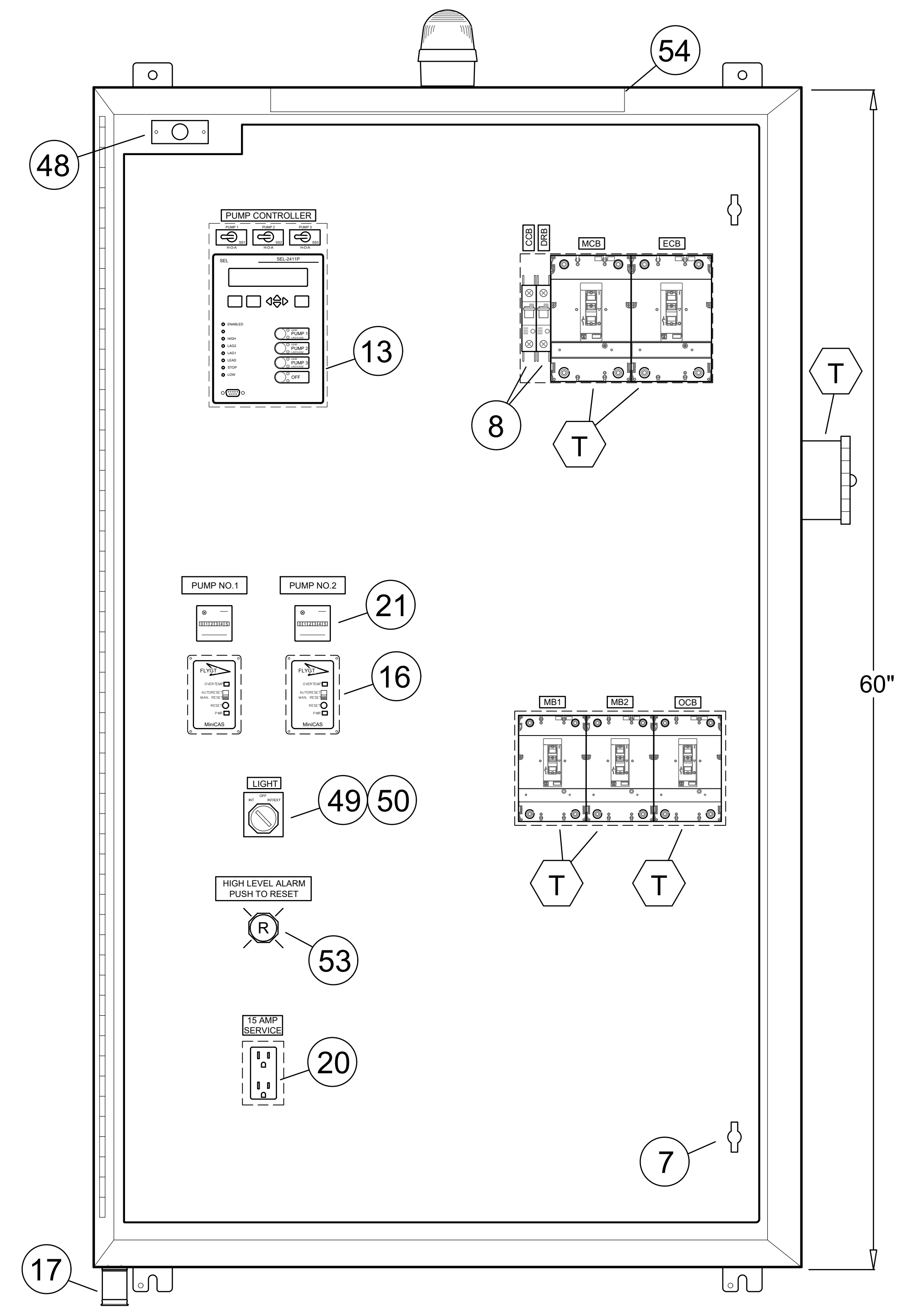
STATUS:



FRONT ENCLOSURE VIEW



LEFT SIDE VIEW



INNER DOOR VIEW

NOTES: ITEM NUMBERS REFER TO BILL OF MATERIALS SHOWN ON SHEET E7.3.  
ITEMS REFERENCED "T" REFER TO COMPONENT TABLE ON SHEET E7.4

REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023

REVISIONS

CHARLOTTE COUNTY UTILITIES DEPARTMENT

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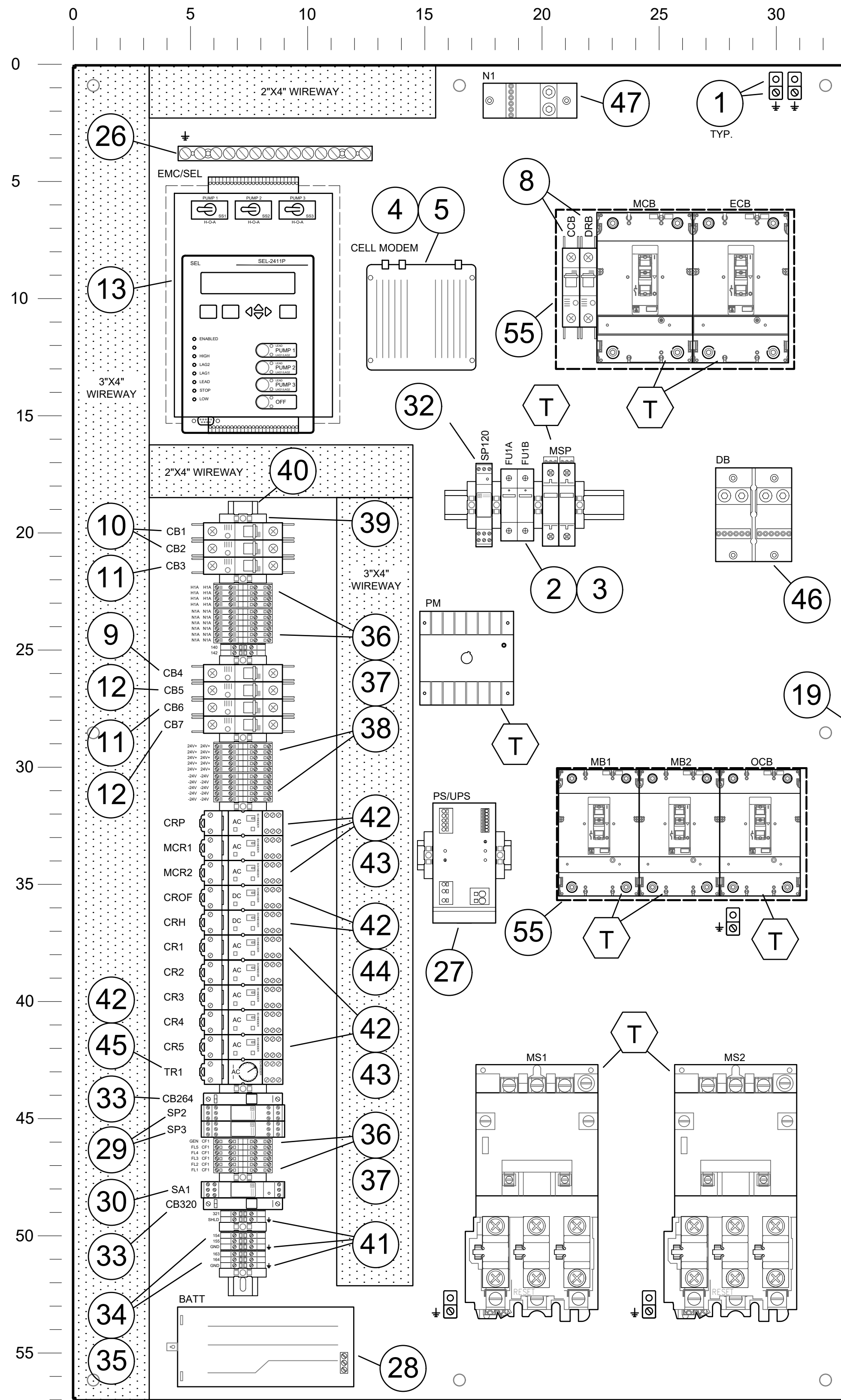


CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS

LIFT STATION PCP & RTU COMBO (SINGLE PHASE)  
ENCLOSURE DETAILS

DATE: OCTOBER 2023	SCALE
MCE PROJ. # 07169-0012	HORIZONTAL: E7.2
DRAWN: CJA	VERTICAL:
DESIGNED: CJA	1
CHECKED: EEB	REVISION
PROJ. MGR.: EEB	

STATUS:



NOTE: ITEMS REFERENCED "T" REFER TO COMPONENT TABLE ON SHEET E7.4

BACKPANEL VIEW

ID	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION
1	5	BURNDY	KA2U	GROUND LUG, #2-14
2	3	BUSSMANN	FNQ-R-1	CLASS CC FUSE, 1 AMP, TIME DELAY
3	1	BUSSMANN	CHCC3DIU	CLASS CC FINGERSAFE FUSE HOLDER WITH INDICATOR
4	1	CRADLEPOINT	S700-C4D-WIRELESS ROUTER	CRADLEPOINT S700 SERIES, VERIZON
5	1	CRADLEPOINT	170656-002	RADIO DIN RAIL BRACKET
6	1	CRADLEPOINT	698-2700MHz 12dbi	WIDE-BAND WIFI 4G LTE & 5G GSM UMTS CDMA 12DBI OUTDOOR OMNI DIRECTIONAL CELLULAR ANTENNA
7	1	CUSTOM	PANEL SHOP	12GA. STEEL INNER DOOR DEADFRONT, BLACK POLYESTER POWDERCOATED
8	2	EATON	FAZ-C15/1-NA	CIRCUIT BREAKER, 15 AMP
9	1	EATON	FAZ-C10/1-NA	CIRCUIT BREAKER, 10 AMP
10	2	EATON	FAZ-C1/1-NA	CIRCUIT BREAKER, 1 AMP
11	2	EATON	FAZ-C5/1-NA	CIRCUIT BREAKER, 5 AMP
12	2	EATON	FAZ-C3/1-NA	CIRCUIT BREAKER, 3 AMP
13	1	EMC	SEL-70C1	SEL-2411P CONTROLLER WITH HOUSING KIT AND WIRING HARNESS
14	1	FEDERAL SIGNAL	LP3T-120R	120VAC RED ALARM STROBE
15	1	FEDERAL SIGNAL	350TR-120VAC	NEMA 4X ALARM HORN WITH GASKET
16	2	FLYGT	14-407129	MINICAS FLANGE DOOR MOUNTABLE PUMP MONITOR RELAY, 120V
17	1	HOFFMAN	AVDR4SS4	H20MIT VENT DRAIN, 4X, 304 STAINLESS STEEL
18	1	HOFFMAN	A60H3616SS6LP3PT-CUSTOM	60"H X 36"W X 16"D TYPE 4X SS 316 ENCLOSURE WITH DRIPSHIELD
19	1	HOFFMAN	A60P36	BACKPANEL FOR 60"x36" ENCLOSURE
20	1	HUBBELL	GFRST15SNAPW	GFCI RECEPTACLE, 15A, 120V
21	2	INTERMATIC	UWZ48E-120U	120VAC ELAPSED TIME METER
22	1	PANDUIT	F2X4LG6	SLOTTED WIREWAY, GRAY, 2"x4", 6' STICK
23	1	PANDUIT	C2LG6	2" WIREWAY COVER, GRAY, 6' STICK
24	1	PANDUIT	F3X4LG6	SLOTTED WIREWAY, GRAY, 3"x4", 6' STICK
25	1	PANDUIT	C3LG6	3" WIREWAY COVER, GRAY, 6' STICK
26	1	PANDUIT	UGB2-0-414-12	GROUND BAR, #14-4AWG
27	1	PHOENIX CONTACT	2907161	24VDC UPS AND POWER SUPPLY MODULE, 10 AMP
28	1	PHOENIX CONTACT	1274117	24VDC BACKUP BATTERY, 4 Ah
29	2	PHOENIX CONTACT	2800982	PLUG TRAB SURGE PROTECTOR WITH BASE, 24VDC, 4-POINT
30	2	PHOENIX CONTACT	2800976	ANALOG SIGNAL SURGE PROTECTOR WITH BASE
32	1	PHOENIX CONTACT	2907918	120VAC SURGE PROTECTOR WITH STATUS, PLUG AND BASE
33	2	PHOENIX CONTACT	0916603	THERMOMAGNETIC DEVICE CIRCUIT BREAKER, 1/2A
34	10	PHOENIX CONTACT	3044102	STANDARD TERMINAL BLOCK, 30A
35	4	PHOENIX CONTACT	3047028	STANDARD TERMINAL BLOCK END BARRIER
36	30	PHOENIX CONTACT	3044814	2-TIER ISOLATED TERMINAL BLOCK
37	6	PHOENIX CONTACT	3047293	2-TIER TERMINAL BLOCK END COVER
38	8	PHOENIX CONTACT	3030271	2-TIER TERMINAL BLOCK JUMPER BRIDGE
39	16	PHOENIX CONTACT	0800886	DIN RAIL END BRACKET
40	1	PHOENIX CONTACT	0801733	STANDARD DIN RAIL, 2M
41	5	PHOENIX CONTACT	30-44-12-8	GROUNDING TERMINAL BLOCK
42	11	SCHNEIDER	70-782EL8-1	RELAY BASE, 8-PIN
43	8	SCHNEIDER	792XBXM4L-120A	DPDT RELAY, 120VAC, WITH INDICATOR AND TEST LATCH
44	2	SCHNEIDER	792XBXM4L-24D	DPDT RELAY, 24VDC, WITH INDICATOR AND TEST LATCH
45	1	SCHNEIDER	TDR782BXBA-110A	DPDT ON-DELAY TIMER, 120VAC
46	1	SQUARE D	9080LBC363206	3-POLE DISTRIBUTION BLOCK, (2) LINE #14-2/0, (6) LOAD #14-#4
47	1	SQUARE D	9080LBC163206	1-POLE DISTRIBUTION BLOCK, (2) LINE #14-2/0, (6) LOAD #14-#4
48	1	SQUARE D	9007MS02S0200	INTRUSION SWITCH WITH CUSTOM MOUNTING BRACKET
49	1	SQUARE D	9001SKS43B	3-POSITION SELECTOR SWITCH WITH 3 CONTACTS
50	2	SQUARE D	9001KA1	CONTACT BLOCK, 1NO-1NC
51	1	SQUARE D	9001SKR1U	MOMENTARY PUSH-BUTTON
52	2	SQUARE D	9001KA2	CONTACT BLOCK, 1NO
53	1	SQUARE D	9001K1L1RH13	ILLUMINATED PUSHBUTTON, RED, 120V, 1NO-1NC
54	1	UTILITECH	0877623	UNDERCABINET LIGHT, 120VAC, WITH 18' LED BULB
55	2	CUSTOM	PANEL SHOP	CUSTOM ELEVATED CIRCUIT BREAKER SHELF
56	-	CUSTOM	PANEL SHOP	ENGRAVED PHENOLIC NAMEPLATES, WHITE TEXT WITH BLACK BACKGROUND

BILL OF MATERIALS

NOTES:  
 1. BILL OF MATERIALS IS PROVIDED FOR EXAMPLE ONLY. PANEL COMPONENTS WILL VARY WITH EACH SPECIFIC LIFT STATION. CONTROL PANEL MANUFACTURER TO PROVIDE A COMPLETE LIST OF CONTROL PANEL MATERIALS FOR COUNTY APPROVAL BEFORE FABRICATION.  
 2. CONTROL PANEL TO BE UL508A LISTED TYPE 4X.

REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023

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CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS

LIFT STATION PCP & RTU COMBO (SINGLE PHASE)

BACKPANEL DETAIL AND BILL OF MATERIAL

DATE: OCTOBER 2023	SCALE: HORIZONTAL	<b>E7.3</b> DRAWING NO. 1 REVISION
MCE PROJ. # 07169-0012	DRAWN: CJA	
DESIGNED: CJA	CHECKED: EEB	
PROJ. MGR: EEB	STATUS:	

COMPONENT REFERENCE TABLE																	
SERVICE VOLTAGE	MCB/SERVICE	MAIN BREAKER PART#	GENERATOR RECEPTACLE	RECEPTACLE PART#	MAIN SURGE PROTECTOR	PHASE MONITOR	ODOR CONTROL BREAKER PART#	TOTAL PANEL FLA	PUMP HP	PHASE	PUMP FLA (PER NEC)	MOTOR BREAKER AMPS	MOTOR BREAKER PART#	WIRE SIZE	STARTER SIZE	STARTER PART#	OVERLOAD PART#
208/120VAC, 3PH, 4W	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910360	ATC-SLA-208-AFE	SQD-HDL36030	48.375	3	3	10.6	20	SQD-HDL36020	12	1	SQD-8536-SOC3V02	SQD-B15.5
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910360	ATC-SLA-208-AFE	SQD-HDL36030	65.625	5	3	17.5	35	SQD-HDL36035	12	1	SQD-8536-SOC3V02	SQD-B25.0
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910360	ATC-SLA-208-AFE	SQD-HDL36030	82.375	7.5	3	24.2	50	SQD-HDL36050	10	1	SQD-8536-SOC3V02	SQD-B36.0
	150	SQD-HDL36150	150	RS-DS2414MP000	PC-2910360	ATC-SLA-208-AFE	SQD-HDL36030	98.875	10	3	30.8	60	SQD-HDL36060	8	2	SQD-8536-SOD3V02	SQD-B45.0
	150	SQD-HDL36150	150	RS-DS2414MP000	PC-2910360	ATC-SLA-208-AFE	SQD-HDL36030	137.375	15	3	46.2	90	SQD-HDL36090	6	2	SQD-8536-SOD3V02	SQD-C58.0
240/120VAC, 1PH, 3W	100	SQD-HDL26100	100	RS-DS1314MP000	(2) PC-2910368	ATC-58072	SQD-HDL26030	55.00	1	1	8	15	SQD-HDL26015	12	1	SQD-8536-SOC3V02	SQD-B11.5
	100	SQD-HDL26100	100	RS-DS1314MP000	(2) PC-2910368	ATC-58072	SQD-HDL26030	65.00	2	1	12	25	SQD-HDL26025	12	1	SQD-8536-SOC3V02	SQD-B17.5
	100	SQD-HDL26100	100	RS-DS1314MP000	(2) PC-2910368	ATC-58072	SQD-HDL26030	77.50	3	1	17	35	SQD-HDL26035	12	1	SQD-8536-SOC3V02	SQD-B25.0
	150	SQD-HDL26150	150	RS-DS2314MP000	(2) PC-2910368	ATC-58072	SQD-HDL26030	105.00	5	1	28	60	SQD-HDL26060	10	1	SQD-8536-SOC3V02	SQD-B40.0
	150	SQD-HDL26150	150	RS-DS2314MP000	(2) PC-2910368	ATC-58072	SQD-HDL26030	135.00	7.5	1	40	80	SQD-HDL26080	8	1	SQD-8536-SOC3V02	SQD-C51.0
	200	SQD-JDL26200	200	RS-DS2314MP000	(2) PC-2910368	ATC-58072	SQD-HDL26030	160.00	10	1	50	90	SQD-HDL26090	6	2	SQD-8536-SOD3V02	SQD-C58.0
240/120VAC, 3PH, 4W	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	36.00	2	3	6.8	15	SQD-HDL36015	12	1	SQD-8536-SOC3V02	SQD-B10.2
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	43.00	3	3	9.6	20	SQD-HDL36020	12	1	SQD-8536-SOC3V02	SQD-B15.5
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	57.00	5	3	15.2	30	SQD-HDL36030	12	1	SQD-8536-SOC3V02	SQD-B22.0
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	74.00	7.5	3	22	45	SQD-HDL36045	10	1	SQD-8536-SOC3V02	SQD-B32.0
	150	SQD-HDL36150	150	RS-DS2414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	89.00	10	3	28	60	SQD-HDL36060	10	2	SQD-8536-SOD3V02	SQD-B40.0
	150	SQD-HDL36150	150	RS-DS2414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	124.00	15	3	42	80	SQD-HDL36080	6	2	SQD-8536-SOD3V02	SQD-B15.5
	200	SQD-JDL36200	200	RS-DS2414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	154.00	20	3	54	90	SQD-HDL36090	4	-	AB-150-C60NBD	-
	200	SQD-JDL36200	200	RS-DS2414MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	189.00	25	3	68	100	SQD-HDL36100	4	-	AB-150-C85NBD	-
	250	SQD-JDL36250	250	RS-DS4141MP000	PC-2910371	ATC-SLA-230-ALE	SQD-HDL36030	219.00	30	3	80	110	SQD-HDL36110	2	-	AB-150-C85NBD	-
480/277VAC, 3PH, 4W (NEUTRAL NOT USED)	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	28.50	5	3	7.6	15	SQD-HDL36015	12	1	SQD-8536-SOC3V02	SQD-B11.5
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	44.50	10	3	14	25	SQD-HDL36025	12	1	SQD-8536-SOC3V02	SQD-B22.0
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	62.00	15	3	21	40	SQD-HDL36040	10	2	SQD-8536-SOD3V02	SQD-B32.0
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	77.00	20	3	27	60	SQD-HDL36060	10	-	AB-150-C30NBD	-
	100	SQD-HDL36100	100	RS-DS1414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	94.50	25	3	34	70	SQD-HDL36070	8	-	AB-150-C37NBD	-
	150	SQD-HDL36150	150	RS-DS2414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	109.50	30	3	40	80	SQD-HDL36080	8	-	AB-150-C43NBD	-
	150	SQD-HDL36150	150	RS-DS2414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	139.50	40	3	52	90	SQD-HDL36090	6	-	AB-150-C60NBD	-
	200	SQD-JDL36200	200	RS-DS2414MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	172.00	50	3	65	100	SQD-HDL36100	4	-	AB-150-C85NBD	-
	250	SQD-JDL36250	250	RS-DS4141MP000	PC-2910386	ATC-SLA-440-ALE	SQD-HDL36030	202.00	60	3	77	110	SQD-HDL36110	2	-	AB-150-C85NBD	-

NOTES:  
SQD - SQUARE D  
ATC - ATC/DIVERSIFIED ELECTRONICS  
RS - RUSSELLSTOLL  
AB- ALLEN BRADLEY  
PC - PHOENIX CONTACT

NOTES:

- COMPONENT REFERENCE TABLE IS PROVIDED FOR REFERENCE ONLY. ALL PANEL POWER COMPONENTS AND MOTOR CONTROL COMPONENTS TO BE DETERMINED BY PANEL MANUFACTURER BASED ON SITE SPECIFIC REQUIREMENTS.
- ALL MATERIAL SELECTED SHALL MEET UL508A AND NEC REQUIREMENTS. SITE SPECIFIC MATERIAL LIST TO BE PROVIDED TO COUNTY FOR APPROVAL.
- GENERATOR RECEPTACLE AND ODOR CONTROL COMPONENTS PROVIDED BASED ON SITE SPECIFIC REQUIREMENTS.
- 480VAC PANELS TO BE PROVIDED WITH 480V/120V CONTROL PANEL TRANSFORMER (NOT SHOWN).

REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023

REVISIONS

CHARLOTTE COUNTY UTILITIES DEPARTMENT

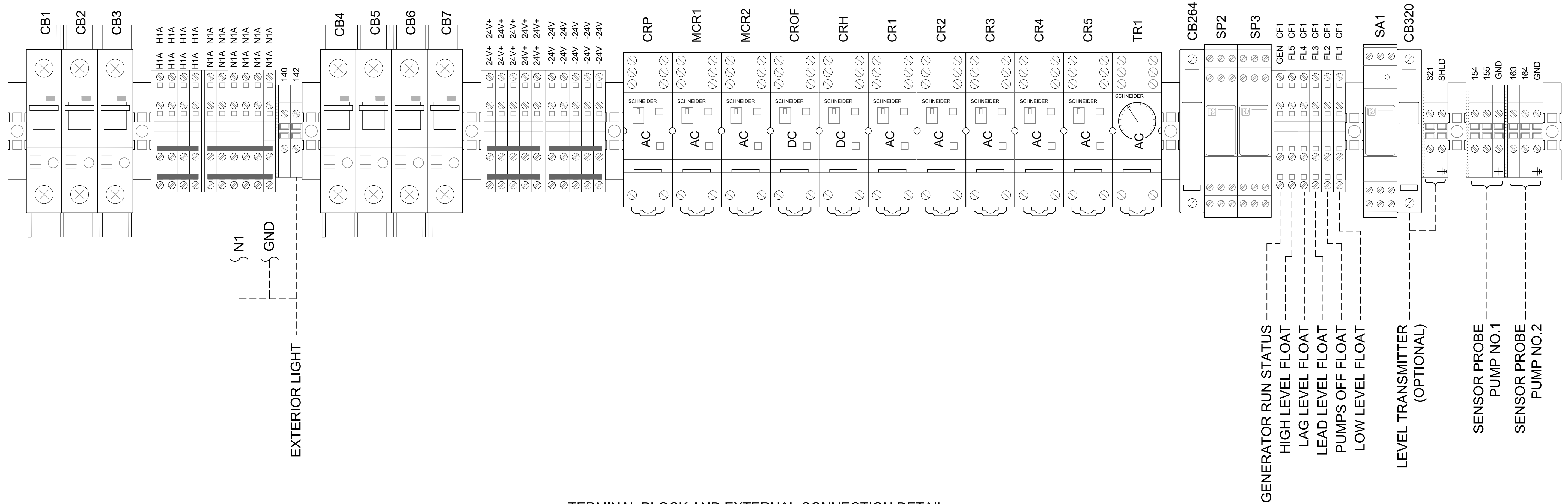
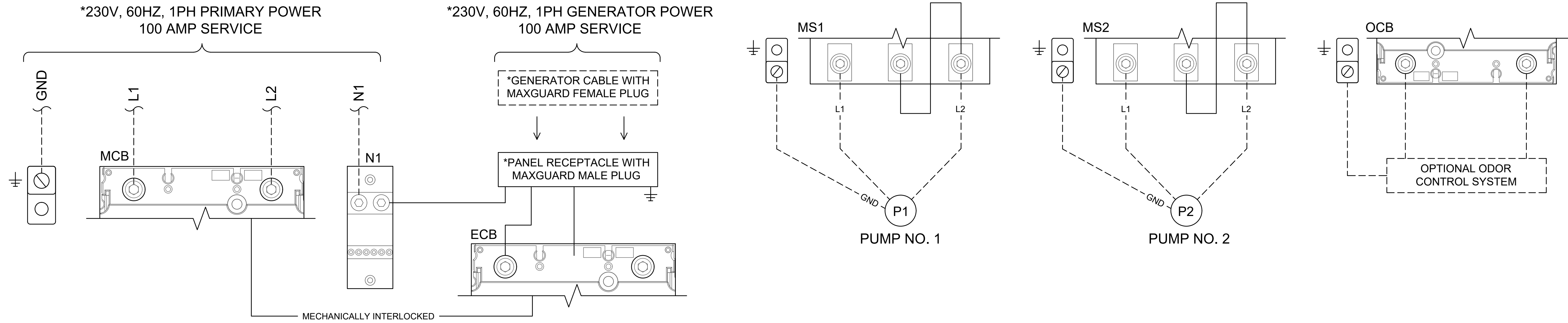
NOTE: PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL. FOR EACH INSTALLATION A SPECIFIC SET OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS (IF DEEMED NECESSARY BY THE DESIGN ENGINEER) MUST BE PREPARED.



CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS

LIFT STATION PCP & RTU COMBO (SINGLE PHASE)  
COMPONENT REFERENCE TABLE

DATE: OCTOBER 2023	SCALE	<table border="1"> <tr> <td>HORIZONTAL:</td> <td rowspan="5">E7.4</td> </tr> <tr> <td>VERTICAL:</td> </tr> </table>	HORIZONTAL:	E7.4	VERTICAL:
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VERTICAL:					
MCE PROJ. # 07169-0012					
DRAWN: CJA					
DESIGNED: CJA					
CHECKED: EEB					
PROJ. MGR: EEB		1			
STATUS:		REVISION			



TERMINAL BLOCK AND EXTERNAL CONNECTION DETAIL

REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023

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CHARLOTTE COUNTY UTILITIES DEPARTMENT

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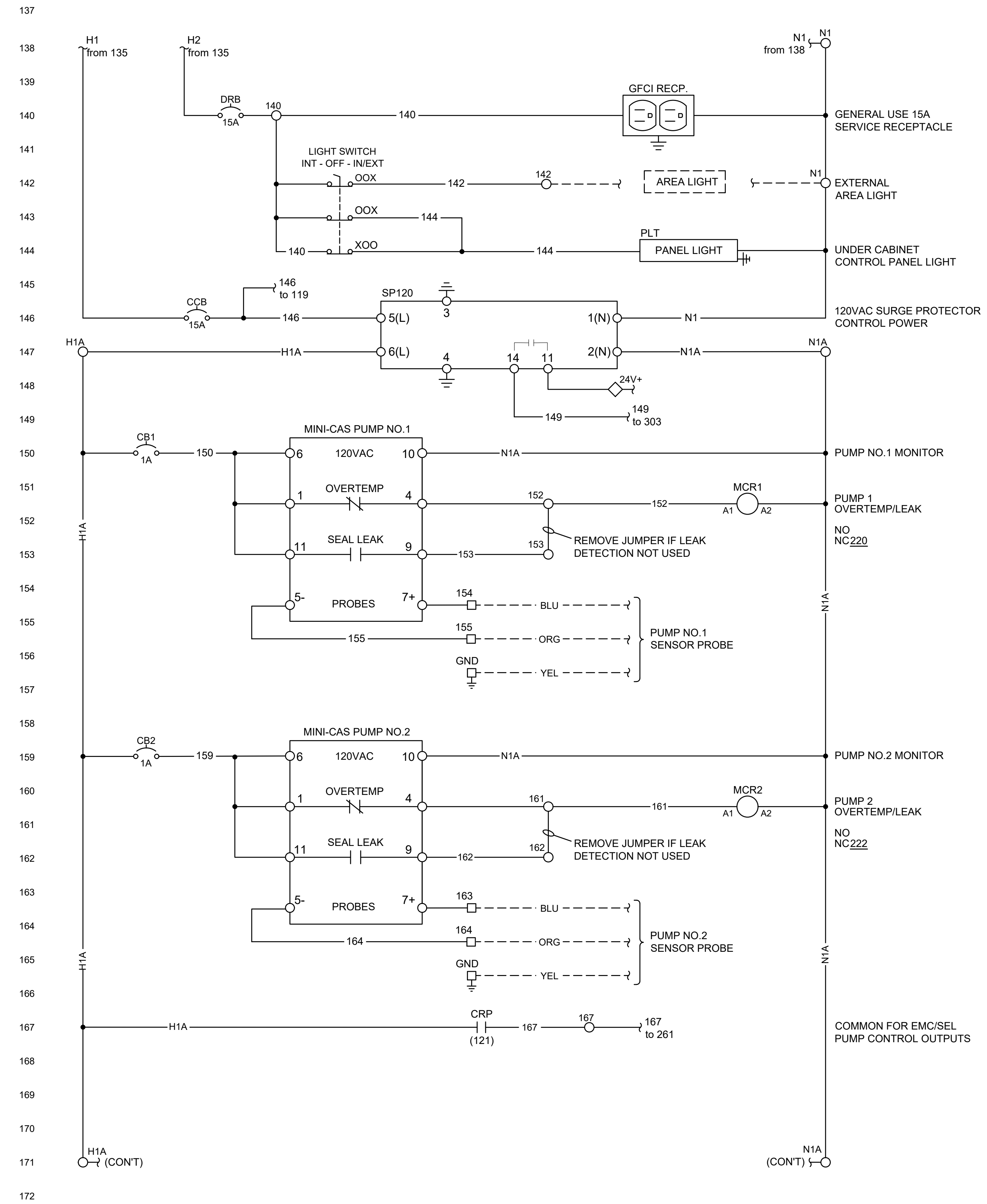
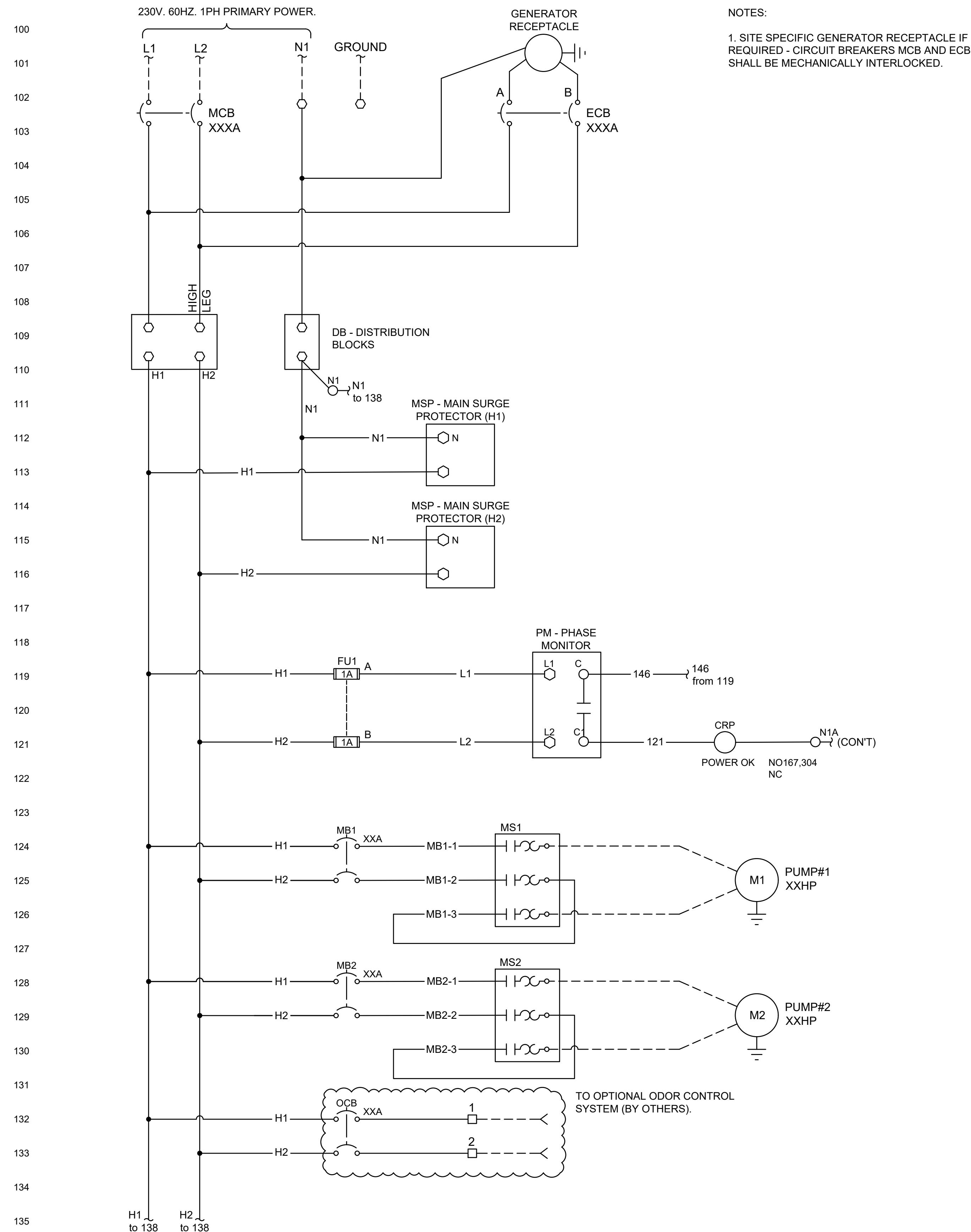
**CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS**

LIFT STATION PCP & RTU COMBO (SINGLE PHASE)  
**TERMINAL BLOCK AND EXTERNAL CONNECTION DETAIL**

DATE: OCTOBER 2023	SCALE
MCE PROJ.# 07169-0012	HORIZONTAL:
DRAWN: CJA	VERTICAL:
DESIGNED: CJA	
CHECKED: EEB	
PROJ. MGR: EEB	

<b>E7.5</b>
DRAWING NO.
1
REVISION

STATUS:



REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023

REVISIONS

CHARLOTTE COUNTY UTILITIES DEPARTMENT

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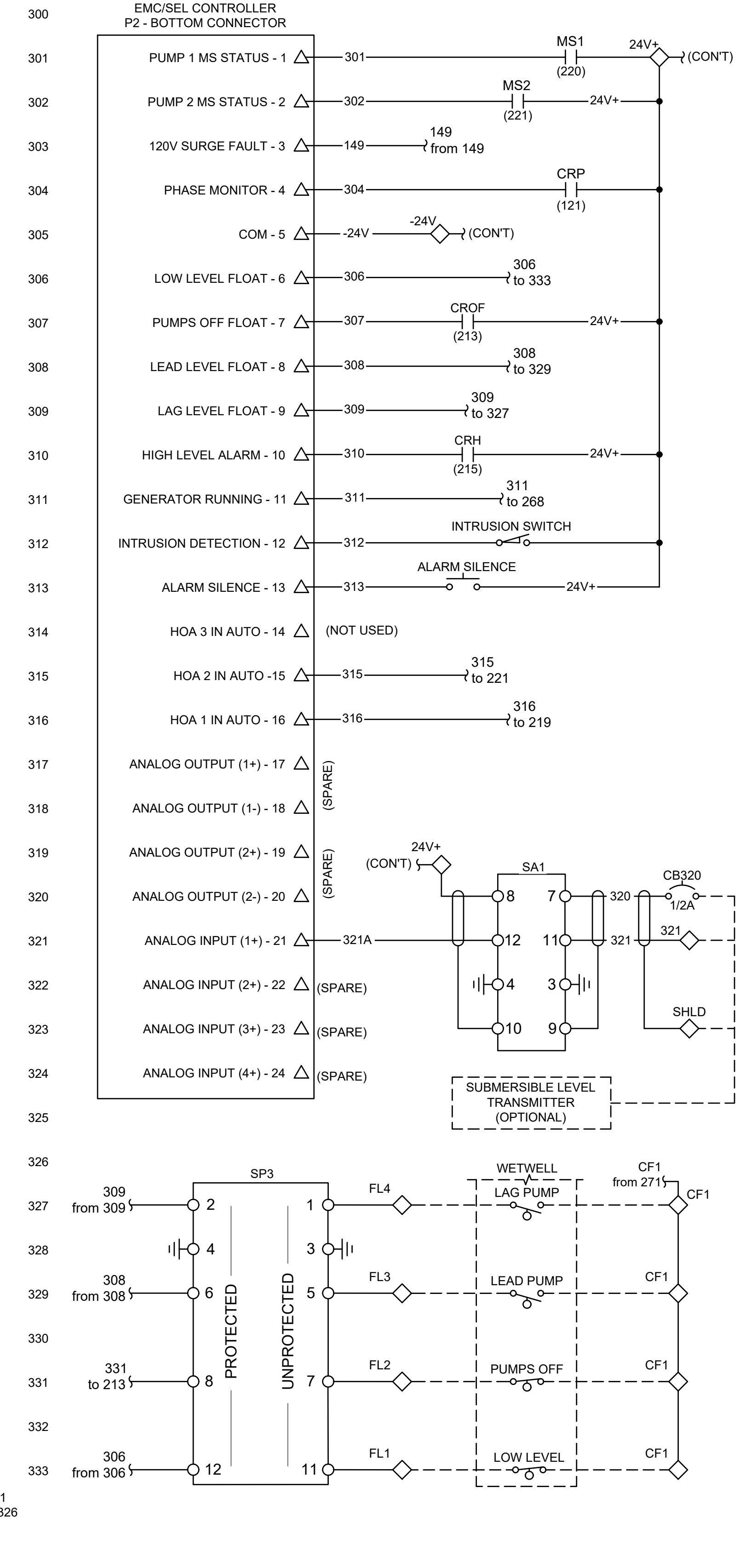
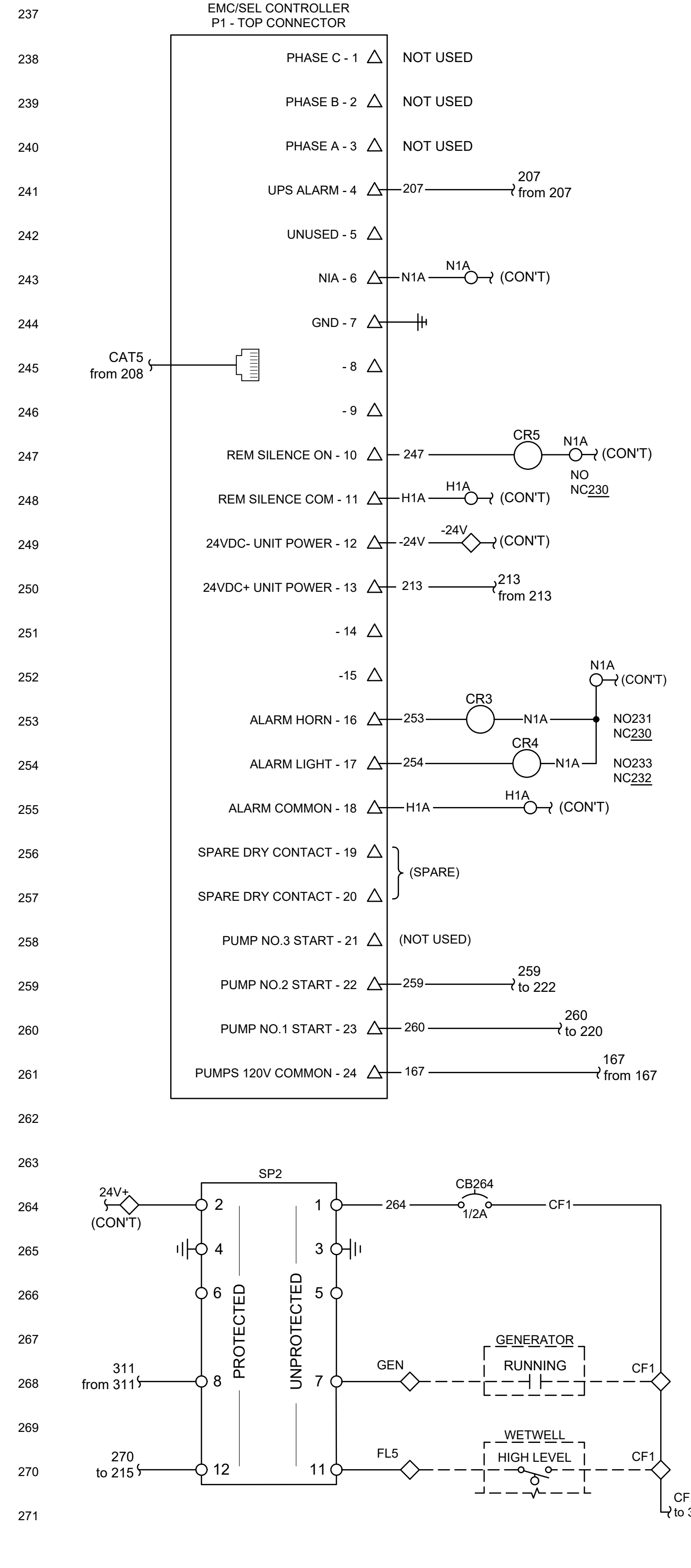
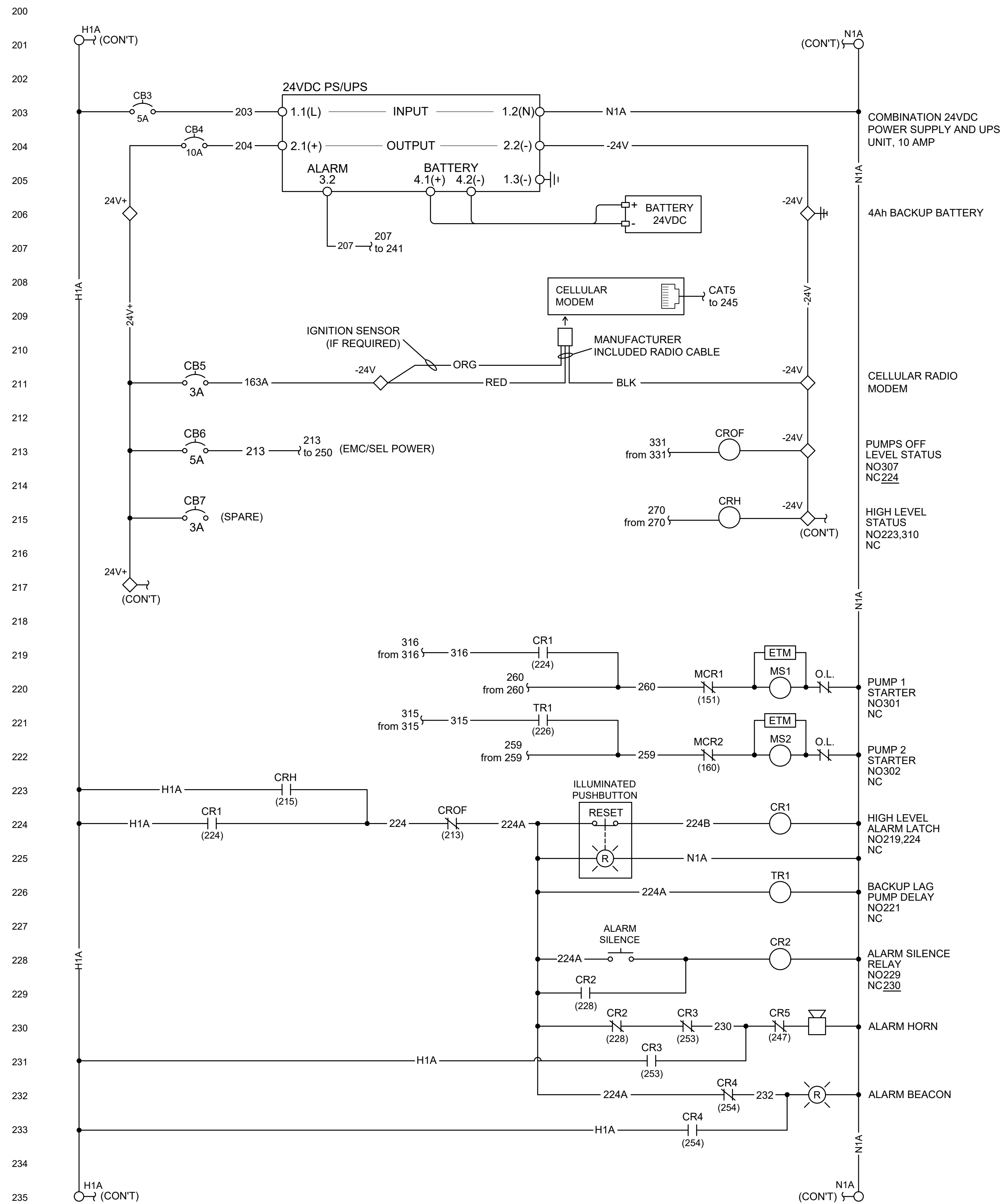


CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS

LIFT STATION PCP & RTU COMBO (SINGLE PHASE)

CONTROL POWER WIRING

DATE: OCTOBER 2023	SCALE	<table border="1"> <tr> <td>MCE PROJ. # 07169-0012</td> <td>HORIZONTAL:</td> <td rowspan="5"> <table border="1"> <tr> <td><b>E7.6</b></td> </tr> <tr> <td>DRAWN: CJA</td> <td>VERTICAL:</td> </tr> <tr> <td>DESIGNED: CJA</td> <td></td> </tr> <tr> <td>CHECKED: EEB</td> <td></td> </tr> <tr> <td>PROJ. MGR.: EEB</td> <td></td> </tr> </table> </td> </tr> <tr> <td>DRAWN: CJA</td> <td></td> </tr> <tr> <td>DESIGNED: CJA</td> <td></td> </tr> <tr> <td>CHECKED: EEB</td> <td></td> </tr> <tr> <td>PROJ. MGR.: EEB</td> <td></td> </tr> </table>	MCE PROJ. # 07169-0012	HORIZONTAL:	<table border="1"> <tr> <td><b>E7.6</b></td> </tr> <tr> <td>DRAWN: CJA</td> <td>VERTICAL:</td> </tr> <tr> <td>DESIGNED: CJA</td> <td></td> </tr> <tr> <td>CHECKED: EEB</td> <td></td> </tr> <tr> <td>PROJ. MGR.: EEB</td> <td></td> </tr> </table>	<b>E7.6</b>	DRAWN: CJA	VERTICAL:	DESIGNED: CJA		CHECKED: EEB		PROJ. MGR.: EEB		DRAWN: CJA		DESIGNED: CJA		CHECKED: EEB		PROJ. MGR.: EEB	
MCE PROJ. # 07169-0012	HORIZONTAL:		<table border="1"> <tr> <td><b>E7.6</b></td> </tr> <tr> <td>DRAWN: CJA</td> <td>VERTICAL:</td> </tr> <tr> <td>DESIGNED: CJA</td> <td></td> </tr> <tr> <td>CHECKED: EEB</td> <td></td> </tr> <tr> <td>PROJ. MGR.: EEB</td> <td></td> </tr> </table>	<b>E7.6</b>		DRAWN: CJA	VERTICAL:	DESIGNED: CJA		CHECKED: EEB		PROJ. MGR.: EEB										
<b>E7.6</b>																						
DRAWN: CJA	VERTICAL:																					
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STATUS:																						



REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
1	REVISED	OCT-2023
0	STANDARDS	MAR-2023

REVISIONS

CHARLOTTE COUNTY UTILITIES DEPARTMENT

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**CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS**

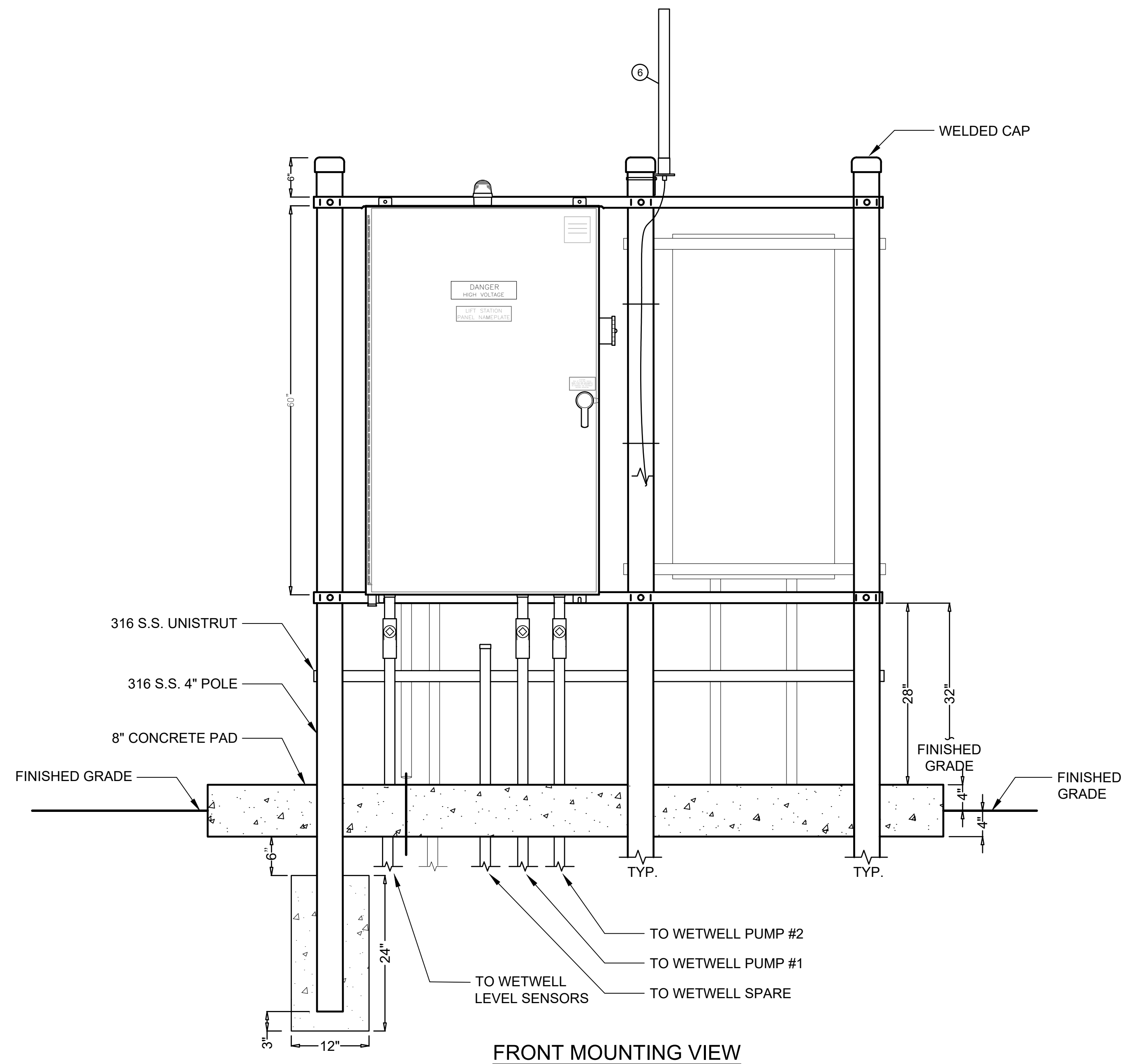
LIFT STATION PCP & RTU COMBO (SINGLE PHASE)

**CONTROL AND EMC-SEL DIAGRAM**

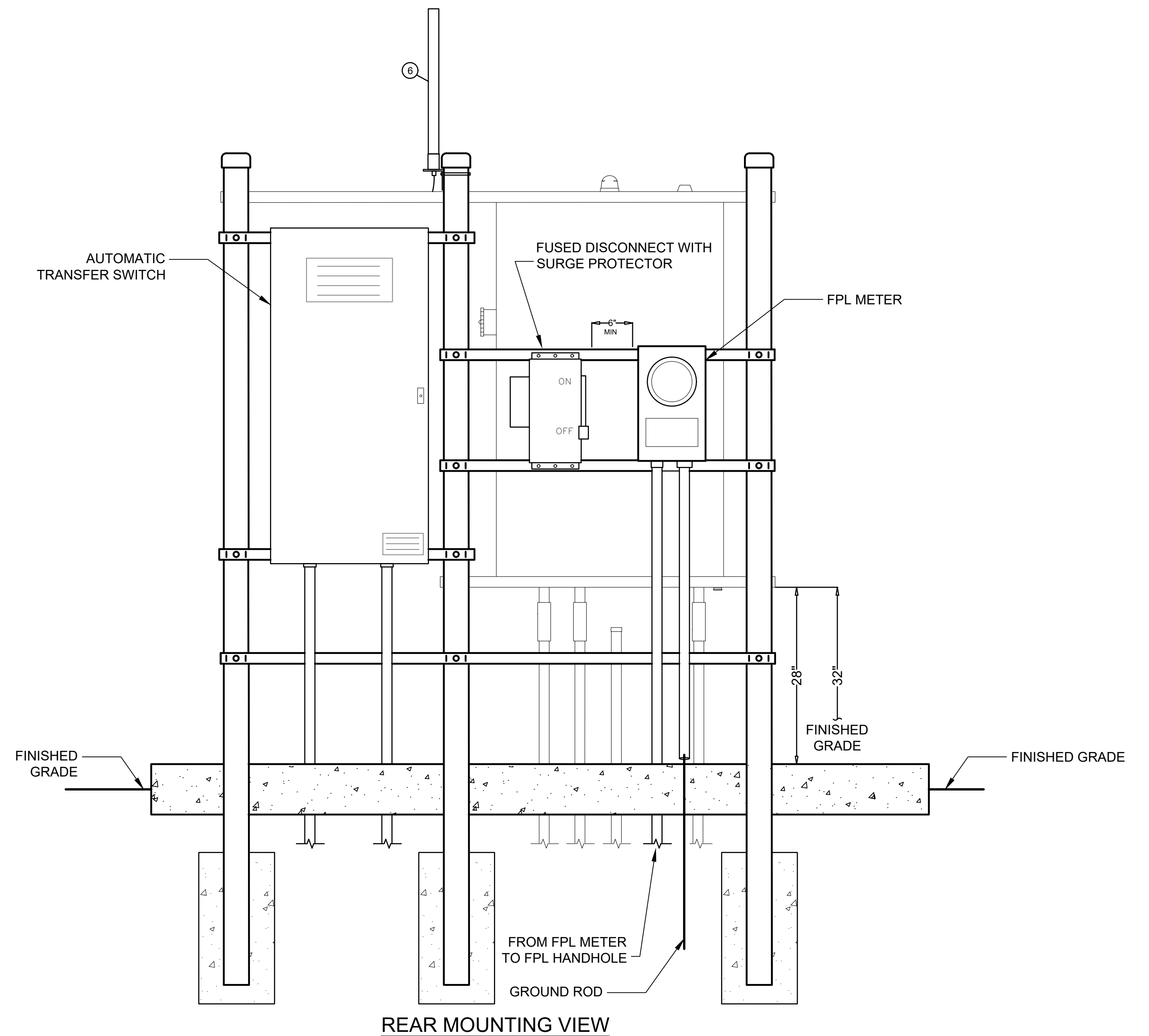
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MCE PROJ. # 07169-0012	VERTICAL: 1 REVISION
DRAWN: CJA	
DESIGNED: CJA	
CHECKED: EEB	
PROJ. MGR.: EEB	

STATUS:





FRONT MOUNTING VIEW



REAR MOUNTING VIEW

DETAIL NOTES:

1. CONDUIT(S) DEPICTED ON FRONT ELEVATIONS ARE SHOWN TO CONVEY DESIGN INTENT AND DO NOT DEPICT ACTUAL SIZES OR QUANTITIES. CONTRACTOR SHALL REFERENCE ALL PROJECT SPECIFIC ENGINEERING DRAWINGS FOR MINIMUM CONDUIT AND CONDUCTOR REQUIREMENTS AND COORDINATE WITH CCU FOR EQUIPMENT LAYOUT.
2. ALL EXPOSED CONDUIT SHALL BE RIGID TYPE 316 STAINLESS STEEL CONDUIT. UNDERGROUND CONDUIT TO THE WETWELL SHALL BE SCHEDULE 80 PVC.
3. GROUND CONDUIT SHALL BE 1/2" SCHEDULE 80 PVC. GROUND WIRE TO BE SIZE NUMBER 6.
4. THE PUMP CONTROL PANEL/RTU PANEL SHALL HAVE A PAD LOCKABLE HANDLE, 3-POINT LATCH.
5. ALL CONDUIT(S) SHALL ENTER THE BOTTOM OF ALL ENCLOSURES WITH DIE-CAST STAINLESS STEEL CONDUIT HUBS - CHASE/CLOSE CONDUIT NIPPLES AND SIDE ENTRIES ARE NOT ACCEPTABLE.

6. WETWELL CONDUITS SHALL HAVE "EYS" EXPLOSION PROOF CLASS 1 SEAL-OFF. ALL NON-WETWELL CONDUIT ENTRIES SHALL HAVE MOISTURE SEALANT APPLIED AFTER ACCEPTED START-UP AND COMMISSIONING WITH APPROVED DUCT SEAL.
7. ALL CONDUIT SUPPORTS, CLAMPS, HANGERS, FASTENERS, BOLTS, NUTS, SCREWS, WASHERS, AND STRUT-CHANNEL SHALL BE STAINLESS-STEEL.
8. STRUT-CHANNEL SHALL NOT BE BENT, DRILLED, CUT OR OTHERWISE MODIFIED TO PRODUCE FITTINGS, BRACES OR BRACKETS FOR CONDUIT AND EQUIPMENT SUPPORTS.
9. ENGRAVED WARNING LABEL STATING "DANGER HIGH VOLTAGE" SHALL BE AFFIXED TO THE OUTSIDE OF THE ENCLOSURE DOOR AND BE SECURED USING ADHESIVE OR CEMENT.
10. IF REQUIRED, ONE (1) INCH PVC AND/OR TYPE 316 STAINLESS STEEL CONDUIT BETWEEN THE PUMP CONTROL PANEL/RTU AND THE AREA LIGHT, THE STANDBY GENERATOR, AND/OR THE ODOR CONTROL SYSTEM IN ACCORDANCE WITH THE PROJECT SPECIFIC ENGINEERING DRAWINGS. (NOT SHOWN)

REV	DESCRIPTION	DATE
2	REVISED	AUG-2024
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0	STANDARDS	MAR-2023

REVISIONS

CHARLOTTE COUNTY UTILITIES DEPARTMENT

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CHARLOTTE COUNTY UTILITIES - REMOTE SITES CONTROL PANEL STANDARDS

LIFT STATION PCP & RTU COMBO (SINGLE PHASE)  
PANEL MOUNTING DETAIL

DATE: OCTOBER 2023
MCE PROJ. # 07169-0012
DRAWN: CJA
DESIGNED: CJA
CHECKED: EEB
PROJ. MGR.: EEB

SCALE	E7.8
HORIZONTAL:	
VERTICAL:	1
	REVISION

STATUS: